

# AERATED WASTEWATER TREATMENT PLANT **LIFESTYLE WASTEWATER SYSTEM**

Owner's Manual WWLSV50M (Oct-23)



hyndswastewater.co.nz 0800 425 433 **Disclaimer:** While every effort has been made to ensure that the information in this document is correct and accurate, users of Hynds product or information within this document must make their own assessment of suitability for their particular application. Product dimensions are nominal only, and should be verified if critical to a particular installation. No warranty is either expressed, implied, or statutory made by Hynds unless expressly stated in any sale and purchase agreement entered into between Hynds and the user.

## **QUICK START GUIDE**

#### **Essential Information For Homeowners**

Follow these 7 easy steps to make sure your system stays in top condition:

- 1. The system will take 3-4 weeks to settle.
- 2. Only wastewater should enter the system. See page 9 for a list of incompatible substances.
- Cater for only your household so the system is not overloaded. Over-catering examples: Excessive laundry: Regularly washing the rugby team's jerseys. Excessive cooking and baking: Making food for a local café or community group.
- 4. Service the system every **6 months** by a trained service technician. See page 11 for maintenance requirements. Wastewater treatment systems are hazardous. Do not attempt to service or modify the system.
- 5. If you go on holiday, the system will automatically go into Holiday Mode; see page 9.
- 6. Use environmentally friendly cleaning products or make your own. For some natural cleaning solutions, see page 12.
- 7. Take 5 minutes to read through this manual to understand your system thoroughly.

## **Frequently Asked Questions**

Should a wastewater treatment system smell?	No. If it is operating correctly, the system should not have an offensive odour. If there is an offensive odour, call your Service Technician.
What can I put down the drain?	Wastewater from the toilet, basins/sinks, shower/bath, washing machine, dishwasher. See page 10 for a list of Dos and Don'ts for each area in your house.
How does a wastewater treatment system work?	The wastewater goes through many steps, such as settling, filtration, and biological digestion. This removes contaminants and produces clean water safe for disposal. See page 7.
What if this is my holiday home or I'm away often?	The system will go into Holiday mode after 48 hours of no activity. See page 9.
How often do I need to pump out my system?	Your service technician will advise you when the system needs pumping out. Typically this is every 2-3 years. See page 11.

Dear Customer,

Thank you for choosing the Hynds Lifestyle wastewater treatment system. Please read this Owner's Manual carefully before using the Lifestyle system and keep it for future reference.

The information contained in this manual is subject to change without notice. Please contact Hynds Wastewater to request the latest manual.

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## 1. SAFETY PRECAUTIONS

Please read the Owner's Manual and Safety Precautions before owning the system.

Wastewater treatment units are hazardous. A trained service technician must perform all maintenance and repair work. Any work carried out by an unauthorised organisation or person may void the warranty.

Hynds recommends the system is on a service contract with a trained service technician.

When reading this Manual, please pay special attention to the following signs:

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A warning label highlights a hazard or unsafe practice which could result in severe injury or death.

## A WARNING

#### **Electrical Safety**

 Before handling any part of the sewage treatment plant, making contact with the water or working on or near any of the electrified equipment, make sure that the power to the tank is switched off at the isolation switch at the tank or the mains in the house.

#### **Fall Prevention**

- Ensure access covers are securely closed to prevent children, animals, or the public from entering the tank.
- During routine maintenance and servicing, be aware the tank lid may have been removed, and there is a risk of falls. Stay clear of the tanks during servicing and maintenance.
- If access covers or any other damage is identified, report the damage to Service Technician.

#### **Hazardous Gases & Confined Spaces**

- Never enter a wastewater tank. Toxic gases in the septic tank can kill in minutes. Personnel required to enter and perform maintenance work in the unit must comply with AS/NZS2865:2001 and New Zealand regulations.
- Ensure no naked flames, smoking or other ignition sources (e.g., tools) around the wastewater tank and vents.

# 

A caution label highlights a hazard or unsafe practice that could result in injury or product/property damage.

## **A**CAUTION

#### **Prevent Physical Loading of the Tank**

- Ensure vehicles do not drive or park in the area around the system.
- Do not drive over access cover lids.
- Do not stand on the access cover lids.

#### **Health Risk**

- Avoid contact with wastewater and treated wastewater. Wash and disinfect any parts of the body or tools that have come in contact with wastewater.
- Do not use treated water for human consumption, livestock watering or irrigating edible crops.

#### **Access Cover Lids**

• Keep your tank manholes locked to prevent children from opening them. Make sure the access covers are securely closed during operation.

## 2. OVERVIEW

#### 2.1 Hynds Lifestyle System

The Hynds Lifestyle System is a high-performing modular wastewater treatment system, which can be designed for all domestic applications. The Lifestyle tank uses Submerged Aerated Fixed Film (SAFF) Technology, which can be connected to an existing septic tank and is designed to blend into the landscaped environment.

SAFF Technology is a proven secondary treatment process that produces clear, odourless liquid suitable for irrigating landscaped gardens, bushes or trees.

The Hynds Lifestyle offers high-quality treatment performance with low running costs. Your local Hyndstrained service technician must maintain the system.

#### 2.2 Installation

A Hynds-trained Installer completes the installation of a Hynds Lifestyle System. Installation of the treatment system and irrigation field is typically completed within one day.

#### 2.3 Performance

All Hynds Lifestyle Systems are designed to exceed New Zealand Standards for disposal of wastewater and are guaranteed to meet the following criteria:

BOD<sub>5</sub> <20 Suspended Solids <30mg/L Total Nitrogen <15 - 20mg/L

#### 2.4 Operation and Maintenance

Maintenance of all septic and wastewater treatment systems is necessary to maintain their performance. Your local trained service technician can offer a service contract to ensure ongoing optimum system performance.

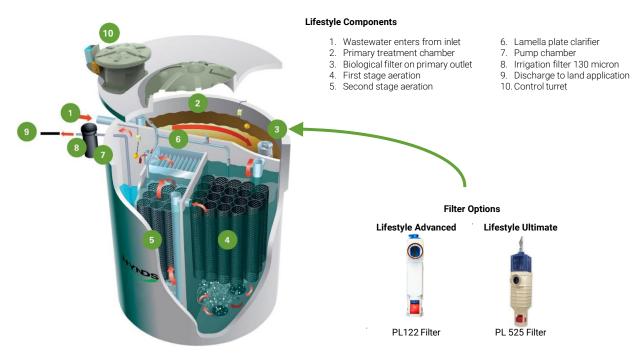
6-monthly services are required to comply with council regulations and ensure the system maintains optimal performance. Failure to maintain the system will result in the warranty being void.

If your contracted service technician is unavailable, they will offer an alternative trained Service Technician, as per the Service Contract.



## 3. TREATMENT PROCESS

#### 3.1 Lifestyle Advanced & Ultimate Systems



#### Note:

North Island: Irrigation filter is outside the tank (as pictured). South Island: Irrigation filter is located within the irrigation chamber.

#### Primary Treatment Chamber 2 3

This chamber separates the solids from the incoming water, and naturally occurring anaerobic organisms break down the organic matter.

Scum floats to the surface of this chamber and reduces odours by trapping the naturally forming gaseous Hydrogen Sulfide. Overloading, peak surging or domestic chemicals can disrupt the scum layer.

Solids settle at the bottom and build up until the system requires desludging or pumping out.

At the chamber outlet, the water passes through a filter to prevent solids from entering the next chamber.

#### 1<sup>st</sup> Stage & 2<sup>nd</sup> Stage Aeration Chamber 4 5

The system has a two-stage aeration process. The water is aerated using an electric blower and air diffusers. The oxygen-rich environment allows aerobic bacteria to thrive on the media blocks as they rapidly digest organic matter.

#### Clarification Chamber

From the Aeration Chamber, the liquid enters the Clarification Chamber, where the lamella plate clarifier filters out any remaining fine particles. A venturi suction system at the base of the chamber returns any solids to the primary treatment chamber for re-treatment.

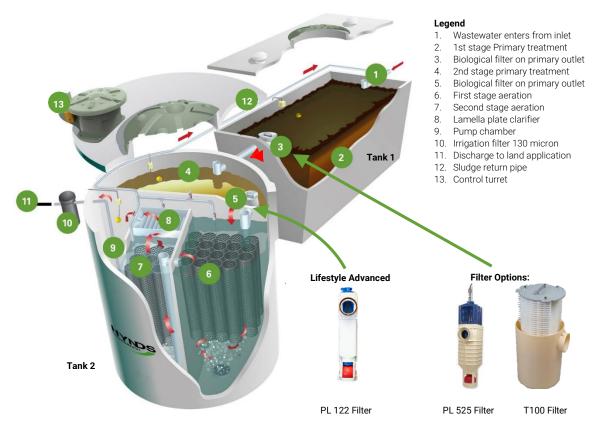
#### Pump Chamber 7 3 9

The irrigation chamber buffers water flow to cope with daily and surge loads. A float switch activates the submersible pump, which feeds the disposal field. The pump size must be increased for fields >2m above the top of the dome lid.

The Lifestyle system and the size of the irrigation pump have been designed to ensure the whole system remains in balance, based on daily volumes and loads.

#### 3.2 Lifestyle Elite System

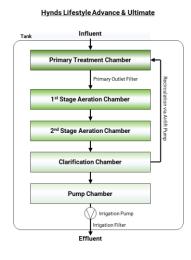
The Lifestyle Elite System is comprised of the Lifestyle Advanced system plus an additional 4500L septic tank, which allows the system to handle larger volumes or loads.



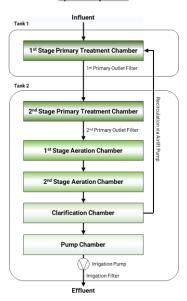
#### Note:

North Island: Irrigation filter is outside the tank (as pictured). South Island: Irrigation filter is located within the irrigation chamber.

#### 3.3 Treatment Flow



Hynds Lifestyle® Elite



## 4. CARING FOR YOUR SYSTEM

#### 4.1 Owner's Responsibilities

This system is designed for domestic-grade wastewater treatment only. A foul odour is a direct consequence of incorrect use. This section covers good practices to keep your system running optimally.

#### Servicing

• Ensure the system is serviced by a trained service technician every 6 months.

#### Influent (Incoming Wastewater)

- Only wastewater enters the system.
- Incompatible Substances must not enter the system; see Section 4.3.
- Ensure rainwater does not enter the system.
- All house gullies are installed to regulation height to prevent groundwater ingress.
- Backflush from a swimming pool must not be connected to the system.
- Downpipes must not be connected to the system.

#### Overloading

- Ensure the number of occupants does not exceed the system's capacity.
- Ensure the use of multiple appliances does not cause peak surging.

## 4.2 Holiday mode

**Do not** switch off the power to the system even if you are going on holiday. Contact your service technician if the system is not used for extended periods.

The controller will automatically enter holiday mode if the irrigation pump has not discharged for 48 hours.

When returning from a holiday, the controller will automatically detect the system being used and revert to normal operating mode.

#### 4.3 Incompatible Chemicals & Substances

Do not allow incompatible substances into the wastewater treatment system. This includes disposal via the kitchen sink, laundry and toilet.

Below is a list of chemicals that are considered harmful to the system:

- Water >75°C
- Excess Milk
- Harsh or excessive cleaning products such as bleaches, disinfectants, whiteners, or spot removers
- Coffee Grounds
- Food scraps (including Insinkerator)
- Fatty or oily substances
- Antibiotics or medicines
- Dressings, Plasters
- Paper towels
- Sanitary towels, Nappies, Baby wipes
- Fibres, cloths
- Cigarette stubs
- Paints
- Acids
- Dyes
- Pesticides, herbicides
- Solvents
- Industrial oils, lubricants, thinners, spirits
- Paints, Thinners, Paint Strippers
- Motor Oil, Petrol, Antifreeze, Break Fluid and Other Automotive Fluids
- Contents from a chemical toilet
- Rainwater or stormwater, including downpipes
- Backflush from a swimming pool

#### 4.4 Other Helpful Hints

- Complete your laundry over several periods during the week to prevent surge loading.
- Use the correct measure of cleaning product.
- Use a compost bin for food scraps.
- Put toxic items in the above list in an appropriate disposal facility.
- Buy environmentally friendly labelled products such as Eco Store from your supermarket.
- If the tank takes a while to settle, purchase live bacteria Septic Tank Starter from Eco Store.

## 4.5 Owner's Dos and Don'ts

	DO	DON'T
General	<ul> <li>Keep daily water usage under the system's limits.</li> <li>Ensure the number of occupants does not exceed the system's capacity.</li> <li>Maintain your system by a trained Hynds Service Technician.</li> <li>Use the correct measure of cleaning products.</li> <li>Read the Owner's Manual.</li> </ul>	<ul> <li>Ever switch the power off on your system.</li> <li>Use bleach, caustic or chemical-based cleaning agents &amp; detergents.</li> <li>Dispose of foreign objects into your system.</li> <li>Dispose of incompatible substances into your system.</li> <li>Run multiple appliances, which can cause a peak surge.</li> </ul>
Kitchen	<ul> <li>✓ Use liquid washing detergents.</li> <li>✓ Use sink Strainers.</li> <li>✓ Use natural cleaning products.</li> </ul>	<ul> <li>Install a sink macerator / InSinkErator.</li> <li>Pour fats/oils/grease down the drain.</li> <li>Pour milk/alcohol/yoghurt down the drain.</li> </ul>
Laundry	<ul> <li>✓ Spread washing over 7 days. Keep the number of loads to 1-3 per day.</li> <li>✓ Use concentrated liquid detergents.</li> <li>✓ Soak stained garments in a bucket &amp; dispose of contents in the garden.</li> </ul>	<ul> <li>Use powder detergents (with phosphorus and sodium).</li> <li>Use whiteners, bleach or commercial-grade cleaners.</li> <li>Pour hairdressing products down the drain.</li> </ul>
Bathroom	<ul> <li>✓ Shorten shower times.</li> <li>✓ Use potassium-based liquid soaps.</li> <li>✓ Use natural beauty products.</li> </ul>	<ul> <li>Fill &amp; drain the bath multiple times per day.</li> <li>Use antibacterial products.</li> <li>Use disinfectant to clean tiles &amp; screens.</li> </ul>
Toilet	<ul> <li>✓ Minimise toilet paper usage.</li> <li>✓ Provide a small bin for sanitary items.</li> <li>✓ Use natural cleaning products.</li> </ul>	<ul> <li>Use scented toilet paper.</li> <li>Flush sanitary items, condoms or nappies.</li> <li>Flush antibacterial wipes.</li> <li>Use toilet block cleaners (cistern &amp; bowl).</li> </ul>



## 5. MAINTAINING YOUR SYSTEM

#### 5.1 Owner's Responsibilities

The plant runs automatically and requires no special knowledge from the owner/user.

#### The owner is responsible for ensuring:

- The system always remains ON.
- The system is on a Service Agreement with a trained service technician and is serviced every 6 months.
- The system is desludged when required. The technician will measure the sludge depth at each service and advise when desludging is needed. The system requires desludging when the primary chamber's sludge level is 50% capacity, or the scum level is >200mm.

#### 5.2 Regular Servicing & Maintenance

The system requires a service **EVERY 6 MONTHS** by a trained service technician to optimise the performance and to maintain its warranty.

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If the 6-monthly service is neglected, or desludging advice from your service technician is disregarded, the warranty will immediately be void.

During maintenance, the green lids will need to be removed. Access must not be restricted due to excess landscaping by the landowner.

Only the manufacturer or a trained technician may perform maintenance and repair work (except filter cleaning) on the treatment system.

A service contract should be made with a trained service technician. Any work carried out by an unauthorised person or organisation may void the system's warranties.

The general servicing will include, but is not limited to:

- Checking and cleaning biological and irrigation filters.
- Checking blower function and replacing primary filter if necessary.
- Checking and flushing irrigation lines as per manufacturer's instructions and recording pressure in lines.
- Checking pump strainers are clear, and the pump is working to optimum pressure.
- Checking controller all alarms and functions are operating effectively.
- Checking Aeration Tank and pipes for sludge, flushing or vacuuming as required.
- Monitoring primary sludge build-up for potential pump out.

- Checking irrigation lines for leaks, blockages and compensation efficiency.
- Flushing the irrigation lines.
- General inspection of the site.
- Taking samples for testing (if applicable).

On completion of the service, a service report is completed and sent to the homeowner and the respective council(s) if required.

## 5.3 Irrigation Area & Disposal

The irrigation pump will pump out the treated wastewater onto the irrigation field on your land. The dose volume is pre-set at 230L; however, the system has the flexibility to dose 200-500L. Speak to your service technician to change the dosing volume.

Specific requirements and laws exist for the disposal/reuse of treated wastewater. The disposal area and irrigation system must be designed and installed by qualified professionals and in accordance with NZ and local council requirements.

## 5.4 Controller & Alarms

Hynds Lifestyle Wastewater Treatment Systems have an IP-rated controller and alarm system that alert the homeowner to any service requirements or potential problems. All systems use the Lifestyle Version 5 Controller, which is designed to assist in identifying power, pump or air faults.

If a fault does occur, an alarm will audibly and visually activate on the alarm plate located on the turret above the tank or inside the home of the owner.

#### If the fault is not easily identified or rectified:

Call your Hynds trained service technician. In the event of a pump failure, there is 24 hours of emergency storage for the fault to be remediated.



Lifestyle Version 5 Controller

## 6. NATURAL ALTERNATIVE CLEANING SOLUTIONS

Wastewater Treatment Systems rely on bacterial growth to treat all wastewater that leaves the home. It is the homeowner's responsibility to ensure all products used do not have a negative effect on the treatment system's performance.

It is easy and simple to create your own cleaning solutions using some basic ingredients:

- ✓ White Vinegar
- ✓ Bi-Carb Soda
- ✓ Soda Crystals

- ✓ Lemon Juice
- ✓ Baking Powder

**Note:** Certain essential oils are strong antibacterial agents, especially tea tree oil and eucalyptus oil. Please prevent placing concentrated amounts of these oils down your drain.

#### **1. Stain Remover**

Lemon Juice Sunlight Soda Crystals

#### Instructions:

- Apply Lemon Juice to stain
- Sit the garment in the sun for 1 hour.
- Rub with soda crystals and wash as usual.

#### 2. Window and Mirror Cleaner

1 part White Vinegar

1 part Water

#### Instructions:

- Mix in a spray bottle.
- Apply to glass and rub dry with newspaper.

#### **3. Grout Cleaner**

Baking Powder Lemon Juice

#### Instructions:

- Mix to form a paste.
- Apply the paste to Grout.
- Scrub with a toothbrush.

#### 4. Floor Cleaner

1 part Boiling Water

1 part White Vinegar

#### Instructions

- Mix in a bucket.
- Use a mop or suitable cloth to apply
- Air dry.

#### **5. Drain Cleaner**

Kettle of Boiling Water Soda Crystals

#### Instructions:

 Once a month, pour boiling water over soda crystals and into the drain.

**Note:** Soda Crystals are made from limestone that undergoes heating to form these crystals.

#### 6. Toilet Deodoriser

Bi-Carb Soda

#### Instructions:

- Once a week, add to the toilet bowl.
- Allow to sit for 2 minutes. Flush.

#### 7. Toilet Bowl Cleaner

- 1/4 cup Bi-carb Soda
- 1 cup White Vinegar
- 1 drop Orange Essential Oil

#### Instructions:

- Mix all ingredients in a bowl.
- Apply the mixture to the toilet bowl and scrub with a toilet brush.
- Allow to sit for 2 minutes before flushing the toilet.

#### 8. Toilet Seat & Cistern Cleaner

White vinegar

#### Instructions

Wipe over with a cloth soaked in white vinegar.

## NOTES

## NOTES

hyndswastewater.co.nz 0800 425 433





# AERATED WASTEWATER TREATMENT PLANT **LIFESTYLE WASTEWATER SYSTEM**

# Operation & Maintenance Manual WWLSV5MM (Nov 2023)

Version 5 Controller



FOR TRAINED SERVICE TECHNICIANS ONLY

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2 | HYNDS WASTEWATER | HYNDS LIFESTYLE SYSTEM - OPERATION & MAINTENANCE MANUAL

Hynds Lifestyle Systems are a high performing range of aerated wastewater treatment systems for domestic applications that offer environmentally sensitive alternatives to the septic tank.

This information is specifically for a trained service technician for the Lifestyle System v5. Please read the Lifestyle Operation & Maintenance Manual carefully before operating or servicing the system. Keep this manual for future reference.

The information contained in this manual is subject to change without notice. Please contact Hynds Wastewater to request the latest manual.

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# **1. SAFETY PRECAUTIONS**

Please read the Operation and Maintenance Manual and Safety Precautions before operating or servicing the plant.

The contents of this section are important to ensure the safety of everyone working onsite. Maintenance must be carried out in accordance with the relevant safety regulations. Hynds recommends a risk assessment be completed before commencing work.

When reading this Manual, please pay special attention to the following signs:



A warning label highlights a hazard or unsafe practice which could result in severe injury or death.

A caution label highlights a hazard or unsafe practice that could result in injury or product/property damage.

#### **Recommended PPE**

The following is the minimum PPE recommended during installation.





Safety boots

## A WARNING

#### **Electrical Safety**

• Turn the power off to the tank at the tank isolation switch before commencing any work on the irrigation filter, blower box or pump.

#### **Confined Spaces**

- The Lifestyle system is considered a Confined Space.
- Personnel are required to work in/around this Confined Space when maintaining and servicing this system.
- Personnel must comply with AS/NZS 2865:2001 Safe Working in a Confined Space and New Zealand Regulations, such as HSWA.
- The contractor is responsible for ensuring staff have the required training and appropriate controls and monitoring are in place.

#### **Hazardous Gases**

 Ensure no naked flames, smoking or other ignition sources (e.g. electrical equipment) around the wastewater tank and vents.



Disposable coveralls



## **A**CAUTION

#### Access Cover Lids

- Ensure the access covers are securely closed after maintenance and during operation.
- Make sure no vehicular traffic loads are applied to the access cover lids during maintenance and operation.
- Do not stand on the access cover lids.

#### **Prevent Physical Loading of Tank**

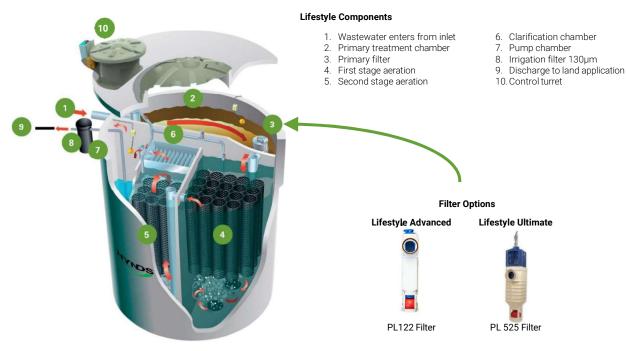
- Ensure vehicles do not park or drive in the area around the system. Heavy vehicles can deform the ground and damage the tank, especially if installed in soft ground.
- Heavy loads/vehicles, including a desludging truck, must be >4m from the tank.

#### **Health Risk**

- All domestic wastewater is a health risk, both before and after the Lifestyle Wastewater Treatment System has treated it. All precautions must be taken to avoid skin contact inhalation and ingestion of both treated and untreated wastewater.
- Do not use treated water for human consumption, livestock watering or irrigating edible crops.

## 2. PROCESS DESCRIPTION

#### 2.1 Lifestyle Advanced & Ultimate: Components



#### Note:

North Island: Irrigation filter is outside the tank (as pictured). South Island: Irrigation filter is located inside the irrigation chamber.

#### 2.2 Lifestyle Advanced & Ultimate: Treatment Process

#### Primary Treatment Chamber 2 3

This chamber separates the solids from the incoming water, and naturally occurring anaerobic organisms break down the organic matter.

Scum floats to the surface of this chamber and reduces odours by trapping the naturally forming gaseous Hydrogen Sulfide. Overloading, peak surging or domestic chemicals can disrupt the scum layer.

Solids settle at the bottom and build up until the system requires desludging or pumping out.

At the chamber outlet, the water passes through a filter to prevent solids from entering the next chamber.

#### 1<sup>st</sup> Stage & 2<sup>nd</sup> Stage Aeration Chamber 4

The system has a two-stage aeration process. The water is aerated using an electric blower and air diffusers. The oxygen-rich environment allows aerobic bacteria to thrive on the media blocks as they rapidly digest organic matter.

#### Clarification Chamber 6

From the Aeration Chamber, the liquid enters the Clarification Chamber, where the lamella plate clarifier filters out any remaining fine particles. A venturi suction system at the base of the chamber returns any solids to the primary treatment chamber for re-treatment.

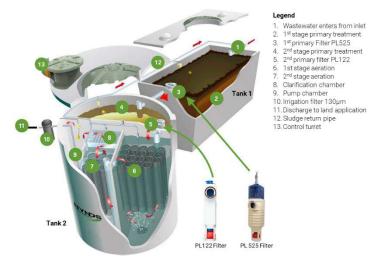
#### Pump Chamber 7 8 9

The irrigation chamber buffers the water flow to cope with daily and surge loads. A float switch activates the submersible pump, which feeds the disposal field. The pump size must be increased for fields >2m above the top of the dome lid.

The Lifestyle system and the size of the irrigation pump have been designed to ensure the whole system remains in balance, based on daily volumes and loads.

#### 2.3 Lifestyle Elite System

The Lifestyle Elite System is comprised of an additional septic tank; the Lifestyle Advanced system plus an additional 4500L septic tank, which allows the system to handle larger volumes and loads.



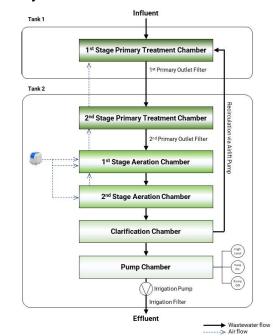
Note: North Island: Irrigation filter is outside the tank (as pictured). South Island: Irrigation filter is located inside the irrigation chamber

#### 2.4 Treatment Flow

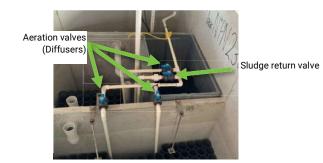
Lifestyle Advanced & Ultimate

# Tank Influent Primary Treatment Chamber Primary Outlet Filter 1st Stage Aeration Chamber 2nd Stage Aeration Chamber Clarification Chamber Pump Chamber Filter Effluent

#### Lifestyle Elite



#### 2.5 Valves



#### 2.6 Controller & Alarm System

#### Lifestyle Controller (v5)

The Lifestyle Controller v5 is the same as the version 4 controller, with the addition of a start/stop float.

The controller is powered via a 230V power supply. This power supply should be protected by a 16A MCB or as deemed necessary by the electrician. The controller is rated to 10A. A junction box is mounted onto the side of the turret.

The controller has the following indicators:

- System OK
- High Level
- Pump Fault
- Blower Fault

There is the option of an additional remote alarm panel.

#### **Holiday Mode**

The controller will automatically enter holiday mode if the irrigation pump has not discharged for 48 hours. In holiday mode, power is supplied to the blower periodically: 30-min ON – 30-min OFF.

The holiday mode will automatically revert to normal operating mode once the irrigation pump starts again.

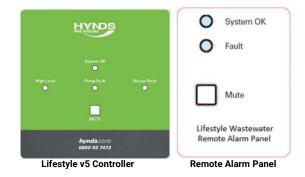
Note: The air fault alarm will not activate if the blower is off during Holiday mode.

#### Alarms

In the event of an alarm, the Mute button stops the sound. The panel will continue to show a fault until the problem is corrected.

The Irrigation Pump Filter is the main reason for an alarm.

The homeowner should contact their trained service technician. In the event of a pump failure, there is 24 hours of emergency storage for the fault to be remediated.



Supporting Document: Lifestyle Controller v5 Manual

## 3. SERVICING PROCEDURE

#### 3.1 Frequency

The system requires a service **EVERY 6 MONTHS** by a Hynds-trained service agent to ensure the system maintains its warranty and optimum performance.

#### 3.2 Field Service Report

Complete each section of the Field Service Report and all required actions as per the procedure below. Take photos where indicated in the Field Service Procedure and of any abnormal conditions or states.

## 3.3 Servicing Kit

The following equipment and materials are required to complete the routine servicing.

- Personal Protection Equipment (PPE)
- Sludge judge or similar
- Wet and Dry Vacuum
- Servicing pump
- Long Hose & Connections (with backflow preventer)
- Large Bucket
- Extension Pole (for lifting pump floats)

- Cable Ties
- Irrigation parts (for repair)
- Citronella and fly spray (for insects)
- Measuring tape
- Blower spare parts
- Water sampling equipment, as required
- Antiseptic liquid (to wash hands)

#### 3.4 Field Service Procedure



#### Step 1: Review System Details

- Review the installation date and most recent desludging date.
- Speak to the owner and confirm the number of inhabitants and the frequency of use.
- Speak to the owner about any concerns they may have.
- Confirm the owner has not made any changes to the system.

#### **Step 2: General Inspection**

#### a) Inspect landscape:

- Tank is accessible (grass, bushes, weeds are low).
- No ponding, subsidence or changes to the landscape since the previous service.
   If there are changes, ensure surface run-off water cannot enter the tank.

#### b) Inspect tank:

- Any obvious signs of physical damage to the system or damaged/broken components.
- If mosquitoes are present, pour a fine film of citronella on top of the clarifier chamber and underside of the lid recess. Use insect spray in the blower box.

#### c) Sampling

• If there is an issue with the system, take samples of the system. Refer to Hynds WWTP Sampling Guide.



Inspect the tank and surrounding landscape.

#### Step 2: General Inspection, continued

#### d) Aeration & Ventilation:

- Remove the control box lid to inspect the aeration blower and controller and confirm the aeration blower in the control box is operational.
- Notice any offensive odours.

#### e) Alarms:

 Check the alarm panel for any active alarm state. On the control box, turn the isolation switch off for 20s, then turn it back on to confirm the alarm system is operating correctly.

#### f) Irrigation Pump:

 Check that the irrigation pump is situated on its plinth and the floats move freely.

#### Step 3: 1st Stage Primary Treatment (Lifestyle Elite only)

#### a) Sludge Return

Ensure sludge return is operating correctly.

#### b) Measure Sludge Levels

- Use a Sludge Judge or similar to measure sludge depth and scum thickness.
- The system requires desludging when: Sludge level > 50% of septic tank or Scum is >200mm thick.

#### c) Primary Outlet Filter (PL525)

- Unscrew and remove the filter from the PVC housing.
- The floating ball will seal off the outlet, preventing sludge from entering the aeration chamber.
- Remove the filter and clean with a hose.
- Replace the filter if the filter cannot be cleaned and is no longer usable.



#### a) Sludge Return (for Lifestyle Advanced and Ultimate)

Ensure sludge return is operating correctly.

#### b) Measure Sludge Levels

- Use a Sludge Judge or similar to measure sludge depth and scum thickness.
- The system requires desludging when: Sludge level >50% of primary treatment chamber or Scum is >200mm thick.

#### c) Primary Outlet Filter (PL525 or T100)

- Unscrew and remove the filter from the PVC housing.
- The floating ball will seal off the outlet, preventing sludge from entering the aeration chamber.
- Remove the filter and clean with a hose.
- Replace the filter if the filter cannot be cleaned and is no longer usable.





Polylock PL122

Polylock PL525

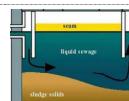


Sludge Judge

lae solids

liquid sewag

Typical Sludge Profile



Sludge Judge

**Typical Sludge Profile** 

HYNDS WASTEWATER | HYNDS LIFESTYLE SYSTEM - OPERATION & MAINTENANCE MANUAL | 9

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Polylock PL525

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#### **Step 5: Aeration Chambers**

#### a) General Condition

- Check for excess growth around the media and sides of the tank. If necessary, use a wet/dry vacuum.
- If there is any floating matter, this may be a sign of cross-contamination or flooding.

#### b) Aeration

• Observe the aeration pattern. 🖸 Ensure all 3 diffusers are emitting a fine bubble on the surface.

#### c) Flush Air Lines

- Close the sludge return valve and all other air valves.
- One at a time, open each diffuser valve to purge and remove any biofilm.
- Once all 3 diffusers are purged, open <u>all</u> valves, including sludge return, and ensure even aeration patterns.

If aeration is not even and fine, a diffuser pipe may be blocked and must be replaced.

#### **Step 6: Clarification Chamber**

#### a) General Condition

- Check no bubbles are surfacing in this chamber. If aeration occurs in the clarification chamber, check the sludge return is not blocked.
- If there is any floating matter, this may be a sign of cross-contamination or flooding.
- The clarifier is well secured to the tank.
- Clean out any excess or surface contaminants using a wet/dry vacuum.

#### b) Flush Sludge Return

This is a **new procedure** for Lifestyle v5 only.

- Open the cap for the sludge return pipework.
- Turn the blower off
- Use a hose to push water through the sludge return pipe until the liquid runs clear.
- When complete, turn the valve back to its original position (fully open).
- Turn the blower on and replace the cap.

Alternative: Use a flexible rod to clear the pipework.

If there is significant sludge buildup in the clarification chamber, pump the chamber out and remove the sludge with a wet/dry vacuum.



Aeration chamber & media



Clarification chamber



Flushing sludge return pipe

#### Step 7: Pump Chamber

#### a) General Condition

- Clean out any sediment using a wet/dry vacuum.
- Hose down the chamber to clean. This clean water can be used to flush the irrigation lines later.

#### b) Pump Maintenance

- Remove the irrigation pump.
- Clean the screen with a hose.
- Check the pump floats are in the correct position If the dosing volume needs adjustment, cut the cable tie and secure the float at the appropriate position.
   100mm shift = Approx 30L
- Vacuum any sludge, as required.
- Replace the pump in the chamber.
- Check floats are freely moving and not snagged on the tank's side or activated too often.

#### Factory settings for 230L dosing:

High-level float: 925mm from base Pump-On float: 735mm from base Pump-Off float: 150mm from base



Pump Station / Irrigation Chamber



Float Positions

#### Step 8: Controller & Blower

#### a) Control Turret

- Check the control turret is dry.
- Check for any insect or rodent infestations. Wipe around the box and spray repellent if necessary.
- Visually check all plugs are firmly connected.

#### b) Blower

- Unplug the blower to allow air pressure to drop. Check alarm activates.
- Remove and clean the air filter. Clean or replace the filter if necessary. The filter should be replaced annually.
- Replace the diaphragm if there is excessive noise, heat or red powdering. Typically, the diaphragm is replaced every 2 years.
- Ensure the blower is reassembled correctly, firmly connected, and not vibrating when running.

Supporting document: LP80HN Blower Servicing

#### c) High-Level Alarm

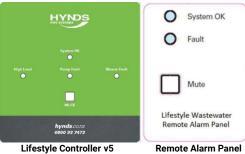
- Lift the High-Level Float to activate the alarm(s).
- Check the system alarms (both audible and visual).
- Return the high-level float, ensuring it is freely moving.

Supporting document: Lifestyle Controller v5 Manual



Inside the Control Turret





#### **Step 9: Irrigation Lines**

#### a) Irrigation Filter Cleaning

- Turn off the power to the tank.
- Clean filters, as per Section 4.2 of this Manual.
- Note: The South Island Lifestyle irrigation filter is in the Irrigation Chamber.

#### b) Irrigation Field Inspection

- Check for leaks, ponding or damage to irrigation lines or changes to layout. Ensure all necessary fittings are attached.
- Ensure all lines are pinned to the ground and covered adequately to prevent UV deterioration. Ensure all valves at the end of the lines are inside valve boxes and can be identified.
- Irrigation fields should be mowed, free of weeds and planted with suitable plant species.

#### c) Flush & Bleed Irrigation Lines

- Open land application valves.
- Using potable water, fill the irrigation tank and allow the pump to activate.
- Notice the time taken to pump out the chamber. If the pump is running poorly, it may need to be replaced.
- While the pump is running, open the flushing valves at the end of each line, ensuring flow is good. Flush until the water runs clear.
- Ensure all air is bled out of lines.
- Close off all taps after flushing the irrigation.

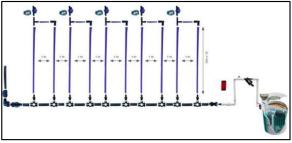
#### **Step 10: Final Checks**

- Ensure power is on and the system is operating.
- Check all aeration & sludge return valves are set
- correctly.Ensure all lids are secure.
- Ensure the filter cartridge is replaced inside the filter housing.
- Wash and disinfect equipment and hands.
- Complete the Field Service Report.
- Leave the site tidy and secure.

Provide a copy of the Field Service Report to the property owner and council, as required.



130 Micron Irrigation Filter



Example layout of a generic 500m<sup>2</sup> Pressure Compensating Drip Irrigation (PCDI) flat field



All valves open

## 4. OTHER MAINTENANCE PROCEDURES

### 4.1 Cleaning of Primary Outlet Filter

- Unscrew or remove the plastic inspection cover above the primary outlet and remove the filter from the PVC housing.
- Clean the filter according to the notes below. Replace the filter if the filter cannot be cleaned and is no longer usable.

#### Lifestyle Advanced: PL122 filter

The floating ball will seal off the outlet, preventing sludge from entering the aeration chamber. Remove the filter and clean with a hose.

#### Lifestyle Ultimate: PL525 filter

The floating ball will seal off the outlet, preventing sludge from entering the aeration chamber. Remove the filter and clean with a hose.

#### Lifestyle (previous versions): T100 filter

Remove the 300mm filter from the PVC housing and clean the filter by hosing it above the tank. Reinstate filter.

#### Lifestyle (previous versions): T1800 filter

Plunge before removing to allow the liquid to run free. Once clear, remove the filter and clean with a hose.

#### 4.2 Replacement of Diffuser

- Cut the diffuser pipe at the top of the vertical, as shown.
- Cut the new replacement pipe to the same length as the pipe removed.
- The diffuser pipe is available from Hynds Wastewater.Reinstall the diffuser pipe in the tank to the existing aeration pipework.

Note: Diffuser pipe is porous, allowing aeration. It has a hard sponge texture.

**Important!** Ensure the diffuser pipe is correctly orientated under the filter media.

## 4.3 Pump Floats & Dosing

#### 4.3.1 Factory Settings for floats

The factory setting for the irrigation dosing volume is 230L, and the default factory settings for the floats are:

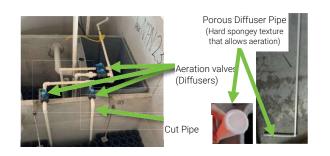
High-level float: 1125mm from base Pump-On float: 735mm from base Pump-Off float: 150mm from pump







Taylex T100



#### 4.3 **Pump Floats & Dosing, continued**

#### 4.3.2 **Adjust Irrigation Pump Dosing Volume**

If the Dosing Volume needs to be changed:

- For the High-Level Alarm float, cut the cable tie. Secure new cable tie at the appropriate position. Ensure float and wires are secured in the correct position.
- Repeat for the Pump-On Float.
- Reinstall the pump into the Pump Chamber.
- Check the pump floats are freely moving and will not snag or activate too often. Check for airlocks.

#### Important!

- Float cable length = 150mm
- Distance between Pump-On to High-Level (shoulder-to-shoulder)= 390mm
- Floats must have a <u>H07-rated</u> cable. H05 Float will cause electrical faults.
- 100mm shift in floats = approx 30L.

#### 4.3.3 FAULT: Pump & Alarm NOT Activating

The problem is caused by two issues:

- Floats fixed incorrectly and/or
- Incorrect pump location.

These problems are causing the floats to hook up on each other and/or jam on the tank wall. To fix this issue:

#### Step 1 (The system is likely to be flooded)

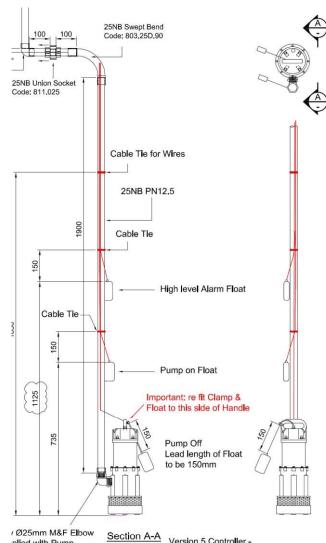
- Disconnect the blower power and plug the pump directly into the blower power output.
- The pump will restart, and water will pump to the irrigation system.
- When the water is back to normal operating levels the pump will stop.
- Turn off all power to the system and reconnect the blower and pump to their correct power outputs.

#### Step 2

- Remove the pump and check all floats are connected correctly (as per the attached drawing)
- Re install the pump and connect all pipe work.

#### Step 3

- Turn power back on.
- Fill water directly into the pump station and activate the pump 2-3 times to ensure all floats are working and moving freely.

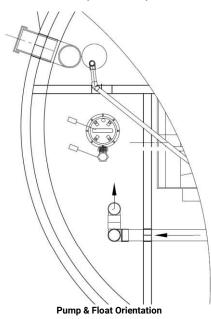


plied with Pump

Version 5 Controller -Pump and Float Set up

#### Pump & Float Setup

Pump



#### 4.4 Irrigation Filter Cleaning

The below procedure is a generic cleaning procedure for a disc irrigation filter. Filter orientation, location and size will vary.

#### Step 1

• Turn off the power using the isolation switch on the side of the controller.

#### Step 2

 At the filter housing, <u>slowly</u> loosen and remove the irrigation cap (must be done slowly to relieve any builtup pressure).

#### Step 3

• Remove the internal disc filter.

#### Step 4

• Loosen the disc by unscrewing the top off in an anticlockwise direction.

#### Step 5

Clean the disc with a garden hose or similar.
 Important! Separate and clean between discs.

#### Step 6

- Tighten up the disc filter by hand until secure.
- Place back into filter body and reassemble housing.
   Note: The disc filter will fit either way in the filter body.











#### Step 8

- Wash hands with anti-bacterial soap.
- Turn the system power on.

## 5. DESLUDGING

#### 5.1 Desludging Requirements

To ensure the overall health and performance of the Lifestyle wastewater treatment system, Hynds Wastewater recommends desludging the primary treatment chamber every time the sludge reaches 50% capacity of the primary chamber or when the depth of the scum is >200mm.

Desludging frequency will depend on sludge and scum accumulation levels, which vary depending on usage; therefore, it is essential to ensure the system is desludged when required. To check if desludging is needed, measure the sludge depth at every service interval and advise the property owner when the tank requires desludging.

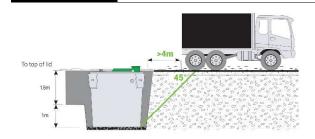
If it is found that desludging is required during servicing, book a wastewater disposal truck to come and pump out the sludge.

#### 5.2 Desludging Procedure

#### Step 1: Location of truck

- Ensure the vacuum truck does not physically load the tank.
- On soft ground, ensure the truck does not park or drive within 4m of the tank. The load will deform the soft ground and may damage the system.

The vacuum truck will have a significant weight. Ensure clearance between tank and truck.



#### Step 2: Desludge and Clean the Primary Chamber

- **<u>Gently</u>** lower the hose into the primary tank.
- Remove the contents of the primary tank.
- Clean the primary chamber with a hose and remove cleaning water.
- Fill the primary chamber with potable water.

#### In Extreme Flooding Events:

If the water table is 0-500mm below Ground Level, do not desludge or remove any water from the tank.

#### Step 3: Desludge and Clean Aeration Chambers

This is only required if the tank has been neglected or contaminated.

- Ensure the Primary Chamber is full.
- Gently lower the hose into the 1<sup>st</sup> aeration chamber.
- Remove the contents of the chamber.
- Clean the chamber with a hose and remove cleaning water.
- Fill the chamber with potable water.
- Repeat, for the 2<sup>nd</sup> stage aeration chamber.



The heavy hose couplings can easily cause damage to the system and components.

A WARNINGS

The tank must be filled to prevent buoyancy. Failing to fill the tank can result in ineffective treatment and odours.

The primary chamber must be full of water before the 1<sup>st</sup> aeration chamber is pumped out.

# 6. TROUBLESHOOTING

## 6.1 Primary Treatment Chamber

Ref	Visual Impact	Cause	Solution
	High water level inside primary chamber only. All other chamber water levels are normal.	Blocked primary filter	<ul> <li>Remove, clean, and put back in place primary filter.</li> </ul>
1a		Excessive crust depth	
		Excessive sludge depth	<ul> <li>Pump out primary chamber and refill with potable water.</li> </ul>
	High water level	Ingress of stormwater	<ul> <li>Check to identify source and terminate.</li> </ul>
	inside primary	Leaking taps or other appliances	<ul> <li>Check to identify and repair.</li> </ul>
1b	chamber. All other chambers are also	Hydraulic load is too high for the system	<ul> <li>Reduce hydraulic load from the property by removing fixtures and/or upgrade treatment plant.</li> </ul>
	flooded	Tank integrity is compromised	<ul> <li>Confirm the source of the leak and repair.</li> </ul>
	Blocked filter	Bug/worm infestation	<ul> <li>Pump out primary chamber and any other chamber that is infested, clean and refill with potable water.</li> </ul>
1c		Seeds from some diets	
		Excessive fibre, hair, wipes, cotton buds etc.	<ul> <li>Remove, clean, and put back in place primary filter more regularly.</li> </ul>
	Excessive odour	No crust – system is still within startup phase	<ul> <li>More time is required to form a crust.</li> </ul>
1d		No crust – usage is too low	<ul> <li>Vent the system and insert an odour cartridge.</li> <li>Durate set is a bast of a state from For the set of the set</li></ul>
		Infrequent use (holiday house)	<ul> <li>Purchase live bacteria Septic Tank Starter from EcoStore.</li> </ul>
	No water from sludge return	Blocked sludge return pipework	<ul> <li>Check and clear all sludge return pipe work.</li> </ul>
1e		Insufficient airlift	<ul> <li>Check blower pressure is sufficient.</li> <li>Check sludge return valve is closed (except for v5) Check for any air leaks and repair</li> </ul>
1f	Echoing from sludge return	Sludge return pipe is too far above the water level	<ul> <li>Extend the sludge return pipework so that it terminates 10mm above the normal operating water level.</li> </ul>

## 6.2 1<sup>st</sup> & 2<sup>nd</sup> Stage Aeration Chambers

Ref	Visual Impact	Cause	Solution
	No bubbles or bubbles only in one chamber	Loss of aeration from the blower	<ul> <li>Check all connections and pipework integrity for air leaks and repair if necessary.</li> </ul>
2a		Blocked aeration pipework	<ul> <li>Check all connections and pipework integrity. Purge the aeration lines by closing the valves and opening one at a time to release the built pressure, repeat process, repair if necessary and/or replace the diffusers.</li> </ul>
		Blower not operational	<ul> <li>Check electrical connections and controller if ok blower may need replacement.</li> </ul>
2b	Fatty residue forming on the concrete walls and pipework or media	Excessive fats, oils and grease (FOGs)	<ul> <li>Identify the source of FOG's and cease activity or install a suitably sized grease trap.</li> </ul>
		Short start up period	<ul> <li>Should settle within 10-12 weeks depending on influent load.</li> </ul>
2c	Excessive foaming	Excessive soaps and cleaning products (Detergent etc.)	<ul> <li>Reduce laundry to 1 load per day and reduce the use of soaps in the house.</li> </ul>
		Insufficient influent loading	<ul> <li>Increase the load if possible</li> </ul>
2d	Grey matter (flocking) floating on surface	Under or over aerated	<ul> <li>Adjust the level of aeration (if product allows)</li> </ul>
		Substance contamination	<ul> <li>Confirm and stop the contaminant from entering the system (medications, pesticides, herbicides, excessive cleaning products etc.)</li> </ul>
2e	Excessive solid matter	Cross contamination from primary chamber carryover	<ul> <li>Check primary filter is clean and clear.</li> <li>Check tank doesn't need to be desludged.</li> <li>Try to clear the debris with a dry vacuum, if contamination is excessive all chambers may require</li> <li>desludging and refill with potable water</li> </ul>
	Sludge forming at the base of the chamber	Cross contamination from primary chamber	See 2e
		Overloaded system	<ul> <li>Reduce the influent load or review the system size</li> </ul>
2f		Primary filter not in place	<ul> <li>Ensure filter is in place and clean</li> </ul>
		System has been flooded and not cleaned sufficiently	<ul> <li>Try to clear the debris with a wet/dry vacuum, if contamination is excessive all chambers may require desludging and refill with potable water.</li> </ul>
	No biofilm present on the media	System still going through startup phase	<ul> <li>Allow more time.</li> </ul>
2g		Under or over aerated	<ul> <li>Increase the load if possible.</li> <li>Adjust the level of aeration (if product allows).</li> </ul>
		Substance contamination	<ul> <li>Confirm and stop the contaminant from entering the system (medications, pesticides, herbicides, excessive cleaning products etc.).</li> </ul>

## 6.3 Clarification Chamber

Ref	Visual Impact	Cause	Solution
3a	Bubbling in clarifier	Blocked inlet junction on the side of clarifier	Vacuum inlet junction.
		Pipe integrity compromised	<ul> <li>Determine location of leak and repair.</li> </ul>
	Sludge accumulation at base of clarifier	Cross contamination from aeration and/or primary chamber	<ul> <li>Check primary filter is clean and clear.</li> <li>Check tank doesn't need to be desludged.</li> <li>Try to clear the debris with a wet/dry vacuum, if contamination is excessive all chambers may require.</li> <li>desludging and refill with potable water.</li> </ul>
Зb		Overloaded system	<ul> <li>Reduce the influent load or review the system size.</li> </ul>
		Primary filter not in place	<ul> <li>Ensure filter is in place and clean.</li> </ul>
		System has been flooded and not cleaned sufficiently	<ul> <li>Try to clear the debris with a dry vacuum, if contamination is excessive all chambers may require desludging and refill with potable water.</li> </ul>
30	Grey matter (flocking) floating on surface	Insufficient influent loading	<ul> <li>Increase the load if possible.</li> <li>Adjust the level of aeration (if product allows).</li> </ul>
30		Substance contamination	<ul> <li>Confirm and stop the contaminant from entering the system (medications, pesticides, herbicides, excessive cleaning products etc.).</li> </ul>
3d	Excessive suspended solids (cloudy water appearance)	Cross contamination from primary chamber carryover	<ul> <li>Check primary filter is clean and clear.</li> <li>Check tank doesn't need to be desludged.</li> <li>Try to clear the debris with a wet/dry vacuum, if contamination is excessive all chambers may require desludging and refill with potable water.</li> </ul>

## 6.4 Irrigation pump chamber

Ref	Visual Impact	Cause	Solution
	Flooded chamber	Pump not operating	<ul> <li>Check float/s can move freely Clean and clear pump screen.</li> <li>Check on/off float/s are watertight and operational.</li> <li>If above does not work replace pump.</li> <li>Ensure pump chamber is cleaned and vacuumed prior to installing new replacement pump.</li> </ul>
4a		Daily hydraulic load exceeds system capacity	<ul> <li>Reduce the influent load or review the system size.</li> </ul>
		Peak load exceeds system capacity per hour	<ul> <li>Spread the water use activities over a longer period of time alternatively increase the system size.</li> </ul>
		Blocked irrigation filter	<ul> <li>Remove, clean and reinstall irrigation filter Pump down, clean and vacuum chamber.</li> </ul>
		Land application system is blocked	<ul><li>Flush irrigation lines.</li><li>Repair and replace if necessary.</li></ul>
4h	High level float not operating	Wire or connection damaged	Daplace the fleet
40		Float damaged	<ul> <li>Replace the float.</li> </ul>
	Sludge forming at the base of the chamber	Cross contamination from previous chambers	<ul> <li>Check primary filter is clean and clear.</li> <li>Check tank doesn't need to be desludged.</li> </ul>
4c		Flooded chamber	<ul> <li>Try to clear the debris with a dry vacuum, if contamination is excessive all</li> </ul>
		Excessive bacterial growth	chambers may require desludging and refill with potable water.
4d	Grey matter (flocking) floating on surface	Insufficient influent loading	<ul><li>Increase the load if possible.</li><li>Adjust the level of aeration (if product allows).</li></ul>
40		Substance contamination	<ul> <li>Confirm and stop the contaminant from entering the system (medications, pesticides, herbicides, excessive cleaning products etc.).</li> </ul>

## 6.5 Irrigation Discharge

Ref	Visual Impact	Cause	Solution
		Excessive solids	<ul> <li>Remove and clean irrigation filter.</li> </ul>
		Excessive fats, oils and grease (FOGs)	<ul> <li>Remove and clean irrigation filter.</li> <li>Identify the source of FOG's and cease activity or install.</li> <li>a suitably sized grease trap.</li> </ul>
5a	Irrigation filter is blocked	Bug/worm infestation	<ul> <li>Remove and clean irrigation filter.</li> <li>Pump out irrigation chamber and any other chamber that is infested, clean and refill with potable water.</li> </ul>
		Seeds from some diets	
		Excessive fiber, hair, wipes, cotton buds etc.	<ul> <li>Remove and clean more regularly.</li> </ul>
		Under/overloaded system	<ul> <li>Increase/reduce the influent load or review the system size.</li> </ul>

### 6.6 Control Turret

Ref	Visual Impact	Cause	Solution
		Blocked aeration pipework inside the tank	<ul> <li>Replace blower.</li> <li>Purge the aeration lines by closing the valves and opening one at a time to release the built pressure, repeat process, repair if necessary and/or replace the diffusers.</li> </ul>
6a	Blower not operational	Blower filter blocked	Clean the blower filter or replace if necessary. Replace blower if necessary.
		Blower membranes/gasket damaged	<ul> <li>Replace blower membranes/gasket. Replace blower if necessary.</li> </ul>
		Blower has overheated	<ul> <li>Increase ventilation inside the control. Increase the size of the blower housing.</li> </ul>
		Clear tube loose or disconnected	<ul> <li>Check all connections to and from the clear tube.</li> </ul>
		Blower not operational	<ul> <li>See ба.</li> </ul>
6b	Air fault alarm active	Air pressure outside of accepted range	<ul> <li>Check blower is operational.</li> <li>Check all aeration pipework in the tank, repair if necessary.</li> <li>Purge the aeration lines by closing the valves and opening one at a time to release the built pressure, repeat process, repair if necessary and/or replace the diffusers.</li> </ul>
		Air switch blocked	<ul> <li>Remove clear tube from the blower while leaving the other end connected to the control panel, blow into the tube and listen for a "pen click" sound.</li> <li>If no click is heard, replace the air switch.</li> </ul>
бс	Pump Fault Alarm Active	Pump not operational	<ul> <li>Check float/s can move freely Clean and clear pump screen.</li> <li>Check on/off float/s are watertight and operational. If above does not work replace pump.</li> <li>Ensure pump chamber is cleaned and vacuumed prior to installing new replacement pump</li> </ul>
		Electrical connections damaged or loose	Check all connections are secure and operational.
	High level alarm active	Irrigation pump not operational	<ul> <li>See 6c.</li> </ul>
6d		Irrigation filter is blocked	<ul> <li>See 4a.</li> </ul>
		Daily hydraulic load or peak load exceeds system capacity	<ul> <li>See 4a.</li> </ul>
	Control panel not operational	Water leak to the housing	<ul> <li>Replace controller and all connections.</li> </ul>
		Isolation switch is off	<ul> <li>Ensure isolation switch is in the on position.</li> </ul>
6e		RCD has tripped	<ul> <li>Reset RCD at power board.</li> </ul>
		Incorrect electrical cable size installed	<ul> <li>Electrician to confirm the requirements.</li> </ul>
		Water is in the control turret and has shorted the controller	<ul> <li>Identify where the water source and repair the leak. Replace controller.</li> </ul>

See also Hynds Lifestyle Controller Version 3, 4, 5 Troubleshooting.

## 7. WARRANTY

# **Certificate of** Warrantv



The quality waste water treatment product you have purchased from Hynds Waste Water is covered under this comprehensive warranty as outlined in the following document and shall be read in conjunction with Hynds Terms and Conditions of Sale.

#### THE ENVELOPE (TANK) 1.

Unless otherwise agreed in writing by duly authorised persons the structural integrity of the concrete tank shall be WARRANTED for a period of 10 years, commencing from the date of delivery; and all other components (parts only) of 2 years commencing from the date of delivery.

#### 2. THE TREATMENT AND PERFORMANCE

The treatment and performance of the product (as defined in the user's guide supplied with the product) are guaranteed, provided that the terms and conditions set out in this document are complied with.

#### FOREWARD 3

Hynds Waste Water (hereinafter referred to as "HWW") manufacture and distribute products intended for the treatment of waste water. The purpose of this document is to inform the owner, or installer about the warranty relating to HWW products. The warranty shall cover all waste

water treatment products manufactured or distributed by HWW (hereinafter referred to as the "Product").

Products shall consist of an external envelope in concrete or in polyester and internal components can be accompanied by accessories such as but not limited to sockets, pump, raiser, lids and control panels. In this Agreement or other documents the term "End User Owner" shall be further defined as including or referring to any Purchaser or Customer of Hynds.

#### WARRANTY 4.

HWW warrants to the owner that the product is designed to treat wastewater in compliance with the regulatory requirements in force at the time it is purchased in a new and unused condition.

Notwithstanding anything contained in this Warranty the liability of either Party to the other including the end user owner shall not in aggregate exceed the invoice price of the Goods in respect of which the liability occurs.

The different warranties shall apply from the purchase date by the end user owner of the product, provided that, pursuant to installation, users and operating instructions, the product:

was correctly sized with consideration to hydraulic and organic loading as specified by the Customers engineer, approved designer or regulatory authority; and

was correctly installed, connected and commissioned in strict accordance the manufacturers and local authority requirements by an approved and certified contractor, the Customers engineer, approved designer or regulatory authority; and

is operated consistently within the parameters of which it was designed; and

the Product receives regular servicing in accordance with the manufacturers and local authority requirements by an approved and certified contractor

#### **EXCLUSION FROM WARRANTY** 5.

The following types of damage including but not limited to shall be

excluded and therefore void any warranty: 5.1 Any damage resulting from poor handling, transport (by a third party engaged by the customer directly) or storage defect. More generally, any damage caused by a third party that was not authorized directly by the manufacturer or distributor

5.2 Any damage resulting from a modification of the product without having consulted the manufacturer or distributor beforehand (and having received either Parties written consent) about the modifications made to

the product by any individual, company, agent or person. 5.3 Any damage resulting from an installation that does not comply with the requirements specified in HWW's installation guide (supplied with the product or available upon request at the following address: hwwsupport@hynds.co.nz) or those required by the local

regulatory authority.

5.4 All damage resulting from a sizing error of the product, in particular with regard to the hydraulic and organic Load of wastewater intended for the product and to the legislation in force at the time the product was installed. The term "Load" shall refer to water, liquids, any elements sent inside the product to be stored or processed therein.

5.5 Any damage resulting from a change of the use of the product leading to a modification of the Load (flow rate and/or nature of wastewater) intended for the product.

5.6 Any damage caused by using the product in a way not compliant with the requirements set out by HWW in the user's instructions for the product (supplied with each product and available upon request at hwwsupport@hynds.co.nz).

Any damage caused by failing to observe the maintenance or 57 operating instructions for the product as defined by HWW and as contained in the operating instructions for the product or any other document supplied with the product. Instructions are supplied with the product or are available on demand at hwwsupport@hynds. co.nz. The manufacturer reserves the right to review and update the instructions from time to time and it shall be the Customers responsibility to remained informed.5.8 At the sole discretion of Hynds, any damage resulting from incorrect, incomplete and/or inadequate installation of the product essential to the correct functioning of the product.

5.9 Any damage resulting from a technical intervention on the installation by any individual, company or person who is not approved/certified (by the manufacturer or local regulatory authority), or does not have the correct equipment and knowledge to intervene on the product and its accessories. More generally, any modification or alteration of the product without the prior, written consent of HWW shall cancel the warranty granted by HWW and release the latter from its obligations without limitation.

5.10 Any damage resulting from elements such as the conditions of placement, conditions of installation, nature of the soil type, nature of the water to be treated or other similar external source that in the sole discretion of HWW is communicated inadequately, or with unreasonable delay or not at all to the installer and directly HWW by the end user owner, individual or company authorized by the latter or to whom said task was entrusted

5.11 Any damage caused directly or indirectly, deliberate or accidental resulting from negligence, tort or unforeseeable circumstances of the installer, the end user owner, individual or company authorized by the latter. For the purposes of clarity this shall by extension also include force majeure, such as earthquake, storm, flooding, volcanic eruption, and as may be further defined

#### IMITATION AND IMPLEMENTATION OF THE WARRANTY 6.

If the product should malfunction and provided that the terms and conditions of the warranty are complied with, HWW shall proceed or nominate an agent to review as soon as practically possible the repair(s) required in accordance with the degree of malfunction and assessment by HWW, or at the sole discretion of HWW the replacement of the product or component(s) of the product as may be required.

Under no circumstances may HWW be held liable for damages of any kind including liquidated damages, direct or indirect, resulting from incorrect or unsafe use of the product. The end user owner is responsible for the daily supervision of the product, within the limits of their competencies, the latter must inform HWW immediately and without unreasonable delay (defined as not more than 5 business days) upon detecting a defect

or malfunction of the product. Notification must be in writing to

#### hwwsupport@hynds.co.nz.

Any call on the warranty must be made in writing, if possible using the appropriate form (documented entitled "Claim Card" likewise available upon request at hwwsupport@hynds.co.nz ), sent to hwwsupport@hynds.co.nz. If, after inspection, it turns out that the damage or defect ascertained by the end user owner, who has informed HWW, does not comply with the terms and conditions of warranty, and where the HWW cannot be held liable, HWW reserves the right to invoice all expenses incurred including but not limited to travel or time & material operations to the end user owner or individual, company or person(s) who has engaged HWW or their nominated repair agent for services

February 2019

## Notes

## Notes

hyndswastewater.co.nz 0800 425 433

