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halgan
liquid waste

Grease Traps Sizing / Installation

Grease Trap Waste Servicing Requirements

Presenters:

Howard Christie | Business & Consultant Representative

Glenn Horne | Halgan Liquid Waste

DESIGN MANUFACTURE SERVICE
SUSTAINABLE ENVIRONMENTAL TREATMENT SOLUTIONS

Introduction

Company Profile

Halgan Pty Ltd.

- Established 1996
- Australian Owned & Operated
- Fully Certified Company to AS/NZS 1546.1 (*MGT Series S*)
- Operating Divisions
 - Halgan Pty Ltd
 - Halgan Environmental Solutions
 - Halgan Liquid Waste
- “End to End” Solutions.
Design, Manufacturer, Assembly, Supply and Service



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ID Number: 100896

Introduction

Manufacturing Facilities

Sydney:

10 Davis Road , Wetherill Park, NSW 2164

Free call: 1800 626 753

Ph: +61 2 9939 8030

Brisbane:

141 Magnesium Drive, Crestmead, Qld 4132

Ph: +61 7 3208 8339

Sales:

sales@halgan.com.au

General enquires:

admin@halgan.com.au

Web:

www.halgan.com.au; www.halganliquidwaste.com.au;

www.halganenvironmental.com.au

'Tap in' Discharge Trade Wastewater

Services

Select services or apply for a Section 73

<p>Section 73 Compliance Certificate We can assist with small to medium developments</p> <p>Now</p>	<p>Building plan approvals Eg. Add a swimming pool, build an extension</p>	<p>Diagrams Eg. Sewer service diagram, service location print etc.</p>	<p>Connection approvals Eg. Drinking water, wastewater etc.</p>
<p>Pressure enquiry Statement of available pressure and flow</p>	<p>Water meter installations Request a new water meter</p>	<p>Adjust Sydney Water asset Raise or lower a Sydney Water asset</p>	<p>Pressure boosting and pumps Eg. Boost a drinking water service, pump to sewer</p>
<p>Change existing service Downsize/upsue existing drinking/recycled water service</p>	<p>Disconnect service Eg. Disconnect drinking water, wastewater service etc.</p>	<p>Discharge trade wastewater Discharge trade wastewater into Sydney Water sewer pipes</p>	<p>Billing record search Search for billing records on a property</p>
<p>Disuse of Sewer Eg. Remove a section of unrequired Wastewater pipe.</p>			

Sydney WATER Tap in Services Dashboard Complete a connection Account details Help Log out

Property details Application Review order Payment

87 Consul Rd, Narrabeena 2099 Plan number: 355338 Lot number: B

Discharge trade wastewater application

Please answer all questions unless marked (optional).

- What would you like to do?
 -
 -
 -
- Please enter the trading name of your business
 -
- Are you currently discharging trade wastewater?
 -
 -
- When will you commence discharging trade wastewater?
 -
- Is there any existing trade waste equipment installed?
 -
 -
- What type of business activity will be occurring at the property?
Please select one or more of the following
 - Retail food business
 - Please select retail food business activity (you can select more than one)
 -
 -
 -
 -
 - Retail motor vehicle
 -
- Additional information
Please tell us if there is anything else we need to know about this discharge trade wastewater (optional)
 -

Sydney Water – Food Industry Pre-treatment Guidelines -2020

- Min. 1000L - Max. 5000L Grease Arrestor approved by Sydney Water as per authorised “listed pre-treatment for food businesses.
- Kitchen waste should drain by gravity to GA and then by gravity to sewer, if this is not possible kitchen waste can drain to a pump well outside the kitchen or under sink pump unit
- GA’s require to 2x 100mm vents, AAV,s only permitted on branch lines not on main line or chamber vents, currently chamber vents to rise individually from each GA to termination.
- A minimum of one metre (1m) obstructed clear space is required above the GA
- All above ground GA’s higher than 1.2m need platform and steps to AS1657-1992
- In-sink & in-floor waste bucket traps to be installed to commercial kitchens & food prep. areas.
- Install GA as close as possible to source, avoid long pipe runs if unavoidable increase drainage grade or consider heat trace.
- There must be a boundary trap on all retail food properties plus property containment backflow and zone backflow within reach of the grease arrestor.

RE: Bunding to above Ground Grease Arrestors - Clarification of Sydney Water requirements if any

MD

MAROUNGAS, DENNIS

To Howard Christie

Wed 21-Aug-19 11:31 AM

Hi Howard, Sydney Water does not have any bunding requirements for the installation of the above ground grease traps, unless there is a floor waste that drains in the sewerage system where the installation is. In this case, bunding is required able to hold 110% of the volume of the largest vessel in the bunding. If there is no bunding and no floor waste then it is, Sydney Water's responsibility to mention to the customer that in case of an accident, the wastewater will run into the environment and the local council will get involved.

Regards

Dennis Maroungas

Technical Specialist M.Eng., BSc., Dip.Tech., C.Chem.

Business Customer Services

Sydney Water, Level 7, 1 Smith Street, Parramatta NSW 2150

Grease Arrestor Pre-Treatment Options

Types & Materials

Types

greasy wastewater pre-treatment option available

Grease Arrestors

- Boat Shape
- Modular
- Filter type arrestors

Dissolved Air Flotation (DAF) units

Vertical Gravity Separators (VGS) (Sydney Water limited to McDonald's)(not often used)

Materials

- Polyethylene
- Fiberglass
- Stainless Steel
- PVC
- GRC (*epoxy coated internally*)
- Pre-Cast Concrete (*epoxy coated internally*)

Grease Trap Installation

Location & Installation

1. Location:

In ground external to the building

- landscape area, external loading dock, carparks etc.

Above ground within the building

- loading dock, basement level carparks, dedicated grease arrestor rooms

2. Position:

- as close as possible to location of source of greasy waste (e.g. kitchen)
- as close as possible to a hard stand area accessible by Liquid Waste Tanker
- direct access from loading dock or tanker hardstand to grease arrestor
- remote as possible from any supply air intakes to a building and lift lobbies

3. Kitchens - Food Preparation - Food Delivery Areas

- do not located grease arrestors in these locations

Grease Arrestor Sizing

Acceptable Methods

1. Grease Arrestors should be sized in accordance with local authority requirements

Number of seats (if unknown allow 2 people / m² of seating space)
(*eg: Sydney Water Sydney Water – Food Industry Pre-treatment Guidelines -2020*)

Fixtures flow rates
(*e.g. WSA-FFOG Guidelines (National Guideline for Managing Food, Fats, Oils & Grease from Food Premises)*)

Sizing from known flow rates (*e.g.: WSA-FFOG Guidelines (National Guideline for Managing Food, Fats, Oils & Grease from Food Premises)*)

2. NSW commercial minimum pre-treatment size for GA's at 1000 litres

Sydney Water Sydney Water – Food Industry Pre-treatment Guidelines -2020 minimum pre-treatment volume is a guide only. Pre-treatment volume determined upon assessment of trade waste application)

3. Understanding the location of the proposed Retail Outlet and providing the necessary capacity to suit the likely type of food tenancy

(*e.g. Project in Chatswood – Food Tenancy likely to be Asian – 2kl to 3kl GA based on fixture flow rates*)

Grease Trap Installation

Location & Installation

4. Liquid Waste Vehicle Access

GREASE WASTE TRUCK SIZES, WEIGHTS & CLEARANCE HEIGHTS

Note:

Consultant should confirm tanker sizing with preferred Liquid Waste Contractor

TRUCK CAPACITY LITRES	VEHICLE HEIGHT METRES		VEHICLE LENGTH METRES	VEHICLE WIDTH METRES	VEHICLE GMV WEIGHT kg
	OLD	NEW	Varies on cab chassis provided & tank configuration	Maximum width allowed on road	GMV based on NSW requirements
2000	1.9	2.1	4.6 – 5.1m	1.95	4500
4000	2.2			2.5	9000
4200	2.4			2.5	9000
7500	3.3	3.6	8.55	2.5	16000
9000	3.3	3.6	8.55	2.5	22500
10500	3.4	3.6	8.55	2.5	22500
11000**	3.4	3.6	8.55	2.5	23000
12500	3.4	3.6	9.0	2.5	26500
14000	3.5		9.0	2.5	30000



** Length based on Halgan vehicle. 11kl capacity. Glenn Horne Halgan - dated Nov 2019

Grease Trap Installation

Location & Installation

5. Grease Waste Tanker Vacuum Capability Matrix – Horizontal Pipework Length

Flow rates in vacuum system pipework are subject to many variables and shall fluctuate with the changes in static lift, efficiency of the vacuum system, “cfm” capacity of the vane or liquid ring vacuum pump, volume of tank, pipework and fittings.

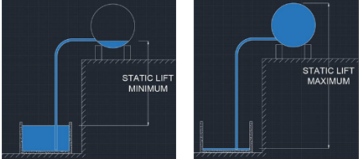
Static lift is to liquid level in tanker, this varies based on size of tanker and manufacture, inlet connection point to tanker, etc.

In all instances you should confirm with the preferred Liquid Waste Contractor their ability to service the specific project.

Grease Trap Installation

Location & Installation

6. Grease Waste Tanker Vacuum Capability Matrix – Horizontal Pipework Length

VACUUM TRUCK STATIC LIFT <i>(based on maximum static lift, and full vacuum pump at minimum 460cfm – Halgan 11kl Tank & 30% inefficiency for grease waste)</i> (m)	MAXIMUM RESIDUAL HEAD FOR PUMPING <i>(SYSTEM VACUUM less MAX. STATIC HEAD = MAX RESIDUAL HEAD)</i> (m)	MAXIMUM LENGTH OF HORIZONTAL PIPEWORK FOR WATER <i>(m)</i> @ 3.3 l/sec	MAXIMUM LENGTH OF HORIZONTAL PIPEWORK FOR GREASE PUMP OUT (m) @ 3.3 l/sec
		75MM NOMINAL BORE TO SYDNEY WATER REQUIREMENTS EFFICIENCY WITH 20% SAFETY MARGIN FOR BENDS, FITTINGS ETC & AIR LEAK AT KAMLOCK FITTINGS ETC	DESIGN WITH 25% SAFETY MARGIN FOR GREASE ARRESTOR LIQUID WASTE (SOLIDS OILS & AND GREASE)
6.5			
6	0.5	14	10
5.5	1	32	24
5	1.5	49	36
4.5	2	67	50
4	2.5	80	60
3.5	3	102	76
3	3.5	118	88

The Matrix has been prepared based upon Halgan 11.5kl liquid tanker vacuum system being able to pull full vacuum for clean water with an allowance of 30% inefficiency applied for greasy waste.

The mean flow rate at 3.3l/sec allows for a 5kl GA to be emptied in approx. 25-30 minutes, which is an acceptable industry time within the industry.

(as residual head change as tanker fills flow rates system flow rates vary)

A further 25% has been applied for design safety factor, bends and fittings .

In all instances you should confirm with the preferred Liquid Waste Contractor their ability to service the specific project.

Grease Trap Installation & Servicing

Servicing & Wastesafe

Wastesafe Commences

In the early 90,s Sydney Water acknowledged they had issues within their systems that were resulting in sewer grease build ups and “grease balls” being washed up on Sydney Beaches.

It was identified that the main contributor to these issues were the inadequate servicing to the grease traps within the Sydney area.

To remedy these issues the Sydney Water “Waste Safe” program was introduced. Waste Safe managed the frequencies of pump outs by way of a Trade Waste Agreement with every establishment that utilised a grease trap.

Within 2 years the issues affecting Sydney Water were eliminated, and controls of service ensured that grease traps were serviced regularly to minimise grease being directed to the sewer systems.

Grease Trap Installation & Servicing

Servicing & Wastesafe

Grease Trap Servicing:

the process, carried out by a Wastesafe transporter, which involves the removal of greasy waste from the GA as well as cleaning the GA by scraping and hosing residues from the wall of the GA . (Known as “Pump – out”)

Wastesafe Transporter:

a commercial operator authorized by Sydney Water or local Authority to carry out both the servicing of grease tarps and the transportation of same to appropriate treatment facility.

Waste Treatment Facility:

a commercial operator authorized by Sydney Water or local Authority to process greasy waste. Has an agreement with Sydney Water to participate in the “Wastesafe” program.

Grease Installation & Servicing

Servicing & Wastesafe

Wastesafe Program

Sydney Water customers with a GA are part of the Wastesafe program, which is an electronic tracking system to monitor the generation, collection, transportation and disposal of grease trap waste.

Servicing Frequency

Sydney Water specifies how often (frequency) the GA must be pumped out, based on the size of the GA and the volume and quality of greasy wastewater generated. Effectiveness of the GA dependent on good housekeeping practices, oils from should be collected prior to entering the drainage system.

The following table shows Sydney Water's standard GA servicing frequencies for **Restaurants**. The minimum frequency is every 26 weeks, and the maximum is every 4 weeks.

Default Frequency is every 13 weeks

Table 1 Grease trap servicing frequencies

Grease Trap Size	Number of Covers (Meals) per Day OR Calculated From Water Consumption Data											
	0-50	50-125	125-250	250-500	500-750	750 - 1000	1000 - 1250	1250 - 1500	1500 - 1750	1750 - 2000	> 2000	
1000 litre	26 Weeks	13 Weeks	13 Weeks	8 Weeks	4 Weeks							Requires Centralised Pre-Treatment
1500 litre		26 Weeks	13 Weeks	13 Weeks	8 Weeks	4 Weeks						
2000 litre			26 Weeks	13 Weeks	13 Weeks	8 Weeks	4 Weeks					
3000 litre				26 Weeks	13 Weeks	13 Weeks	8 Weeks	4 Weeks				
4000 litre					26 Weeks	13 Weeks	13 Weeks	8 Weeks	4 Weeks			
5000 litre						26 Weeks	13 Weeks	13 Weeks	8 Weeks	4 Weeks		

Grease Installation & Servicing

Servicing & Wastesafe

Cleaning the Grease Trap

1. grease traps must be pumped out completely and the internal surfaces be scraped down and washed every time the grease trap is serviced to clean the grease trap of coagulated grease, food solids and any other particles that could cause blockage or obstruction of the outlet pipe work
2. the end of an onsite hose is never to be left in a grease trap
3. water used to wash down the inside of a grease trap should be pumped out at the end of the service
4. avoid wash water splashing out of the grease trap
5. it is not necessary to refill a grease trap with water after it has been serviced
6. surfactants or detergents must not be used when cleaning a grease trap
7. any filters, surge control devices or other special additions must be cleaned as per the manufacturer's instructions and never removed without replacement.
8. The transporter should notify the generator of any other repairs or maintenance needed by the grease trap.



Halgan Liquid Waste

Grease Trap Pump Outs, Cleaning & Servicing



Cleaning



Collection



Transport



Treatment

Service includes:



The complete pump out and removal of all FOG's (fat, oil, grease)



Washing and scraping of walls, lids and SCD / baffles



Servicing logged with the appropriate water authority

We provide grease trap waste removal services at scheduled times, and emergency pump outs. Grease trap cleaning and maintenance is carried out in accordance with regulatory authorities.



Complete environmental treatment solutions delivering quality, reliability & EPA compliance

Call 1800 626 753 | www.halganliquidwaste.com.au



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Introduction

[Grease Trap Servicing – Play Video](#)





Halgan Pty Ltd

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141 Magnesium Drive Crestmead QLD 4132

Phone 1800 626 753

email info@halganliquidwaste.com.au
www.halganliquidwaste.com.au



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DATE / /

SERVICE AGREEMENT

ACCOUNT ADDRESS		SERVICE ADDRESS	
Client Name: HCAA		Client Name: HCAA	
Address: 14 Consultant Road		Address: 14 Consultant Road	
Suburb: Sydney	Postcode: 2000	Suburb: Sydney	Postcode: 2000
Phone:	Fax:	Phone: 9920 1234	Fax:
Mobile: 0417 000 000		Mobile: 0417 890 123	
Contact Name: Howard		Contact Name: Nick	
Contact Title: Owner		Customer Order No.:	
ABN: 33 027 876 123	ACN:	Email: HCAA@hydraulic consultant .com.au	
Email: HCAA@hydraulic consultant .com.au		<input type="checkbox"/> I would like to receive information about Halgan products and services	
Is the client a Pty Ltd or Limited Entity? If so what is the full corporate name?			

TYPE OF AGREEMENT: 3 years	AGREEMENT COMMENCEMENT DATE: 1/01/21
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SERVICE DETAILS:						
	SERVICE	WASTE TYPE	PIT SIZE/ LITRE	FREQUENCY PERMANENT/ ONE OFF	LIQUID WASTE DISPOSAL CHARGE <small>PRICE - cents per litre/treatment/other</small>	AMOUNT \$
1	pump out	Grease	5000	13 weeks	minimum charge	00.00
2						
3						
4						
5						
After Hours Emergency Call Out (minimum 4 hours)						

INVOICES TO BE PAID WITHIN 14 DAYS	SUB TOTAL:	00.00
	GST:	00.00
	TOTAL:	00.00

TRADE WASTE AGREEMENT No. 30134	GREASE TRAP BAR CODE No. WS050506
Water Authority: SYDNEY WATER	
Site Special Requirements: Pit located on left side of shop down gated walk way	
Access Hours: 4.00AM - 6.00AM	Keys Required: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Additional Hose Length: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Height Restrictions: NO	

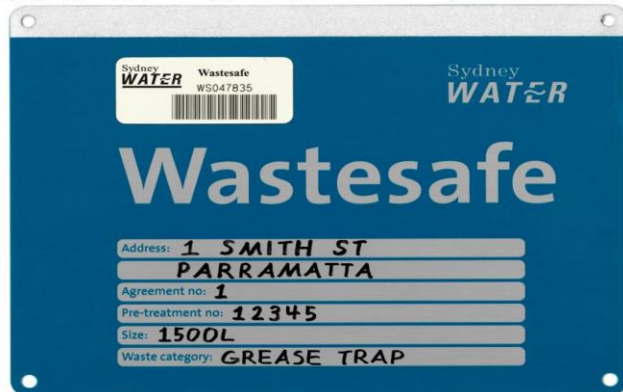
ACKNOWLEDGEMENTS	
This form can be agreed to electronically via our link or by signing this form. I acknowledge that I am authorised to sign and that I have read and understand the terms and conditions of this agreement.	
Position: OWNER	Halgan Representative Position: ACCOUNT MANAGER
Print Name: NICK	Date: 12.12.20
Signed for Customer:	Signed for Halgan Liquid Waste Pty Ltd:

Grease Installation & Servicing

Servicing & Wastesafe

Wastesafe Barcodes to Grease Traps

All grease traps should be individually barcoded. The barcode should be attached to a Wastesafe information plate which records the address of the property, the trade waste agreement number, pre-treatment number of the grease trap, size of the grease trap and category of pre-treatment. The name of the customer or business should not be recorded.



One Pre-Treatment Pit = One Barcode

The bar code should be allocated to that pit appropriate pump out frequency applied to

One Barcode = One Transporter

The bar code should be allocated to that pit and an appropriate pump out frequency applied to it.

Grease Installation & Servicing

Servicing & Wastesafe

Strata Properties

Where there are Strata Properties then a single shared pit is permitted but the Trade Waste Permit needs to be in the name of the Owners Corporation (Master Strata) with each sub-unit also having their own permit. The permits of each sub-unit will have no pre-treatment pit details.

- Owners Corporation would receive the Wastesafe charges only
- Individual properties would receive TW Quality charges and TW Permit fees.

This means that where there is a Master Strata or Single Owner of a property that has a shared pit arrangement then this person / group must nominate the Transporter for that pit. Any commercial implications need to be arranged directly by the parties concerned.

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Recording the collection of Grease Trap Waste

Accurate recording of grease trap collections is the responsibility of transporters. Transporters must:

1. ensure workers are trained in the process and use of equipment to record waste collection
2. ensure waste tracking equipment is well maintained and in full working order before commencing a service
3. ensure they scan the correct barcode once only after completing a service
4. if no barcode can be located, correctly attach and record a new reflective sign and barcode
5. if no barcode can be located and the transporter is not equipped to attach and record a new barcode. Advise Sydney Water of the customer's information and request a new barcode.

Recording the collection of Grease Trap Waste

All waste delivered must be recorded on the treatment facility's Wastesafe Depot System.

The total mass of all loads discharged at a facility must be recorded on the Wastesafe Depot System.

Grease Installation & Servicing

Servicing & Wastesafe

Waste Treatment Facility Responsibilities

1. use the Wastesafe processes and systems as intended without manipulation
2. comply with their Environment Protection Authority license & Sydney Water agreement.
3. ensure the site is safe for transporters, staff, Sydney Water employees and contractors who may be required to visit the site in relation to the Wastesafe program

Grease Trap Installation & Servicing

Servicing & Wastesafe

Sydney Water – EPA pressure

Sydney Water has discussed at previous HCAA meetings that they are currently experiencing difficulties meeting EPA requirements and are considering increasing the service frequencies to their clients to reducing the grease loadings to their systems.

This increase in FOG affecting Sydney Water infrastructure was advised as being a result of inadequate sized GA's, changing lifestyles (*Generation X& Y eat out*) and the emergence of the “Black Kitchen” (*catering for the high demand for home delivery*)

Grease Trap Installation & Servicing

Servicing & Wastesafe

Sydney Water – EPA pressure cont...

The following issues will occur should these approaches be taken.

At present there are >14000 licenced grease trap customers in the Sydney area.

- Increasing the frequencies could increase the volumes and required service levels significantly
- Increase costs to clients would result in new problems for contractors
- Current transport ability may not be sufficient to cope with a significant increase in service required
- Transport companies may need to grow fleet numbers
- Current treatment facilities would need to increase capabilities and EPA licence conditions to cope with increased volumes.
- Increase in treatment hours of operation would be required
- Higher water discharge to Sydney Water resulting in higher costs (*not a big issues as charges to clients would increase*).

Grease Installation & Servicing

Servicing & Wastesafe

Noise and Odours

All parties must ensure they comply with legislation relevant to noise and odours. The Protection of the Environment Operations Act 1997 (POEO Act) is the relevant legislation for the generation and control of noise and odours. The POEO (Noise Control) Regulation 2008 gives further regulation to noise generation, while the Technical Framework: Assessment and Management of Odour from Stationary Sources in NSW offers guidance on odour related issues.

Grease traps are often serviced outside of normal business hours. Transporters must make all reasonable effort to ensure that noise generated during a service is kept to a minimum.

If a grease trap is emitting excessively strong odours this can be a sign that the grease trap is not functioning correctly.

Grease Installation & Servicing

Servicing & Wastesafe

Housekeeping - Greasy Waste Generators

Housekeeping refers to good practice in and around grease trap areas. Good housekeeping is essential to ensuring grease traps can be serviced in a safe and efficient manner. Good housekeeping is primarily the responsibility of greasy waste generators and should be implemented as a matter of good commercial practice.

1. the area around the grease trap should be kept clean and tidy at all times - a transporter will refuse to service a grease trap if it is inaccessible
2. items should never be placed on grease trap lids
3. greasy waste generators must follow the manufacturer's guidelines while their grease trap is in operation
4. Wastesafe signs and/ or barcodes should be clearly visible and accessible at all times.
5. Only one barcode should be attached per pit

Grease Installation & Servicing

Servicing & Wastesafe

Grease Arrestor Rooms & Confined Spaces

Grease traps may be located in dedicated rooms inside a building.

These rooms are normally used when there is a lack of sufficient space outside the building or in other areas such as undercover parking or waste areas. These rooms should be mechanically or naturally vented to atmosphere to prevent odours entering the building and should also have adequate lighting. Rooms meeting these criteria along with **safe access/egress** are generally considered **a place of work and not considered confined spaces**.

If it is necessary to enter the grease trap itself, by descending a ladder or step irons (or any other means of entry), this is considered as a confined space and should be treated accordingly.



Halgan End to End

Design , Manufacture, Supply, Service & Treatment

Halgan Service

At Halgan liquid Waste, we are extremely loyal to our customers. For this reason, we offer best post sales service and warranty for our grease traps.

Being the manufactures, we understand our products and make sure our grease traps are serviced in a way that maximizes their performance.

We offer a 7-year warranty on all our products. This is increased to 10 years the moment you sign up for a service contract with us. We also offer you 25% off your first service when you sign up with us.

Halgan Treatment

Our soon to be installed Treatment Plant at Wetherill Park will be a show piece, both functionally and aesthetically. It will be a state-of-the-art facility, custom designed, utilizing patented technology to achieve the highest quality standards. It will operate in compliance with Sydney Water “Wastesafe Program” and EPA requirements.



Questions

