# Abrimix SSF Effluent Separation

## SSF System

Generic Full Reuse Recovery option is presented in this document. Some items will be excluded depending on the client's needs.
There are multiple addons available for the system such as SMS notifications, laptop software monitoring, all at additional costs to the client.

We have a mobile unit which can service 10m$^3$ per hour, where we require 5 days workings, charged for upfront, then per day after 5 days. When successful, the main plant is paid for and purchased within three months of testing.

If we are unable to achieved the set criteria for the client, there will be a full refund of monies spent for the test unit time on site.

**Technology Overview:**

**The Abrimix SSF** plant is a proven, patented technology that effectively separates suspended solids from wastewater producing water suitable for reuse in non-critical applications, or for upgrading to potable quality.

The proprietary mixer, developed by Abrimix, generates high intensity mixing and is coupled with compressed air and selected reagents within a pressure environment to rapidly separate suspended solids from water. The high shear mixing effect allows for cost-effective reagent utilization and the creation of highly dispersed micro bubbles.

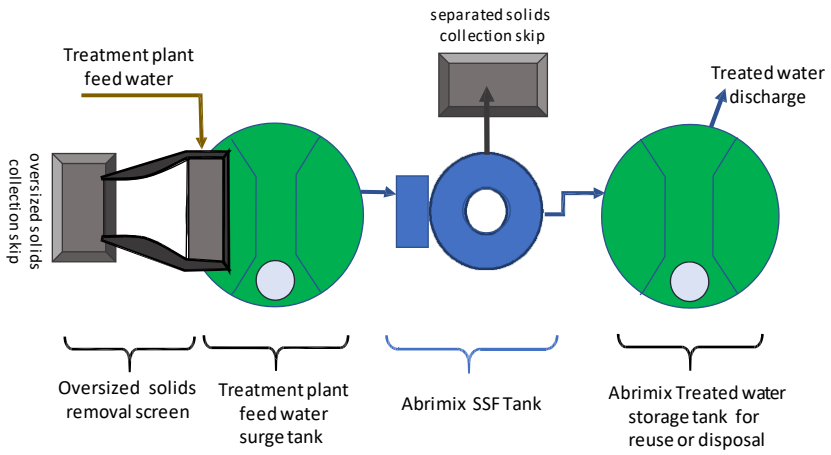



**Figure 1 - Typical layout of SSF plant**

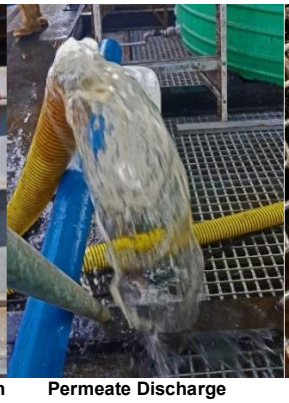
The main benefits provided by the Abrimix SSF plant are:

- Ease of operation, adjusting automatically to accommodate variable water qualities
- Enhanced reaction speeds separation, reduces reagent uses shorter process time
- Robust and versatile in variable water contamination qualities to be treated.
- Produces a treated water quality continuously that can be considered for reuse.

## Abrimix Live pics:

Raw Effluent

Permeate Offtake Comparison



Permeate Discharge

Post Treatment

Dry Effluent Top Exit

Dry Effluent in Bin

Dry Effluent being held to show consistency

Probiotic Enriched Effluent & Permeate Water can be used for resale for fertiliser or animal food processing.

## Proposed Solution

The proposed complete water recovery solution consists of an Abrimix SSF wastewater treatment plant followed by an AFM & RO filtration solution ending with Calcium Hypochlorite sanitization.

To ensure that the treatment costs are kept to a minimum the recommended production practices need to be monitored and identified issues rectified where required. Any noticeable consistent, continuous change in the quality of the wastewater for treatment will influence the cost of treatment.

### Operation

The SSF plant will operate continuously until the surge tank reaches the low-level set point where after the plant will switch off. The plant will restart once the level within the surge tank has reached the pre-determined level to commence with treatment of the wastewater again. The plant will operate for as long as the levels within the collection tank remain between the two predetermined set levels.

To ensure that the treatment costs are kept to a minimum the following production practices need to be monitored and rectified where required:

- That Spillages within the Abattoir process plant that could contribute to increased contamination are kept to a minimum (the aim thereof to keep operational costs down).
- That the plant only operates during the prescribed operating periods to remove the suspended solids and contaminants from the treatment plant supply water tank.
- That unnecessary solids addition is prevented from entering the feed water stream resulting in a direct increase in chemical consumptions occurring from the increased solids /contaminant concentration loading resulting there from.
- That the identified Abattoir disinfection / cleaning chemicals, known to increase the wastewater treatment costs, be replaced with products that do not contribute to the elevated treatment costs in producing the required treated water quality.

Any noticeable consistent, continuous change in the quality of the wastewater for treatment will influence the cost of treatment.

**Collection Sump**
The Abattoir's wastewater will flow into a collection sump from which the wastewater will be pumped into the SSF treatment plant where the first step is removal of oversized solids.

**Pre-screening**
The wastewater pumped from the abattoir must discharge the wastewater over a suitable screen to remove all oversized solid particles larger than, > 0.5 mm, as this is the most economical method to remove large solids from a wastewater stream. This screen can be required from Biologik.

**Wastewater pre-conditioning and surge tank (to be supplied by customer)**
The screened water then flows directly into the pre-conditioning and surge tank with an agitator where the water is held before being pumped to the SSF tank. [This can be on or two tanks, as desired by the customer – volume to hold 1hour of plant average flow.]

**SSF modules**
The screened water from the pre-conditioning and surge tank is pumped through the SSF reaction enhancer (Modular to allow for plant increases), with the required reagents [Coagulant Example : Abfloc 102, Flocculant Example: Abfloc 250] dosed into the line feeding the SSF tank to allow for the required contact, mass transfer and separation of the organic suspended solids. From here the water is discharged into the SSF tank to allow for the agglomeration and separation of the organics and contaminants to take place. Within the SSF tank the solids concentrate, dewater and overflow into the solid's separation launder for removal with reduced moisture content.

There are two discharge streams from the SSF tank:

- The treated clear water with <5 mg / litre suspended solids and TDS, depending on cleaning regimen, of between 2,000mg/l and 6,000mg/l. a. Please consult with us if further TDS reductions are desired
- The separated solids, with reduced moisture, for disposal or further use.

**Probiotic Treated Water storage tank (to be supplied by customer)**
The treated water from each SSF modules will be discharged through a monitoring station with an automated 3-way valve to divert any non-compliant water back to the pre-conditioning tank. The treated water storage volume may be determined by the customer, but recommendation is no less than 12hours of average flow.

**Solids Collection Skip (to be supplied by customer)**
Solids discharged from the SSF modules needs to be collected in a vessel for further processing.

**Instrumentation and system controls**
All instrumentation (e.g. level switches, quality monitoring instruments, etc) and controls needed for the plant to operate will be supplied along with the modules.
The Abrimix SSF system proposed for you can have has several water quality monitoring and control measures included to ensure that the treatment not only produces the desired discharge quality but does so as cost-effectively as possible. The monitoring and controls are split into the different sections of the system and described below:

Raw Water
The raw effluent discharged from the abattoir is screened (>1mm solids removed mechanically) and fed to a pre-conditioning/surge tank. At this stage water is monitored for:

- pH
- pH is controlled
- Flow rate
- Volume (level sensors in the tank)

Feed Water
The pre-conditioned water pumped from the pre-conditioning/surge tank is monitored for:

- Turbidity (suspended solids loading)
- Conductivity (dissolved solids loading)
- pH

Treatment Chemicals / Reagents
The volume of chemicals and reagents in the makeup tanks will be monitored for:

- Volume (level sensors in the tanks)
  - a replenishment notification to on-site operators and remote monitoring
  - a low-level alarm to on-site operators and remote monitoring

Treated Water

The treated water discharged from the SSF system is monitored for:

- Turbidity (suspended solids loading)
  - Any water exceeding the set-point for turbidity will be returned to the surge tank via an automatic three-way valve.

An alarm will notify both on-site operators and remote monitoring station of the incident

- Flow rate
- Conductivity (dissolved solids loading)
- Total Organic Carbon (TOC)
  - Levels will be monitored, baselined and then controlled for spikes with any water exceeding the set-point for TOC returned to the surge tank via an automatic three-way valve. An alarm will notify both on-site operators and remote monitoring station of the incident

**Treatment Chemicals / Reagents**

The volume of chemicals and reagents in the makeup tanks will be monitored for:

- Volume (level sensors in the tanks)
- a replenishment notification to on-site operators and remote monitoring
- a low-level alarm to on-site operators and remote monitoring
- Treated Water

The treated water discharged from the SSF system is monitored for:

- Turbidity (suspended solids loading)
- Any water exceeding the set-point for turbidity will be returned to the surge tank via an automatic three-way valve.
- An alarm will notify both on-site operators and remote monitoring station of the incident
- Flow rate
- Conductivity (dissolved solids loading)
- Total Organic Carbon (TOC)
- Levels will be monitored, baselined and then controlled for spikes with any water exceeding the set-point for TOC returned to the surge tank via an automatic three-way valve. An alarm will notify both on-site operators and remote monitoring station of the incident

**TDO Organics Media Filters & Disinfection**

The media filters are placed after the treated water storage tank. Pre these media filters, is an injection point for additional fresh probiotics to digest the dissolved organics caught in the filter. These filters, due to non-frequent backwash requirement (2 weeks to a month) are manually operated to save unnecessary costs. The backwash water from the filters will reintroduce back to the inlet of the SSF system for no losses in probiotics or water.

**Splitable Units for easy maintenance, cleaning and made in fiberglass for durability**

Post the filters we add the Bio Swirl Calcium Hypochlorite dosing system, to disinfect the low pH polished water supplied into the raw water holding tanks. The calcium in the calcium hypochlorite in addition to disinfection, also remineralization of the permeate so an additional favourable cost saving.


**Newly Patented Model**


**Citrus Disinfection**

**Potable Water**

**Disinfection Poultry Carcass Wash, Scolding, Chilled Water & Factory Surface Cleaning**

**The AFM+RO Plant** offers an impenetrable barrier to suspended solids, colloidal matter and bacteria. It is an essential process step to guarantee the high rejection rates of contaminants that are unsuitable for downstream processes. Calcium hypochlorite has been selected for disinfection. This method ensures a free chlorine residual in the system for storage purposes and prevents formation of a biofilm which can negatively impact the downstream piping and processes. The system is designed to recover water to SANS 241:2015 potable standard in line with ISO and WHO guidelines.

Activated Filter Media, (AFM®) is a direct replacement for sand in any type of rapid sand filter. Simply replacing the sand with AFM®, will greatly improve performance and stability of the filters. AFM® does not channel, so unfiltered water will never enter the product water, and because of this engineered property the security of the water supply is assured. A solution to a difficult problem achieved with no change to the existing infrastructure, and once AFM® is in the filters, it never needs to be changed.

Benefits include:

- **Lower running costs & better performance** – AFM® filters at least 30% better than sand and 10 times better at removing sub 5-micron particles (independently measured by IFTS). A return in capital can be expected within two years
- **AFM® will last for the life of the filters** – should never need to be changed (sand replacement is normal every 3-5 years)
- **Lower consumption of chemicals** – AFM® performs better than sand, so less flocculant is needed (up to 40% saving) and the product water has a lower chlorine oxidation demand, (up to 80% less chlorine)
- **Lower disinfection by-products** – AFM® will reduce harmful disinfection by-products (THM's) because we use considerably less chlorine
- **Bacteria removal** – AFM® is the only filter media able to consistently and reliably remove Cryptosporidium, Giardia, Vibrio Cholera and Legionella bacteria from water, which are known to be the source of sickness and sometimes death in millions of people worldwide
- **Ferric, arsenic, chromium, lead & manganese** – AFM® is the perfect filter media for the sustainable control of heavy metals and metalloids
- **Priority substances** – AFM® will effectively remove some priority substances. Pre-treatment research is being conducted to enhance the performance and expand the range of priority substances that can be removed

## Applications are wide from municipal to industrial treatment

AFM® is the chosen filter media in more than 100,000 installations around the world including:

- Municipal drinking water plants, ground water and surface water
- Municipal Sewage Treatment Plants, tertiary treatment of effluent
- Salt water desalination, pre treatment prior to membranes
- Industrial users
    - Petrochemical & Chemical , provision of clean water and removal of oil
    - Pharma & Bio-chemical
    - Food & Beverage producers
    - Textile

- Aquaculture
- Swimming pools

**What makes AFM® so effective?**

1. We use predominantly green container glass as it has the correct chemical and structural properties for our activation process.
2. Particle shape and size distribution are critical for the best fluid hydraulics and solids retention. For example, solids can easily push their way through glass bead filter media but with a sub-angular AFM® media, the grains lock together to prevent the solids slipping through.
3. The AFM® activation process increases the surface area available for adsorption by 300 times to over 1,000,000 $m^2/m^3$. This means 300 times more surface area for the adsorption of dissolved organic pollutants. The huge surface area coupled with the electrostatic attraction of the negative zeta potential makes AFM® the best filtration media for potable water treatment.

**Figure 2 - Typical layout of AFM&RO plant**

**Pricing Basis**

This quotation are firm for a period of 30 days and subject to standard SEIFSA escalations and confirmation, during the period leading up to the placement of the order.

All prices quoted herein are exclusive of VAT, duties, taxes, transportation, delivery, clearing, customs and any other costs associated over the cost of the equipment and consumables – these are all for the clients account.

**Equipment Rental**
The proposed system can be installed at our cost based on a monthly rental contract wherein we will operate and maintain the plant on behalf of the client. The service fee would include a fixed (capital, interest, & license) and variable (operating cost) component. A 30% deposit for this is required. Payback time is 5 years. This option is only for South Africa Clients. For export clients, please request further to try facilitate terms.

**Contract Price adjustment**
The prices quoted herein are subject to review on the anniversary of the commencement date of this agreement.

**Delivery period for ordered equipment**
The delivery period is 20 to 24 weeks after receipt of the payment and signed contracts, to be confirmed upon order placement.

**Conditions of supply**
Equipment manufacture, and supply will take place once the necessary agreements have been entered and the payment terms outlined below have been met. Ideally 95% upfront is required.

- Deposit: 90% of the cost of the plant supply value on placement of the order to trigger manufacturing
- Balance of 5% to be paid on notification of readiness to ship to trigger delivery, installation, and commissioning.
- The remaining 5% to be paid once the plant has been installed and commissioned on the client's site.

If for any reason the onsite installation and commissioning of the plant is delayed, then the client is required to pay the outstanding 5% and USD $ 5000,00 per day, upfront pre that day.

**Abrimix SSF IP License fee**
The Abrimix technology utilized in the separation of the solids from within the wastewater belongs to Abrimix and is never sold. To enable Abrimix to install the Abrimix Technology into the Clients Abattoir recommended treatment plant, the following requirements need to be agreed to and met:

- The acceptance and signing of the Abrimix confidentiality agreement.
- The acceptance and signing of a service level license agreement for a period of no less than five (5) years, automatically renewable.

**Plant and equipment guarantee**
All plant manufactured equipment and workmanship will carry a standard 12-month warranty, with all procured plant components warranty as prescribed by the suppliers of the equipment installed within the treatment plant.

**Service Level Agreement**
A service level agreement (SLA) is a mandatory part of the ongoing operation of an Abrimix SSF plant. A range of SLA's are offered and commence upon completion of the installation and commissioning of an Abrimix SSF plant. During commissioning of the treatment plant operators will be trained and the optimum operating settings will be determined ensure consistent and continuous treatment.

The minimum service level offered [included in the *proposed scenario* operating cost calculation] is a monthly visit to support the client appointed operators and confirm that they are operating and maintaining the plant optimally to ensure that the waste water process and plant is operating correctly and effectively. The requisite reagents are also delivered during the visit and a date agreed for the following visit.

The maximum service level agreement is a full operation and maintenance (O&M) contract against a set discharge requirement. The price of a full O&M contract is available on request.

In all instances outside of a full O&M SLA, Abrimix will train the client's appointed operators and monitor the operator's performance on agreed SLA visits and implement retraining when required, to ensure optimum operation of the plant is always maintained.

These costs are for the client, or added into the agreement.

**Reagent delivery**
All prices quoted for the supply of the recommended reagents are to a local delivery address and are exclusive of fuel levy increase and decrease, exchange fluctuations, shipping increases, and the like, adjustments made on placement of the order, should the increase /decrease in fuel price be greater than 10%. This variance in delivery cost will be subject to fuel cost increase / decrease variation every time an order is placed for delivery at the time of order placement for the products to be supplied.

**Plant First Line Spares provision**
A list of recommended first line spares for the proposed equipment will be supplied with the system. Similar plants operating have operated with minimal downtime for maintenance and repair requirements as the identified and implemented equipment has been chosen for its robustness and durability to ensure reliable continuous operating.

**Design life**
The proposed plant has been designed for an operating life of 20 years or more for as long as the necessary equipment component maintenance requirements are maintained and adhered to.
The equipment utilized, components are readily available in South Arica and over the counter.

The efficient and cost-effective use of the recommended system is dependent on:

- The maintenance of the feed water pH between a range of pH= 6.8 and pH = 9.5. If this should vary outside either pH, then an additional step would be required to rectify this pH variance.
- Reagent consumption is directly related to the volume and contamination levels of feed water treated as there is a direct relationship between product consumption and contaminant / suspended solids loading contained within the wastewater. Thus the % solids concentration removal process will have a direct influence on product consumption and cost of treatment.
- Any plant disinfection / cleaning chemicals utilized that have been identified to cause problems in the treatment process should be exchanged for products which will not cause problems.

**Generic Monthly Plant Reagents & Consumables:**

Abrimix has sourced and identified the most cost-efficient polymer blends to use for the effective agglomeration and separation of an Abattoir's highly variable quality potable and discharge water.

The treatment cost quoted has been calculated based on the provided flow rate. Biological and chlorine products are costed in this proposal

Ab 1002
The Ab 1002 product is a specially formulated coagulant which is dosed to assist in ensuring the ultra-fine organic and inorganic suspended solids are captured and removed from the wastewater to insure a clear suspended solids free treated water.

Ab 2050
The Ab 2050 product is a specially formulated flocculent blend which is GRAS (Generally Regarded as Safe) compliant and added to assist in agglomerating the separated solids which also aides in the effective dewatering of the concentrated solids before discharge from the SSF.

Bio FOG 5kg, 220g, 1kg
Upstream Probiotic slow release to buffer reductions of FOG in the system, with additional benefits of clean systems, probiotic enriched sludge, odour reduction, environmental safety and other.

Bio WWT 5kg
Upstream Probiotic slow release to buffer reductions of FOG in the system, with additional benefits of clean systems, probiotic enriched sludge, odour reduction, environmental safety and other.

Bio Fizz 20kg
Upstream Probiotic shock dosing in drains as far upstream as possible to buffer efficiencies of FOG in the system, with additional benefits of clean pipes and reduced requirement for drain cleaning.

Bio Floor and Surface 25l
Dosing pre organic filters to accelerate Dissolved Organics digestion.

Bio Odour Mist 25l
For Broiler misting systems.

Bio B10 Chips 62% 25kg
Disinfection post for Potable Water, High Chlorine washdown & Surface cleaning and Organic filters for reintroduction.

ASR HCL 30%
For pH correction at various points

ASR Genesis Surface Sanitizer 20x
Used for vehicle cab spraying, office misting,

Aluminum Sulphate liquid (25L) and or Coagulant (25L)
Products for cleaning the dirt in the water for potable use

The above consumables are dosed in accordance with flow and raw water quality through the plant to keep a constant balance.

## Note:

### Abrimix SSF Intellectual Property

Other than the information contained in this quotation, all other drawings, tools, procedures, inventions, trade secrets, patents, patent applications, know-how, show how, trademarks, and other confidential and proprietary information ("Intellectual Property") furnished by Abrimix shall remain the property of Abrimix and all Intellectual Property made, conceived or developed by Abrimix incidental to the procuring and/or carrying out of the order will vest in and inure to Abrimix's sole benefit. Nothing in the order shall grant or be construed as giving the Client any rights or interest with respect to the Intellectual Property.

# Other Technologies for Add-On

## Potable Water

### Water Treatment Plant Auto / Semi Automated:

Our Water Treatment / Purification Programs are one which is of an international standard with regards to Equipment supplied, Installation and breakdown assistance

Our Treatment Plant offers an Automated System designed to remove contaminants and filter impurities / dirt from the water as well as chlorination and pH. control (recommended). The system also services automation for low and high levels on tanks to protect pumps.

**Plant: - Basic example of plant real life built from the ground up.**

The Treatment Plant Package consists of:

- Fiber Glass Floc Column, Fiber Glass Clarifier, Fiber Glass Settled Tank, Fittings, Valves, Saddles, Pipes, Clamps, Connectors, Bolts & Nuts, Adaptors, all materials required, Labor, Travel, Installation, Transportation Equip to Site, Commissioning Costs all to specified battery limits. Backwashing will be manual.

Pumps:

- Filter: 1 x run and 1 x Standby for Filter Water Feed (Backwash allowance), include pump plates) (Raw: 1 x run and 1 x standby for raw water supply (excl cable)

Automatic floc reader and dosing system:

- Controller, Floc Detector, Floc Tank, Dosing Pump associated pipping

ORP Controller with probes and components:

- Controller, Probe, Probe Holder, Tubing

Automatic pH Controller and dosing system:

- Controller, Probe, Probe holder, Calibration Solutions, Acid Tank, Dosing Pump, Tubing

Disinfection:

- Calcium hypo chlorination unit with frame for final treatment of potable water

Control Levels:

- Level control systems, control panel & cabling

Filtration:

- Dual media, Manual Valve System with Incorporated Backwash Facility & Under Drains, Filter

Raw Supply:

- Raw water & Dam Water pumps stations, panels, pumps, flow controls

.

# Disinfection - Chlorination, pH and ORP:

Our systems use Calcium Hypochlorite Tablet technology is designed for ease of replacement, safe to use and store effective. Calcium Hypochlorite will also assist in the addition of calcium to the potable water, which has associated health benefits, and a sweeter taste than other chlorines.

Our units will remove microbiological contamination, any foreign radicals (e.g. E-Coli) as well as oxidize small quantities of dissolved minerals. The pH of the water is critical. If it is not maintained between min 6.2 and max 6.9 then **NO product** will operate efficiently.

The correct course of action is required in order to maintain these levels such as a pH controller.

This form of chlorine is also used in the Citrus / fresh produce packing facilities for rinsing, as well as irrigation systems, together with carcass rinse areas, meaning it is also safe for use on site for irrigation purposes.





# Chlorine – Food Product Disinfection and Surface Rinsing


Newly Patented Model


Citrus Disinfection

Potable Water

Disinfection Poultry Carcass & Surface

**Mechanical Equipment:**

This includes but not limited to: High Chlorine: Chlorination Dispensers, 5000l Low Profile Tank, , Pumps, Piping, Valves, Fittings, Electrical cables, Electrical Panel, Hydraulic Automation, level control, Auto pH control and separate ORP control both consisting of the following - (Controller, probe, cabling, sample pot, tubing, injection points, no flow stop), all to battery limits, labor, travel installation, training.

**Suggested to be done by Client:**

- Walking ladder with loading framework platform for staff to load unit's safety
- Internal piping standalone network in the facility to be done in HDPE. Be aware hot water areas may require stainless steel
- Bunded area / control enclosure (barrier so staff cannot gain access to this area)
- Roofing / environmental block out

**Exclusions:**

- Monthly Servicing
- Power cable to our panel
- Piping to our system, and from our system to the facility
- Civils if required
- Slab adjustment
- Enclosures

**Consumables Required in house:**

- Handheld pH and ORP probe combo
- Chlorine test strips to 200ppm
- ORP Buffer solution
- pH 4.0, 7.0, 10.0 buffer solutions
- Cleaning Soaps / Degreasers

**Please note we use high quality automation equipment for our products automation and control, not cheap knock offs.**

## General Exclusions for Abrimix SSF, Potable Systems and Disinfection:

Exclusions and or Battery Limits for this Project (to be furnished by customer):

- Utilities to the plant location (Water and power 400V 3 Phase).
- Treated water collection tank and discharge point
- Separated, moisture reduced solids collection container
- Roof, side walls and overhead shelters.
- All civils (slab, bund wall, spillage sump, foundation preparation, etc)
- Spillage sump pump
- Plant lighting.
- Monthly Consumables
- Insurance of equipment during transport to customer's site
- All holding tanks for wastewater & treated water
- All solids holding containers and transfer to customer's rendering plant
- Accommodation meals and transport for commissioning engineers, 4 people excluding labour (require approximately 3 weeks).
- All offloading cranes
- All civils (slab, bund wall, spillage sump, foundation preparation, etc), (detailed drawings to follow)
- Utilities to the plant location (Water and power 400V 3 Phase).
- Spillage sump pump
- Plant lighting
- Electrical supply to panel, possible mounting frames, tie ins to existing pipework
- Insurance of equipment during transport to customer's site
- All holding tanks for wastewater & treated water
- All solids holding containers and transfer to customer's rendering plant or the like
- Accommodation meals and transport for commissioning engineers, 4 people excluding labour (require approximately 3 weeks).
- All offloading cranes
- All civils (slab, bund wall, spillage sump, foundation preparation, etc), (detailed drawings to follow upon acceptance and down payment)
- Utilities to the plant location (Water and power 400V 3 Phase).
- Spillage sump pump
- Plant lighting
- Piping, electrical, frames, tie ins to existing pipework.
- Running raw water pipework to plant slab.
- Piping between existing equipment's, tanks, concrete chambers
- Throwing of reinforced slab deep
- The piping allowance (24m) is costed for up to the final tank from filters including the piping allowance for the chlorination system.
    - Should this battery limit be further, this will be billed for accordingly, This also applies to the level control cabling and controls.
- Electrical work and cable running to treatment plant panel
- Pump station civils, and cabling to these points
- Fencing around plant roof structures if required etc.
- Civils and trenching
- Buildings and structures.

Exclusion to Service contract and consumable supply:

- Costs for water testing
- Increases in economic environment, including but not limited to, fuel, exchange rate, accommodations, salaries

Any of the above listed exclusions may be included in our scope of supply on request with the cost to be confirmed after a site visit by our engineers.

**Please Note**: The above price does include for deliveries use of the various consumables on the estimated consumable use average. Any additional consumables, or overuse due to increase in production, or addition of use in consumables in other areas is for separate supply and is for the customer's account and
replacement especially stipulated for peak season usage. Abrimix is the approved distributor of Truewater and ASR Oils products.

**Please Note**: Any equipment replacements or repairs or excessive consumable use due to increased use via expansion or where it can be seen through human error, otherwise neglect, tampering, or lack of staff interest after training and a callout is required thereafter to rectify any situation, that may arise during the period of warranty or time thereafter is not included for and will be billed for and for the customer's account. However, they will be dealt with on an as needed basis with prior consultation. This of course is dependent on if it can be seen that equipment and chemicals have not been misused with

unfair wear and tear.

**Please Note**: Manufacturing frames, powder coating as well as acquiring other components can take as long as 3 - 6 weeks, depending on engineering company's discretions. They will be ordered as soon as the order and payment is presented. Specialized blends require 2 weeks' notice prior to delivery on probiotics.

**Guarantee:** The equipment supplied by Abrimix of distributor items is guaranteed for a period of Contract or for 12 months and this is provided that the plant is operated in accordance with standard instructions and is not subjected to unfair wear and tear and human neglect or misuse. Also applied to this is natural disasters, lightning, load shedding

**Escalation of prices:** All prices quoted are firm for a period of 30 (thirty) days, calculated from the date of this quotation.

**VAT:** Please note that the prices quoted do not include 15 % VAT.