Background

Barwon Water and Colac Otway Shire Council are partnering with the Forrest community to investigate opportunities for wastewater improvements in the township.

This partnership acknowledges the growing role tourism plays in Forrest and the regional economy, and the increasing stress this may place on existing wastewater systems in the town.

External consultants Decentralised Water Consulting and Kernow Environmental Services have been appointed to support the project with technical studies and a detailed wastewater audit of the town.

Wastewater audit results

Colac Otway Shire Council undertook an audit of the performance of all existing onsite wastewater systems in Forrest in October 2017, as a first step in the wastewater options investigation project. The results are below:

Risk	Description
High	Systems that are non-compliant and result in offsite discharge of both Black water and Grey water and are not serviced, water tested or desludged
Medium	Systems that discharge only grey water offsite and may retain black water onsite and are not serviced, water tested or desludged
Low	Systems that are retaining waters onsite but require servicing or desludging and have minor non compliance

Risk Rating	Numbers
High	39
Medium	21
Low	31
Unknown	20
OHS	12
Total audits conducted	**113**

Key findings

- A large number of properties are not retaining waste water on site and are discharging to the environment (i.e. drains or waterways).
- A large number of systems appear to have been altered and/or installed without Council approval and do not meet regulatory requirements.
- A large number of properties are not undertaking service/ water tests or desludging of systems, resulting in the failing of disposal fields.
- Buildings constructed over existing treatment systems are significantly impacting the ability to service, desludged and maintain them.
- Increasing levels of tourist accommodation and commercial activities is resulting in over loading of existing systems at peak times of the year.

The audit findings will assist discussions with the community about future wastewater treatment solutions for the town. They reflect local feedback that effluent waters are draining through the street network and result in an unpleasant odour, and reinforce the need for authorities to examine ways in which to address the problem.

There has been a perception that current problems are caused by a small handful of commercial businesses in Forrest, however these results confirm that it is a more widespread issue involving most residential properties

Next steps

Short term - Council's Health Protection Officers to follow up on those systems that have potential to pose a significant risk to public health or a public nuisance.

Long term – No immediate long term action will be taken while the wastewater project is in progress. This is because this project will look at a range of options and alternatives to the current situation, which could include community wide reticulation and treatment of effluent.

What the community has said to date

During the latter part of 2017, we ran a workshop and survey to better understand:

- the scale of the issue
- community views on a wastewater solution
- what needed consideration

The main findings included:

Concerns about nearby rivers being polluted, particularly after major increases in population (visitors).

Cost of any wastewater option / proposal needs to consider in light of affordability and impact.

Shortage of public amenities such as public toilets

Ensuring the town can manage surge periods of tourists.

Any option or proposal should try and be alternative to traditional sewerage systems.

Concerns with bad smells, polluted environment and risks to public health

Protect the leafy green / country feel and natural landscape of the town.

There is a wastewater problem and something needs to be done to fix it.

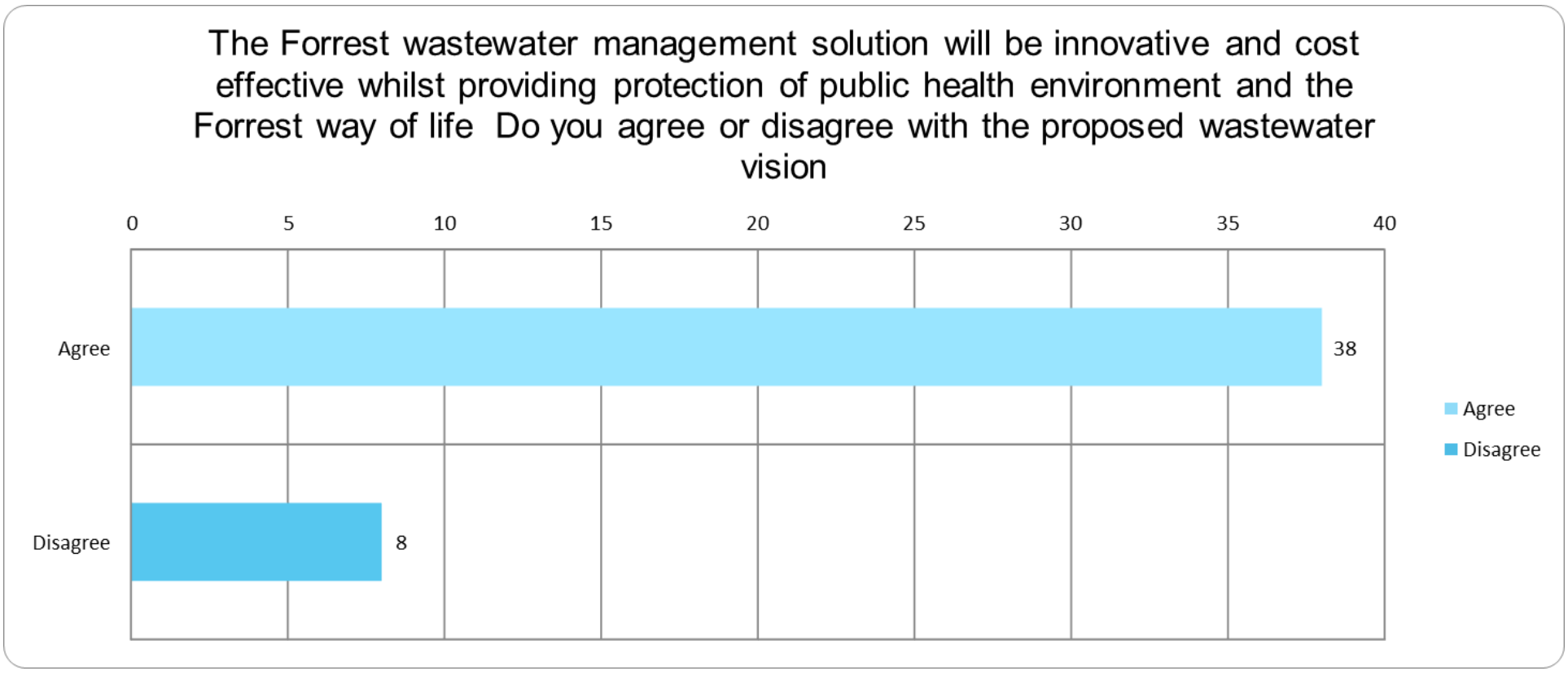
What the community has said to date

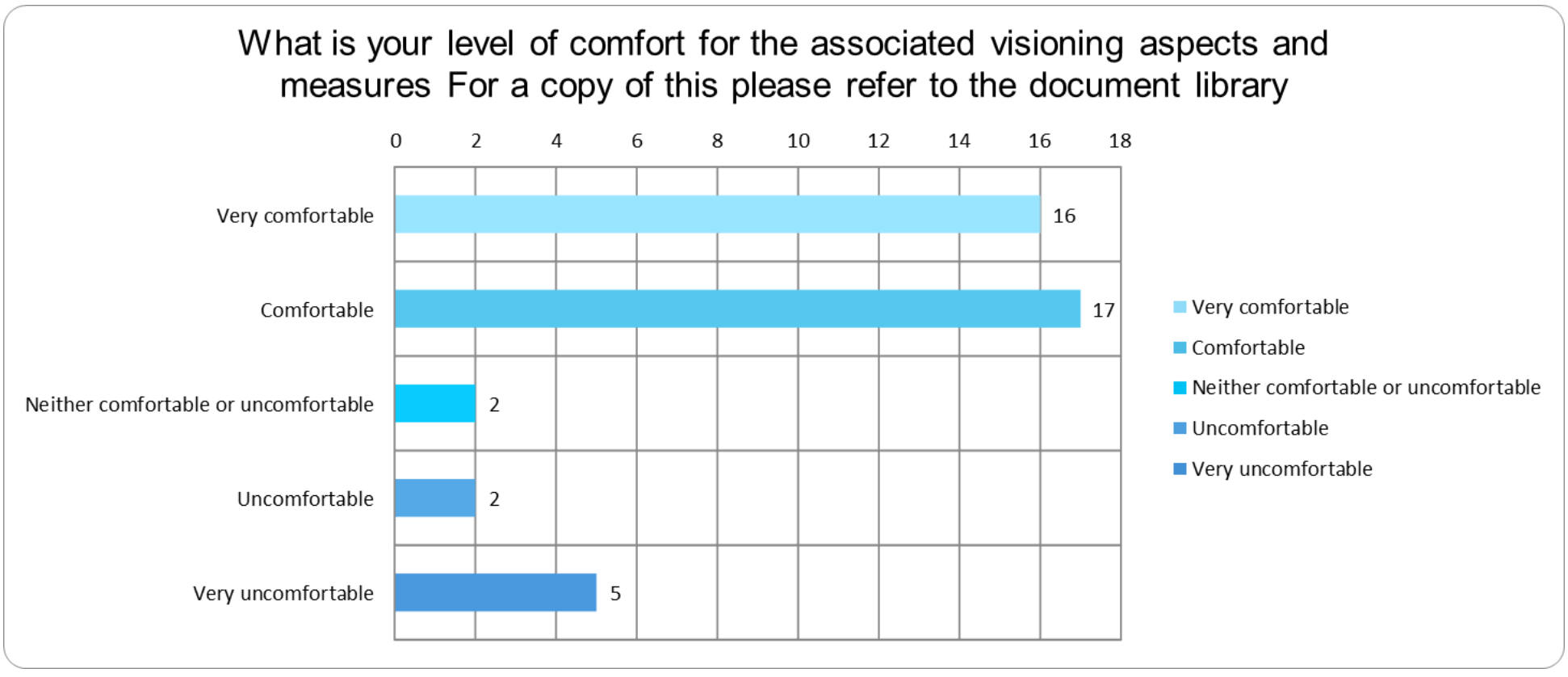
Since mid- February, 2018 the proposed wastewater vision and associated aspects has been open for community feedback.

50 surveys were completed online and returned through the mail.

The majority of the responses agreed with the proposed vision and comfortable with the associated aspects and measures for the vision.

The wastewater options and solution will be developed and assessed against the vision and associated aspects, this will be shared with the community.



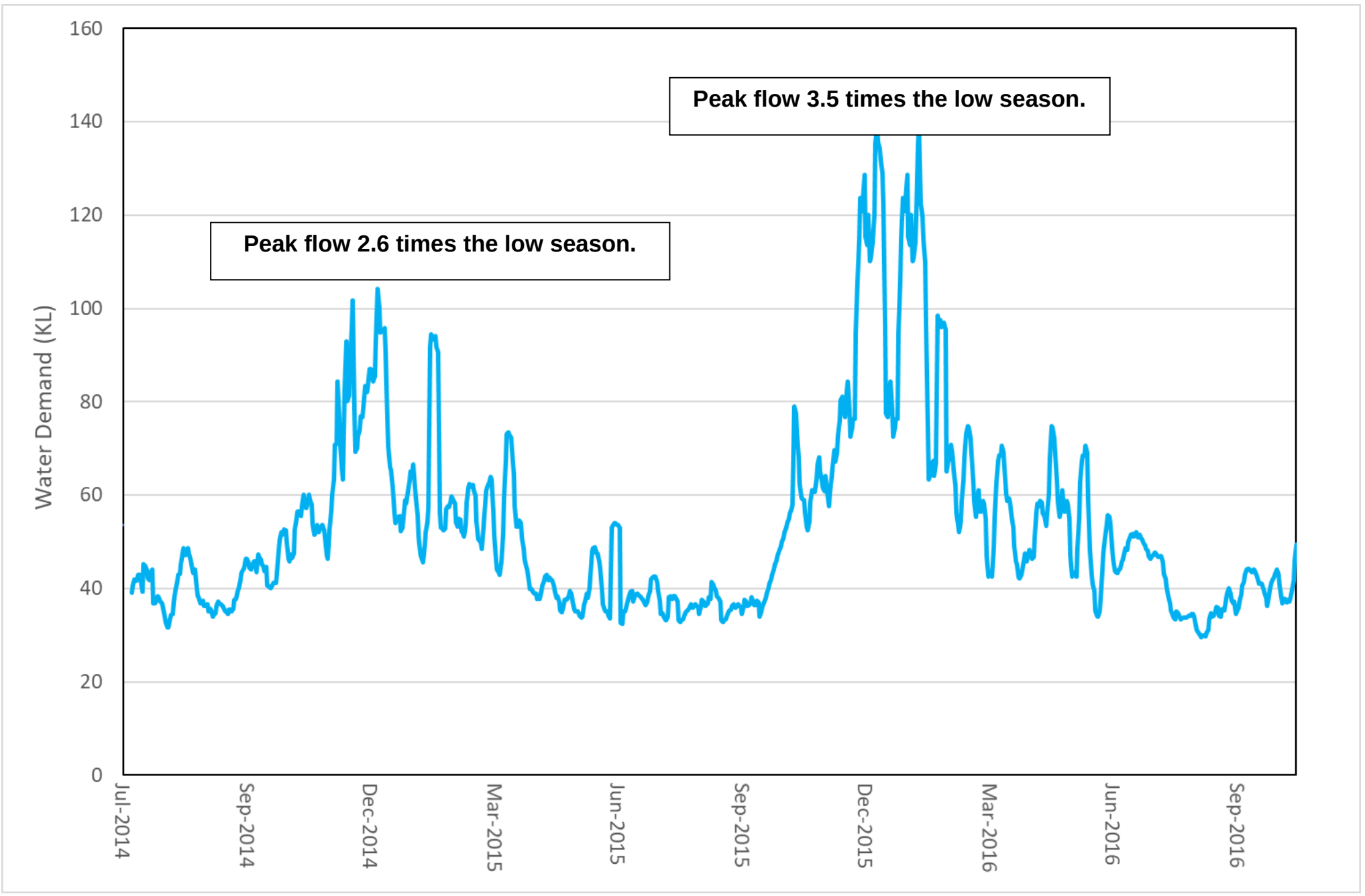


Managing seasonal visitors

An important component of the investigation is managing seasonal visitors to Forrest.

Seasonal visitors could include tourists passing through the town on the way to other destinations or those staying for extended periods.

Water use data from Forrest shows a significant seasonal over the summer period as well as an increase on weekends due to tourist activities.



Most standard wastewater management options are not designed to deal with this level of fluctuation over a short period.

Seasonal visitors also typically use more water than permanent residents. This can make temporary overloading of wastewater systems worse.

One option for reducing this impact is the use of low flow / water efficient fixtures and guest education.

Managing seasonal visitors

Significant community feedback has been received regarding the lack of public amenities (toilets) in Forrest and the dependence on older, undersized septic systems to manage peak seasons and visitors.

Any wastewater solution for Forrest will consider options for improving the availability and performance of public amenities during peak tourist periods.

Another option (especially for commercial and public facilities) is to install flow balancing systems.

They help spread the peak volumes out over days and even weeks. This means infrastructure does not need to be designed to manage peak seasonal loads.

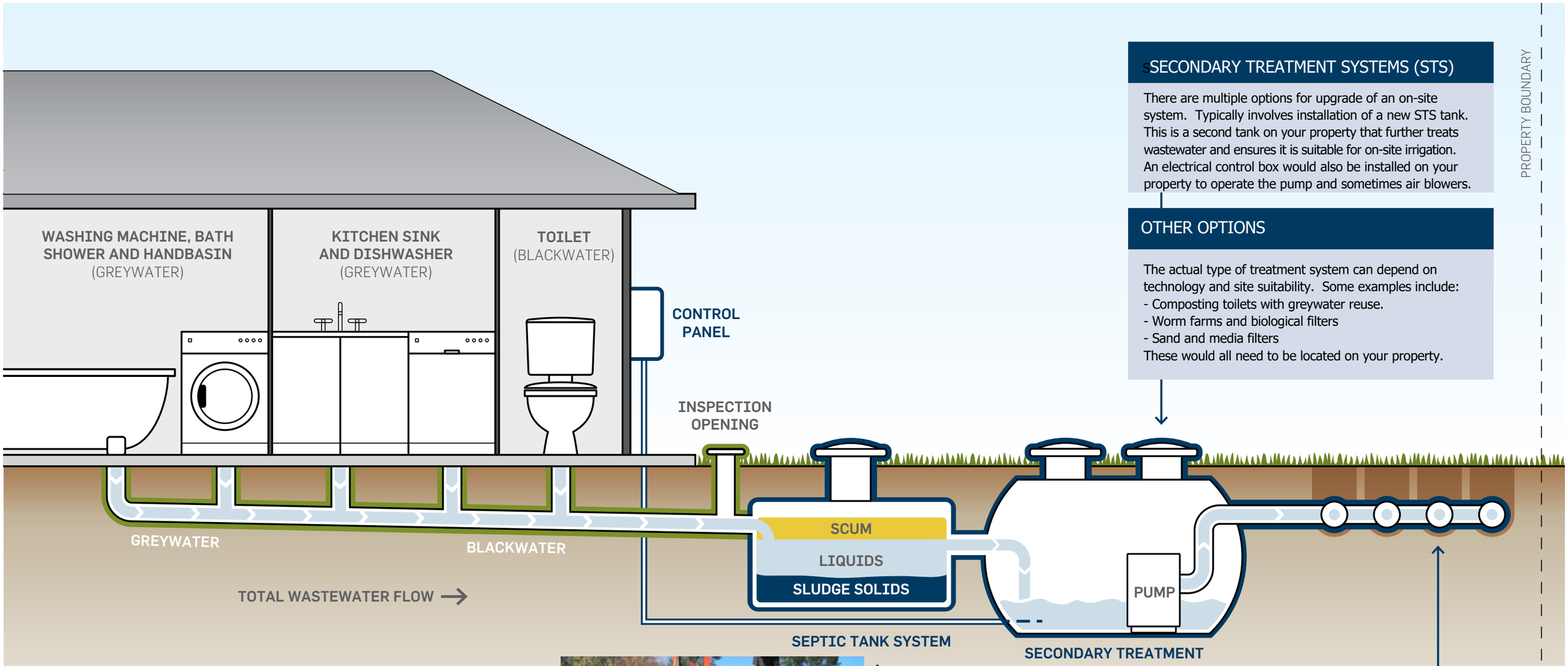
Do you think the town needs additional public toilets? If so, where?

Comments from session on Sunday April 29th

Old Forestry Commission building site (opposite MBT trails)
Yes at the hall or caravan park
Yes at the hall
Yes, main street, near businesses or town hall
Yes. Upgrade/extension of the hall toilets are only viable option in centre of town.
New toilets further up Grant Street would not get used.
Definitely - anywhere.
Located in the main street (Grant Street) near the main businesses (shop, brewery etc)
Public toilets located at the hall / upgrade current toilet infrastructure and access
Yes in the centre of town!
At the hall and available 24/7
Yes, centre of town
Definitely - preferably on the main street but anyway where that's well lit, sign posted and open 24/7, and maintained / cleaned frequently.
Public toilets at hall. Should be 24 hour access, upgrade system to cope.
Yes centrally
Yes on the main street
A no brainer! Of course the needs public toilets in main street and decent amount of toilets.

UPGRADES TO EXISTING ON-SITE WASTEWATER MANAGEMENT SYSTEMS

There are some properties in Forrest capable of containing their wastewater on-site subject to an upgraded or new on-site wastewater treatment and land application area.



SECONDARY TREATMENT SYSTEMS (STS)

There are multiple options for upgrade of an on-site system. Typically involves installation of a new STS tank. This is a second tank on your property that further treats wastewater and ensures it is suitable for on-site irrigation. An electrical control box would also be installed on your property to operate the pump and sometimes air blowers.

OTHER OPTIONS

The actual type of treatment system can depend on technology and site suitability. Some examples include:
- Composting toilets with greywater reuse.
- Worm farms and biological filters
- Sand and media filters

These would all need to be located on your property.

AT A GLANCE

PROS

Allows the wastewater to be reused for lawn / garden bed watering (reduces water bill).

Likely to be lower cost option.

No discharge to rivers.

CONS

On property infrastructure required.

Requires a new management structure.

Some properties in Forrest cannot fully contain their wastewater on site.

SEPTIC TANKS

Septic tanks remain a reliable and low cost treatment option but they need to be larger than traditional septic tanks installed in the past. Satisfactory tanks may be retained.

EFFLUENT LAND APPLICATION AREAS (LAA)

The higher level of treatment means wastewater from the property can be applied to grassed areas and garden beds (under the ground) in a more productive and flexible manner. There may be several irrigation fields for each property.

Modern LAAs are designed to suit the soils and topography of each property to ensure effluent is safely managed.

Artwork supplied by Yarra Valley Water

What is your level of comfort with this option?

Community feedback from session on Sunday April 29th

Comfortable

10

Uncomfortable

12

Is there anything you want to say about this option?

Comments from session on Sunday April 29th

Would this onsite upgrade be funded through a whole of town scheme or by each individual resident?

Property owners are responsible for their water use and waste but support for low income imperative, but can/will they maintain it?

Very high rainfall and heavy clay lead to overloading the water table. Septic systems have been shown to fail within winter. This situation is compounded by grey water discharge.

I am not comfortable people in town will maintain these.

Still better than what most homes have.

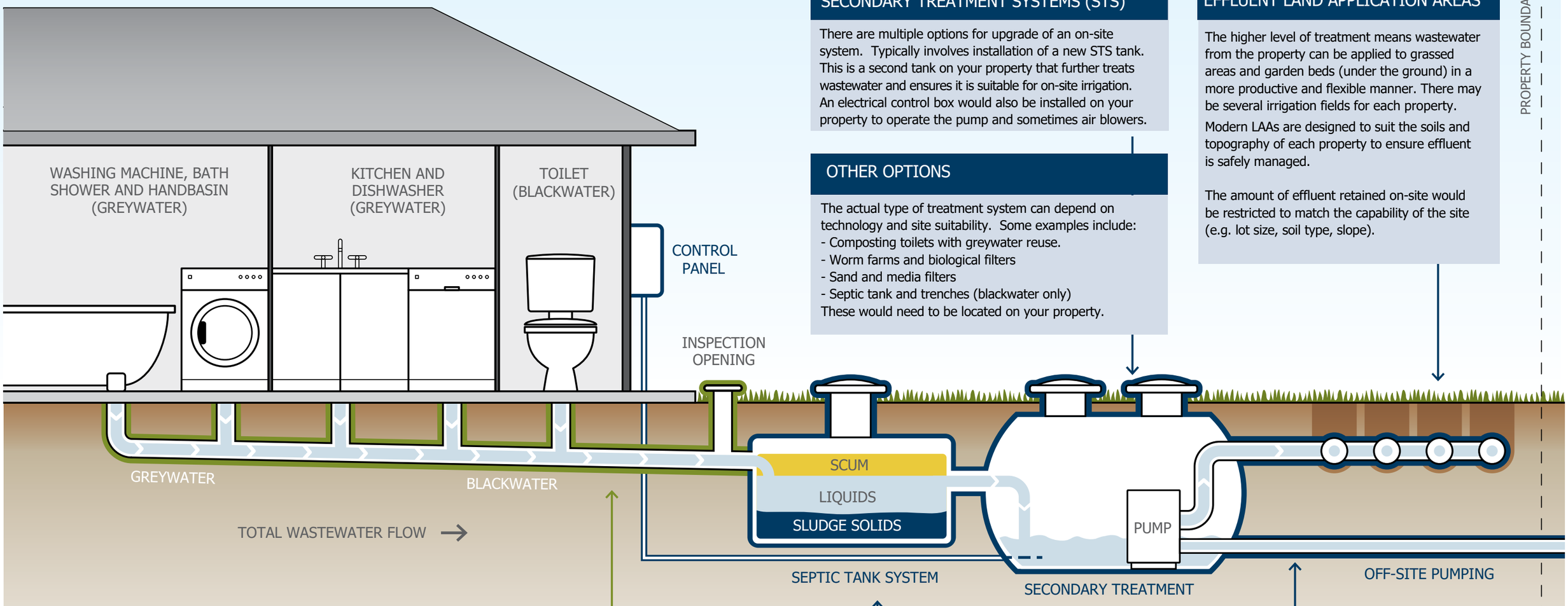
Soil suitability and high water table in winter a problem even on larger sites (runoff)

Need a contract for all installations to be checked by an outside contractor

once/twice a year is the only way to be sure these new systems would be maintained

PARTIAL ON-SITE WASTEWATER MANAGEMENT SYSTEMS

Small towns can potentially achieve a cost effective and high quaility outcome by managing a safe amount of wastewater on individual properties and sending excess volumes to a managed off-site solution.



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OTHER OPTIONS

The actual type of treatment system can depend on technology and site suitability. Some examples include:
- Composting toilets with greywater reuse.
- Worm farms and biological filters
- Sand and media filters
- Septic tank and trenches (blackwater only)

These would need to be located on your property.

EFFLUENT LAND APPLICATION AREAS

The higher level of treatment means wastewater from the property can be applied to grassed areas and garden beds (under the ground) in a more productive and flexible manner. There may be several irrigation fields for each property.

Modern LAAs are designed to suit the soils and topography of each property to ensure effluent is safely managed.

The amount of effluent retained on-site would be restricted to match the capability of the site (e.g. lot size, soil type, slope).

AT A GLANCE

PROS

Allows the wastewater to be reused for lawn / garden bed watering (reduces water bill).

Provides flexibility in amount of wastewater reused depending on lot size.

Provides greater capacity for permanent residents and temporary visitors.

CONS

On property infrastructure required.

Requires a new management structure.

SEPTIC TANKS

Septic tanks remain a reliable and low cost treatment option but they need to be larger than traditional septic tanks installed in the past. Satisfactory tanks may be retained.

OFF-SITE PUMPING

A pump and discharge pipeline will be installed to convey excess wastewater to a central location for treatment and dispersal.

This could be a town water recycling plant or a small cluster reuse system at the end of your street.

This approach means only the effluent not safely managed your property needs to be managed elsewhere and most of the treatment has already occured.

Artwork supplied by Yarra Valley Water

Effluent Sewer
Control Pump/Shed
Storage Tank
Effluent Reuse

Figure: Example of a cluster wastewater management system (INDICATIVE ONLY)

What is your level of comfort with this option?

Community feedback from session on Sunday April 29th

Comfortable

13

Uncomfortable

10

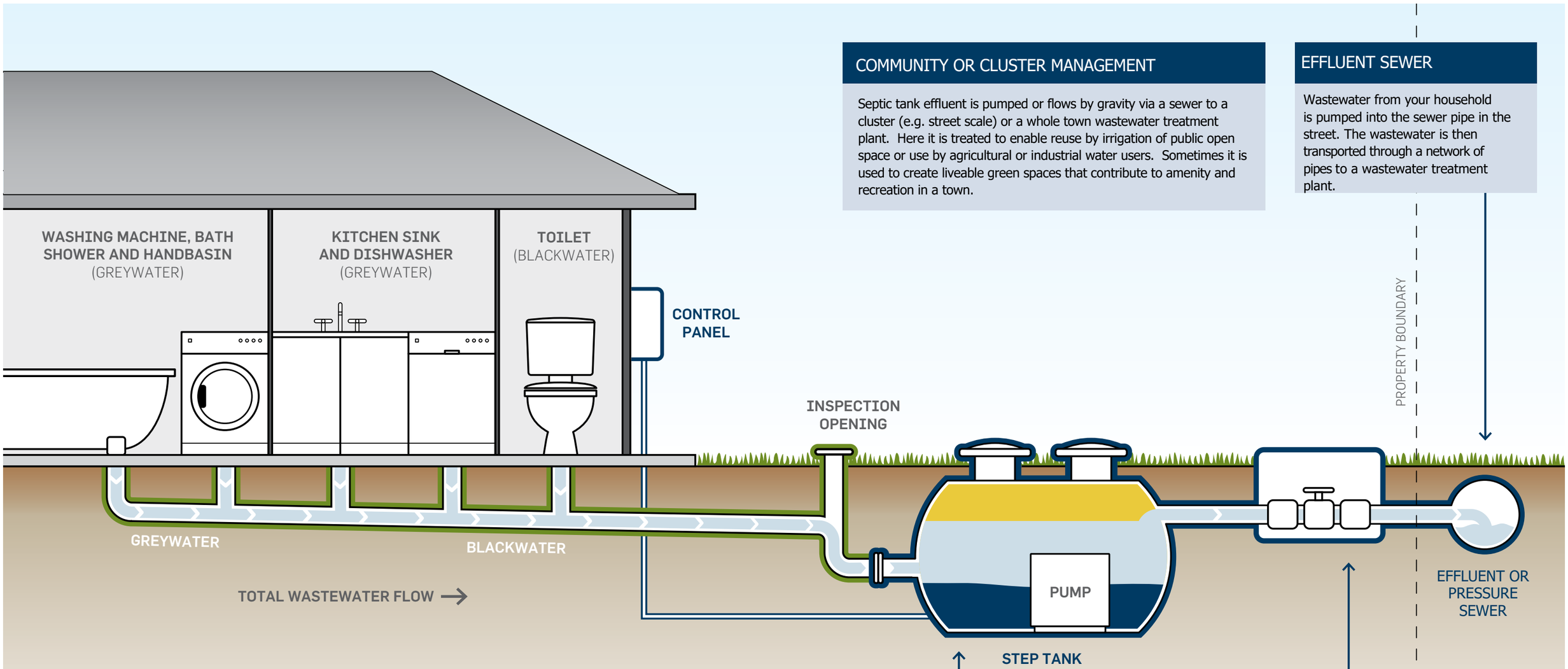
Is there anything you want to say about this option?

Comments from session on Sunday April 29th

Looks like it would address issues with peak load and visitor accommodation properties
Ok as long as affordable
Great for sites / too small / not suitable for dealing with waste, but need support for low income
I like the idea of using grey water for garden
Deals with grey water flow to environment
Another better option than what town presently has
This idea better than the whole 'on-site' method

SEPTIC TANK EFFLUENT PUMP / GRAVITY (STEP/STEG) SYSTEMS

STEP/STEG systems can reduce the size and cost of reticulation and treatment plants by providing primary treatment, biosolids breakdown and flow balancing on each property. This can be important in small towns with lower permanent population and economies of scale for central infrastructure.



COMMUNITY OR CLUSTER MANAGEMENT

Septic tank effluent is pumped or flows by gravity via a sewer to a cluster (e.g. street scale) or a whole town wastewater treatment plant. Here it is treated to enable reuse by irrigation of public open space or use by agricultural or industrial water users. Sometimes it is used to create liveable green spaces that contribute to amenity and recreation in a town.

EFFLUENT SEWER

Wastewater from your household is pumped into the sewer pipe in the street. The wastewater is then transported through a network of pipes to a wastewater treatment plant.

AT A GLANCE

PROS

Provides partial treatment of effluent on-lot so smaller treatment / recycling plant required for final treatment.

Better able to manage seasonal flows.

No pump stations required.

Lower operational cost than other sewerage options.

CONS

No ability to reuse wastewater for watering on the property.

Larger volumes of treated sewage need management in a central location.

Requires on property infrastructure.

Desludging required (approx. every 8-10 years)

STEP / STEG TANK

This tank treats wastewater, stores and digests sludge and pumps away liquid wastewater. Solids in the wastewater are pumped away periodically. In some situations existing septic tanks may be able to be retained and converted into Septic Tanks with Effluent Pumping (STEP) systems.

Septic Tank Effluent Gravity (STEG) units have no pump and operate by gravity fall. They need to be elevated above the sewer.

For properties where the existing septic tank is in poor condition or inadequately sized, it will be replaced with a new STEP/STEG tank system.

OFF-SITE PUMPING

A pump and discharge pipeline will be installed to convey excess wastewater not able to be irrigated on the property to a central location for treatment and dispersal.

Artwork supplied by Yarra Valley Water

What is your level of comfort with this option?

Community feedback from session on Sunday April 29th

Comfortable	Uncomfortable
9	11

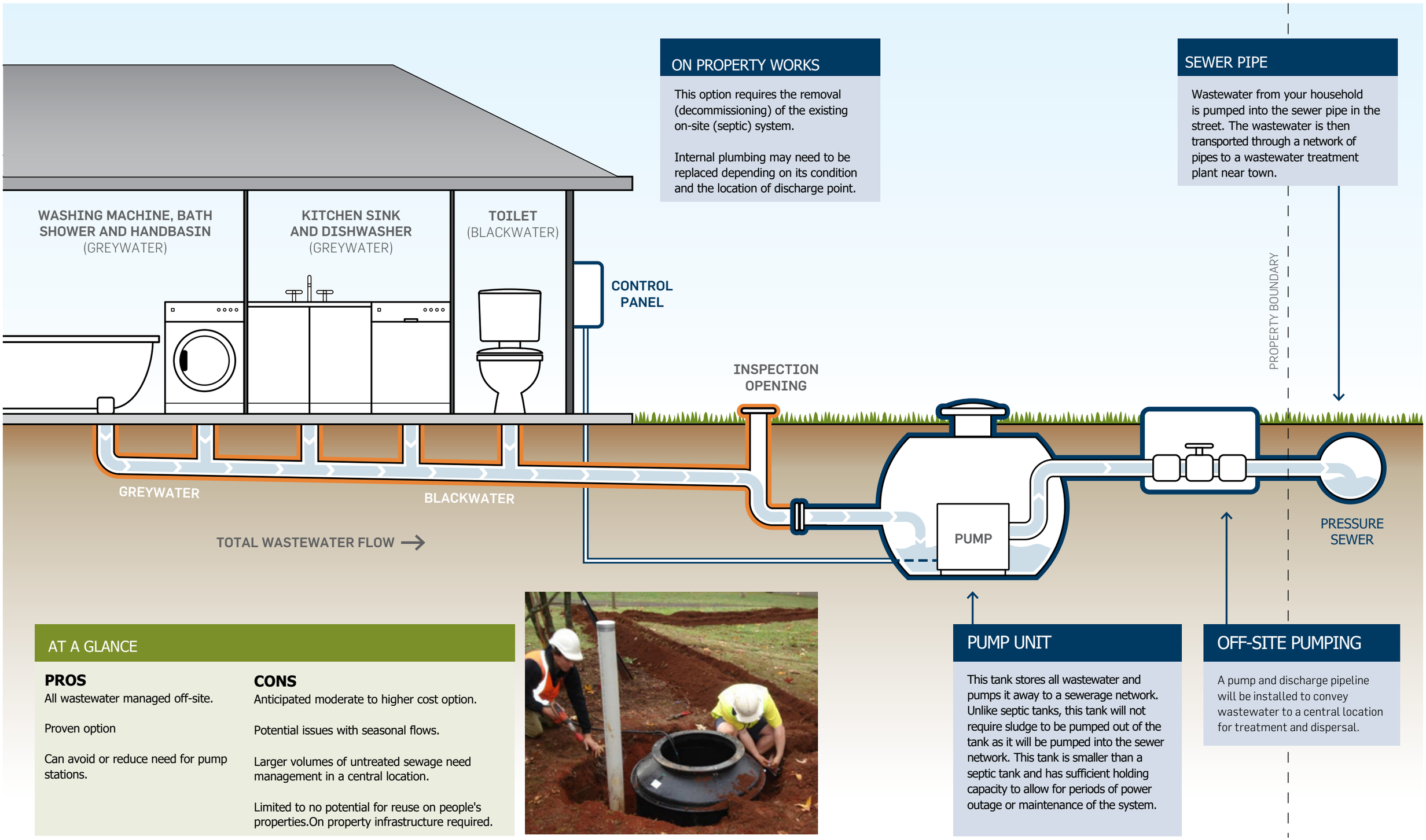
Is there anything you want to say about this option?

Comments from session on Sunday April 29th

Prefer to reuse water on property and where would treatment plant go?
Half/half might as well be fully sewered.
Grey water should be used in garden
Better for properties used by the public (including public toilets), the central treatment would need to be at a low point (below caravan park maybe?)

PRESSURE SEWERAGE NETWORK

Pressure sewerage systems can be a cost effective way to provide a full off-site sewerage solution in undulating terrain where gravity sewerage is challenging or expensive. A small pump unit is installed on each property to pump raw macerated sewage into a pressurised sewer network.



ON PROPERTY WORKS

This option requires the removal (decommissioning) of the existing on-site (septic) system.

Internal plumbing may need to be replaced depending on its condition and the location of discharge point.

SEWER PIPE

Wastewater from your household is pumped into the sewer pipe in the street. The wastewater is then transported through a network of pipes to a wastewater treatment plant near town.

AT A GLANCE

PROS

All wastewater managed off-site.

Proven option

Can avoid or reduce need for pump stations.

CONS

Anticipated moderate to higher cost option.

Potential issues with seasonal flows.

Larger volumes of untreated sewage need management in a central location.

Limited to no potential for reuse on people's properties.On property infrastructure required.

PUMP UNIT

This tank stores all wastewater and pumps it away to a sewerage network. Unlike septic tanks, this tank will not require sludge to be pumped out of the tank as it will be pumped into the sewer network. This tank is smaller than a septic tank and has sufficient holding capacity to allow for periods of power outage or maintenance of the system.

OFF-SITE PUMPING

A pump and discharge pipeline will be installed to convey wastewater to a central location for treatment and dispersal.

Artwork supplied by Yarra Valley Water

What is your level of comfort with this option?

Community feedback from session on Sunday April 29th

Comfortable

16

Uncomfortable

9

Undecided

1

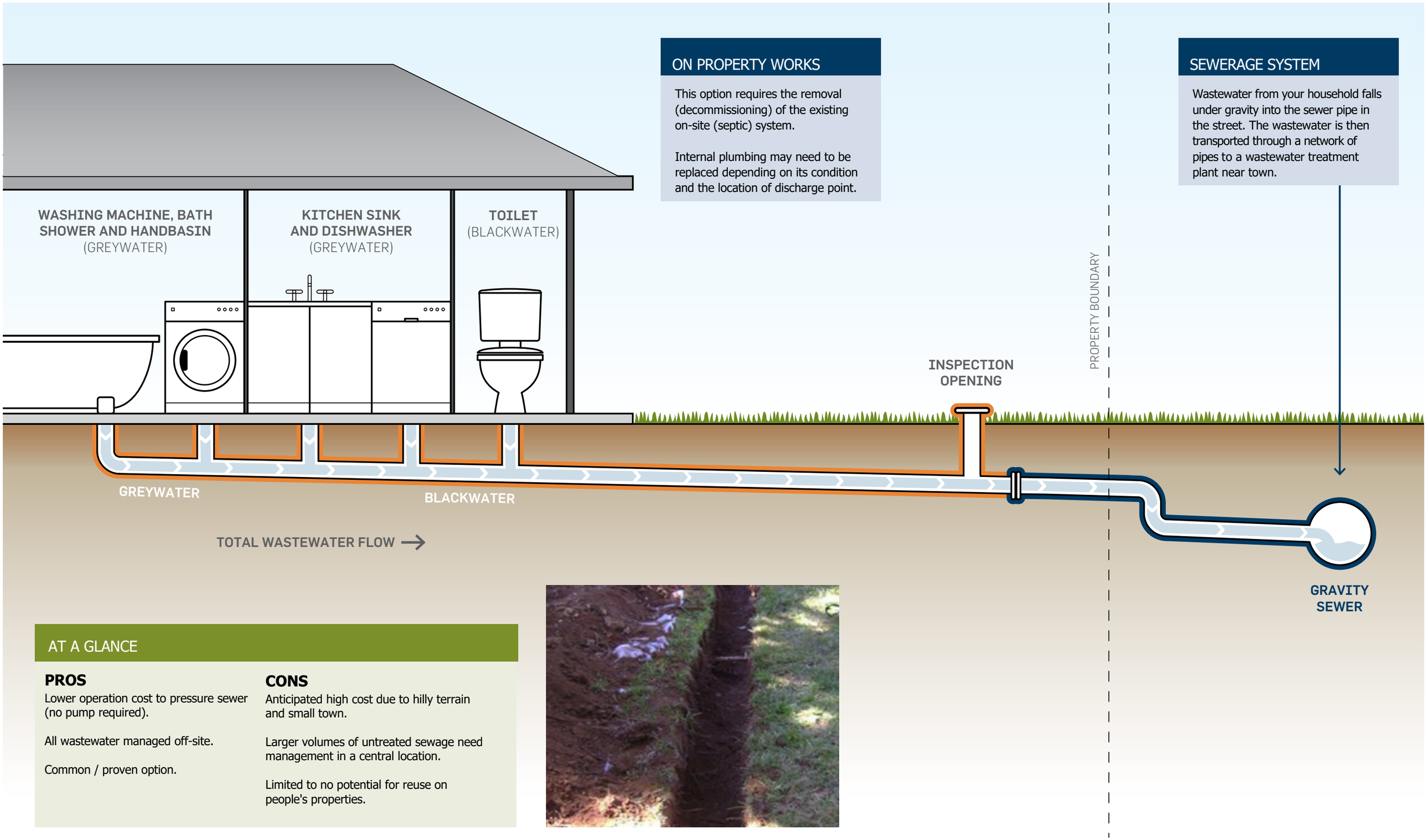
Is there anything you want to say about this option?

Comments from session on Sunday April 29th

Ok, as long as affordable
Ok, as long as affordable
Ok, as long as affordable
Ok for people below sewer pipe
Initial cost could be difficult for some, though cost of repair of failed septic systems is also expensive
Prefer to use water onsite
Would need a bigger treatment plant, so not good for town's appearance, also more expensive.
Best option
Eventually it'll have to be upgraded to this system

GRAVITY SEWERAGE

A gravity sewer is the traditional way Barwon Water would service a town. Gravity sewerage systems are a known and relatively simple system. However, they can be expensive for small towns that lack the economy of scale of an urban area. They can also require a lot of pump stations in undulating areas.



ON PROPERTY WORKS

This option requires the removal (decommissioning) of the existing on-site (septic) system.

Internal plumbing may need to be replaced depending on its condition and the location of discharge point.

SEWERAGE SYSTEM

Wastewater from your household falls under gravity into the sewer pipe in the street. The wastewater is then transported through a network of pipes to a wastewater treatment plant near town.

AT A GLANCE

PROS

Lower operation cost to pressure sewer (no pump required).

All wastewater managed off-site.

Common / proven option.

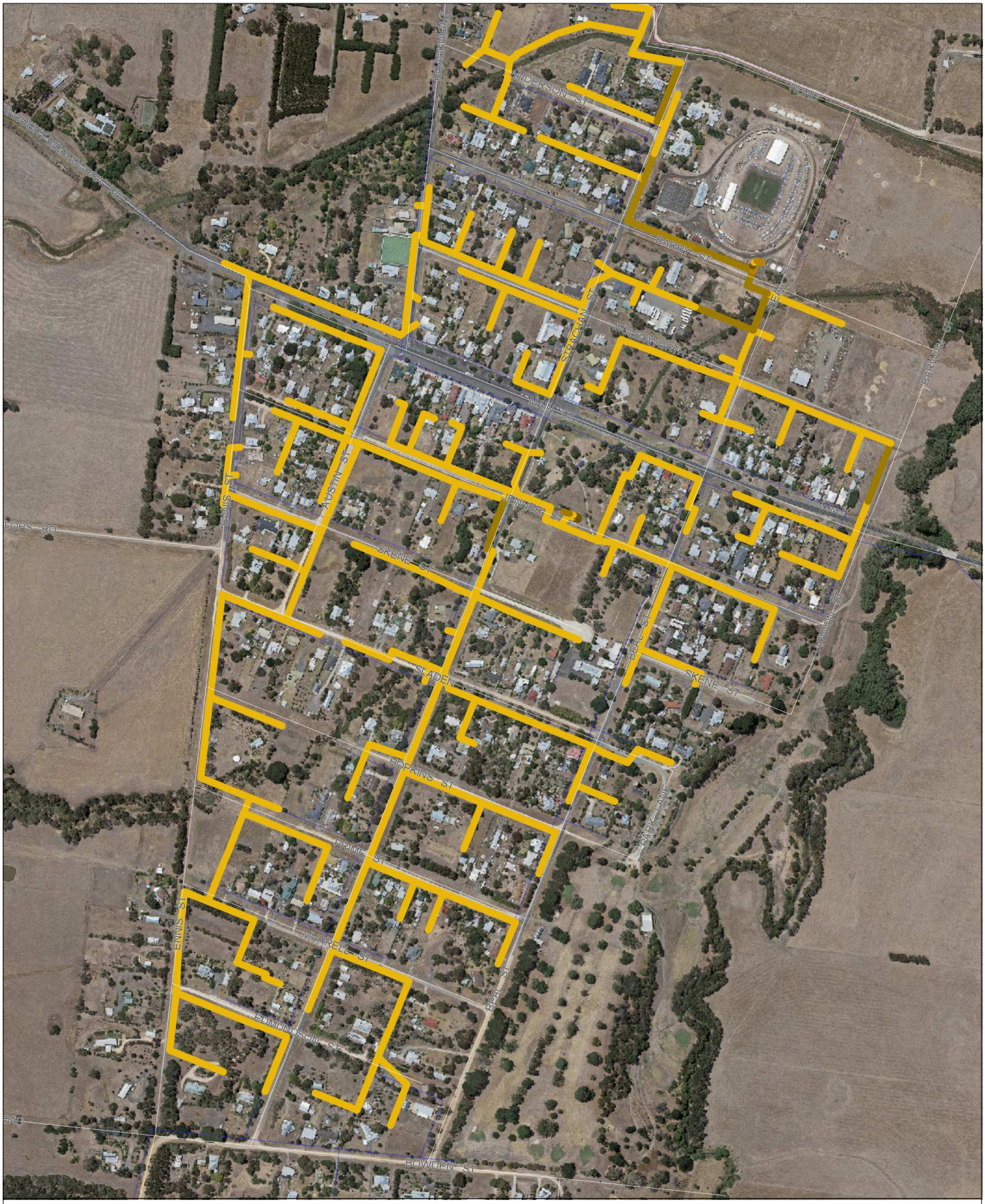
CONS

Anticipated high cost due to hilly terrain and small town.

Larger volumes of untreated sewage need management in a central location.

Limited to no potential for reuse on people's properties.

Artwork supplied by Yarra Valley Water



Birregurra sewerage scheme

N

What is your level of comfort with this option?

Community feedback from session on Sunday April 29th

Comfortable

14

Uncomfortable

9

Undecided

1

Is there anything you want to say about this option?

Comments from session on Sunday April 29th

Provided it is affordable
Unfortunately, affordability can't always come before health
Too expensive
Has the feasibility to run a line to the Birregurra system been considered?
Connecting small regional towns such as Barwon Downs and Deans Marsh.
Seem good option with less onsite 'moving parts' requiring maintenance - provided it is affordable
Treated water can then be used for horticulture or wetland rejuvenation
Don't like 'flush and forget' feel - need to recycled where possible and be aware of waste
Topography of the town needs pumps
Not practical for a town this small
Too expensive and disrupting
Pipe to Birregurra plant

Water recycling and managing effluent

Where effluent is treated via a centralised or precinct based wastewater treatment plant, there are opportunities to reuse effluent for a beneficial use.

There are a range of treatment technologies available that can convert sewage into recycled water for a range of uses.

Some potential uses include:

- Backyard irrigation
- Public open space irrigation (such as ovals)
- Irrigation of crops

It would be envisaged that any proposal including a wastewater treatment must include recycled water reuse in Forrest. Potential recycled water uses in Forrest could include irrigation for agriculture etc.

Excess effluent that can't be reused needs to be managed carefully to ensure it is safe and impact on the environment is minimised.

Other opportunities for recovering resources from our wastewater include nutrient recovery and waste to energy generation. Generally, energy recovery is more feasible on large scale sites where the nutrient load is high. Sites such as Forrest may be more difficult, however would need to be investigated.

Wastewater treatment plants

A wastewater treatment plant receives and treats black and greywater from properties. Barwon Water currently operates 11 plants across the region.

Water is reclaimed from sewage so it can be recycled or discharged with no negative impact on the environment. Barwon Water sites use a mix of biological, chemical and mechanical treatment processes.

Processes involve pre-treatment, biological breakdown, nutrient removal, filtration and disinfection. Treated and disinfected sewage is referred to as recycled water. Where possible, recycled water is used for a range of purposes. The end quality of the effluent depends on the level of treatment.

PROS	CONS
Generally managed by Water Authority	High cost
Proven technology	Requires significant land site
Can produce effluent and or energy* (*on larger scales)	Amenity issues (odour, visual, etc.)
No wastewater remains on the property	High energy use

Types of facilities

Lagoon Treatment Plant – Use natural processes to treat waste and require large amounts of land operate.

Mechanical Treatment Plants – Use technology and mechanical equipment to treat wastewater. Generally higher cost that lagoon facilities.

Packaged Treatment Plants – Similar to mechanical plants and are generally cheaper and smaller.

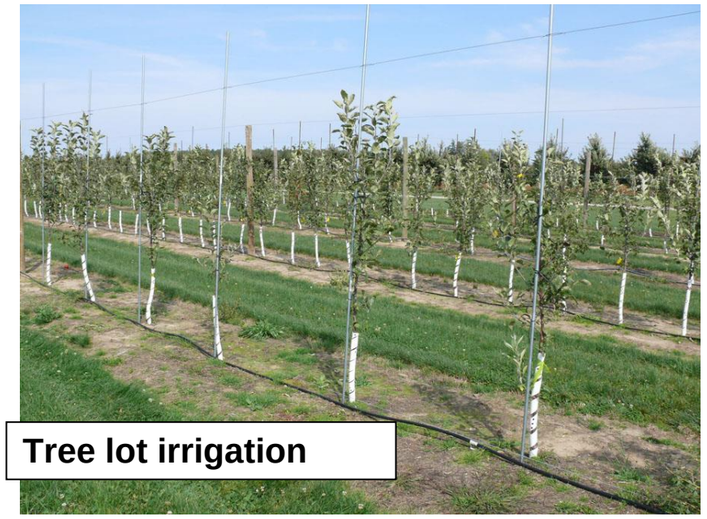
Where could you use recycled water in Forrest?

Comments from session on Sunday April 29th

Foothill organics (Yeo)
Potato suppliers / farms (Yeo)
A purpose created wetland in Forrest
Playground / public spaces / environment
Local farm land
Forrest football ground
Hop plantations and hop co-operative
Peas were once a popular crop
All of the three uses noted in above text
Creating greener band of parkland around township as bushfire barrier
Public food for gardens and orchards or local farms
Fire fighting water tanks
More wetlands
Treated waste recycled to irrigation on tree plantation and wood pulp areas
Aroona Court, Colac-Forrest Road and Roadknights Creek Road residents would NOT support a water reclamation plant in that area.
Don't support town residents pushing the problem out of town to people who don't benefit (such as phone towers).
Birregurra not feasible
Footy oval
Forrest Common
Trees on nature strips
Hop plantations and hop co-operative
Blue gum plantations above town
A green fire break around township (summer)

Backyard irrigation

Public open space subsurface irrigation



Tree lot irrigation

Polishing and biodiversity wetland

Irrigation of crops

Water sensitive urban design

Vineyards

Home use

Green roofs

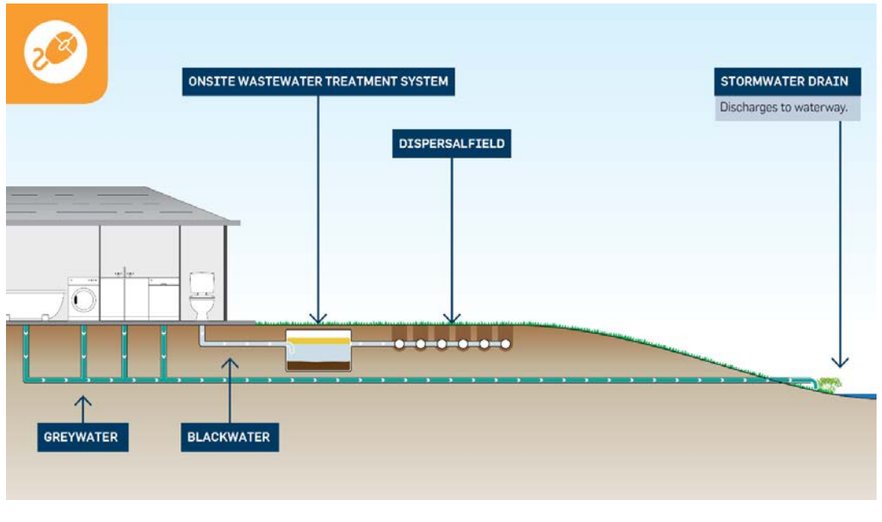
What if nothing changes?

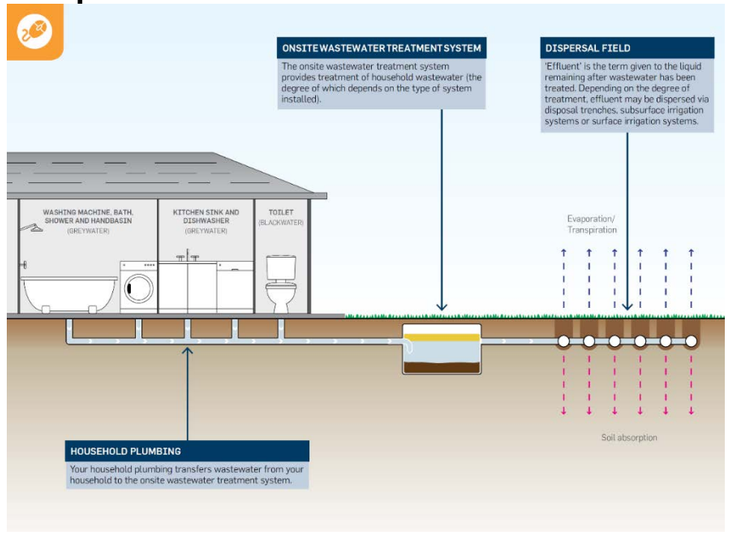
Traditional septic tank systems rely on absorption into soil, evaporation and transpiration by plants to take up effluent discharged on the property. Every property has a different capability (called land capability) to retain the effluent (the water and pollutants) on site.

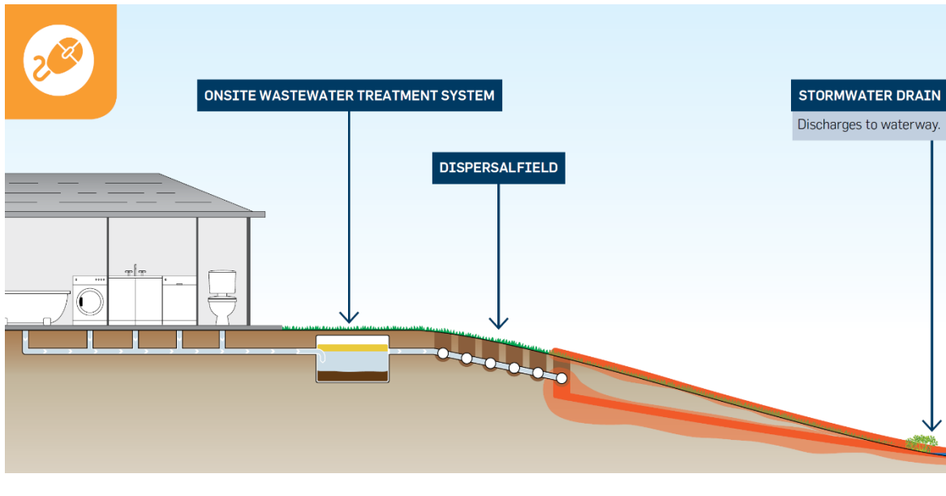
When located, designed, constructed and operated correctly, traditional on-site systems can provide a high quality service however many older septic systems throughout Victoria (including Forrest) involve the direct discharge of untreated greywater or partially treated sewage off the property via stormwater drains.

Many older septic systems in Forrest are undersized compared to current standards and some of the properties in Forrest are too small to be able to prevent seepage or runoff of effluent off site into drains.

If nothing changes in Forrest, systems will continue to discharge offsite, creating potential amenity and health issues ongoing. Even if property owners gradually upgrade their septic systems over time, whilst there could be some minor improvement, most properties would not be able to be upgraded to meet EPA requirements and there would always be a level of non-compliance which has the potential to stifle growth and create ongoing problems in the town. This approach will be tested against the other solutions being developed as a baseline for comparison.







What is your level of comfort with this option?

Community feedback from session on Sunday April 29th

Comfortable	Uncomfortable
1	18

Is there anything you want to say about this option?

Comments from session on Sunday April 29th

If nothing happens what will be the cost to the resident to upgrade high risk systems
Cannot ignore it any longer
With the amount of properties identified as having issues with their current septic system, at the very least a plan needs to be developed to improve on these issues if not a whole town approach supporting a new sewerage system
Good to know what the cost will be to upgrade high risk system
This method (onsite system) has failed we can't continue this method and expect a different outcome (i.e. it smells)
Situation is not going to fix itself - if not now, then probably compound - must be dealt with now
We need a temporary fix if this all
takes too long, it's urgent.
If nothing is done now, then those with a failed system will have to do a future upgrade at their own expense.

Indicative costs

This phase of the project is about identifying the full list of options to address wastewater problems in Forrest. Options are likely to be paired with other components to form an overall solution package. Therefore, at this stage, detailed costs are not available.

In addition, later stages of the project will begin to identify potential external funding opportunities which could assist the project and bring costs to property owners down.

We understand that costs are an extremely important consideration for all residents and the community vision is clear that the solution must be equitable and affordable for all residents.

What is the cost to me?

At this stage, the costs to the residents is not known. The full cost of the scheme does not necessarily translate to a cost to residents. There may be funding streams identified which can assist in reducing costs to existing residents. Until this is known we are not able to advise of specific costs to residents.

Indicative costs

What are the indicative costs of schemes built elsewhere?

There is a broad range of costs dependant on the technology utilised. Some indicative ranges of schemes built elsewhere are presented below.

Technology	**Example ranges of other schemes (per property)***
Upgrade Onsite system	$10,000 - $20,000
Partial Upgrade with offsite treatment	$20,000 - $40,000
Reticulated sewerage system	$40,000 - $100,000

Please note: This is an indicative range of the full costs of other town schemes and does not necessarily reflect the cost to residents. These estimates also do not include private in-house plumbing fees (i.e. from the fixture to the onsite unit).

Birregurra sewerage scheme case study

Birregurra was sewered by Barwon Water in 2012 under the Victorian Government's *Country Towns Water Supply and Sewerage Program*.

Under that program customer contributions (cost to connect to the system) were capped at $800 per property (excluding onsite plumbing works) and the remainder of costs were borne by Barwon Water and Victorian Government. The program no longer exists.

The overall scheme included a gravity sewerage network, several pump stations and a new lagoon based sewerage treatment plant.

The cost to construct the infrastructure was nearly $15 million which equated to approximately $57,000 per property (unsubsidised).

Innovative options

There are range of innovative primary and secondary systems available for wastewater, greywater and stormwater treatment both on the property and along public areas like streets and parks, these include:

Recirculating sand filter with subsurface irrigation

Reed bed – passively treats the wastewater using natural processes as it moves through vegetation.

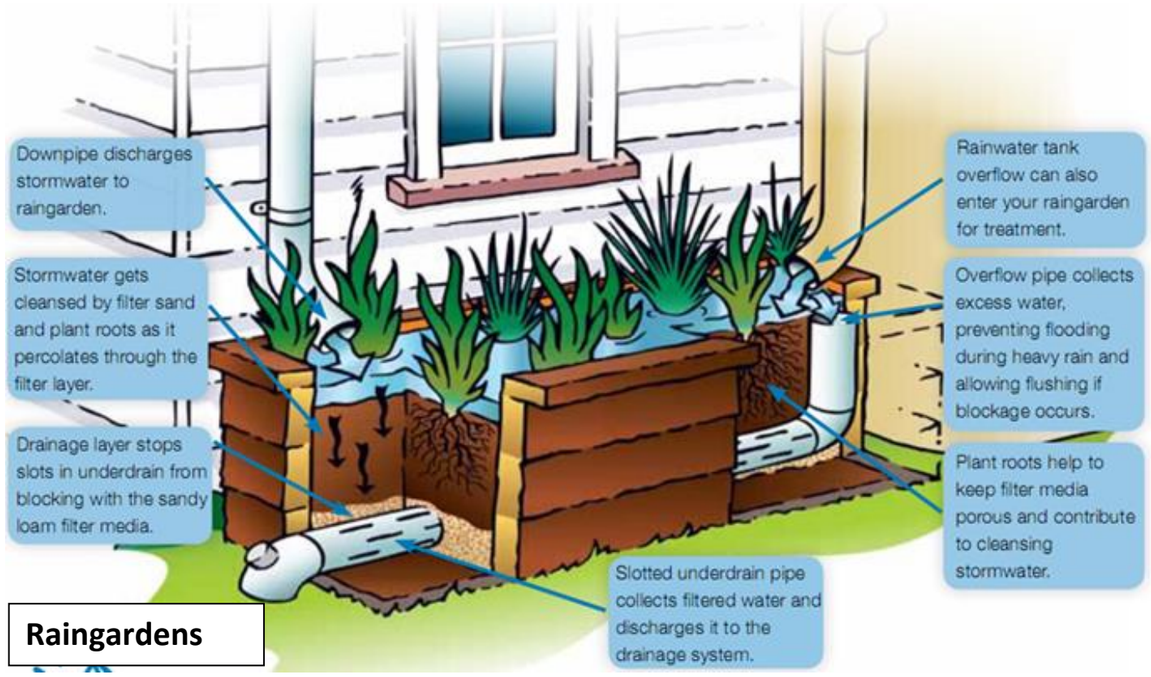
Power generation

Greywater onsite treatment

Worm farms

Textile filter system

Precinct plants



Raingardens

Composting toilets

Potable reuse

Do you have any suggested innovative options? Is there anything missing?

Comments from session on Sunday April 29th

Need to consider how stormwater affects the problem.
Stormwater flowing offsite saturating neighbouring properties and affecting their ability to contain
Stormwater drains acting as overland sewers fix the drainage to address issues
Bushfire mitigation project in one of Victoria's 50 most at risk townships
Feel all innovative/alternative/sustainable options need to be seriously explored / investigated
Solar panels on pressure sewer pumps and use when sunny
Biofuel and power-generation system
A large reed bed below the caravan park would be great for the environment
Release treated water to the Barwon River
Location of possible treatment or processing system
Barwon Water farm located outside Barwon Downs would provide an option to link in Barwon Downs as well
Need to include quarterly service charges in costs so ongoing costs are clear to residents
It would be nice to see a 'novel' solution for Forrest with sustainability as main concern (e.g. reed garden, natural flora and fauna, re-used wastewater for community garden)
Prefer a communal sustainable system that encourages efficient water use and recycling to benefit the community as a whole
Consider funding approaches for onsite costs that spreads over time
See fungi perfect
Explore / experiment with micro-treatment of stormwater

Next steps

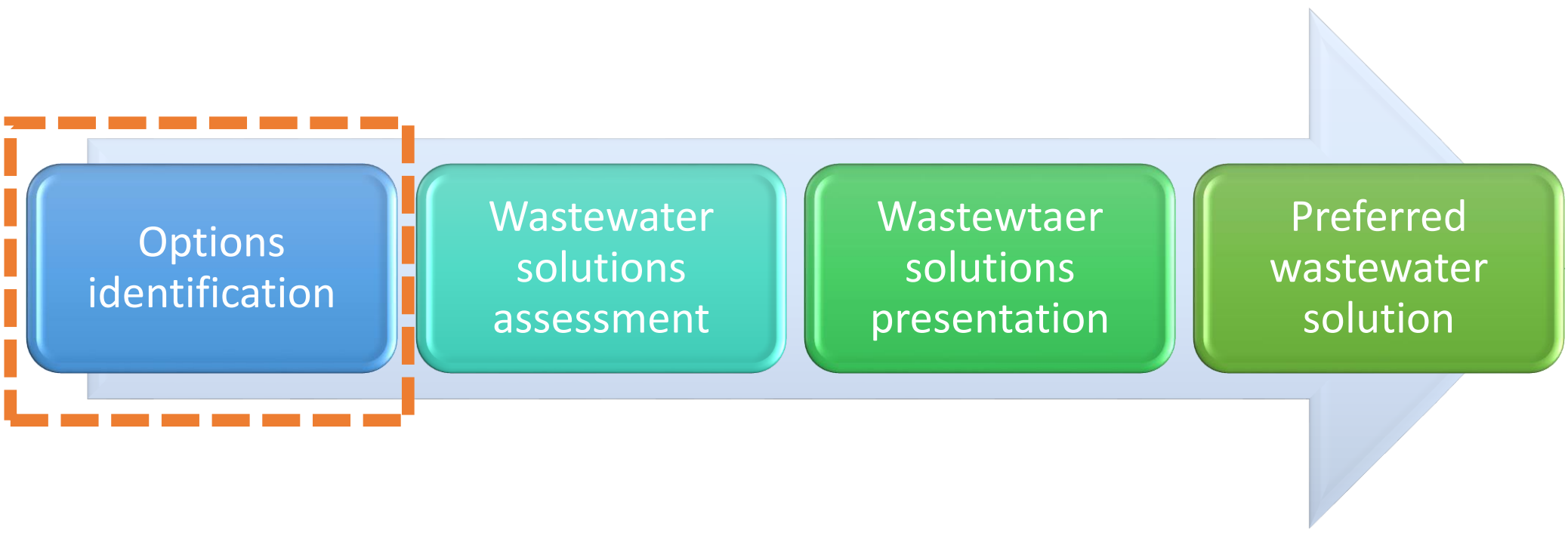
The next phase of the project will see feedback from the options development session (April 29) tailored to form specific wastewater solution packages for Forrest.

The solutions will be developed to a high level of detail (including cost estimates) and be presented back to the community for their consideration and feedback. We anticipate this to occur in June, 2018.

The solutions assessment phase will identify a community preferred solution to address wastewater issues in Forrest. We anticipate this to occur in August, 2018.

Solutions will be assessed against the criteria established by the community.

A business case for the project will be presented to the community. We anticipate this to occur in December, 2018.



How are we assessing

To ensure the preferred wastewater solution reflects the views of the community, solutions will be assessed against the developed and agreed community vision and associated measurements. The agreed vision statement is:

The Forrest wastewater management solution will be innovative and cost effective, whilst providing protection of public health, environment and the 'Forrest way of life'.

During the solutions assessment process, a full triple bottom line assessment will be undertaken with the community and will be assessed against the visioning aspects below:

Visioning aspect	How will this be measured?
Ensure protection of human and environmental health	• Reduction in pollution to waterways • Reduction of offsite discharges • Estimated reduction in disease burden
Enhance community and way of life	• Economic impact to Forrest • Increase to Tourism • Change to population/resident make up • Community support for solution
Establish an equitable and affordable solution	• Up-front costs and life cycle costs • Fair and equitable distribution of costs
Create flexible wastewater options for the future	• Ability to stage/adapt • Ability to cater for residents and visitors (tourism)
Showcase innovation and best practice	• Opportunities for water recycling and energy recovery. • Level of flexibility of options • Showcase / case study potential • Level of water cycle integration

Keeping in touch

Barwon Water and Colac Otway Shire Council will continue to keep the community informed as the project progresses.

Following the options development session (April 29), a letter and all display information will be posted to residents and businesses. These people will be invited to provide feedback on the options.

As with previous correspondence, the project team will communicate via a range of mediums including website (www.yoursay.barwonwater.vic.gov.au/forrest), mail outs, workshops, listening posts, information sessions, drop in sessions, phone calls and emails.

Should you wish to speak to anyone in the project, here are contact details:

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