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Meet **Cilla**, one of our crawling ciliates

Cilla is our wastewater treatment expert

#AMP8

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Cilla is going to crawl her way over the following topics...

- POPULATION GROWTH
- TIGHTENING DISCHARGE CONSENTS
- CSO CHALLENGES
- N_2O EMISSIONS
- CHEMICAL CONSUMPTION
- ENERGY COSTS
- ASSET LIFE / RESILIENCE

#AMP8

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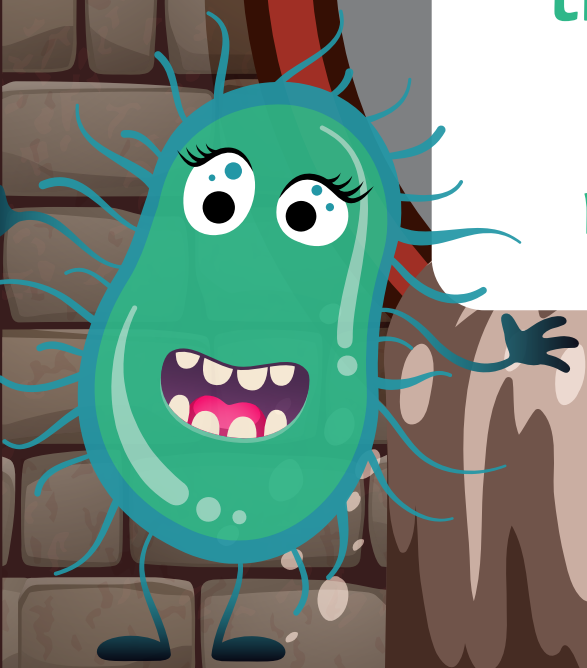
Whats the answer, Cilla?

Cilla says.....

te-cyc our enhanced biological treatment process for effective nutrient removal



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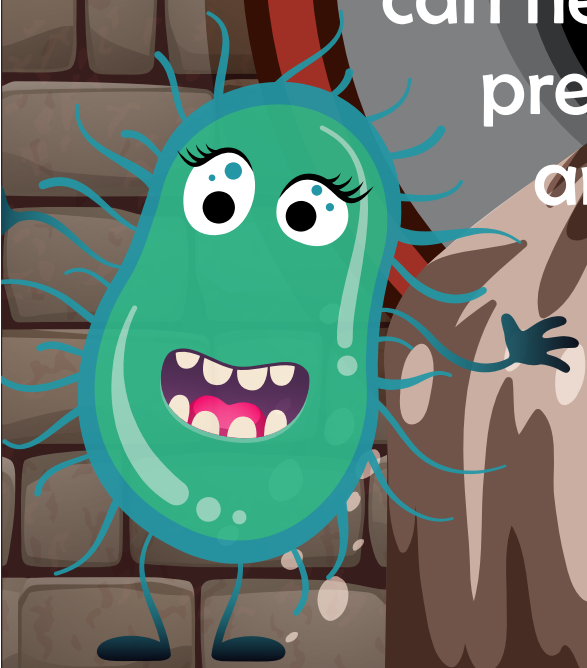
Next time....

Cilla explains how the te-cyc can help with the pressures of AMP8 and why it is the best solution for N&P removal



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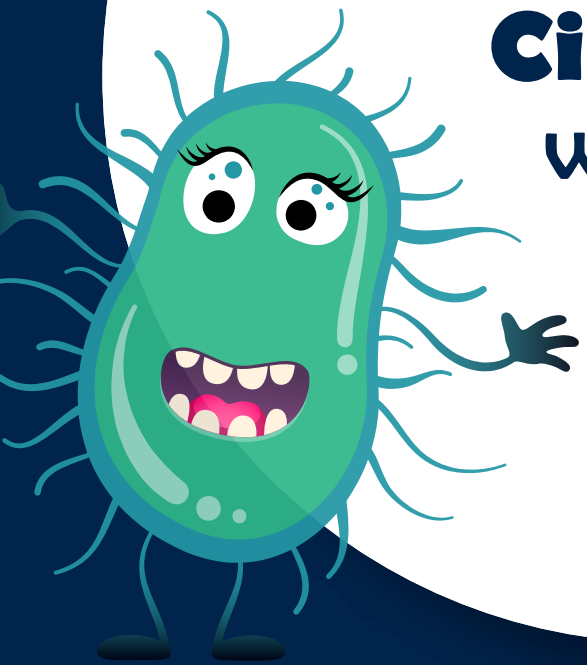

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POPULATION GROWTH

TIGHTENING DISCHARGE CONSENTS

CSO CHALLENGES

N_2O EMISSIONS

CHEMICAL CONSUMPTION

ENERGY COSTS

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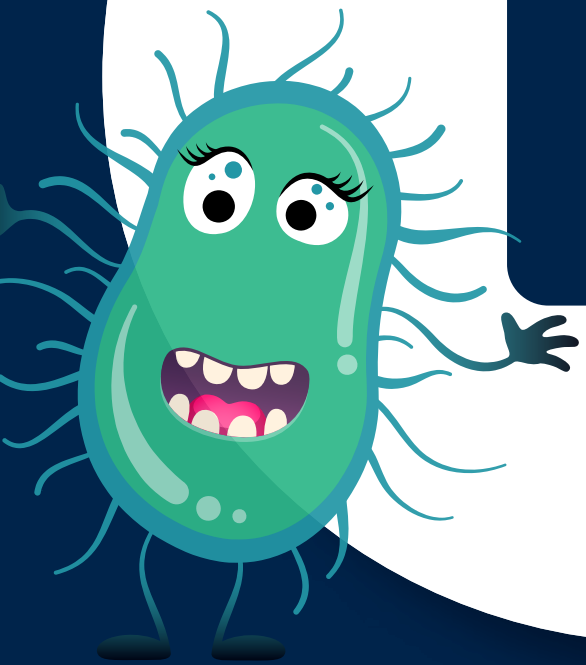

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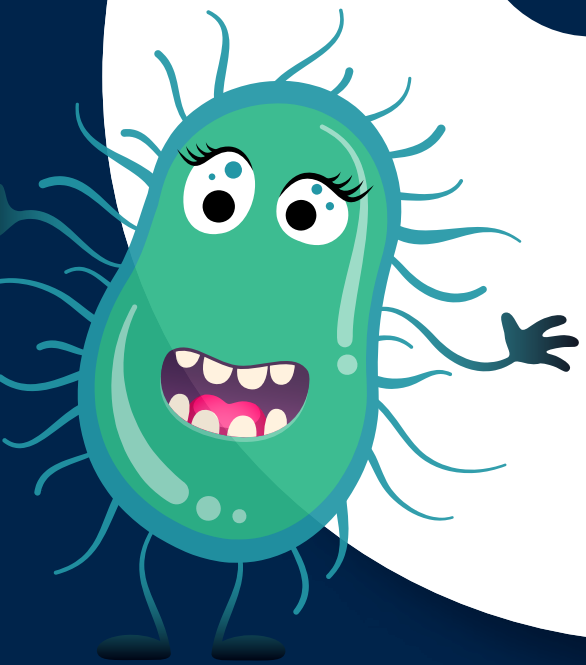
Single stage treatment

- small footprint ✓
- secondary settlement ✗
- upstream tanks ✗
- primary settlement ✗



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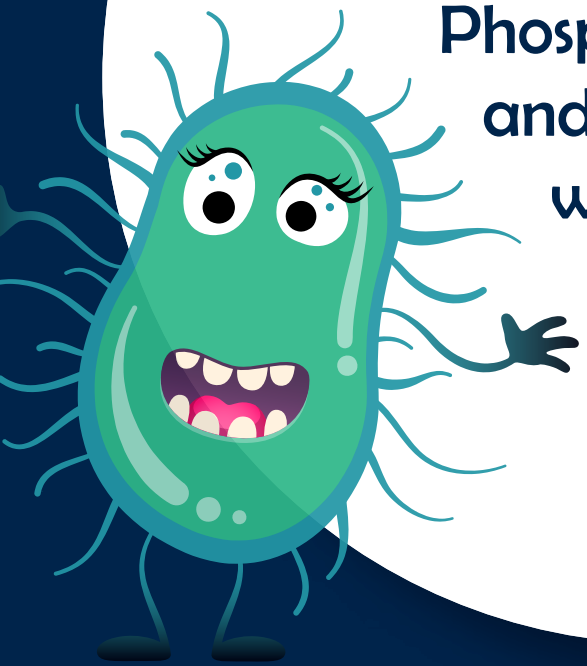
High-rate biological phosphorous removal, < 1 mg/l Total Phosphorous (TP) and < 0.3 mg/l TP with reduced chemical dosing



#AMP8

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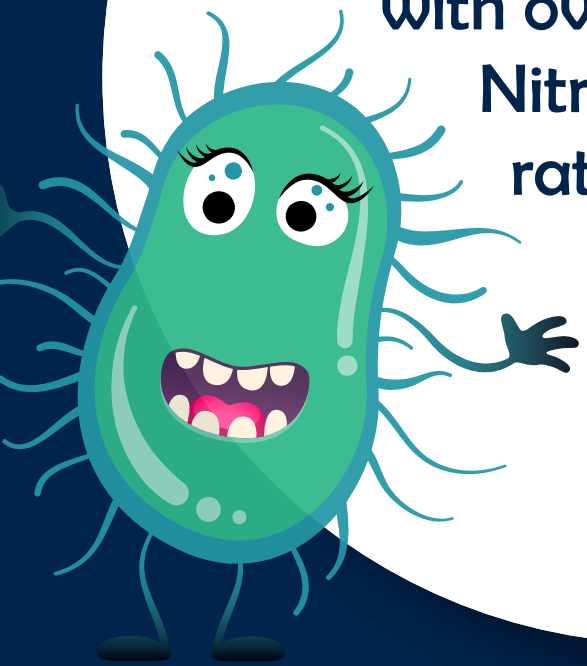
Simultaneous nitrification/denitrification with over 90% Total Nitrogen (TN) removal rates



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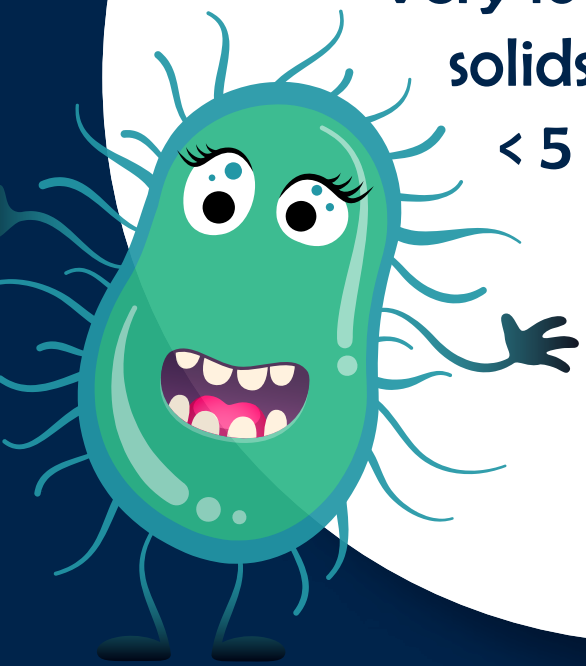
Very low suspended solids, typically < 5 mg/l average



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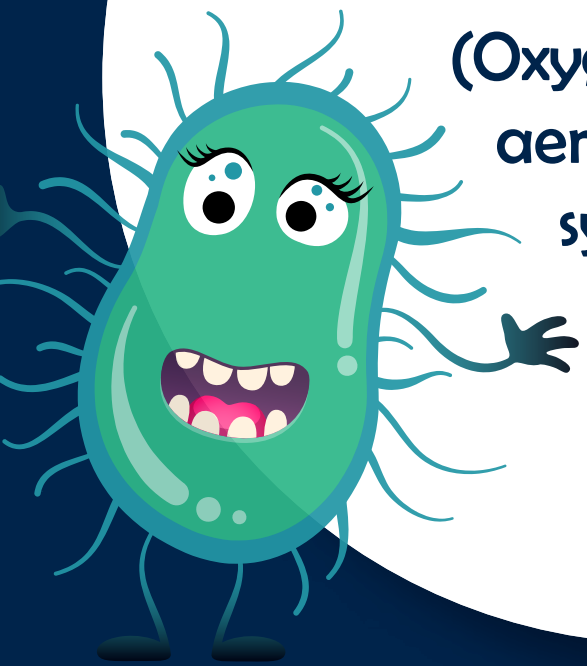
Optimised air usage and low operational cost utilising OUR (Oxygen Uptake Rate) aeration control system



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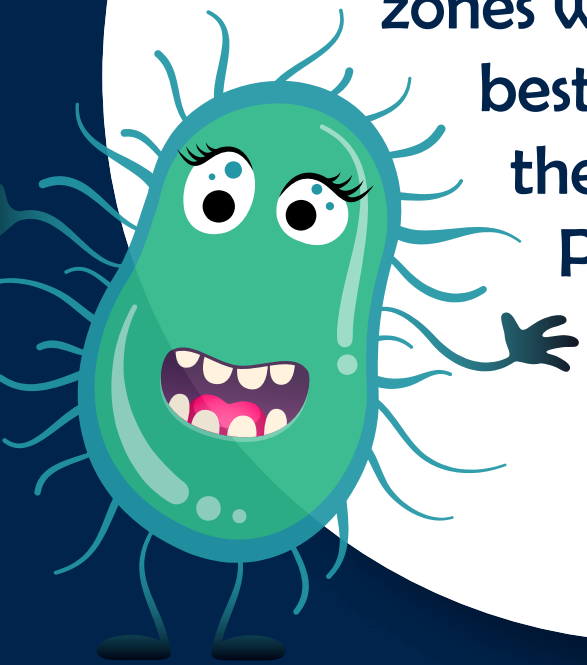
Next time....

Cilla explains how the te-cyc has unique selector zones which provide the best environment for the formation of PAO's.



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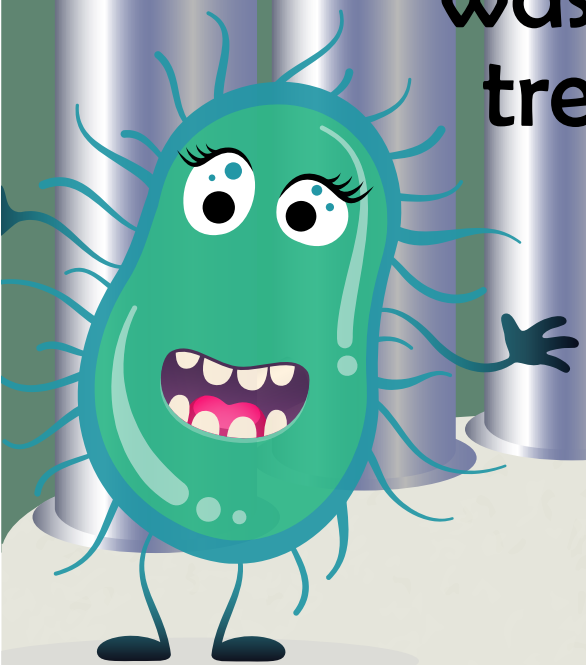
Meet **Cilla**, one of our crawling ciliates

Cilla is our wastewater treatment expert



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Cilla is going crawl her way over the following topics.....

- POPULATION GROWTH
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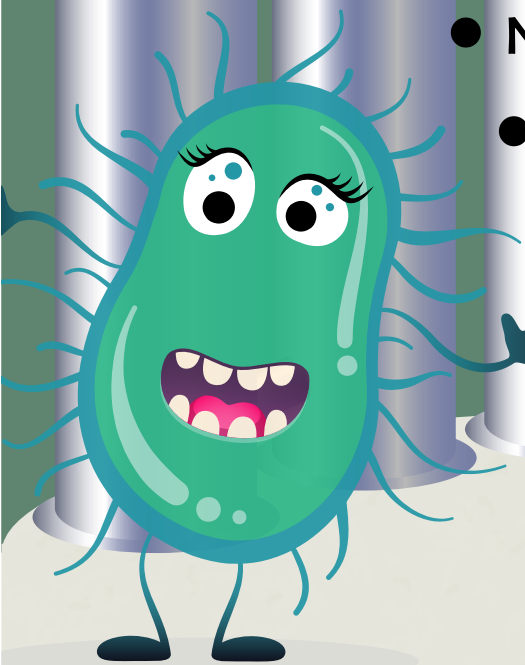
- ASSET LIFE / RESILIENCE



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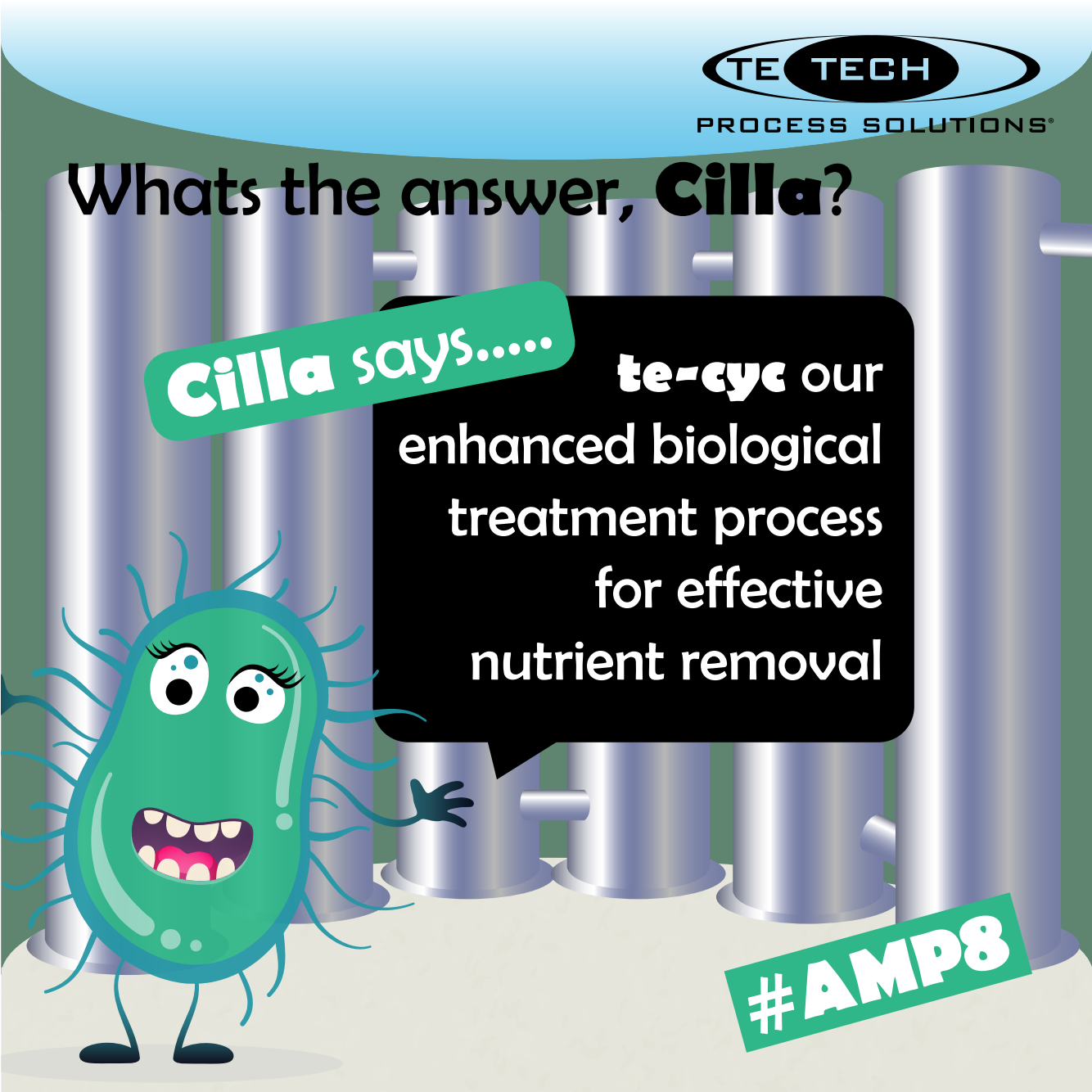
Whats the answer, **Cilla**?



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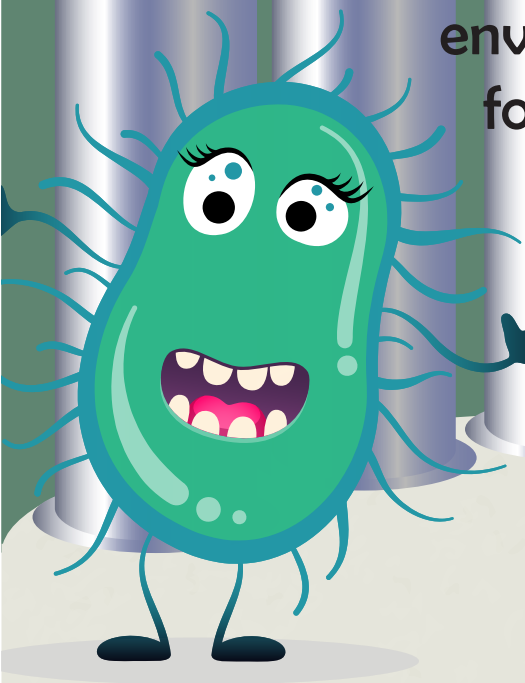
Why is the **te-cyc** effective for N&P removal?

The **te-cyc** has unique selector zones which provide the best environment for enhanced formation of Phosphorus-Accumulating Organisms (PAO)'s



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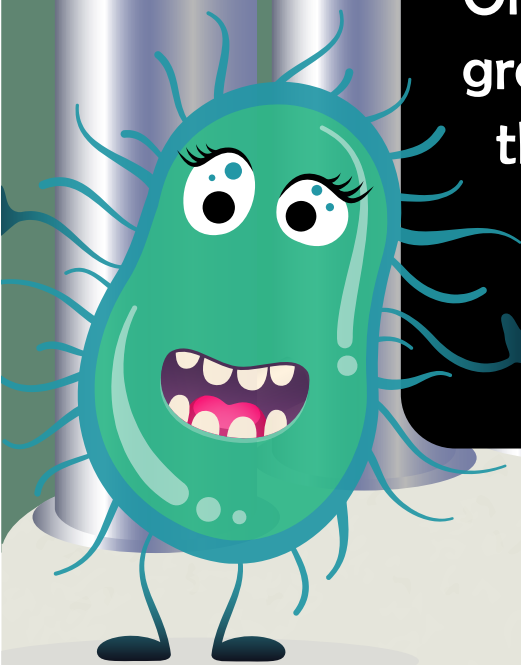
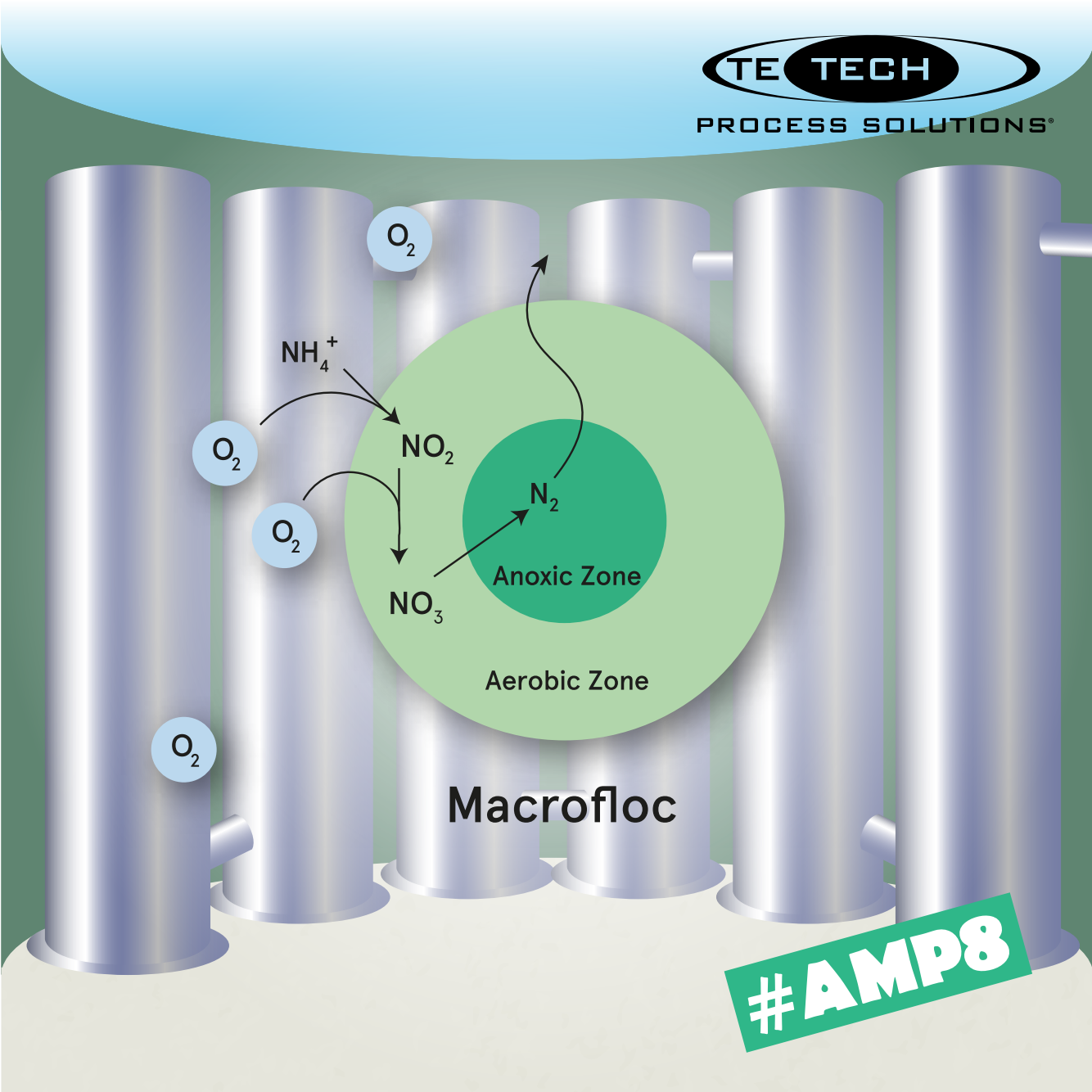
Tell us what a PAO is Cilla



Phosphorus-Accumulating Organisms (PAOs) are a group of microorganisms that, facilitate the removal of large amounts of phosphorus

#AMP8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O_2
NH_4^+
O_2
NO_2
O_2
N_2
Anoxic Zone
NO_3
Aerobic Zone
O_2
Macrofloc
#AMP8

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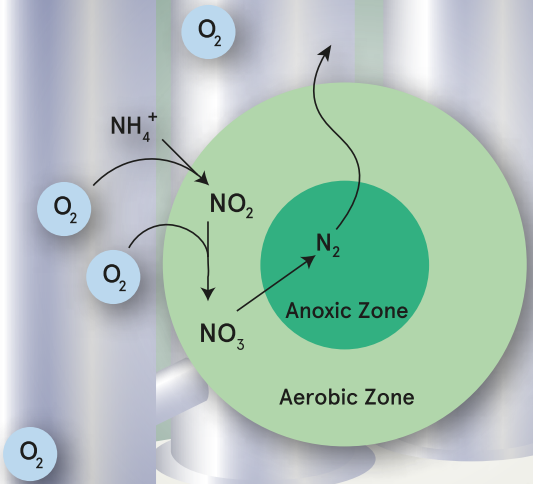
The design of this process enables the formation of macroflocs, which allow for simultaneous nitrification and denitrification, as well as the formation of PAOs (Phosphorus-Accumulating Organisms) for high rates of biological phosphorus removal.



Macrofloc

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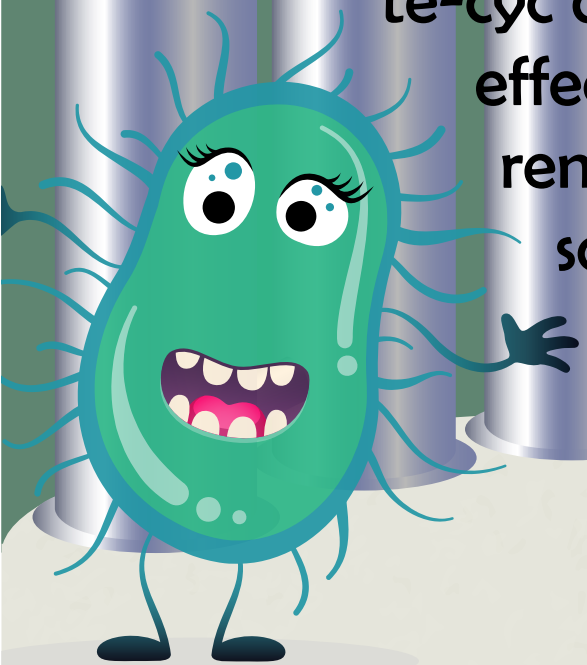
Next time....

Cilla explains how the te-cyc decanters are effective in the removal of suspended solids



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Meet Cilla one of our crawling ciliates

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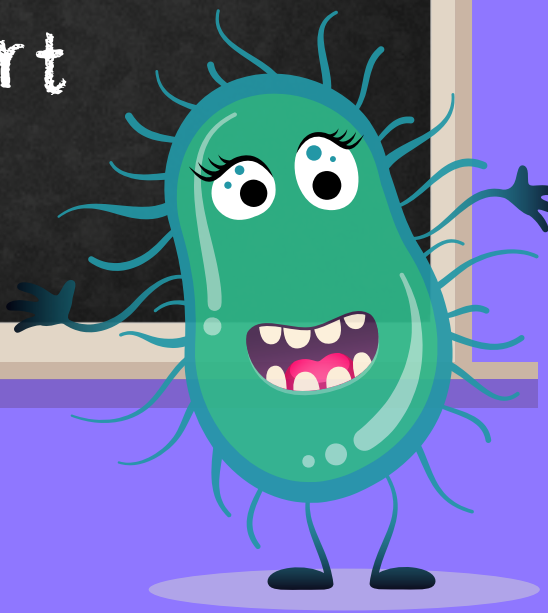

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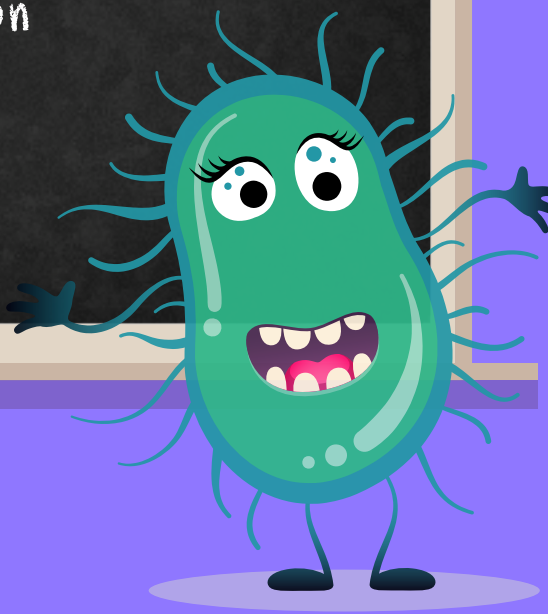
Cilla is going to crawl her way over the following topics.....

- population growth
- tightening discharge consents
- end of life assets / resilience
- chemical consumption
- CSO challenges
- N_2O emissions
- energy costs



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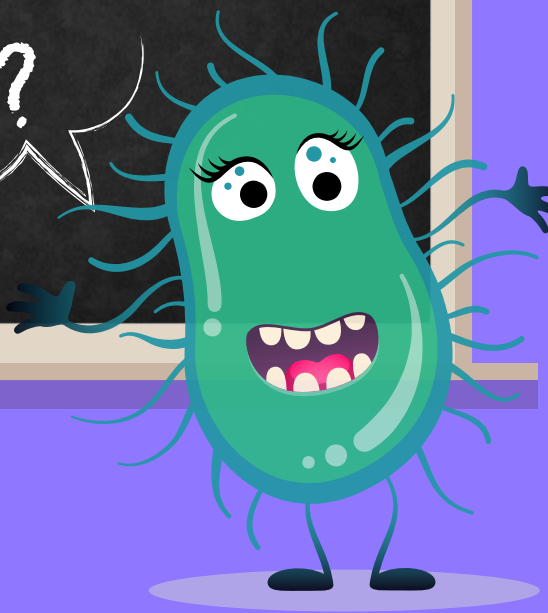
With the pressures of AMP8, the te-cyc can be adapted to suit your needs

Cilla says....

wanna know more?



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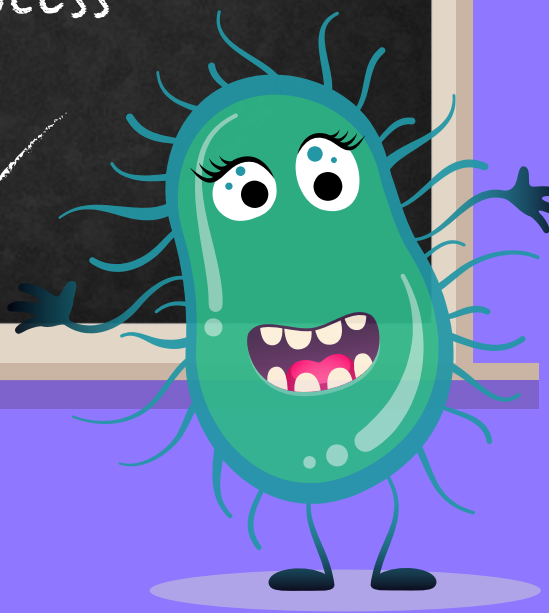
Whats the answer, Cilla?

Cilla says.....

The answer is te-cyc, our enhanced biological treatment process for effective nutrient removal



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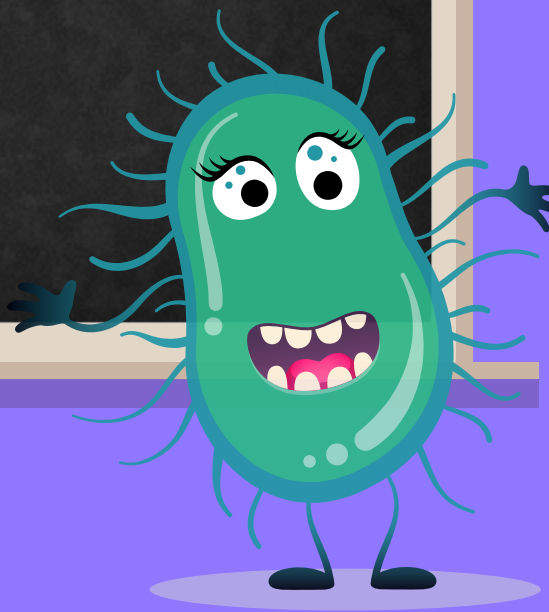
Growth Drivers and Tightening Consent Standards



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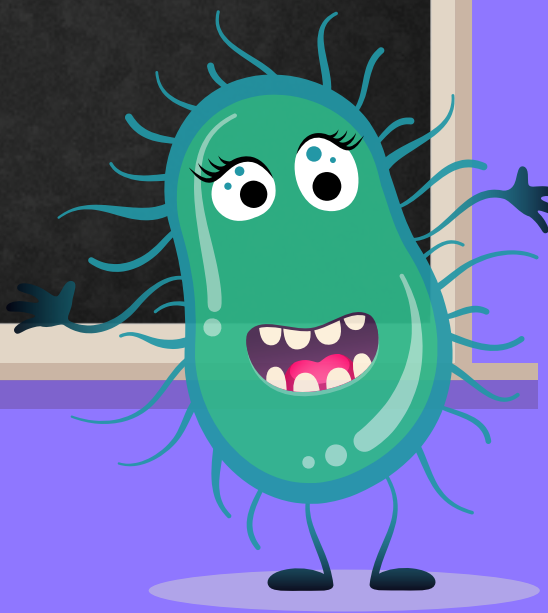
Biological P Removal
to <1mg/l



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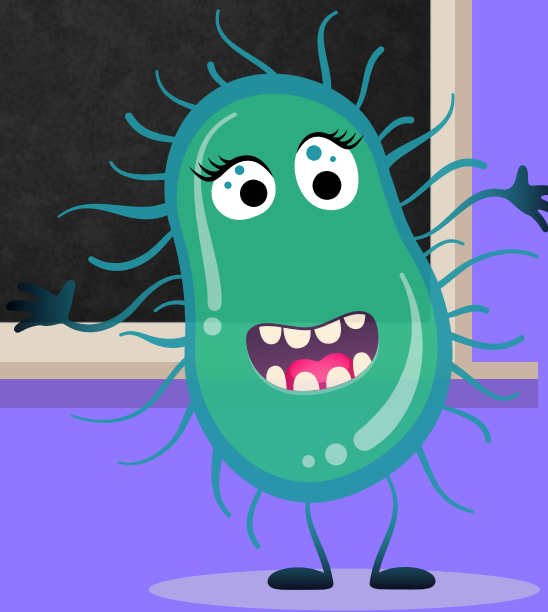
P Removal to <0.3 mg/l
with reduced
chemical dosing



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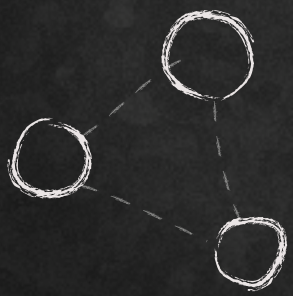
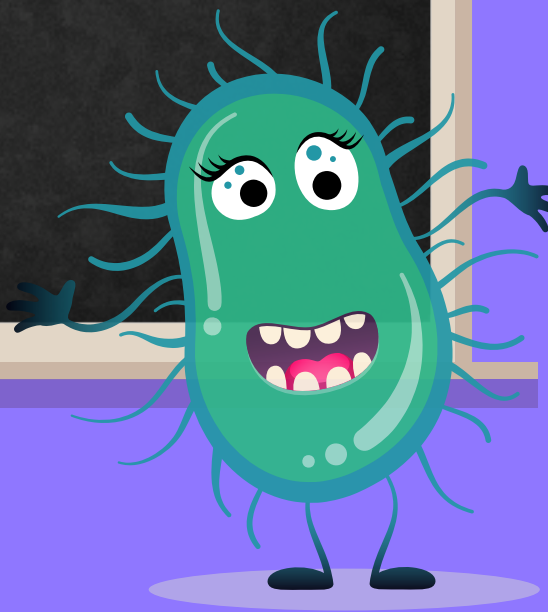
Simultaneous Nitrification & Denitrification





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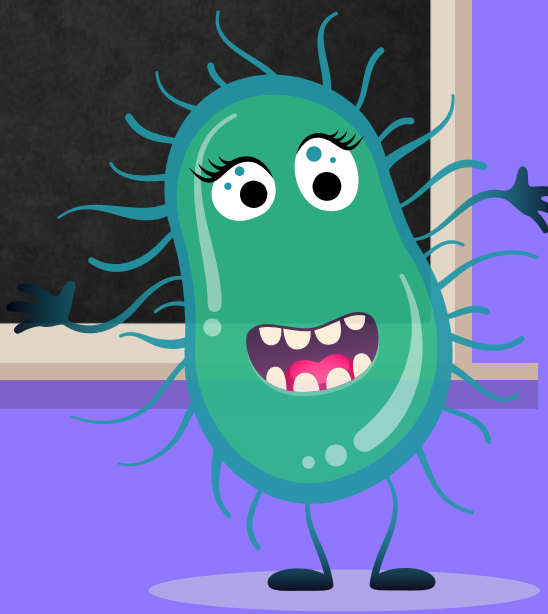
Nutrient Neutrality for New Residential Developments and Growth



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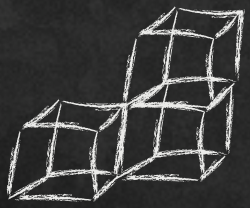
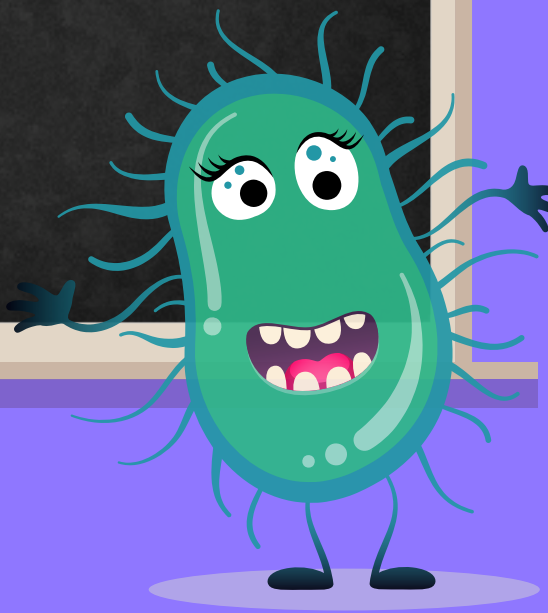
Replacement of ageing multiple stage assets with single stage treatment





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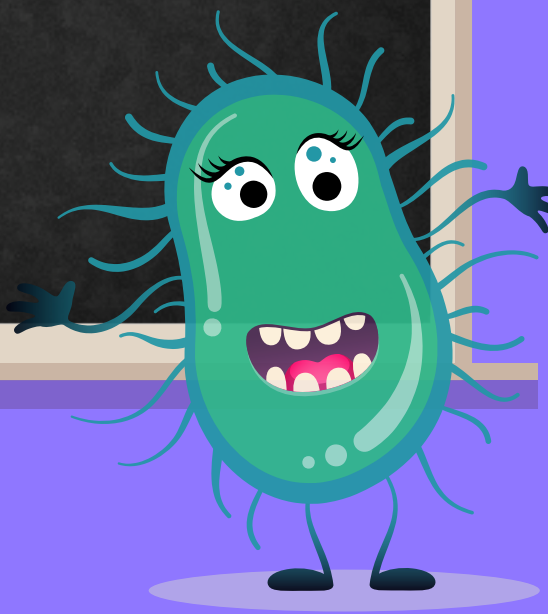
Side stream treatment for increases in flow and load



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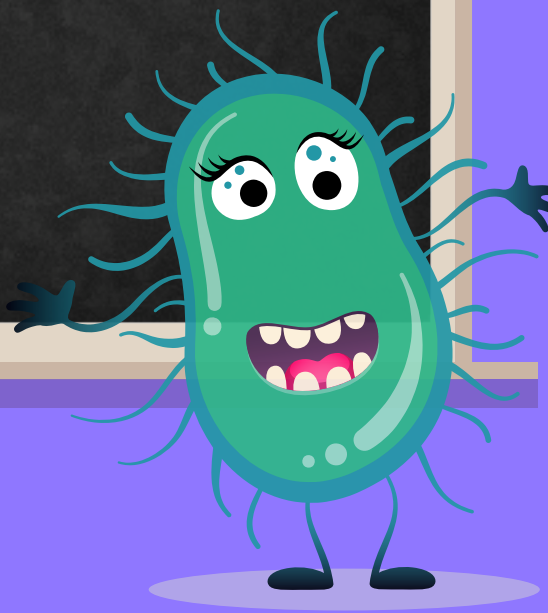
Conversion of existing SBR's or AS Plants for increased flow and load and tightening consents



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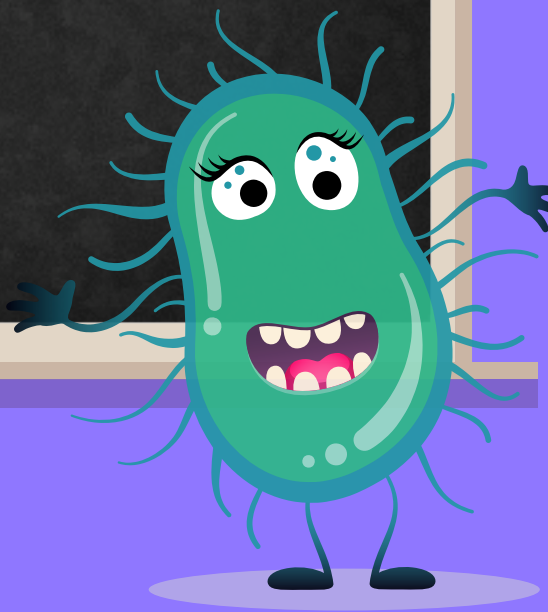
Package solution for small / rural sites to eliminate/reduce chemical delivery and handling



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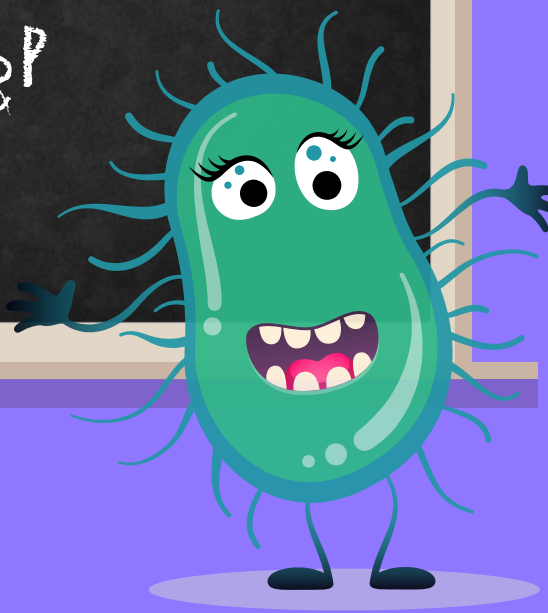
Next time

Find out how we can help our customers achieve both the need for increased capacity and tightening N&P consents in AMP8.



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Meet **Cilla**, one of our crawling ciliates

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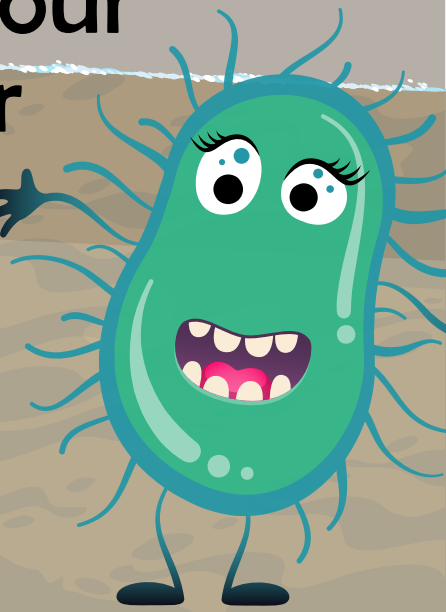

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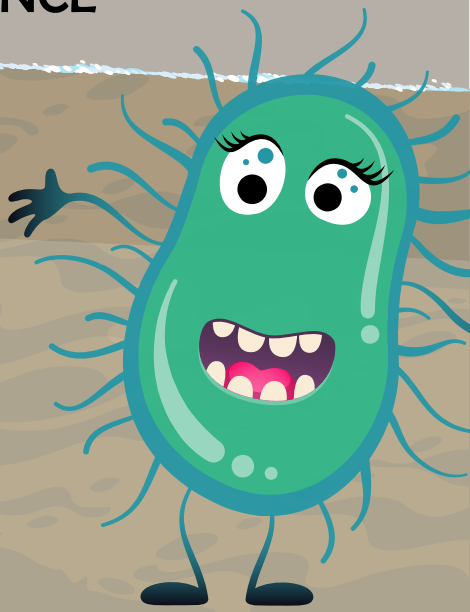
Cilla is going to crawl her way over the following topics.....

- POPULATION GROWTH
- TIGHTENING DISCHARGE CONSENTS
- END OF ASSET LIFE / RESILIENCE
- CSO CHALLENGES
- N_2O EMISSIONS
- CHEMICAL CONSUMPTION
- ENERGY COSTS



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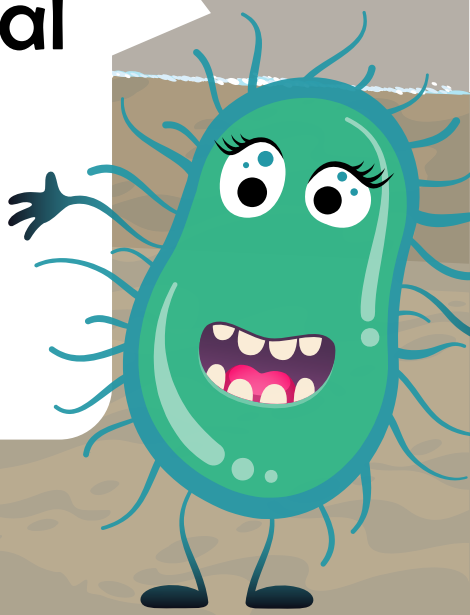
What's the answer, **Cilla**?

Cilla says.....

te-cyc our enhanced biological treatment process for effective nutrient removal



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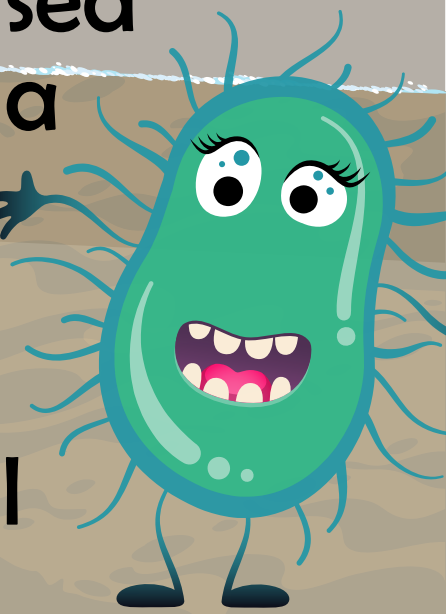
Let **Cilla** explain

The Macroflocs created in the selector zone and the bespoke motorised decanter both play a vital part in achieving excellent levels of nutrient removal



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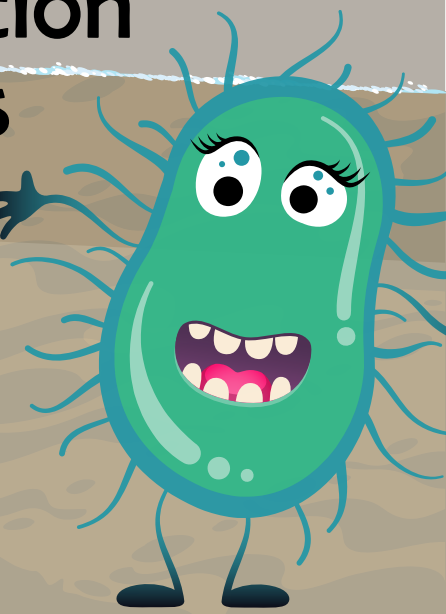
Macrofloc formation in the selectors enhances settleability



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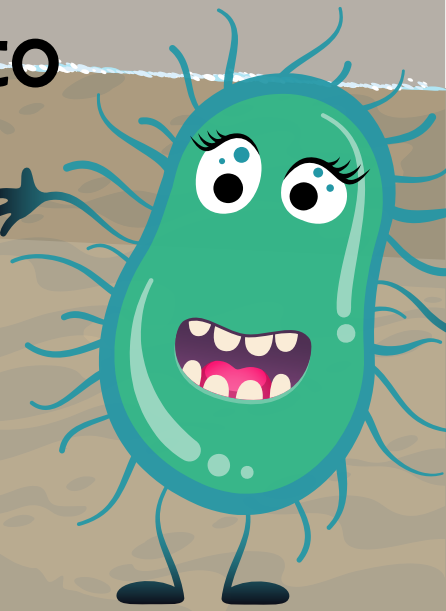
The decanter is designed to prevent any withdrawal of solids



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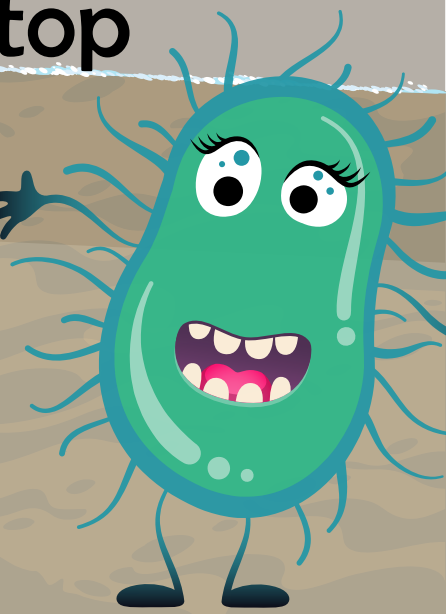
We completely stop influent during settlement and decanting stages



#AMP8

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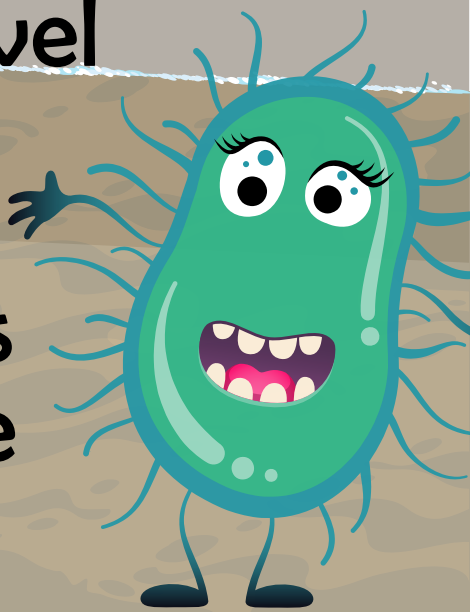
The decanter has a regulated travel rate to ensure a controlled and continuous discharge



#AMP8

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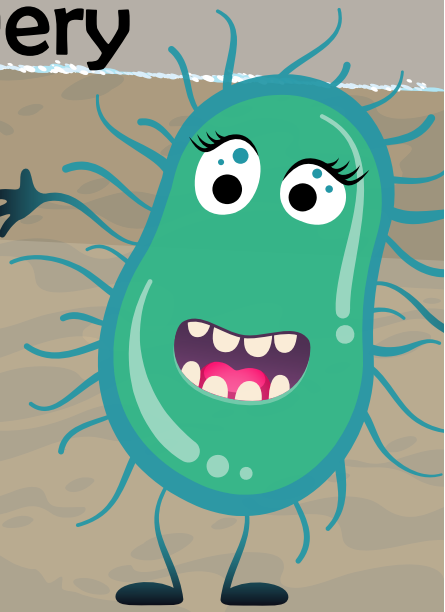
Resulting in very low suspended solids, typically < 5 mg/l



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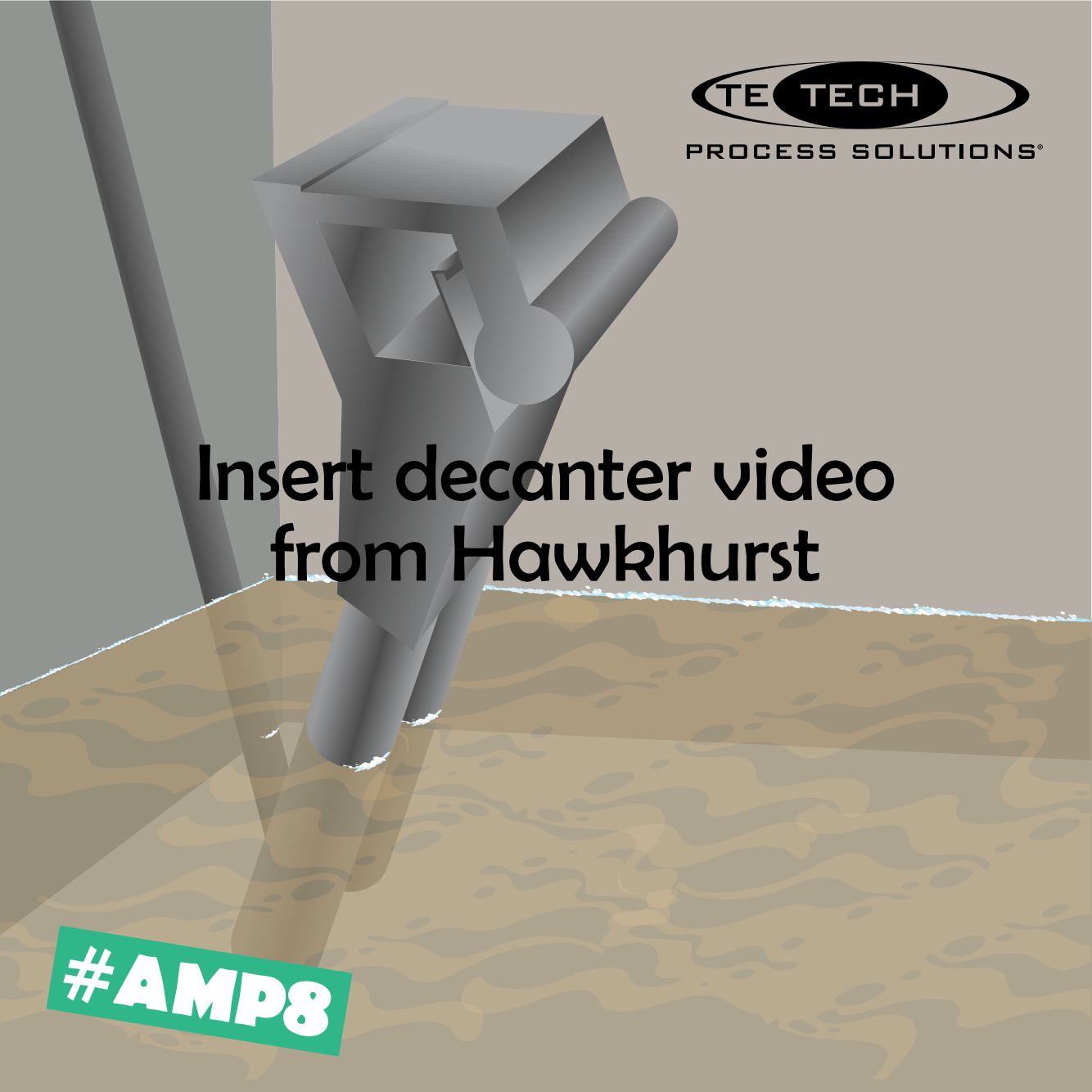
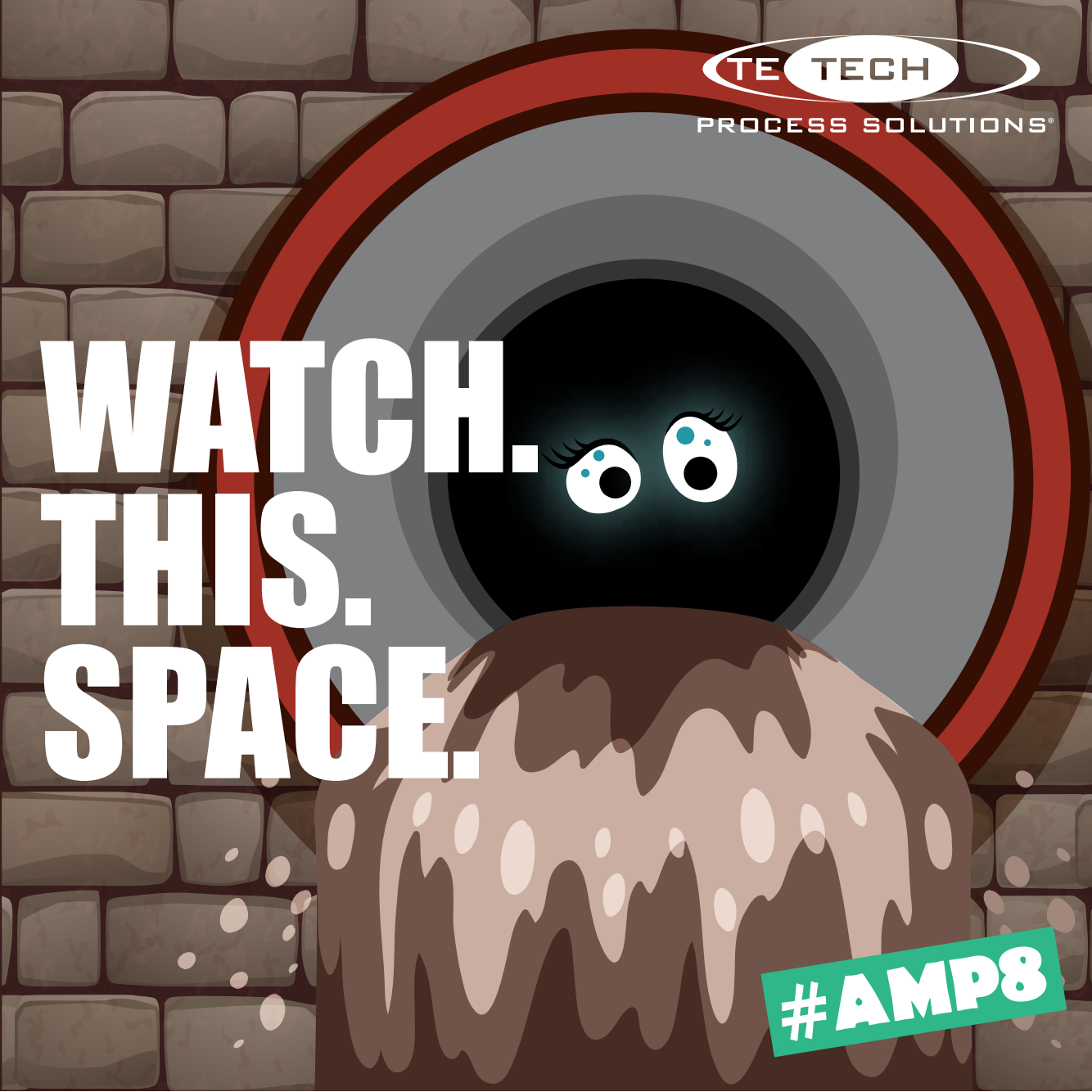
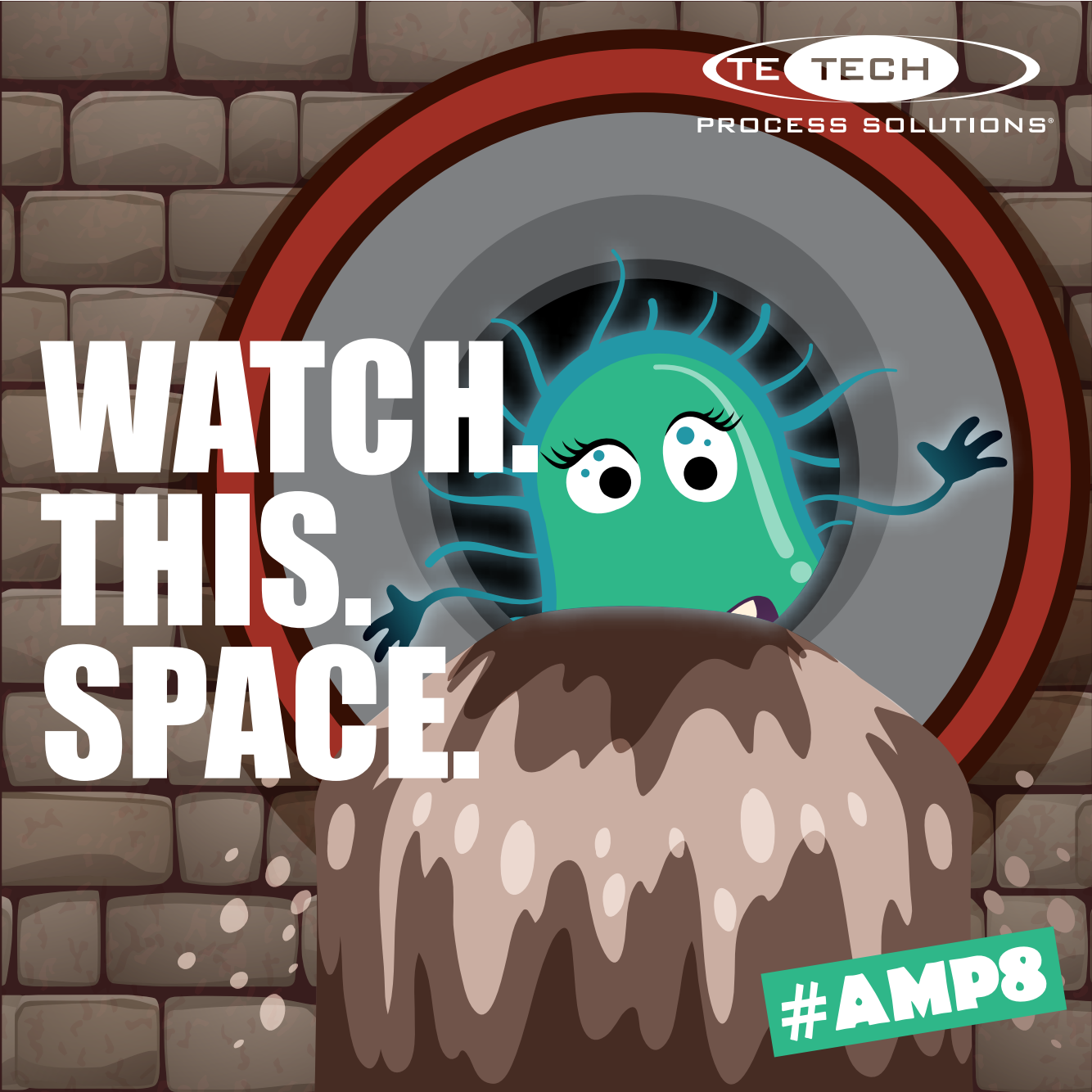

TE TECH
PROCESS SOLUTIONS®
Insert decanter video from Hawkhurst
#AMP8

#AMP8

TE TECH
PROCESS SOLUTIONS®


TE TECH
PROCESS SOLUTIONS®
WATCH.
THIS.
SPACE.
#AMP8


TE TECH
PROCESS SOLUTIONS®
WATCH.
THIS.
SPACE.
#AMP8


TE TECH
PROCESS SOLUTIONS®
WATCH.
THIS.
SPACE.


TE TECH
PROCESS SOLUTIONS
12:12
Cilia
Guess what?
What? Tell me....
Guess who's been promoted to Wastewater Expert?
YOU!? Or this a cruel joke
Yep, me! Te-Tech Process Solutions are making me the face of their AMP8 campaign, cool or what!?
The water industry isn't going to know what's hit them congratulations Cilla!
Thank you!
#AMP8