Waitai
Coastal-Burwood-Linwood Community Board
MINUTES ATTACHMENTS

Date: Monday 11 November 2024
Time: 4.30 pm
Venue: Boardroom, Corner Beresford and Union Streets, New Brighton

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EDIBLE STREETS

Growing communities one garden at a time

Edible Streets is now ready to grow.

Our mission is to inspire more people to turn their berms to Edibles, beneficial flowers or native ground covers. These gardens are to benefit the whole community and encourage community leadership, working together and a sense of belonging while caring for our local environment.

10 Edible streetside veggie gardens to 10 homes interested in joining the collective.

Conditions for the safety of everyone in the community.

1 Your berm must be against fence not the roadside for safety.

2 Must be a quite side road as also a safety thing for pedestrians and low volume traffic for food safety.

3 If you rent we need signed permission from landlord to have a streetside berm veggie garden.

4. To maintain garden going forward we are a message away for advice. We will give you free compost and seedlings to get established then its your responsibility to grow seedlings and plant out each season .

You can get your friends to help, or join our community Edible Plants nursery use shared resources and community to grow plants for your edible berm

What will the household get out of the project:

- They will be supplied with the edible or native plants, compost and education about planting and benefits that having a native berm will have to wider ecology.
- Education about weeds and pests
- Having ownership of their street
- Creating living street that are more enjoyable for the whole community
- They will meet people in their communities building strong relationships

What each house is responsible for:

- The maintenance
- Watering and weeding.
- Planting the following years

What Edible Streets and Green Lab are responsible for;

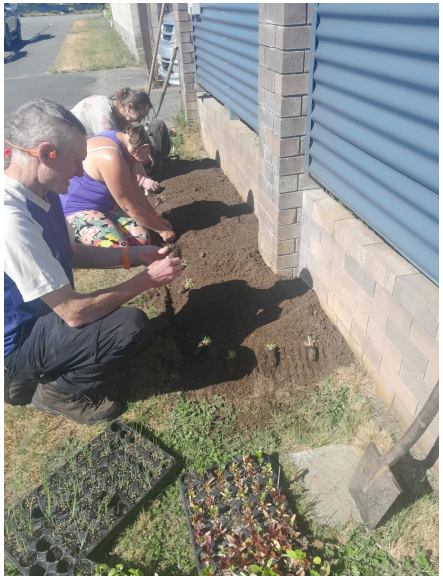
- Providing the plants and compost for the first planting
- Education and will respond to questions people have about the health of their plants.
- Organising with council consents and health and safety processes for planting.


EDIBLE STREETS
GET YOUR WHARE A
VEGETABLE GARDEN
• WITH YOUR HELP, WE'LL SET UP A VEGETABLE GARDEN OR NATIVE HABITAT ON YOUR COUNCIL BERM AS A GROUP
• COMPOST, PLANTS AND ADVICE WILL BE PROVIDED ABSOLUTELY FREE
ALL YOU'LL NEED IS:
• A COUNCIL BERM
• TO BE KEEN TO CONNECT WITH YOUR NEIGHBOURS
• WANT TO GROW FRESH PRODUCE OR NATIVE HABITAT
JOIN ŌTAUTAHI'S LOCAL FOOD MOVEMENT AND HELP BUILD OUR COMMUNITY RESILIENCE.
LETS HAVE A CHAT
contact us via email
ediblestreets@gmail.com

Planting day 2nd November 2024

Four gardens were planted in Linwood, New Brighton and South Brighton. Compost, plants and time even by Zane from Edible Streets.







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Community Liaison Group

CWTP Monthly Update – November 2024

Introduction

- Monthly presentation to provide an update on the operation of the Christchurch Wastewater Treatment Plant
- Includes high-level information on the operational activities being undertaken on the site

In Scope

- Operation of the interim solution
- Activities being undertaken to mitigate odours

Out of Scope

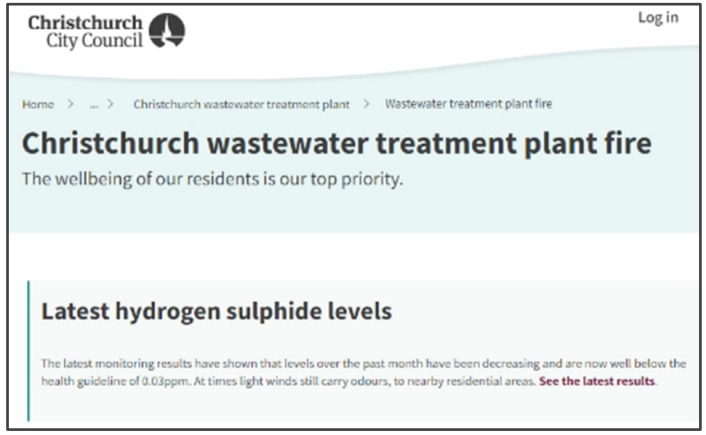
- Implementation of the findings of the Independent Review
- Status of the permanent replacement solution

Agenda

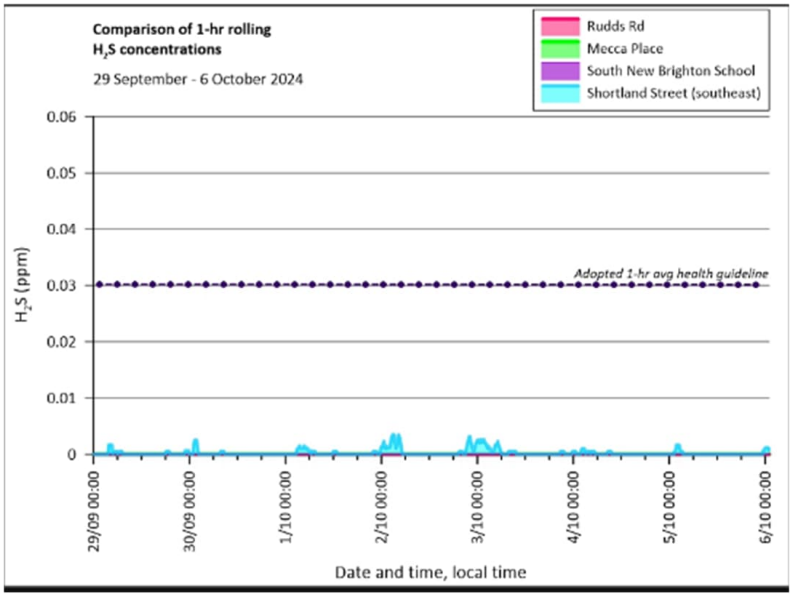
- Odour Monitoring Results
- Plant Status
- Oxidation Ponds – Aerator Status
- Temporary Activated Sludge Plant Optimisation
- Biological / Chemical Trials
- Basics for each Treatment Stage
- What were Trickling Filters & What is Activated Sludge?
- Any Questions

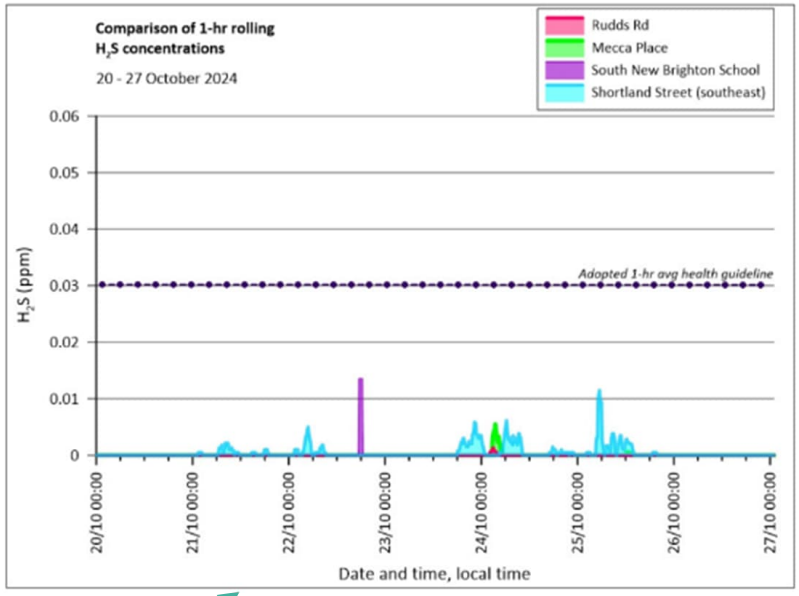
Odour Monitoring Results

- All data is continued to be provided on the CCC webpage from the four monitoring locations at the community sites



Odour Monitoring Results



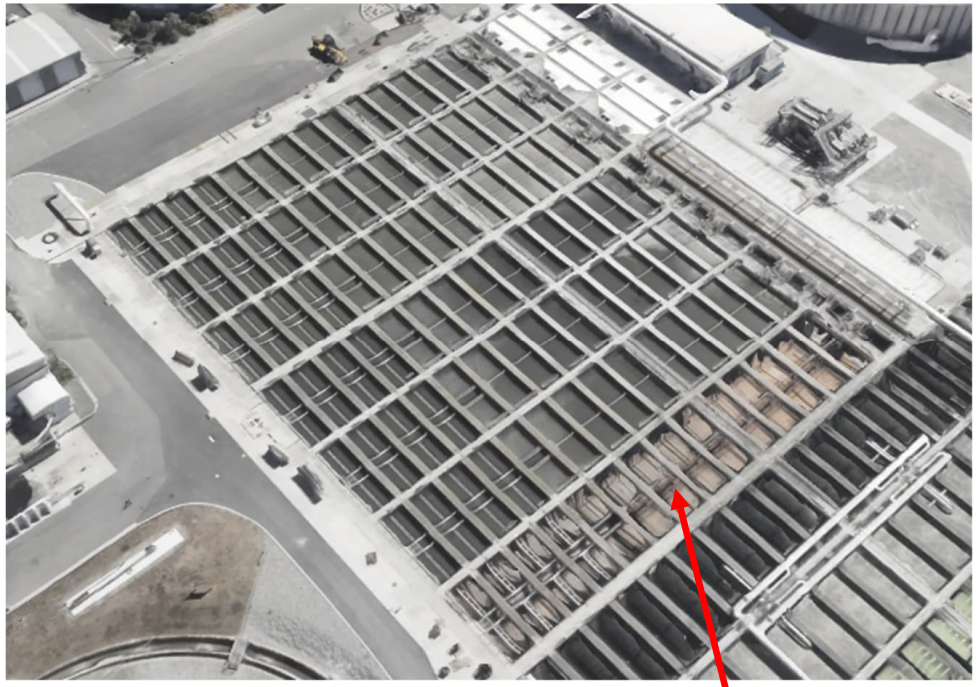


The graphs show the last week for September and latest week in October

CCC have continued to liaise with Ecan with SmeIt-It reports

Plant Status

- October has been a stable month
- Site staff have been preparing the site ready for summer
- We have noted the increase in off-site odour detection and continuing to check and optimise site processes
- Primary Settlement Tanks are our current focus



Aerial image showing the 7 PST's, with the Eastern tank drained

Plant Status – Primary Settlement Tanks

- Review of the flows and tank parameters has shown it is time to reduce number of PST's in service for summer flows
- Green shows recent flows
- Orange shows last year's flows
- Red shows when PST's are outside ideal parameters

Currently on 6 PST's and this week dropping to 5

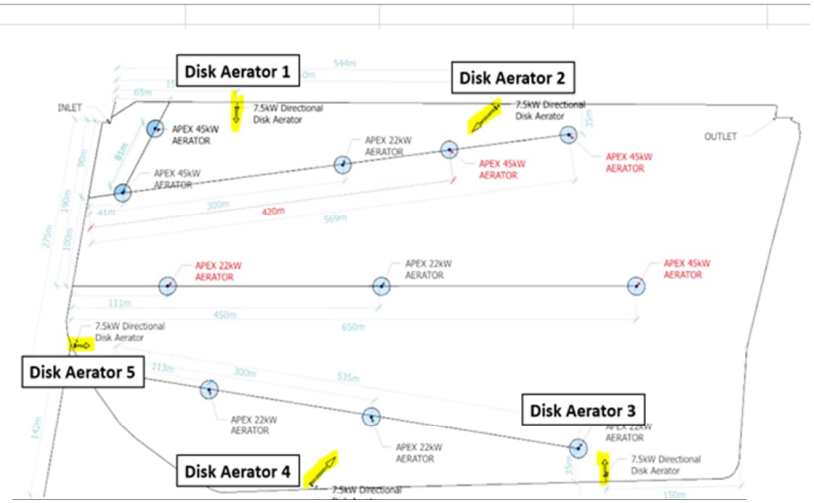
			HRT No. PST's online							Up flow velocity No. PST's online						
	Date	Flow rate (m3/hr)	1 PST	2 PST	3 PST	4 PST	5 PST	6 PST	7 PST	1 PST	2 PST	3 PST	4 PST	5 PST	6 PST	7 PST
Current	8/09/2024 12:00	6543.18434	0.313762	0.627523	0.941285	1.255046	1.568808	1.88257	2.196331	206.3554	103.1777	68.78512	51.58884	41.27107	34.39256	29.47934
	15/09/2024 12:00	6587.870953	0.311633	0.623267	0.9349	1.246533	1.558167	1.8698	2.181433	207.7647	103.8823	69.25489	51.94116	41.55293	34.62744	29.68067
	22/09/2024 12:00	7115.813979	0.288512	0.577025	0.865537	1.154049	1.442562	1.731074	2.019586	224.4146	112.2073	74.80488	56.10366	44.88293	37.40244	32.05923
	29/09/2024 13:00	6538.906508	0.313967	0.627934	0.941901	1.255867	1.569834	1.883801	2.197768	206.2204	103.1102	68.74015	51.55511	41.24409	34.37007	29.46006
	6/10/2024 13:00	6599.809297	0.31107	0.622139	0.933209	1.244278	1.555348	1.866418	2.177487	208.1412	104.0706	69.38039	52.03529	41.62823	34.69019	29.73445
	13/10/2024 13:00	6290.260104	0.326378	0.652755	0.979133	1.30551	1.631888	1.958266	2.284643	198.3788	99.18938	66.12626	49.59469	39.67575	33.06313	28.33982
	20/10/2024 13:00	6166.391193	0.332934	0.665868	0.998801	1.331735	1.664669	1.997603	2.330537	194.4723	97.23613	64.82409	48.61806	38.89445	32.41204	27.78175
	27/10/2024 13:00	7521.285636	0.272959	0.545917	0.818876	1.091835	1.364793	1.637752	1.910711	237.2022	118.6011	79.06739	59.30054	47.44044	39.5337	33.88603
	3/11/2024 13:00	7168.175276	0.286405	0.57281	0.859214	1.145619	1.432024	1.718429	2.004834	226.066	113.033	75.35532	56.51649	45.21319	37.67766	32.29514
	6/11/2024 12:00	6763.80758	0.303527	0.607055	0.910582	1.214109	1.517636	1.821164	2.124691	213.3132	106.6566	71.10442	53.32831	42.66265	35.55221	30.47332
Projection	9/11/2023 12:00	7435.780787	0.276097	0.552195	0.828292	1.10439	1.380487	1.656585	1.932682	234.5056	117.2528	78.16852	58.62639	46.90111	39.08426	33.5008
	16/11/2023 12:00	6845.544581	0.299903	0.599806	0.899709	1.199612	1.499515	1.799419	2.099322	215.891	107.9455	71.96367	53.97276	43.1782	35.98184	30.84157
	23/11/2023 12:00	6565.382123	0.312701	0.625402	0.938102	1.250803	1.563504	1.876205	2.188905	207.0554	103.5277	69.01847	51.76385	41.41108	34.50924	29.57935
	30/11/2023 12:00	6950.484516	0.295375	0.59075	0.886125	1.1815	1.476875	1.772251	2.067626	219.2006	109.6003	73.06685	54.80014	43.84011	36.53343	31.31437
	7/12/2023 12:00	7138.662927	0.287589	0.575178	0.862767	1.150355	1.437944	1.725533	2.013122	225.1352	112.5676	75.04508	56.28381	45.02705	37.52254	32.16218
	14/12/2023 12:00	7088.626464	0.289619	0.579238	0.868857	1.158475	1.448094	1.737713	2.027332	223.5572	111.7786	74.51907	55.8893	44.71144	37.25953	31.93674
	21/12/2023 12:00	6613.412607	0.31043	0.620859	0.931289	1.241719	1.552149	1.862578	2.173008	208.5702	104.2851	69.52339	52.14254	41.71403	34.7617	29.79574
	28/12/2023 12:00	6087.836802	0.33723	0.67446	1.011689	1.348919	1.686149	2.023379	2.360609	191.9949	95.99743	63.99828	47.99871	38.39897	31.99914	27.42784
	4/01/2024 12:00	5993.719097	0.342525	0.68505	1.027576	1.370101	1.712626	2.055151	2.397677	189.0266	94.51331	63.00887	47.25666	37.80532	31.50444	27.0038
	11/01/2024 12:00	6143.94254	0.33415	0.668301	1.002451	1.336601	1.670751	2.004902	2.339052	193.7643	96.88214	64.5881	48.44107	38.75286	32.29405	27.68061
	18/01/2024 12:00	6153.512237	0.333631	0.667261	1.000892	1.334522	1.668153	2.001784	2.335414	194.0661	97.03304	64.6887	48.51652	38.81322	32.34435	27.72373
	25/01/2024 12:00	6237.04755	0.329162	0.658324	0.987486	1.316649	1.645811	1.974973	2.304135	196.7006	98.35029	65.56686	49.17514	39.34012	32.78343	28.10008
	1/02/2024 12:00	6135.715587	0.334598	0.669197	1.003795	1.338393	1.672991	2.00759	2.342188	193.5048	96.75241	64.50161	48.37621	38.70097	32.2508	27.64355
	8/02/2024 12:00	5714.618125	0.359254	0.718508	1.077762	1.437016	1.796271	2.155525	2.514779	180.2245	90.11224	60.07483	45.05612	36.0449	30.03741	25.74636
	15/02/2024 12:00	6438.274288	0.318874	0.637749	0.956623	1.275497	1.594371	1.913246	2.23212	203.0468	101.5234	67.68225	50.76169	40.60935	33.84113	29.00668
	22/02/2024 12:00	6137.427102	0.334505	0.66901	1.003515	1.33802	1.672525	2.00703	2.341535	193.5588	96.7794	64.5196	48.3897	38.71176	32.2598	27.65126
	29/02/2024 12:00	5995.208083	0.34244	0.68488	1.02732	1.369761	1.712201	2.054641	2.397081	189.0736	94.53679	63.02453	47.26839	37.81472	31.51226	27.01051
	7/03/2024 12:00	6153.561933	0.333628	0.667256	1.000884	1.334512	1.66814	2.001767	2.335395	194.0677	97.03383	64.68922	48.51691	38.81353	32.34461	27.72395
	14/03/2024 12:00	6159.081991	0.333329	0.666658	0.999987	1.333316	1.666644	1.999973	2.333302	194.2417	97.12087	64.74725	48.56044	38.84835	32.37362	27.74882
	21/03/2024 12:00	6331.429685	0.324255	0.648511	0.972766	1.297021	1.621277	1.945532	2.269788	199.6772	99.83858	66.55905	49.91929	39.93543	33.27953	28.52531
	28/03/2024 12:00	6096.502864	0.33675	0.673501	1.010251	1.347002	1.683752	2.020503	2.357253	192.2682	96.13408	64.08939	48.06704	38.45363	32.04469	27.46688
	1/04/2024 12:00	5570.335389	0.368559	0.737119	1.105678	1.474238	1.842797	2.211357	2.579916	175.6742	87.83709	58.55806	43.91854	35.13484	29.27903	25.09631

Plant Status

- Two new monitoring devices monitor process stage performance;
  - Chlorophyll a meter – algae in the ponds
  - ORP (Redox Potential)

Oxidation Ponds – Aerator Status

Date	Disk Aerator 1 Running	Disk Aerator 2 Running	Disk Aerator 3 Running	Disk Aerator 4 Running	Disk Aerator 5 Running
9/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
10/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
11/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
12/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
13/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
14/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
15/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
16/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
17/10/2024	100.0%	100.0%	100.0%	100.0%	44.7%
18/10/2024	100.0%	100.0%	100.0%	100.0%	0.0%
19/10/2024	100.0%	100.0%	100.0%	100.0%	0.0%
20/10/2024	100.0%	100.0%	100.0%	100.0%	0.0%
21/10/2024	100.0%	100.0%	100.0%	100.0%	0.0%
22/10/2024	100.0%	100.0%	100.0%	100.0%	0.0%
23/10/2024	97.8%	97.9%	94.3%	99.1%	46.1%
24/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
25/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
26/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
27/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
28/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
29/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
30/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%
31/10/2024	100.0%	100.0%	98.0%	100.0%	100.0%
1/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%
2/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%
3/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%
4/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%
5/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%
6/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%
7/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%



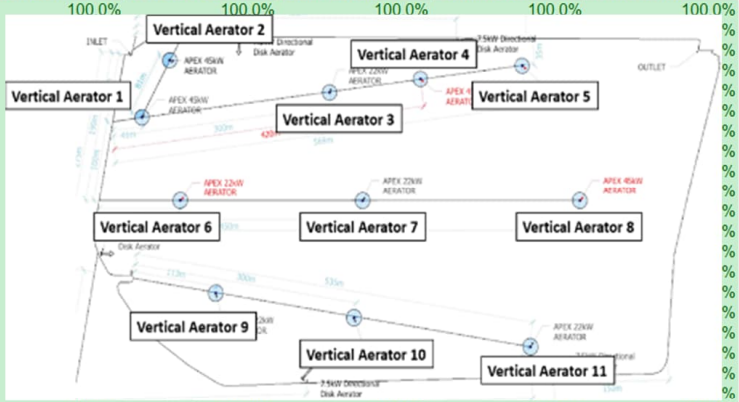
Planned

Reactive

- Contractor is continuing to undertake planned and unplanned reactive maintenance on the disc aerators

Oxidation Ponds – Aerator Status

Date	Vertical Aerator 1 R	Vertical Aerator 2 R	Vertical Aerator 3 R	Vertical Aerator 4 R	Vertical Aerator 5 R	Vertical Aerator 6 R	Vertical Aerator 7 R	Vertical Aerator 8 R	Vertical Aerator 9 R	Vertical Aerator 10 F	Vertical Aerator 11 F
9/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
10/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
11/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
12/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
13/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
14/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
15/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
16/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
17/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
18/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
19/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
20/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
21/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
22/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
23/10/2024	99.0%	98.2%	100.0%	100.0%	100.0%	100.0%					%
24/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
25/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
26/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
27/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
28/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%					%
29/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
30/10/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
31/10/2024	100.0%	100.0%	98.6%	98.4%	98.1%	99.1%	98.6%	98.2%	99.1%	98.7%	98.3%
1/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
2/11/2024	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
3/11/2024	100.0%	100.0%	100.0%	100.0%	69.5%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
4/11/2024	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
5/11/2024	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
6/11/2024	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	98.8%	100.0%	100.0%	100.0%
7/11/2024	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

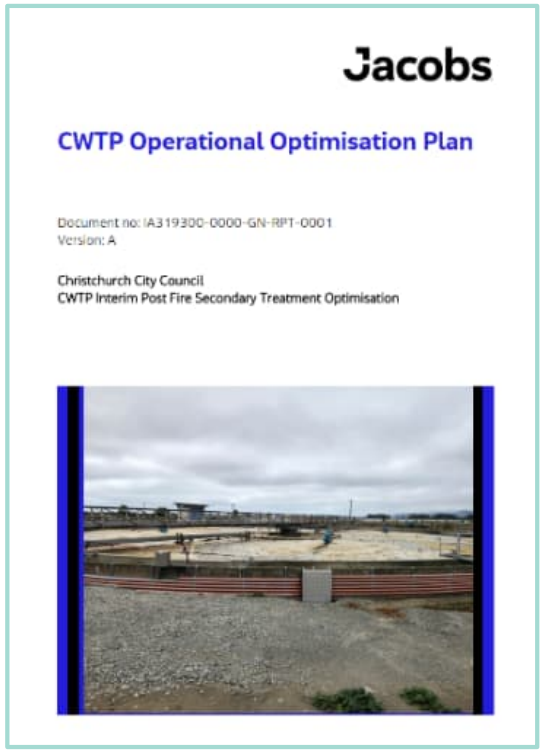


Planned

Reactive

- Contractor is continuing to undertake planned and unplanned reactive maintenance on the vertical shaft aerators aerators

Temporary Activated Sludge Plant Optimisation


Jacobs

CWTP Operational Optimisation Plan

Document no: IA319300-0000-GN-RPT-0001
Version: A

Christchurch City Council
CWTP Interim Post Fire Secondary Treatment Optimisation

- The optimisation plan has 3 modes of operations, each to be trialled for approx. 6 weeks each
- Trialling of two modes has now been completed
- Currently in 3rd and final mode
- Once completed, data will be assessed and recommendation to operation made

Temporary Activated Sludge Plant Optimisation

Mode 1;
4 x SCT's

Mode 2;
2 x SCT's

Mode 1;
1 x SCT

Odour Management Action Plan – ASP Optimisation

Left lane last one to be taken out of service, right lanes in only one in service

Lane which has been out of service for a couple of months

Biological / Chemical Trials

- Number of supplier offered their products to resolve odour issues at CWTP
- A trials overseen by Jacobs is underway to assess the feasibility of 6 products
- The stages and progress to date are;

1. Confirmation of Product Information - Completed
2. Small scale trial (nominal 20 litres) – Completed, awaiting report
3. ~~Medium scale trail (nominal 1,000 litres)~~ Small scale trial (nominal 20 litres) over two week period – Due to start this week
4. Define parameters of a full-scale month-long trial (water/odour sampling, risks, dosing parameters, costs)

- 2 products were stopped at stage 1, 2 products were stopped at stage 2, 2 products continuing to stage 3

Basics for each Treatment Process Stage

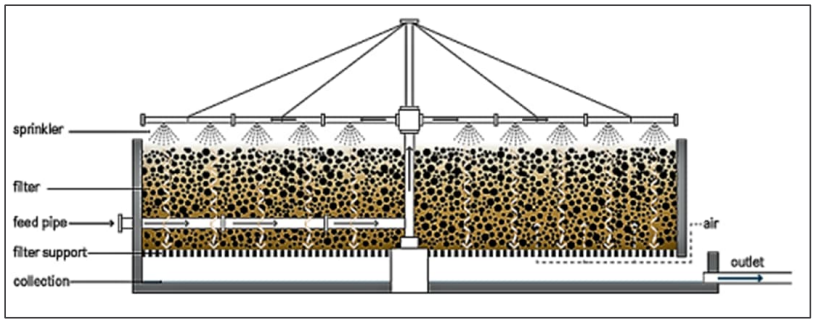
Process	What does it remove?	Why do we need to remove it?
Inlet Screen (Physical)	"Gross" inorganic material (Condom, tampons, cotton buds, wet wipes)	Downstream processes won't treat it Block pumps Blocks air diffusers
Primary Tanks (Physical)	Sludges (Primary)	Reduces load on downstream biological treatment processes
Secondary Treatment (Biological)	Biological Oxygen Demand	Treats the sewage for safe release into the environment
Clarifiers (Physical)	Sludge (Secondary)	Treats the sewage for safe release into the environment
Oxidation Ponds (Physical/Biological)	Nothing - Inactivates pathogens	Prevent spread of waterborne diseases

What were Trickling Filters & What is Activated Sludge?

- Trickling Filters & Activated Sludge are both secondary treatment processes
- Secondary treatment is the removal of biodegradable organic matter (BOD).
- It is achieved by simply creating an environment for the naturally occurring microbes / bacteria (biomass) to thrive and treat the sewage.
- Two classifications; Fixed film or Suspended-Growth Systems
  - Fixed film is where the biomass grows on the media and sewage passes over its surface
  - Suspended Growth is where the biomass is kept in suspensions in aeration tanks, then settled in other tanks and constantly recirculated back
  - (Both fixed-film and Suspended-Growth Systems need clarifiers)

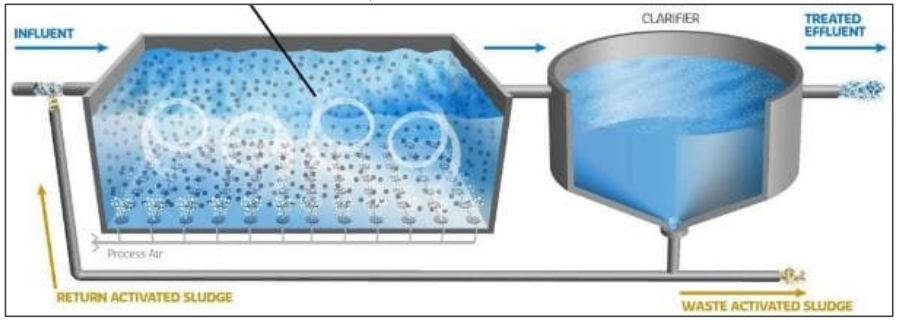
Fixed Film

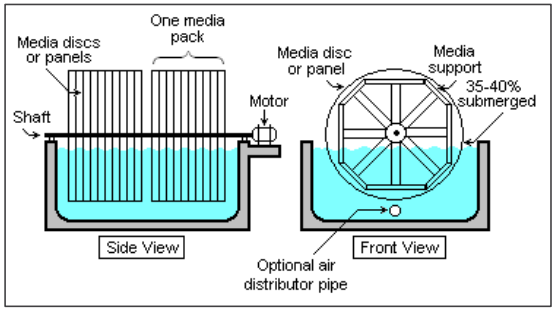
Trickling Filters



Rotating Biological Contactors

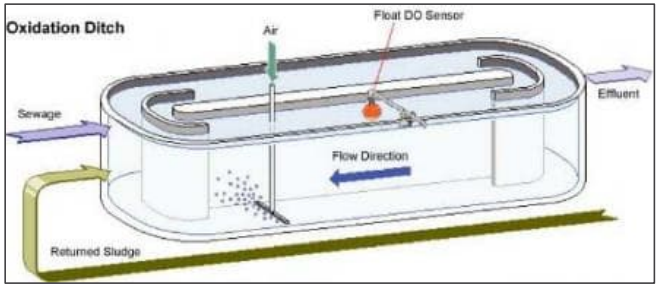
Moving Bed Biofilm Reactors



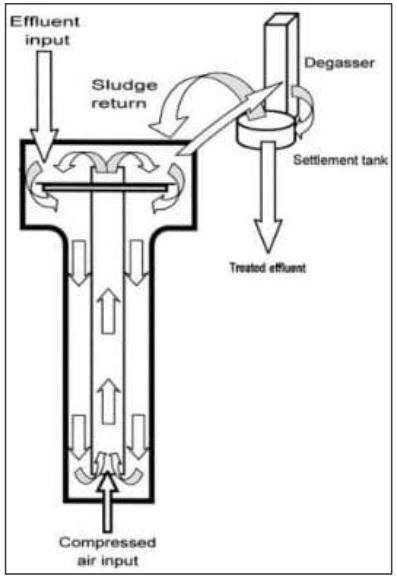


Suspended Growth (all Activated Sludge Plants)

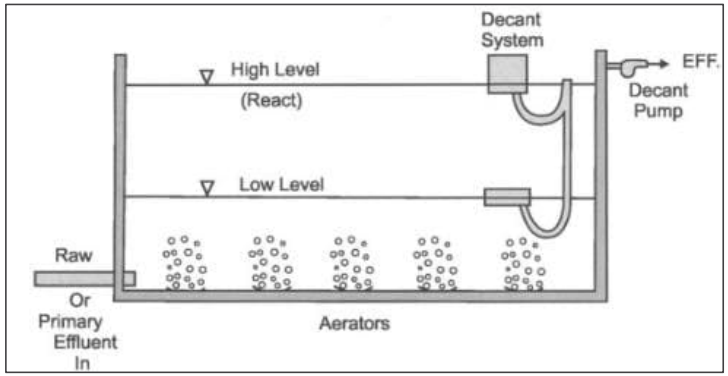
Oxidation Ditch



Deep Shaft / Vertical Treatment



Sequential Batch Reactors

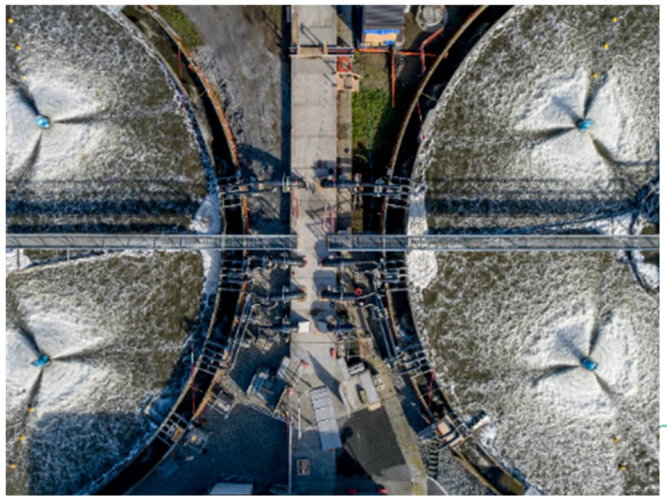


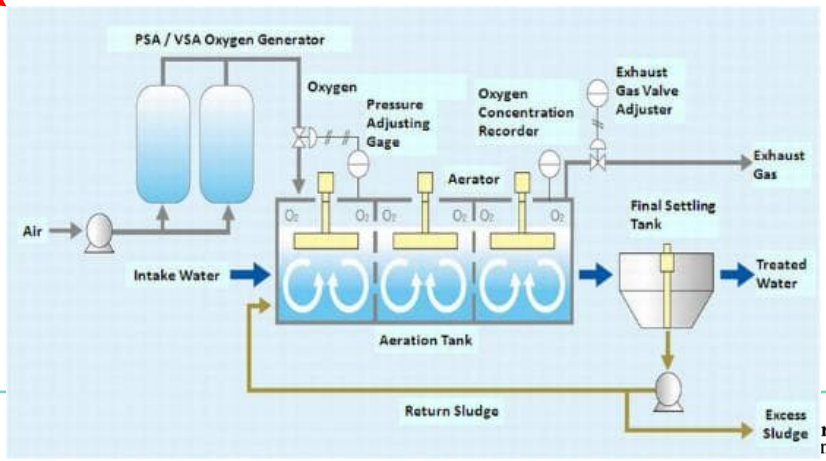
Suspended Growth (all Activated Sludge Plants)

Diffuse Aeration

Pure Oxygen Aeration

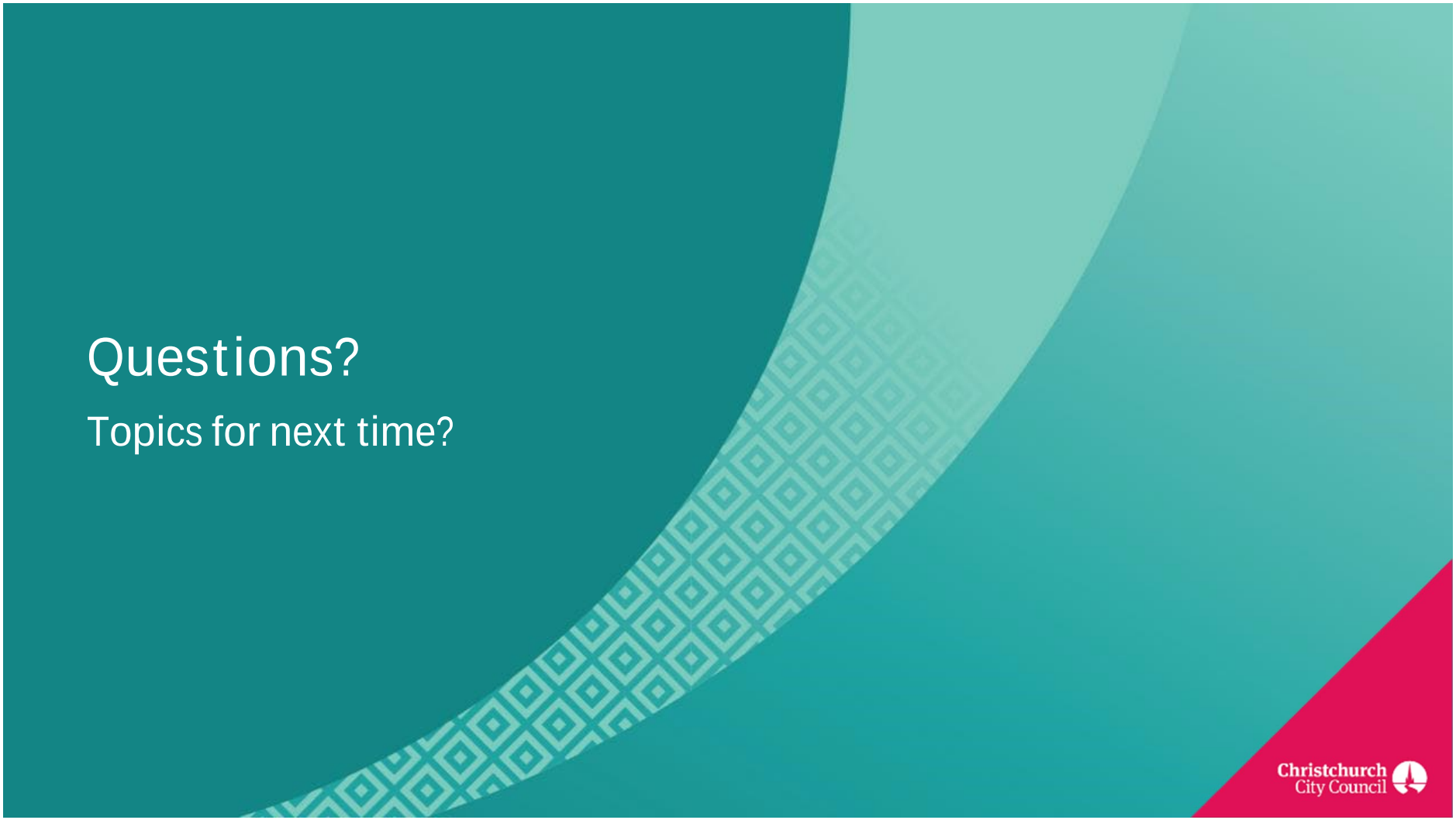
Surface Aeration





CWTP's Activated Sludge Plant

CWTP's Activated Sludge Plant


Questions?
Topics for next time?
Christchurch City Council