South West Water

Brixton Parish Council – SWW Meeting

Dave Pateman – SWW Wastewater Asset Manager

11th January 2021

Agenda

1. Can SWW provide details of the total amount of discharges made during the last 5 years broken down annually?

2. Approximately on average (per month) what capacity is the Brixton Treatment Works operating at in terms of percentage?

3. Based on current modelling when do SWW envisage Brixton Treatment Works capacity will need to be increased?

4. To help the parish council in future housing developments and plans are SWW able to advise approximately how many more houses the Brixton Treatment Works would be able to accept without resulting in breaches of the discharge licence?

5. If and when identified a need to expand Brixton Treatment Works from a planning perspective how long would such a modification take?

6. Can SWW outline if climate change modelling (an increase in heavy downpours for example) is being factored into the future planning of capacity at Brixton Treatment Works?

7. Can SWW outline what factors would influence or lead to increasing the capacity at a treatment works?

8. At times when a discharge is needed, such as after heavy rain, how long does it take from starting to discharge to notification of the relevant stakeholders? EDM record instantaneously and ping data daily (or sooner).

9. Is it possible for the parish council to be considered one of the stakeholders and informed of discharges?

1. Storm Overflow Performance

Can SWW provide details of the total amount of discharges made during the last 5 years broken down annually?

All discharges of any size and accounting for the 12-24 block counting method;

YEAR	2015	2016	2017	2018	2019	2020
Base Data	40	30	29	60	51	38
Exclude <1hr	35	27	23	53	45	34

12-24 counting relates to counting discharges over multiple tide cycles being counted as multiple discharges.

50m^3 considered as a default for ‘significant’ volume. Above numbers do not make any assessment of volume.

2. Current STW Capacity

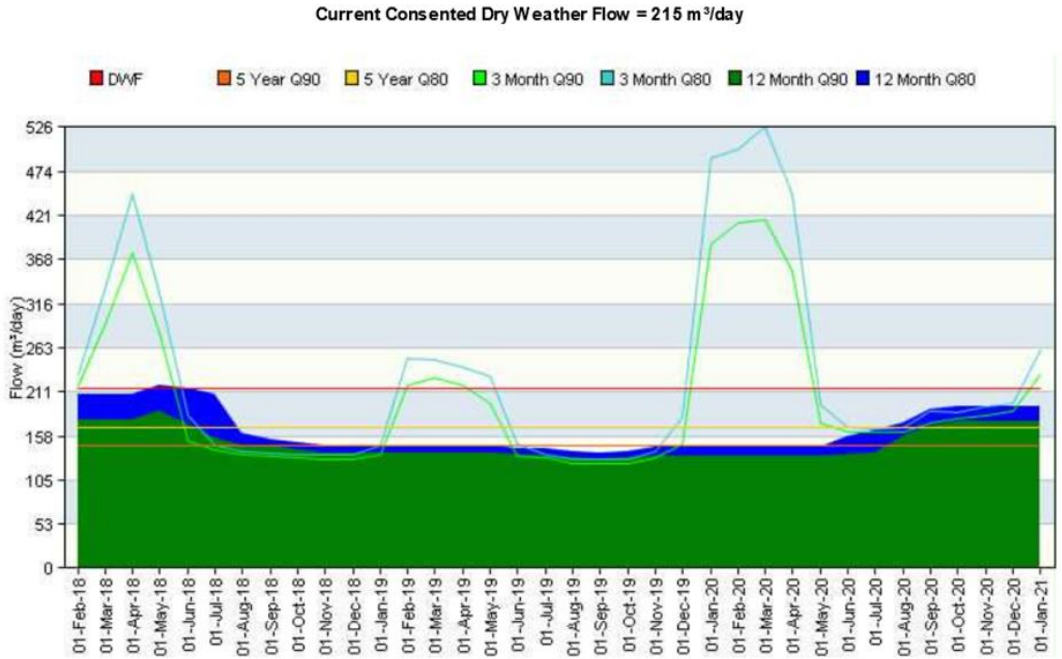
Approximately on average (per month) what capacity is the Brixton Treatment Works operating at in terms of percentage?

Max permitted discharge (Dry Weather) is 215m^3/day.

Based on 2020 data in terms of flow we operate at 78% capacity on average.

Monthly averages vary depending upon weather conditions, tourist populations etc.

In 2020 the monthly average flows in relation to maximum permitted flow varied between 67% an 89%



3. Long Term Asset Plan - STW

Based on current modelling when do SWW envisage Brixton Treatment Works capacity will need to be increased?

Current capacity is just over 1,400 p.e and current load is 985 p.e giving just over 30% headroom.

Current population forecasts to 2041 predict a population connected to the STW of 971.

p.e. relates to Population Equivalent.

- Treatment works are designed to deal with 2 parameters, flow and load.
- Load is the biological load within the flow.
- Some commercial or industrial processes discharge flow with greater load than domestic flow.
- Population equivalent is a way to normalise flow and load back to a population.

Current capacity is therefore in excess of the 2041 prediction / forecast.

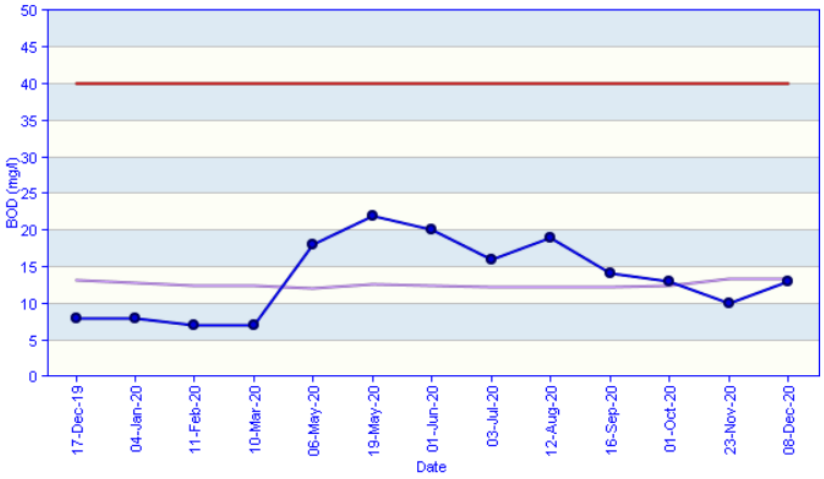
4. Planning Decision Supporting Information

To help the parish council in future housing developments and plans are SWW able to advise approximately how many more houses the Brixton Treatment Works would be able to accept without resulting in breaches of the discharge licence?

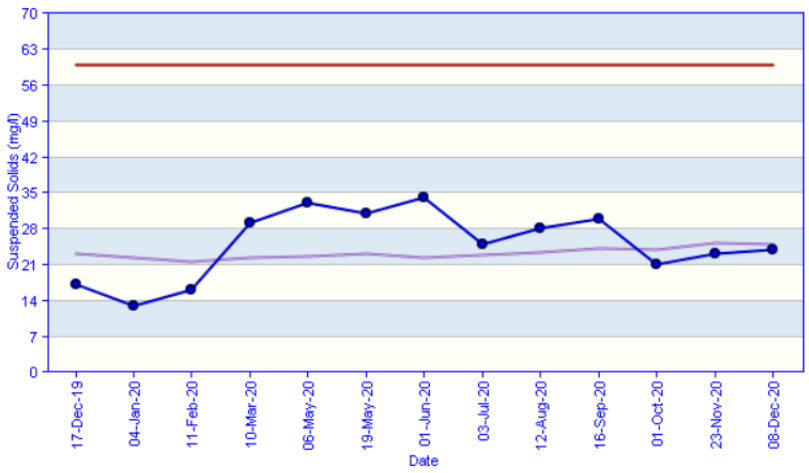
At 2.25 people per dwelling this headroom equates to 184 dwellings in terms of flow.

In comparison the biological performance is proportionally better so there is greater treatment headroom;

Biochemical Oxygen Demand



Suspended Solids



Probability Of Failure

Parameter	Consent Type	Consent Limit	Probability of Failure	'Typical' Result	Underlying Trend	Future Trended Result (% Permitted Value)
BOD 5 Day ATU Total	Lookup	40	0.0%	14.3	◆ Stable	16.5 (41.3%)
SS 105`C Total	Lookup	60	0.0%	27.0	◆ Stable	31.7 (52.9%)

Probability of Failure is calculated using the Weibull Distribution and is based upon the previous 12 months of compliance data

5. STW Expansion - Timescales

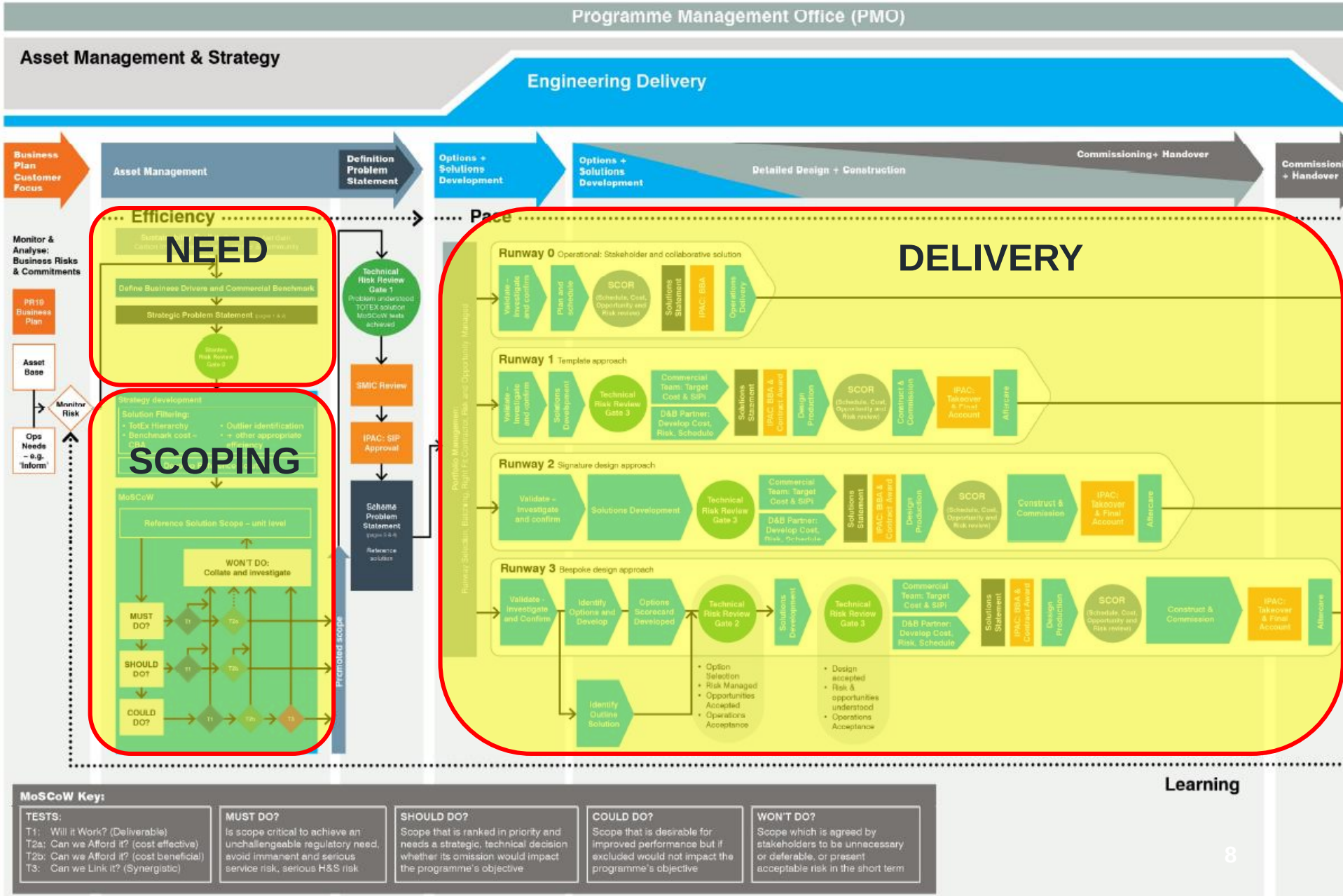
If and when identified a need to expand Brixton Treatment Works from a planning perspective how long would such a modification take?

Depends on a lot of factors;

- Extent of expansion required,
- Planning,
- Environmental etc.

Realistically 18-24 months from identification of a need to operational use accounting for data gathering, scoping, surveys, financial governance, permit discussions etc. See following delivery process model…

South West Water AMP7 Programme End to End Process
Efficiency, Pace and Learning



MoSCoW Key:

TESTS:	MUST DO?	SHOULD DO?	COULD DO?	WON'T DO?
T1: Will it Work? (Deliverable) T2a: Can we Afford it? (cost effective) T2b: Can we Afford it? (cost beneficial) T3: Can we Link it? (Synergistic)	Is scope critical to achieve an unchallengeable regulatory need, avoid immanent and serious service risk, serious H&S risk	Scope that is ranked in priority and needs a strategic, technical decision whether its omission would impact the programme's objective	Scope that is desirable for improved performance but if excluded would not impact the programme's objective	Scope which is agreed by stakeholders to be unnecessary or deferable, or present acceptable risk in the short term

6. Climate Change Consideration

Can SWW outline if climate change modelling (an increase in heavy downpours for example) is being factored into the future planning of capacity at Brixton Treatment Works?

We incorporate climate change allowances in accordance with the latest UKCP18 forecast scenarios in our catchment modelling,

- Drier summers
- Wetter winters

This impacts storm overflow performance rather than STW capacity. Storm overflow performance to a design horizon of 2040 is normally used, with allowances for climate change.

These issues are captured by the Spill Frequency Trigger Point permit (SFTP), which requires us to monitor and review performance of overflows on an ongoing basis against a trigger. The SSO at Brixton STW is on our current programme and will be due for investigation.

7. STW Asset Planning Considerations / Drivers

Can SWW outline what factors would influence or lead to increasing the capacity at a treatment works?

Typically fall into three categories;

a) Water Quality legislative changes – funded through the WINEP (fixed obligation)

b) Business need – to address excessive opex or opportunity to reduce carbon – from Capital Maintenance budgets (flexible – based on prioritisation)

c) Growth related risks to permit (flexible – based on prioritisation)

8. Storm overflow Discharge Notification

At times when a discharge is needed, such as after heavy rain, how long does it take from starting to discharge to notification of the relevant stakeholders?

Our permit includes the requirement for notification of storm discharges – in the case of Brixton the requirement is for annual reports and 'upon request' by the EA – within 28 days of the request. See permit details.

Storm sewage discharge start and end times	M7	Reports to be provided to the Environment Agency upon request Report to be submitted within 28 days unless otherwise specified in writing by the Environment Agency	Upon request by the Environment Agency
Storm sewage discharge start and end times	M7	Annually Report to be submitted within 2 months	1 January
Storm sewage discharge event duration monitoring status (operational / not operational)	M7	Annually Report to be submitted within 2 months	1 January

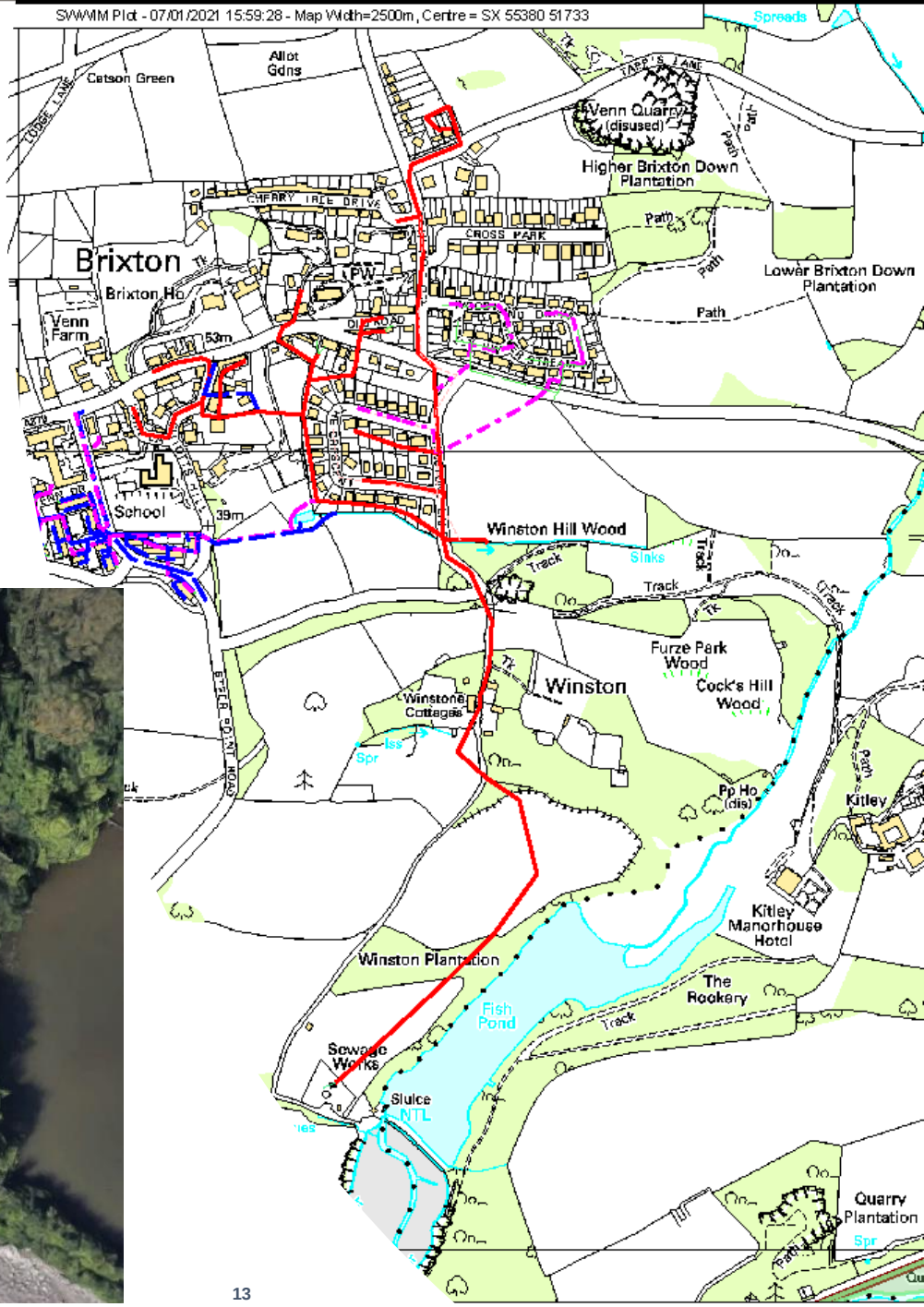
9. Parish Council Notification

Is it possible for the parish council to be considered one of the stakeholders and informed of discharges?

- Our systems and processes are not set up for this and we are not required to by our permit.
- No proposals for making this a ‘live’ dataset or for automatic notification.
- Emergency situations require a notification to the EA ‘as soon as reasonably practicable’.

- National debate on this issue is ongoing. There are proposals to publish storm overflow performance data on a platform that can be referenced publicly but there are significant issues associated with this in terms of the scale of this proposal, data auditing, systems requirements etc.

Questions?


SWWIM Plot - 07/01/2021 15:59:28 - Map Width=2500m, Centre = SX 55380 51733
Allot Gdns
Catson Green
Venn Quarry (disused)
Higher Brixton Down Plantation
Lower Brixton Down Plantation
Brixton
Brixton Ho
Venn Farm
53m
School
39m
Winston Hill Wood
Furze Park Wood
Cock's Hill Wood
Winston
Winstone Cottages
Pp Ho (dis)
Kitley
Kitley Manorhouse Hotel
Winston Plantation
The Rookery
Fish Pond
Sewage Works
Sluice
NTL
Quarry Plantation
Spreads
Path
Track
Slks
Spr

South West
Water