

Outlook

RE: Maer Lane STW Outfall Coastal Modelling

From

Date Tue 6/23/2026 9:50 AM

To

Cc

Hi

Just for completeness, please find below the model output charts for the Budleigh Bathing Water area (please note that BS3 and 4 charts are identical due to BS4 being outside the boundary of the model)

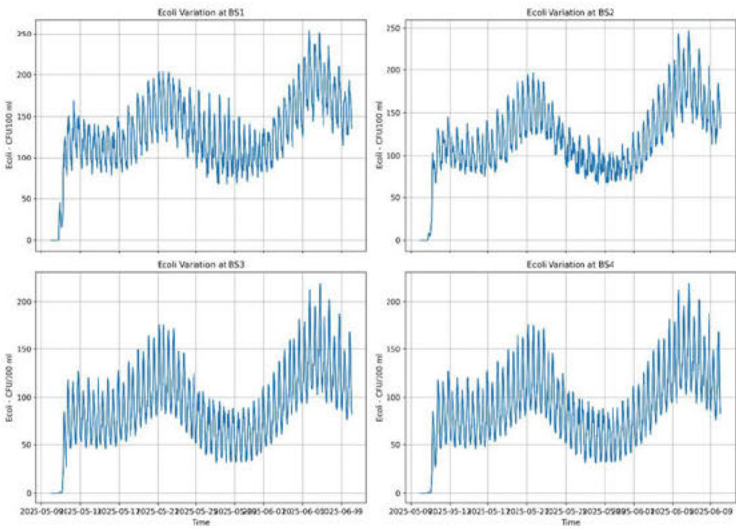


Figure 5: E. coli variation around Budleigh Salterton

Classification: BUSINESS

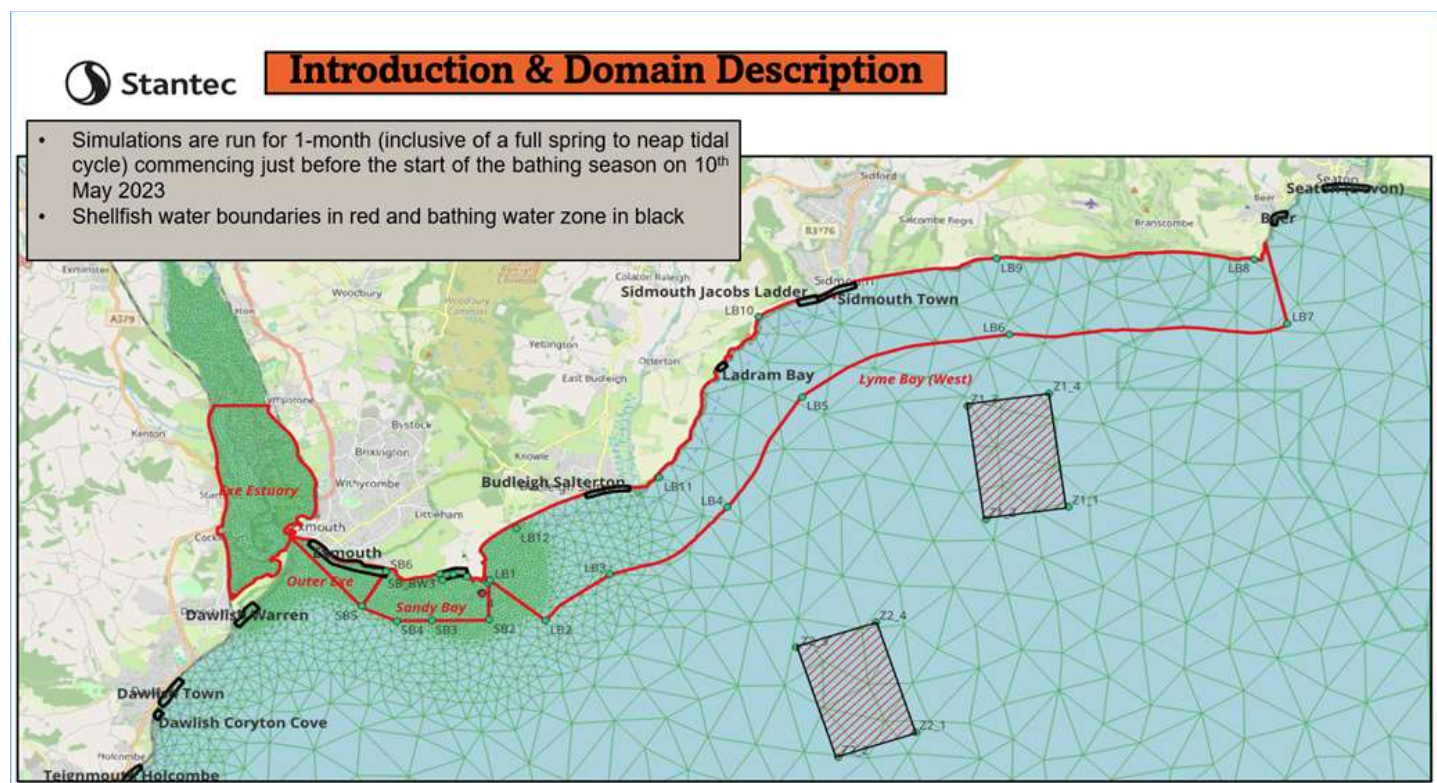
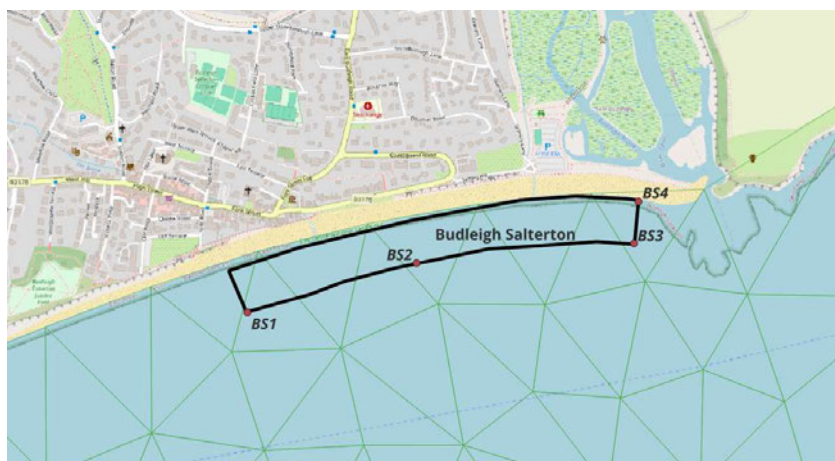
From: [REDACTED]
 Sent: 23 June 2026 08:57
 To: [REDACTED]
 Cc: [REDACTED]

Subject: RE: Maer Lane STW Outfall Coastal Modelling

Hi [REDACTED]

Yes good weekend thanks – but a bit hot for doing what I needed to get done in the garden!

I've taken a look at this and yes, the figures provided are the latest figures and what the LEP modelling has been done on the basis of. However, the previous modelling in 2022 was done with a single point source for the SSO / FE discharge rather than a diffuser arrangement and therefore provides a more concentrated initial plume. I have got Stantec re-modelling the latest model to include the Budleigh Bathing Water to provide comfort that we do not risk a deterioration and I have just got these through.



point_id	geometric_mean	percentile_95	percentile_90
SB1	264.9708862	475.1551514	436.6098938
SB2	3.373292923	270.3478088	175.5193329
SB3	31.2162571	497.5462341	365.8033447
SB4	44.06261063	559.5661011	458.1048279
LB1	266.7432556	537.2402344	491.575592
LB2	0.021213643	9.962083817	6.652902126
LB3	0.065928034	10.38518333	8.601632118
LB12	196.5303802	320.3557739	293.8187256
SB_BW1	117.2255173	260.2752991	232.0000916
SB_BW2	76.55828094	354.1495667	286.1206665
SB_BW3	54.08851624	139.9873199	119.6528625
SB_BW4	56.96921158	185.8964539	162.5618134
Z1_1	1.04463E-10	1.53649E-07	6.89242E-08
Z1_2	1.53036E-07	8.87739E-05	4.56792E-05
Z1_3	2.93857E-05	0.06747631	0.021352885
Z1_4	1.61764E-07	0.000503102	0.000148723
Z2_1	3.97838E-09	2.35682E-06	1.3128E-06
Z2_2	5.03502E-08	9.87502E-06	5.94604E-06
Z2_3	3.22757E-05	0.004523652	0.00278972
Z2_4	3.34484E-06	0.000826721	0.000350272
BS1	70.97299957	202.3269196	186.8842163
BS2	60.3748436	189.8218384	175.7719574
BS3	38.07262802	163.5778809	143.910965

Shellfish

110 E.coli/100ml as a Geomean for Sandy Bay (as its not currently harvested)

5 E.coli/100ml as a Geomean for Lyme Bay harvesting area

110 E.coli/100ml as a Geomean at the boundary of Lyme Bay West SF protection area

Bathing

500 cfu/100ml as a 95%ile for 'Good' bathing water standards

The Budleigh BW results all show 95%iles below the 'Excellent' threshold under these worst case conditions. Point BS4, the north-east boundary point sits marginally on the beach and is outside the model boundary and therefore the hydrodynamic model does not predict results. By inspection the results would be below the concentrations predicted by the model for the other points on the BW boundary simply because it is further away from the outfall. Furthermore, these results demonstrate the benefit of the new diffuser arrangement in increasing the initial dilution at the discharge point and the impact of this in terms of greater dispersion when compared to the 2022 modelling.

Additionally Stantec have re-computed the statistics for all points, but this time rather than fitting the distribution on the simulated data they have computed the stats directly on the model data. I'm not familiar enough with coastal modelling and the associated statistics to fully get my head around the implications of this but I can see that all the shellfish results are the same but the 95%ile figures for Sandy Bay BW have reduced to a point where they are all below the 'Good' threshold using this methodology.

Please let me know if you need any more information, I think this closes out the outstanding queries in relation to the worst case scenario modelling to support the LEP discussion.

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Hi

I hope you are well and had a lovely weekend!

Have you been able to follow up on the email below and seek clarification on whether these figures "Flow from each diffuser is 258.75 l/s and so the total flow is 1035 l/s ." are correct?

Thanks

From: [REDACTED]
Sent: 18 June 2026 13:38

Subject: RE: Maer Lane STW Outfall Coastal Modelling

Hi [REDACTED]

The marine modellers have reviewed the information that was submitted on Tuesday and provided the following feedback and request for further clarification:

I'm satisfied that the modelling and the calculations (geometric mean and percentiles) have been carried out correctly.

However, as Budleigh Salterton BW outputs have not been provided, clarification is needed on the flow values shared by David by email (09/06/2026): "Flow from each diffuser is 258.75 l/s and so the total flow is 1035 l/s ." Could this be checked/confirmed (particularly the units), so that it can be compared against their previously identified threshold (2,592 m³/hour) for deterioration at Budleigh? If the values are correct, the total discharge (1035 l/s = 3726 m³/hour) would exceed this threshold, and based on their earlier report (see attached), this would suggest potential deterioration at Budleigh Salterton BW.

In terms of the modelling results provided:

- Offshore shellfish beds show no issues
- Sandy Bay & Lyme Bay SFW show potential for deterioration (some values exceed compliance within the designated areas)
- Sandy Bay BW show potential for deterioration (one value exceed compliance within the designated areas)

Please can you confirm if these outputs (statistics and plots) will be incorporated into a report and submitted to the EA.

Kind regards

Sent: 16 June 2026 17:42

Subject: Fw: Maer Lane STW Outfall Coastal Modelling

Hi [REDACTED]
Please find attached a response from our consultants regarding the data provided previously. In short, they have checked it and had taken out any zero figures from the calculations of geomean. That's about as far as my statistical understanding goes but the response should answer the queries and as per the message Stantec are happy to share the coding used for the post processing of the data.

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