

**Planning and Environment Department
Water Pollution (Jersey) Law, 2000 - Article 20
Application for a Discharge Permit**

Note: All applicants should complete Part A of the Application Form

**Part B of the form should be completed by applicants for discharges from business premises (including hotels, recreational premises, educational establishments etc, whether for profit or not)
Address for reply is given at the end of Part B of the form**

PART A – Town CSO’s

1 a)	Full name and postal address of applicant (See Note 4) Post Code Daytime telephone number	Transport and Technical Services Department PO Box 412 South Hill St. Helier Jersey CI JE4 8UY 01534 448218
1 b)	Agent (if any) Full name and postal address Contact name and daytime telephone number	
2 a)	Description of land or premises to which this application relates (e.g. private house, flat, business)	The town of St Helier
2 b)	The property is served by:	Bellozanne Sewage Treatment Works
2 c)	The discharge will be to:	A Surface Water sewer and thence to the foreshore / sea
3	State the nature of the discharge	Storm / emergency sewage effluent
4	For sewage and storm / emergency discharge state:	
a)	Maximum quantity it is proposed to discharge in one day (see note 5)	
b)	Highest rate at which it is	

	proposed the discharge will be made (see note 5)	
5	Please give details of the premises:	Multiple dwellings and impervious surfaces
6	If the answer to 5 is multiple dwelling, state number and type of dwelling units (flats, houses) connected to the septic tank / soakaway or treatment plant.	
7	If the discharge is to a soakaway or land drain, how far away (in metres) is:	
a)	The nearest well or borehole	N / A
b)	The nearest other foul soakaway	N / A
c)	The nearest watercourse	N / A
8	Will surface water be discharged separately from sewage effluent?	Yes in separated areas of the Town sewer network
9	Will the septic tank / soakaway or plant be maintained to ensure effective treatment?	N / A
10	If the answer to 9 is Yes, state how often the septic tank / soakaway or plant be inspected and maintained	N / A
11	Will the soakaway discharge its effluent below ground at all times?	N / A
12	State the maximum and minimum number of people using the septic tank / soakaway or treatment plant	N / A
13	If the discharge is to a treatment plant, give brief details of the plant (see note 6)	N / A
14	Is there a foul sewer available to which the discharge could be made? If yes, give reason for not connecting	N / A

PART A – Mont Les Vaux CSO

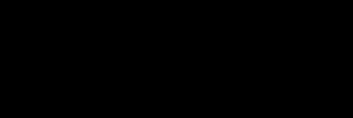
1 a)	Full name and postal address of applicant (See Note 4) Post Code Daytime telephone number	Transport and Technical Services Department PO Box 412 South Hill St. Helier Jersey CI JE4 8UY 01534 448218
1 b)	Agent (if any) Full name and postal address Contact name and daytime telephone number	
2 a)	Description of land or premises to which this application relates (e.g. private house, flat, business)	St Aubin's Village
2 b)	The property is served by:	Bellozanne Sewage Treatment Works
2 c)	The discharge will be to:	A Surface Water sewer and thence to the foreshore / sea
3	State the nature of the discharge	Storm / emergency sewage effluent
4	For sewage and storm / emergency discharge state: a) Maximum quantity it is proposed to discharge in one day (see note 5) b) Highest rate at which it is proposed the discharge will be made (see note 5)	
5	Please give details of the premises:	Multiple dwellings and impervious surfaces
6	If the answer to 5 is multiple dwelling, state number and type of dwelling units (flats, houses) connected to the septic tank / soakaway or treatment plant.	
7	If the discharge is to a soakaway or land drain, how far away (in metres) is:	

a)	The nearest well or borehole	N / A
b)	The nearest other foul soakaway	N / A
c)	The nearest watercourse	N / A
8	Will surface water be discharged separately from sewage effluent?	Yes in separated areas of the Town sewer network
9	Will the septic tank / soakaway or plant be maintained to ensure effective treatment?	N / A
10	If the answer to 9 is Yes, state how often the septic tank / soakaway or plant be inspected and maintained	N / A
11	Will the soakaway discharge its effluent below ground at all times?	N / A
12	State the maximum and minimum number of people using the septic tank / soakaway or treatment plant	N / A
13	If the discharge is to a treatment plant, give brief details of the plant (see note 6)	N / A
14	Is there a foul sewer available to which the discharge could be made? If yes, give reason for not connecting	N / A

PART A

Declaration

I declare that the above details are true to the best of my knowledge and belief (See Note 11)

Signed by Applicant 

Print Name DUNN BERRY

Date: 11/11/15

Position ASSISTANT DIRECTOR

Appendices

1. What is a Combined Storm Overflow and why are they there.
2. When do they come into operation.
3. How do we monitor the Combined Storm Overflow.
4. Application Details
5. Location plan and photographs

1. What is a Combined Sewer Overflow an why are they there

In dry weather, a combined sewer generally only contains foul effluent. However, during periods of rainfall the sewer contents also include surface water from road and roof drainage which is connected directly to the pipe. These combined sewers are a legacy from the Victorian era and while many have been separated, there are still some areas of Jersey where combined sewers are still in operation. A combined sewer will show large fluctuations in flow between dry and wet weather, these flow rates being entirely dependent on rainfall intensity and event duration. During excessive rainfall events there needs to be a 'fail-safe' mechanism to avoid streets and/or properties from being flooded with foul effluent, albeit heavily diluted with rain water, and these 'fail-safe' points are known as Combined Sewer Overflows (CSO).

A CSO is a fixed point on the Islands sewer network where foul and surface water sewers are inter-linked, usually by means of a high-level weir, or orifice of some description. Under normal dry weather operating conditions or lesser rainfall events, the level of the foul effluent within the sewer will not rise sufficiently to be able to discharge over the weir and into the surface water sewer. However, in times of heavier precipitation the flows within these sewers will rise and a proportion of this additional flow is likely to discharge over the weir into the surface water sewer network and then out to sea.

2. When do they come into operation

It is very difficult to give an actual defined point at which a CSO will be start to operate. This is due mainly to the length and intensity variations of rainfall events, i.e. is it a short sharp summer storm or long steady winter storm. Also the topography of the town and its surrounding area may have a big influence depending on where the rain actually falls. Rainfall events are classified as how often they are likely to occur and their duration, the less frequent the occurrence the greater the storm. The current Hydraulic Sewer Model of Jersey (using InfoWorks software) predicts that with the exception of the King Street CSO, the CSO's should not operate until a storm event with a probability of about 1 in 10 years or greater occurs. The King Street CSO is predicted to operate 14 times a year. However, since the installation of the radio monitoring (see below) we have had the following spill events that we believe to be true but there was no visual witness of the event.

Location	Date	Duration	Location	Date	Duration
King Street	15/1/2015	45 minutes	Union Street	12/8/2015	10 minutes
King Street	11/6/2015	30 minutes	Union Street	13/8/2015	57 minutes
Union Street	11/6/2015	15 minutes	Esplanade	13/8/2015	4 minutes
Union Street	12/8/2015	5 minutes			

As further separation of the flows into the Towns sewers is undertaken then the frequency of discharging over the weir(s) should decrease providing that excessive rainfall events do not occur more frequently.

3. How do we monitor the Combined Sewer Overflow

In times past the effluent level in the sewers would have been monitored with the use of “cups” fitted to a wall adjacent to the weir. As the effluent level rose the next cup would fill giving an indication of the maximum level reached. This required the Department to carry out regular checks at each location. Technology has moved on and in 2013 the Department found a radio based system that could be incorporated within the Telemetry system used to monitor the Island’s foul and surface water pumping stations. At each CSO location a probe has been installed to alarm when a discharge occurs. When the tip of the probe becomes immersed a signal is sent out which is logged within the telemetry data. When the effluent drops below the tip of the probe a second signal is received thus giving a time length for the discharge. We are confident that the probes are set to operate correctly on all true spill events. However, during the early days of monitoring we received many signals which were quite clearly false as there was no rainfall at the time and sewer levels were normal. On inspection it was found that these false signals were raised by condensation forming on the surface of the probe. The fixing arrangement has been modified and we have implemented regular inspections (currently monthly) to clean/dry the probes. The number of false alarms has significantly reduced, but not totally, therefore we do carry out checks on all alarms received. This consists of corroboration with the weather and telemetry data to ascertain if the alarm could be valid. If we are unsure then we will attend the CSO site and look for visual evidence as to whether effluent has passed over the weir.

4. Application Details

The Department has never hidden the fact that the CSO’s exist, they have been mentioned in various reports created by/for the department and the Environment Department has been aware of them for many years. It is only since we started with the installation of remote monitoring system that it was brought to our attention that no application for a discharge permit under the Water Pollution (Jersey) Law, 2000 - Article 20 had been made for the town and Mont Les Vaux CSOs.

5. Location plan and photographs

The Department has 8 CSO locations, 7 of which are located in St Helier, the other being at St Aubin. The locations are:

<u>IN TOWN</u>		
Name	Easting	Northing
AQUILA ROAD	41938.19	65929.20
ESPLANADE	41531.89	65661.20
KING STREET	42053.49	65488.41
ROUGE BOUILLON	41865.99	66221.30
THE PARADE	41810.38	65857.20
UNION STREET	42020.38	65704.40
VAL PLAISANT	42180.39	65974.60
<u>WEST of the ISLAND</u>		
MONT LES VAUX	37400.32	65829.94

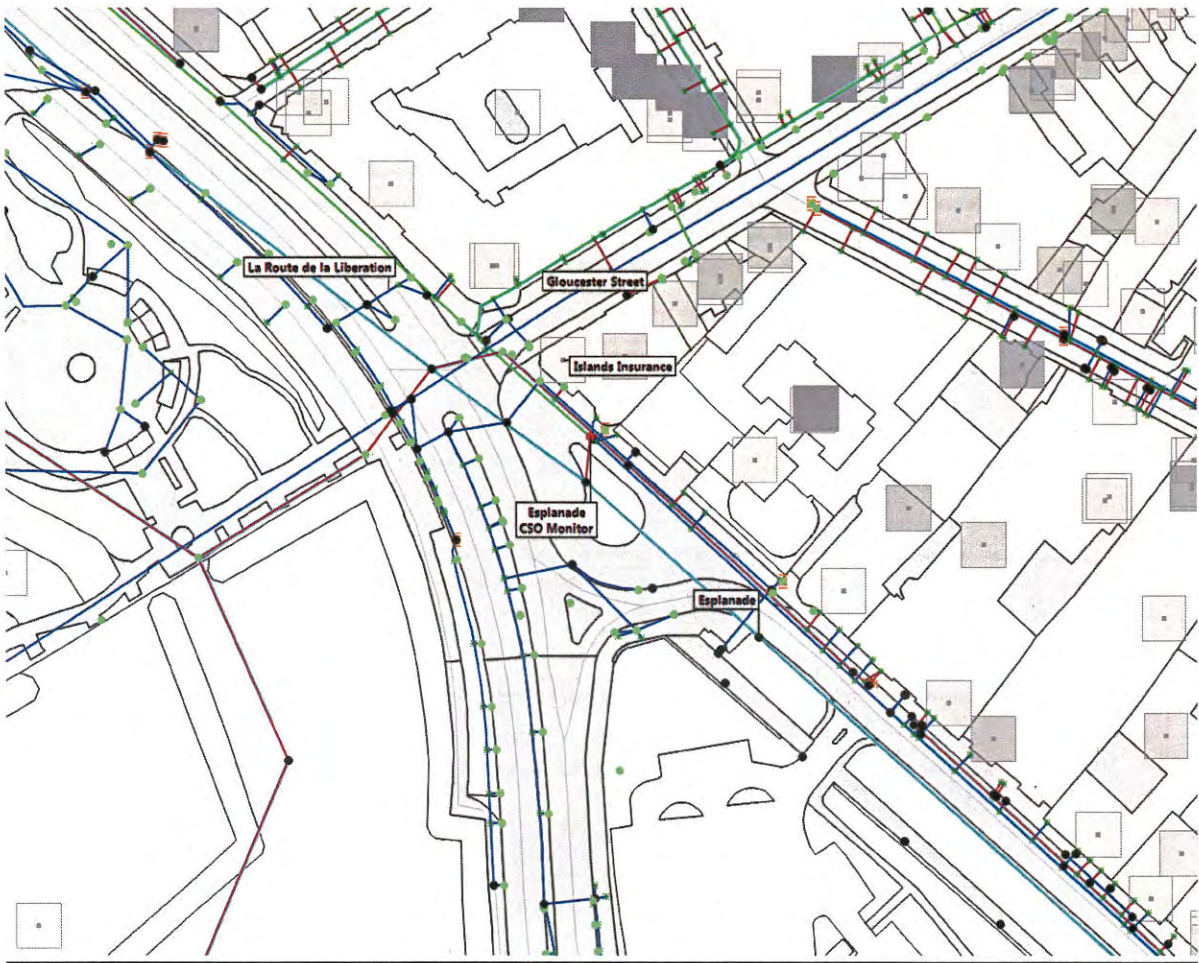
AQUILA ROAD CSO

Discharges to Surface Water Sewer at Clare Street Junction and then to sea from the Gloucester Street outfall.



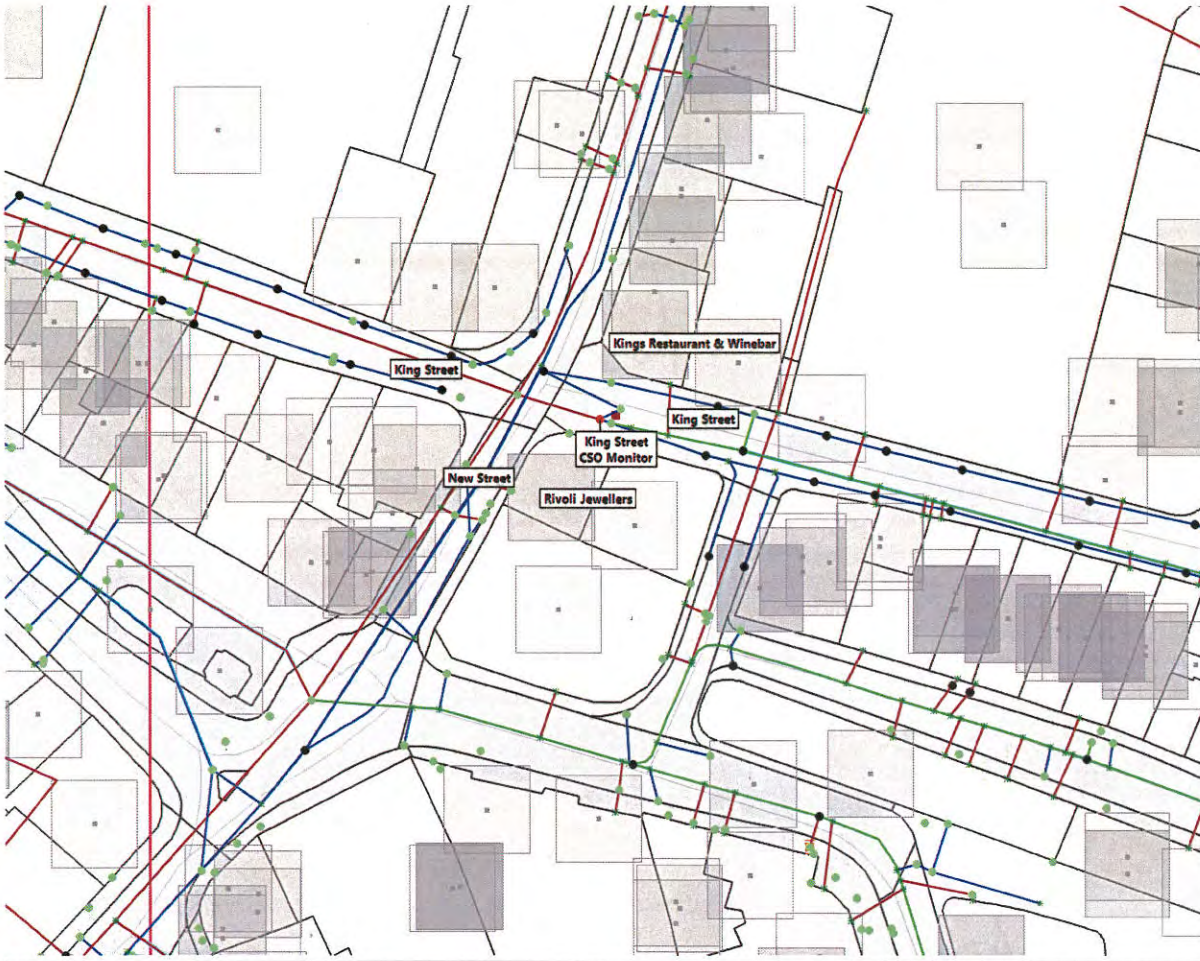
ESPLANADE CSO

Discharges to Surface Water Sewer on the Esplanade and then to sea from the West of Albert outfall.



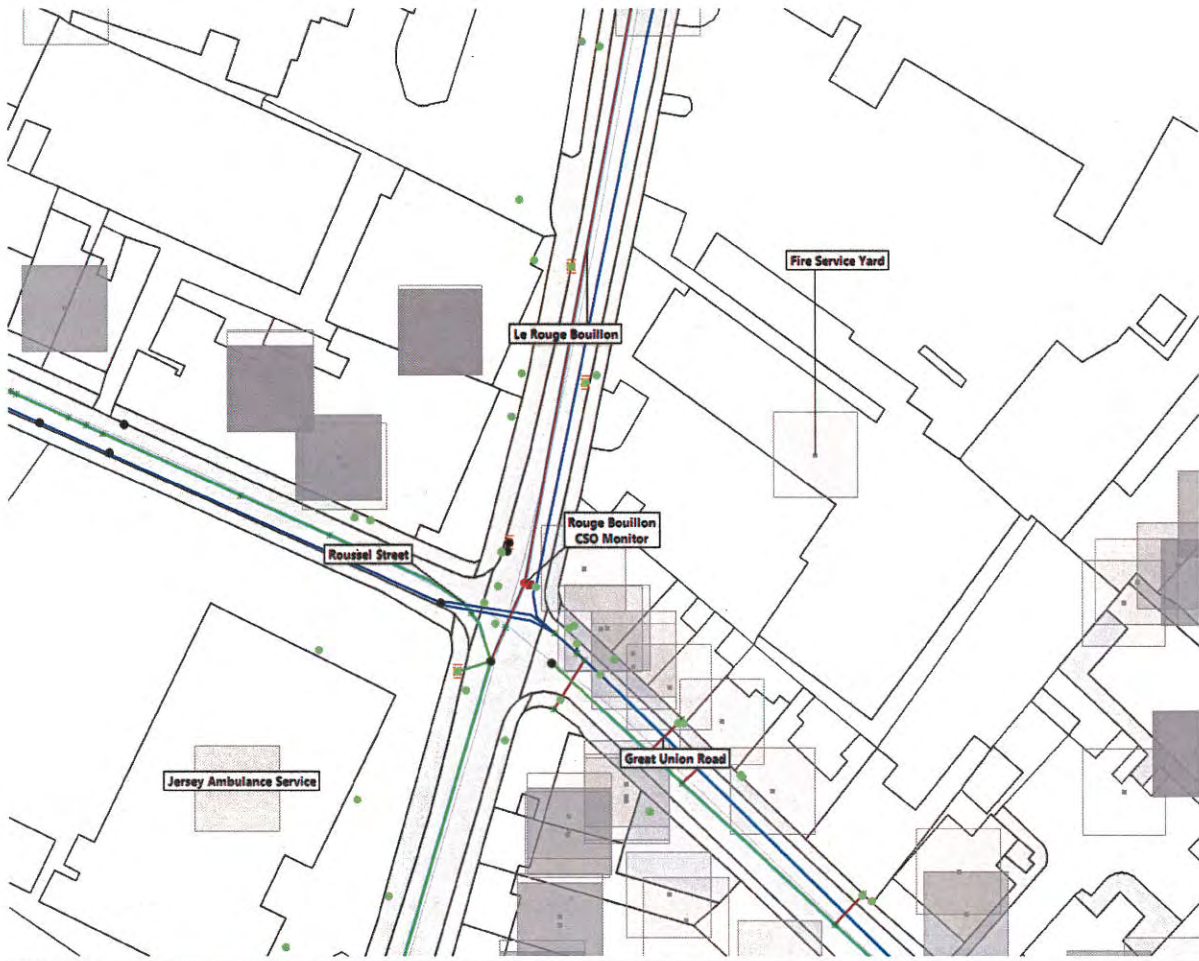
KING STREET CSO

Discharges to Surface Water Sewer in King Street and then to sea from the West of Albert outfall.



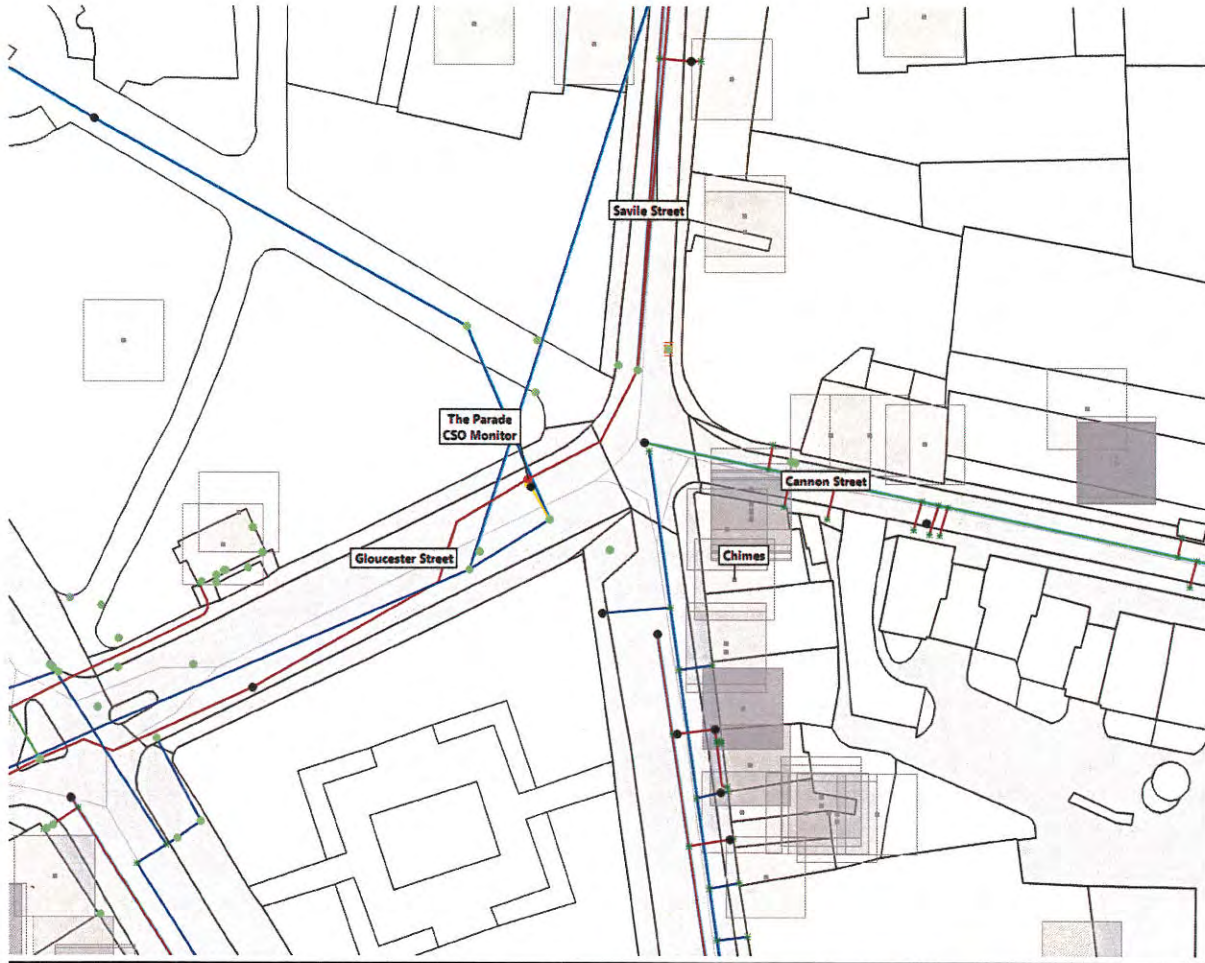
ROUGE BOUILLON CSO

Discharges to Surface Water Sewer in Rouge Bouillon and then to sea from the Gloucester Street outfall.



THE PARADE CSO

Discharges to Surface Water Sewer in the Parade and then to sea from the Gloucester Street outfall.



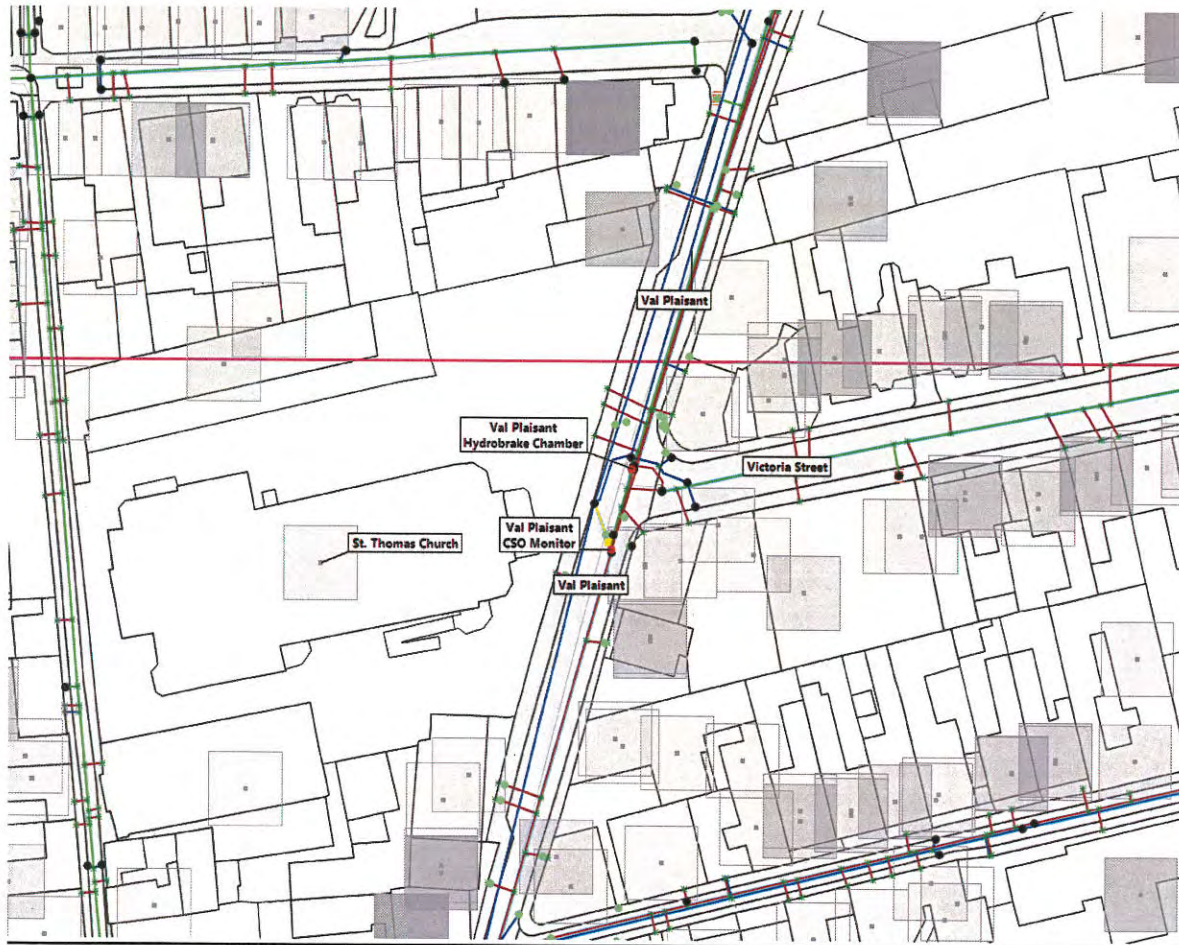
UNION STREET CSO

Discharges to Surface Water Sewer in Union Street and then to sea from the West of Albert outfall.



VAL PLAISANT CSO

Discharges to Surface Water Sewer in Val Pleasant and then to sea from the West of Albert outfall.



MONT LES VAUX (ST AUBIN) CSO

Discharges to Surface Water Sewer in Mont Les Vaux and then to sea via the St Aubin's Harbour outfall.

