

**WRITTEN QUESTION TO THE MINISTER FOR TRANSPORT AND TECHNICAL SERVICES BY
DEPUTY P.V.F. LE CLAIRE OF ST. HELIER
ANSWER TO BE TABLED ON TUESDAY 23rd FEBRUARY 2010**

Question

“Given that the Transport and Technical Services Department has now been awarded a total of £370,792 from the Fiscal Stimulus Fund to continue its programme of work separating surface water from the foul sewer network in St Helier, can the Minister provide a schematic and text brief outlining what has been and what remains to be upgraded within the mains drains networks and sewerage systems in the parishes which feed through the St Helier system?”

Answer

The programme of sewerage system upgrades on the Island is driven predominantly by the need to ensure that the sewerage network operates satisfactorily, even under adverse conditions, and that Jersey is, and continues to be, effectively drained.

More specifically, the programme of upgrades needs to ensure that during the normal operation of the network, pollution is prevented and the risk of flooding minimised as much as possible.

The process of upgrading the sewer network has been ongoing for a number of years and has focused on a number of issues.

Firstly, it has focused on the twin objectives of reducing the risk of surface flooding from the foul and combined sewers, and reducing the number of occasions the combined sewerage systems spill dilute sewage to sea.

Secondly, it has focused on the need to replace pumping station rising main pipes that historically were laid using a material that time has shown is susceptible to eventual failure, due to the variations of pressure that the rising mains operate under.

Thirdly, it has focused on addressing the day to day work that is required of any sewerage network to ensure that it operates satisfactorily, such as repairing or replacing broken or degraded pipes, preventing surface water infiltration and keeping the risk of blockages to a minimum.

In considering the twin objectives of reducing the risk of surface flooding from the foul and combined sewers, and reducing the number of occasions the combined sewerage systems spill dilute sewage to sea.

Combined sewers carry both foul and surface water and as a consequence, there is a risk that their capacity can be exceeded during periods of heavy rainfall, leading to surface flooding. To minimise this risk, Combined Sewer Overflows (CSO's) are constructed at key locations in the system, but predominantly in St Helier where they are most required.

These CSO's are essentially chambers that allow the combined sewage and surface water to spill over into the surface water system when the flow in the combined system reaches a certain level. Whilst this arrangement reduces the risk of surface flooding, it does mean that dilute sewage is discharged to sea.

The construction of the cavern in the late 1990's has made a huge contribution towards limiting the incidences of spills to sea, as flows that used to spill over from the Weighbridge CSO and out to sea on a regular basis, are now re-directed to this facility.

When the rainfall has stopped and the flows in the sewers have returned to normal levels, the flows stored in the cavern are returned to the sewerage network and transported to Bellozanne sewage treatment works.

Surface water separation schemes are essential for reducing the flows in combined sewers as they remove significant volumes of clean water from the combined network and direct it straight to sea. The cumulative effect of these schemes is that it takes a more extreme rainfall event to generate the flows in the combined sewers necessary to cause the CSO's to operate.

In addition, these schemes also significantly reduce the volumes of clean water that are currently pumped to the sewage treatment works for unnecessary treatment. Hence, pumping and treatment costs are reduced. They also free up additional capacity in the foul network for development, which has taken on more importance given that the new draft Island Plan has targeted most new development in the St Helier area.

A number of significant surface water separation schemes have taken place in recent years. These include in Midvale Road and Val Plaisant, which has reduced the flows at the Victoria Street CSO, at Union Street and Le Geyt Street, which has reduced the flows at the Union Street CSO, and in Poonah Road, which has reduced the flows at the Aquila Road CSO.

The latest scheme to receive funding, the Queens Road to Midvale Road surface water separation will, along with the recent La Pouquelaye and Roussel Street schemes, further reduce flows at the Great Union Road CSO.

In addition to the above, a major surface water separation scheme has been carried out in Green Street, which has reduced the combined flows reaching the Dicq pumping station, which ultimately, serves the east of the Island. This in turn has reduced the risk of the capacity of this pumping station being exceeded during rainfall events, which would again result in dilute sewage being spilled to sea.

Moving forward, it is intended that surface water separation in key areas will continue. In particular, further schemes are planned for the Harve des Pas and Greve d'Azette areas to further reduce the flows reaching the Dicq pumping station. There are significant benefits to separating in these areas as there a number of large developments that have been constructed, or are in the process of being constructed, that have separated on-site drainage, which will ensure that large areas of contributing hardstanding will be removed from the combined system as a result of new surface water sewers.

However, one area of concern is the Bath Street, West Centre area of St Helier, which does not have a CSO facility from which combined flows can spill during periods of heavy rain. As part of the cavern and tunnel works carried out in the late 1990's, a CSO facility was planned for this area, but was never constructed due to land issues. As a result, this area is still at risk of flooding from the combined sewer system.

Annual requests for funding to construct a shaft in the Phillips Street area to connect to the tunnel under St Helier have been made, but to date, have not been successful. A shaft in this location would allow a CSO to be constructed that would in turn enable high flows in the combined sewers in this area to be discharged to the cavern and thus significantly reduce the risk of flooding.

In addition, the construction of a surface water link to the tunnel at the same time would allow surface water separation schemes to be constructed through the eastern area of town. Currently, these are not possible as there is nowhere to discharge the surface water.

In an effort to limit the risk of flooding in the West Centre area, surface water separation schemes are planned further north, in the Stopford Road, Byron Road and Byron Lane area. These will discharge to the northern end of the tunnel under St Helier, which is located in Gas Place car park. However, the construction of a shaft at Phillips Street is essential for ensuring that the remaining risk of flooding in that area is reduced to acceptable levels.

With regard to the second issue, which is the ongoing programme of replacing old pumping station rising mains, a number of these have been carried out over the last few years and include major east coast rising mains at Fauvic, Le Rivage, Le Bourg, and most recently, the rising main for the La Collette Marina pumping station. Le Bourg in particular failed on a couple of occasions before it was upgraded, incidents which if repeated today could result in prosecution under the Water Pollution (Jersey) Law 2000.

Future necessary rising main upgrades, the flows from which feed through St Helier, include those at Archirondel, and Rozel 1, 3 & 4 pumping stations in St Martin and Rue du Pont, Golf Lane and The Links pumping stations in Grouville.

An application for funding for the Rozel 1, 3 & 4 pumping station rising main works is currently being considered by the Fiscal Stimulus Steering Group and Treasury and Resources as this is one of the schemes put forward by the Transport and Technical Department for inclusion in the Fiscal Stimulus programme.

Finally, works required to maintain the general fabric of the sewer network are always ongoing. Regular CCTV surveys are carried out and the condition of the network is continually recorded, updated and monitored so that repair and upgrading works can be implemented at the appropriate time. Examples of this are the Poonah Road sewer reconstruction scheme, completed several years ago, and the Railway Walk foul sewer upgrade in St Brelade, the final section of which is to be upgraded shortly with monies provided by the Fiscal Stimulus programme.

Towards the end of this year, the construction of a new computerised sewer network model should be complete, which will enable a more accurate analysis of the operation of the network under extreme conditions. Based on the outcome of this analysis, potential problem areas in the network can be more readily identified, and as a result, proposed upgrade works better targeted.

Given the extent and complexity of the sewer network, it is difficult to represent the foregoing as an illustration on one drawing, as the Deputy has requested. However, a visit to the TTS Engineering Design offices for the Deputy can be arranged if he would like to see more detail and receive more information.