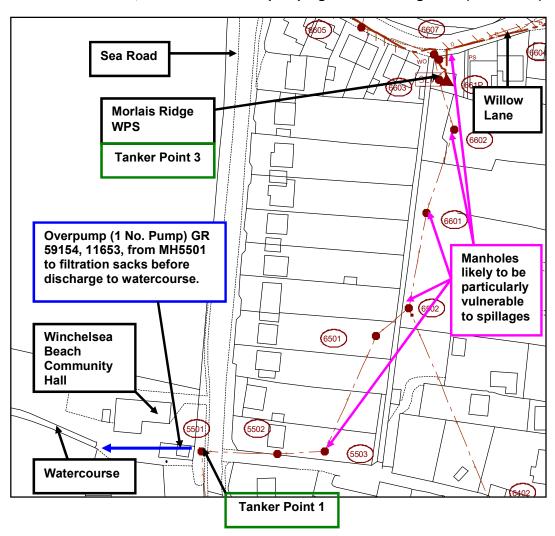
## **APPENDIX B**

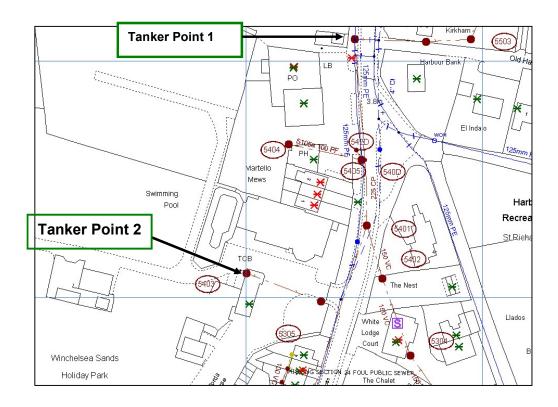
## **Emergency Discharges**

See notes in Section 4.2 and 4.3 regarding the potential need to modify / augment over-pumping sites to deal with future flood events. Over-pumping sites will be selected to provide the most effective arrangements to maintain services, whilst minimising environmental effects. Where practical, sites that have been used previously are expected to be re-used (when necessary), but the use of different locations cannot be ruled out, if hydraulic conditions dictate.

### Winchelsea Beach, East Sussex - Overpumping and Tankering Sites (Plan 1 of 2)



#### Winchelsea Beach, East Sussex - Overpumping and Tankering Sites (Plan 2 of 2)



Note: Tanker Point 1 is a hydraulically efficient location for tankering while Tanker Point 2 may be used intermittently for convenience. Tanker point 3 is not convenient as Willow Lane will need to be closed when tankering activities start.

## Timing for Deployment of Tankers and Over pumps since Winter of 2013-14 up to July 2019

|   | Tankering            |           |                           | Overpumping |           |                         |
|---|----------------------|-----------|---------------------------|-------------|-----------|-------------------------|
| Location                                      | Start Date           | Stop Date | Typical Number of Tankers | Start Date  | Stop Date | Typical Number of Pumps |
| Winchelsea Beach, East<br>Sussex (Location 1) | Late October<br>2013 | 17/02/14  | 2 to 3                    | 05/02/14    | 25/03/14  | 1                       |
| Winchelsea Beach, East<br>Sussex (Location 1) | 13/10/14             | 14/10/14  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 2) | 03/11/14             | 07/11/14  | 2 to 3                    |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 2) | 03/12/14             | 04/12/14  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 2) | 12/12/14             | 13/12/14  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 2) | 23/02/15             | 23/02/15  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 2) | 24/02/2015           | 03/03/15  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 14/08/15             | 14/08/15  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 25/08/15             | 26/08/15  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 18/09/15             | 25/09/15  | 2                         |             |           |                         |

|   | Tankering  |           |                           | Overpumping |           |                         |
|---|------------|-----------|---------------------------|-------------|-----------|-------------------------|
| Location                                      | Start Date | Stop Date | Typical Number of Tankers | Start Date  | Stop Date | Typical Number of Pumps |
| Winchelsea Beach, East<br>Sussex (Location 1) | 17/11/15   | 25/11/15  | 2                         |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 30/11/15   | 05/12/15  | 2-3                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 21/12/15   | 21/01/16  | 3-4                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) |            |           |                           | 22/01/16    | 19/02/16  | 1                       |
| Winchelsea Beach, East<br>Sussex (Location 1) | 9/11/16    | 11/11/16  | 1-2                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 21/11/16   | 22/11/16  | 1-2                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 12/01/17   | 18/01/17  | 1-2                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 11/12/17   | 19/01/18  | 1-2                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) | 13/11/18   | 01/01/19  | 1-2                       |             |           |                         |
| Winchelsea Beach, East<br>Sussex (Location 1) |            |           |                           | 02/01/19    | 16/01/19  | 1                       |
| Winchelsea Beach, East<br>Sussex (Location 1) | 01/02/19   | 11/02/19  | 1-2                       |             |           |                         |

#### **Emergency Discharge Proposal**

Despite the significant investments being made by SW to reduce infiltration into sewers, and multi-agency actions to be taken there may continue to be occasions when emergency discharges will be required. Further analysis will be conducted after completion of the current rehabilitation programme to access the circumstances when overpumping and tankering would be expected to be required, optimum locations and expected flow rates.

At present, our proposal for emergency discharges will be as follows:

| Ref: | Item               | Action   | When Required  | Locations   | Expected Flow Rate   |
|------|--------------------|--|--|---|--|
| 1.   | Tankering          | Deploy tankers to reduce flows at strategic locations in the sewerage system.                              | When hydraulic capacity of the sewers and pumping stations are exceeded due to additional flows from groundwater. Monitor rising groundwater level in cellars and sewers.  | Collect flow from the same manholes used in the winter of 2013-14, as identified in the plans in Appendix D.  Discharge flow to Rye WTW, Winchelsea Beach WTW, Castle Farm WPS or pumping stations in Hastings. | Low  |
| 2a   | Overpumping: Pumps | Install pumps (preferably 3 inch dia. pump) to reduce flows at strategic locations in the sewerage system. | In cases of exceptional high flows in the sewers, and when tankering is insufficient, in order to protect residents from imminent public health dangers of sewage flooding in properties or restricted toilet use (RTU). Monitor levels in manholes. | Overpump, probably at the same locations used in the winter of 2013-14, as identified in the plans in Appendix D, but as noted in Appendix D, the use of other sites cannot be ruled out.                       | Flow rate depends on head/pipe material/distance etc.  3 inch dia. pump = 10 - 20 l/s (typical rate)  4 inch dia. pump = 30 l/s (typical rate) |

| Ref: | Item                                       | Action   | When Required   | Locations  | Expected Flow Rate |
|------|--|--|---|--|--------------------|
| 2b   | Overpumping:  Removal of Suspended Solids  | Provide settlement tanks and filtration sacks to remove suspended solids prior to discharge of treated flow into a watercourse | When discharging flow from the sewer into a watercourse | Remove suspended solids at<br>the same locations used in the<br>winter of 2013-14, as identified<br>in the plans in Appendix D, or<br>other sites if necessary | N/A                |
| 2c   | Overpumping:  Improvement of water quality | Investigate options including basic treatment to improve the quality of treated water discharged to watercourses.              | When discharging flow from the sewer into a watercourse | Investigate options for improved treatment where required.   | N/A                |

In addition to the overpumping and tankering, there may on occasions be some spillage from manholes in the vicinity of the operations. By timely set up of equipment and appropriate maintenance, SW will endeavour to minimise, and ideally to completely avoid such spillages. However, SW considers that on occasions, some spillages will be inevitable.

# **Sampling Locations**

