

| Romsey Wastewater System - Outline Options Appraisal  |  |  |                  |   |  |                       |                     |                  |                      |                      |                  |  |
|---|--|--|------------------|---|--|-----------------------|---------------------|------------------|----------------------|----------------------|------------------|--|
| Generic Option  | Location of Risk   | Planning Objective and Description of Risk         | Option Reference | Description   | Further Description  | Unconstrained Option? | Constrained Option? | Feasible Option? | Net Benefits         | Estimated Cost       | Preferred Option | Best value / Least cost or Reasons for Rejection |
| Control/ Reduce surface water entering the sewers   | Catchment Wide   | PO1, PO7 - Hydraulic                               | ROMS.SC01.1      | Natural Flood Management                              | Study / Investigation: Identify suitable location/s for flood alleviation schemes in the Romsey catchment (update hydraulic model)<br><br>Flood alleviation schemes are being built around Romsey.   | Yes                   | Yes                 | Yes              | Moderate Positive ++ | £TBC - With Partners | No               | Best Value                                       |
| Control/ Reduce surface water entering the sewers   | New Developments   | PO1, PO7 - Hydraulic                               | ROMS.SC01.2      | SuDS  | Study / Investigation: Identify with partners and developers suitable location/s to construct SuDS within new developments in the Romsey catchment, for example, on the Ashfield Estate.   | Yes                   | Yes                 | Yes              | Moderate Positive ++ | £TBC - With Partners | No               | Best Value                                       |
| Control/ Reduce surface water entering the sewers   | Catchment Wide   | PO1, PO7 - Hydraulic                               | ROMS.SC01.3      | Rain Water Harvesting                                 | Study / Investigation: Identify suitable location/s for surface water separation in the Romsey catchment to aid potable water supply issue concerns in the catchment/region (update hydraulic model)<br><br>Utilising the excess levels of surface water for water supply. | Yes                   | Yes                 | Yes              | Moderate Positive ++ | £TBC - With Partners | No               | Best Value                                       |
| Control / Reduce groundwater infiltration   |  |  |                  |   |  |                       |                     |                  |                      |                      |                  |  |
| Improve quality of wastewater entering sewers (inc reducing FOG, RAG, pre-treatment, trade waste) | Romsey   | PO1- Internal Flooding                             | ROMS.SC03.1      | Customer Education Programme                          | Enhanced Customer Education Programme to prevent blockages<br>Linking with the 'FOG' Team.   | Yes                   | Yes                 | Yes              | Minor Positive +     | £115K                | Yes              | Best Value                                       |
| Control / Reduce the quantity / flow of wastewater entering sewer system                          |  |  |                  |   |  |                       |                     |                  |                      |                      |                  |  |
| Network Improvements (eg increase capacity, storage, conveyance)                                  | Romsey   | PO1- Internal Flooding                             | ROMS.PW01.1      | Jetting Programme                                     | Enhanced Maintenance: Review and enhance jetting programme of the pipe network in this location to maximise the capacity of the network for rainfall.  | Yes                   | Yes                 | Yes              | Minor Positive +     | £90K                 | Yes              | Best Value                                       |
| Network Improvements (eg increase capacity, storage, conveyance)                                  | Catchment Wide   | PO1 and PO7 - Hydraulic Flooding                   | ROMS.PW01.2      | Pipe Rehabilitation Programme                         | Study / Investigation: Identify suitable location/s for sewer relining to prevent groundwater infiltration in the Romsey catchment (update hydraulic model).   | Yes                   | Yes                 | Yes              | Minor Positive +     | £TBC - With Partners | No               | Best Value                                       |
| Network Improvements (eg increase capacity, storage, conveyance)                                  | SouthWest of Catchment   | PO1 and PO7 - Hydraulic Flooding                   | ROMS.PW01.3      | Additional Conveyance Capacity - Rising main upgrades | Enhanced maintenance: Review operation and maintenance of Rising Mains close to the River Test in the southwest of the catchment - potential for high scale pollution incidents.   | Yes                   | Yes                 | Yes              | Minor Positive +     | £TBC - With Partners | No               | Best Value                                       |
| Improve treatment (capacity and quality at existing works or develop new WTWs)                    | ROMSEY WTW   | PO6 (2050)- WTW compliance                         | ROMS.PW02.1      | Increase Capacity                                     | Diameter of settlement tanks required- PST at 4.   | Yes                   | Yes                 | Yes              | Minor Positive +     | £2,010K              | Yes              | Best Value                                       |
| Improve treatment (capacity and quality at existing works or develop new WTWs)                    | ROMSEY WTW   | PO11 - Nutrient Neutrality                         | ROMS.PW02.2      | Install UV removal tertiary plant                     | Installation of UV removal tertiary treatment at Romsey WTW.   | Yes                   | Yes                 | Yes              | Minor Positive +     | £TBC - With Partners | Yes              | Best Value                                       |
| Improve treatment (capacity and quality at existing works or develop new WTWs)                    | ROMSEY WTW   | PO6 (2050)- WTW compliance                         | ROMS.PW02.3      | Optimisation of treatment process                     | Develop scheme to upsize mains and change the outfall for the works.   | No                    |                     |                  |                      |                      |                  | Risk and uncertainty - future resilience         |
| Wastewater Transfer   |  |  |                  |   |  |                       |                     |                  |                      |                      |                  |  |
| Mitigate impacts on Air Quality (e.g. Carbon neutrality, noise, odour)                            |  |  |                  |   |  |                       |                     |                  |                      |                      |                  | Not included in the first round of DWMPs         |
| Improve Land and Soils  |  |  |                  |   |  |                       |                     |                  |                      |                      |                  | Not included in the first round of DWMPs         |
| Mitigate impacts on Water Quality   |  |  |                  |   |  |                       |                     |                  |                      |                      |                  |  |
| Reduce consequences Properties (e.g. Property Flood Resilience)                                   |  |  |                  |   |  |                       |                     |                  |                      |                      |                  |  |
| Study/ investigation to gather more data  | Rudd Lane  | PO1- Internal Flooding                             | ROMS.OT01.1      | Investigation into causes                             | Further investigation to identify the cause of the internal flooding incident.   | No                    |                     |                  |                      |                      |                  | Cost Effective                                   |
| Study/ investigation to gather more data  | Solent Maritime<br>Solent & Southampton Water<br>Solent and Dorset Coast | PO11 - Nutrient Neutrality                         | ROMS.OT01.2      | Nutrient Budget                                       | Study / Investigation: Develop a nutrient budget and investigate the risks and sources impacting these named Habitat sites.  | Yes                   | Yes                 | Yes              | Minor Positive +     | £75K                 | Yes              | Best Value                                       |
| Study/ investigation to gather more data  | Catchment Wide?<br>Overflow Locations                                    | PO1 - Internal Flooding<br>PO7- Hydraulic Overload | ROMS.OT01.3      | Improve Hydraulic Model                               | Study / Investigation: Update and re-verify the Romsey Hydraulic Model to improve model confidence.  | Yes                   | Yes                 | Yes              | Minor Positive +     | £300K                | Yes              | Best Value                                       |