Lavant Valley Infiltration Plan

Appendix B – Mitigation Measures

from Southern Water

Appendix B

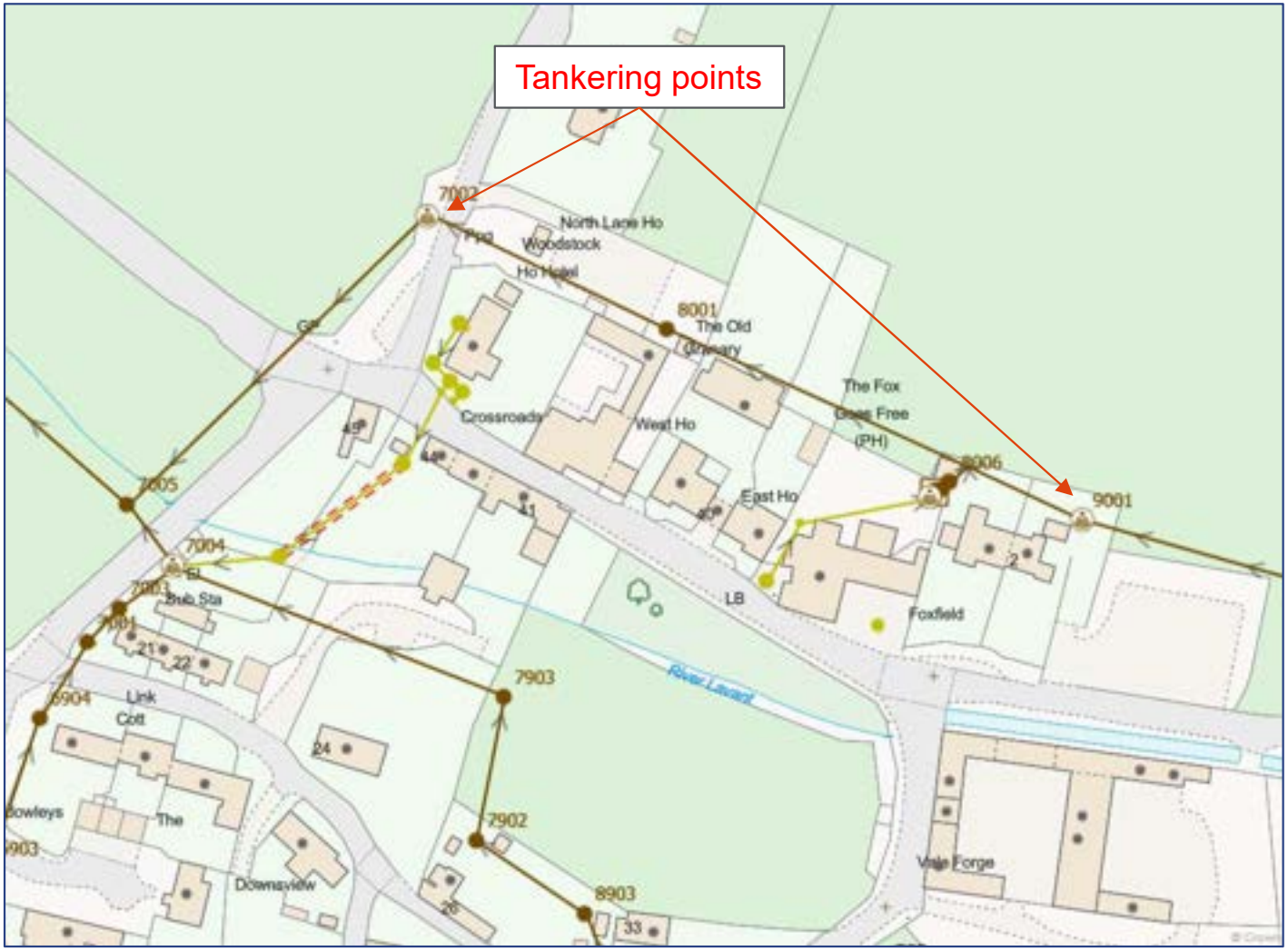
APPENDIX B

Mitigation measures

See notes in Section 4 regarding the potential need to introduce mitigation measures to reduce the risk of groundwater infiltration impacting the level of service provided by the sewerage system. Location of 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.

Tanker Locations

Charlton – tankers will be deployed to the locations below



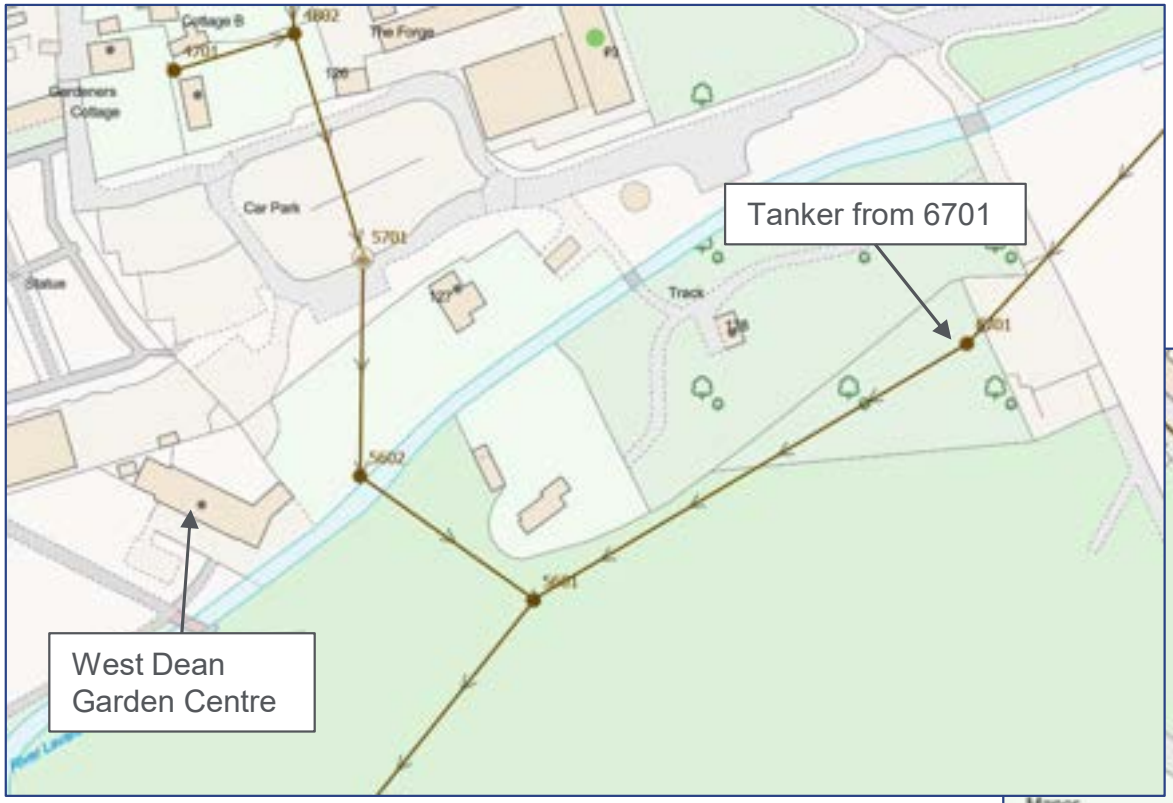
Tankers deployed to nodes 9001 and 7002

What3Words:

9001 = brass.chatter.handover

7002 = sulk.beaten.abruptly

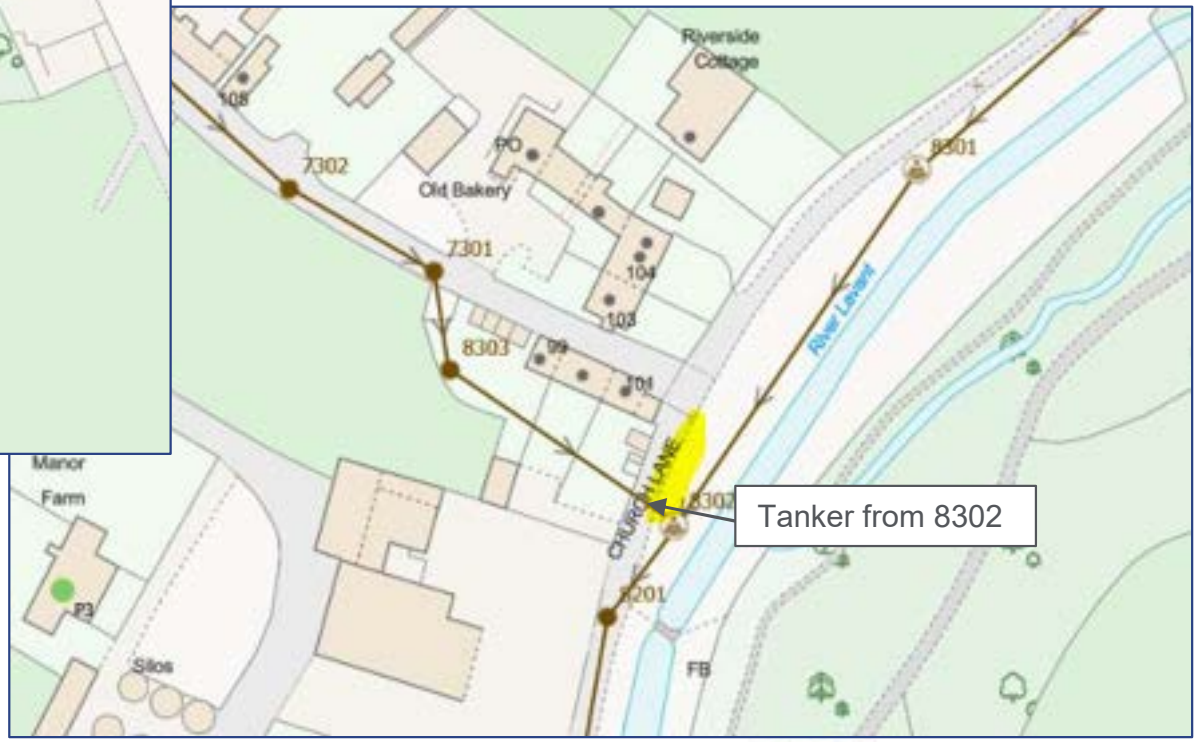
West Dean – tankers will be deployed to the locations below



What 3 words:

6701 = outbound.than.risky

8302 = slant.rocker.petulant



Groundwater Treatment Locations

At our groundwater treatment sites excess flow is extracted from the sewer by pumping. This flow is passed through screens to remove rags and solids. The screened flow is then passed through a cloth filter to remove fine deposits from the liquid flow.
After the finer solids have been removed the liquid flow is passed through ultra-violet lamps which kill harmful bacteria such as e.coli and enterococci. The resultant treated flow is then discharged to the watercourse.

Monitoring
We will monitor at all times 24/7 the performance of the groundwater treatment process
We will use sondes in watercourse upstream and downstream of the discharge to ensure no impact on the environment
We will spot sample and take daily bottled samples to determine the quality of flow discharged from the treatment process
The quality of the treated flow will meet the standard set out in the table below.

Determinand	NH3-N (mg/l)	BOD (mg/l)	COD (mg/l)	pH (pH Units)	P (mg/l)	SS (mg/l)	E.Coli (no./100ml)	Enterococci (no./100ml)
Crude influent	5.6	18.8	44	7.62	3.19	53.77	230000	41500
Treated effluent	2.5	9.4	22	7.71	2	11	100	100
Removal Efficiency	55%	50%	50%	n/a	37%	80%	>99%	>99%

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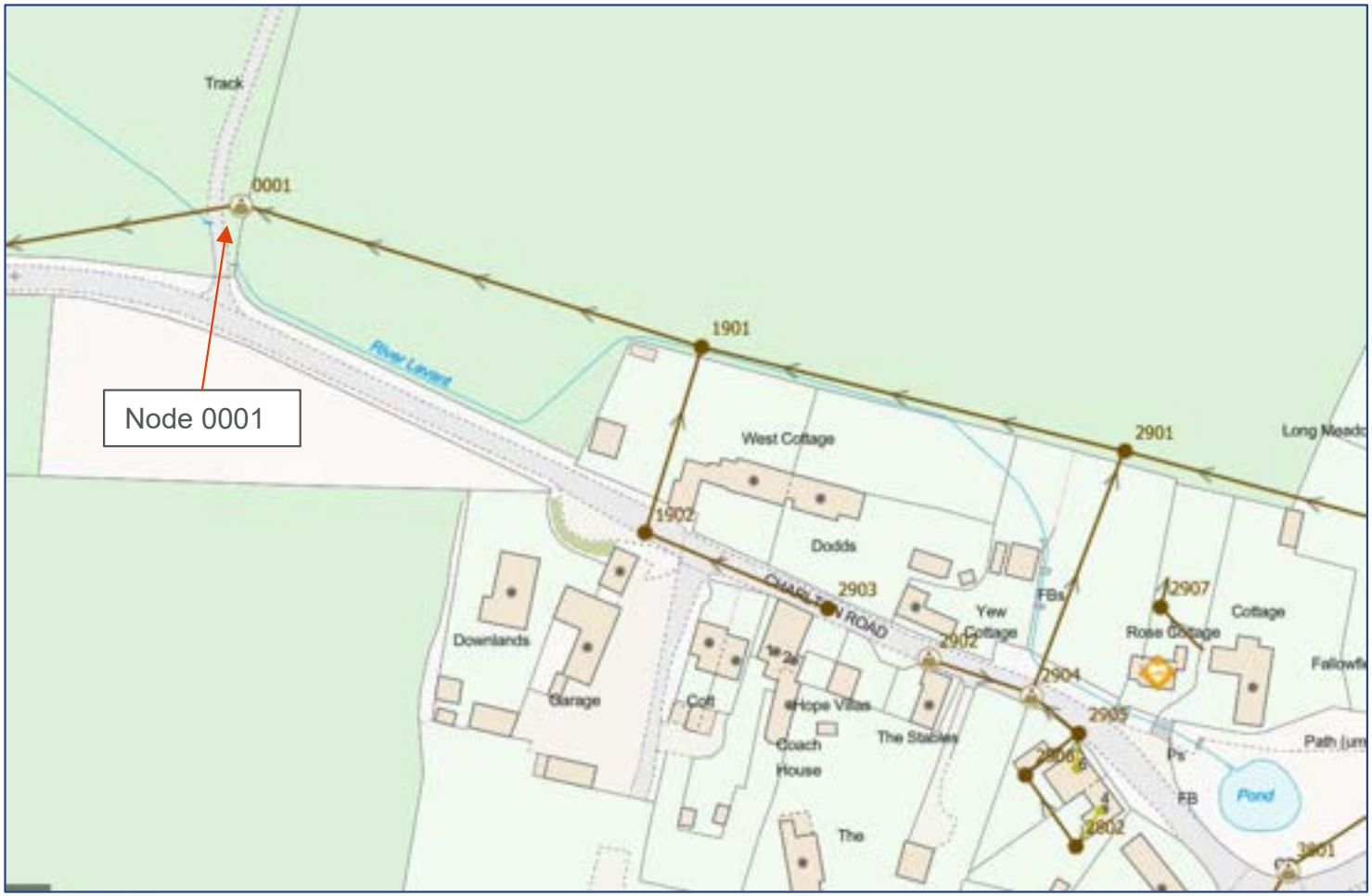
East Dean – groundwater treatment units will be deployed to the location below

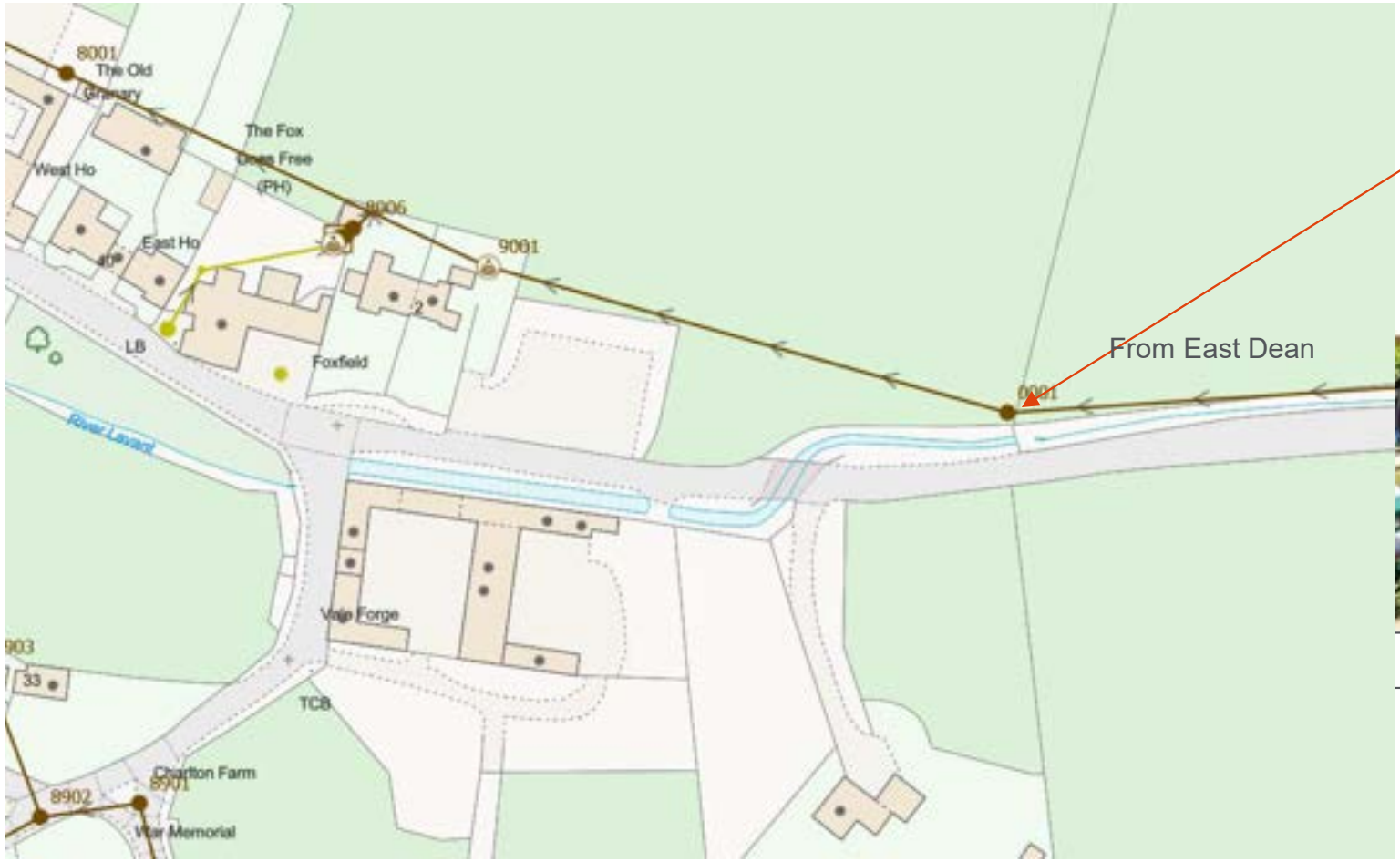


Flow taken from node 0001.
Flow treated in groundwater treatment unit and discharged to River Lavant.

What3words:
0001 = releasing.note.uttering

Photo of groundwater treatment unit.

Charlton – groundwater treatment units will be deployed to the location below



Flow taken from node 0001.
Treated in groundwater treatment unit and discharged to River Lavant

What3words:

0001 = variation.mainland.tester

Photo of groundwater treatment unit.

Charlton – groundwater treatment units will be deployed to the location below

Flow taken from node 7005.
Treated in groundwater treatment unit and discharged to River Lavant

What3words:

7005 = couches.warping.attention

Photo of groundwater treatment unit.