

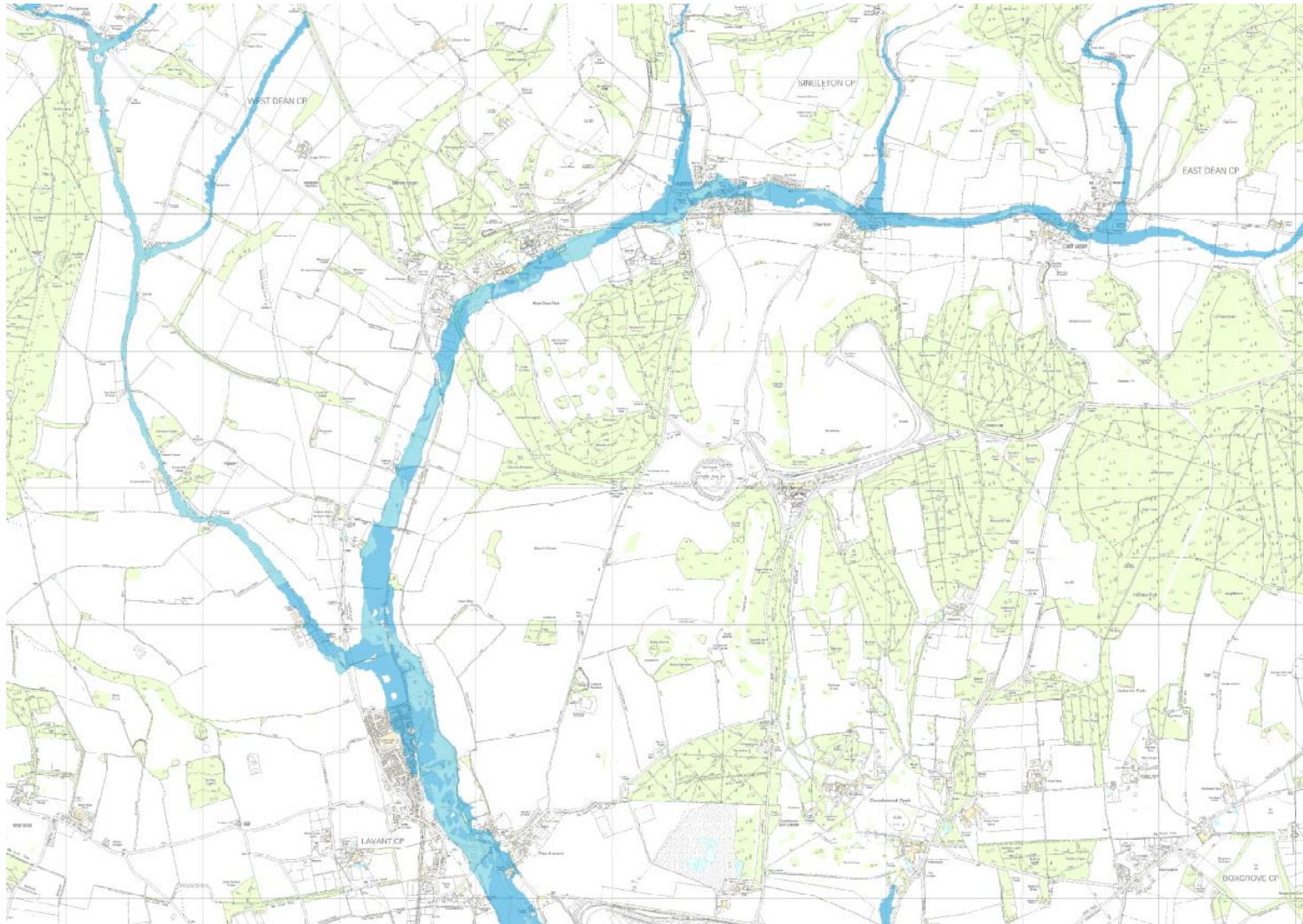
An overview of the proposed Lavant Valley Surface Water Management Plan

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Drainage Strategy Team Leader

This evening's presentation:

- Existing Mapping
- Chilgrove Borehole
- Flood Risk Management Concept
- Short Listed Options

EA Flood Zones 2 and 3



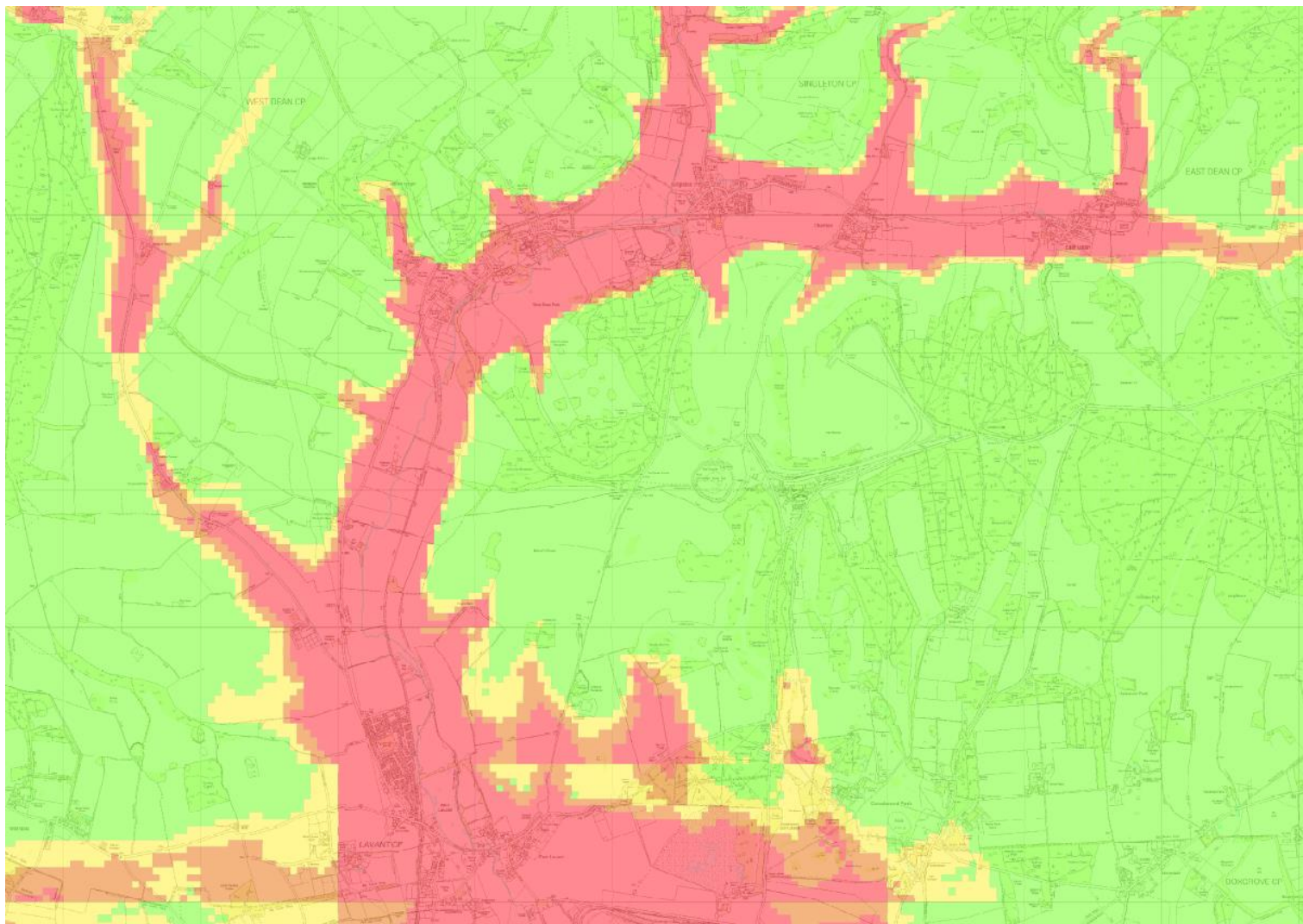
uFMfSW 1 in 100 Event



uFMfSW 1 in 1000 Event



Groundwater Suceptability

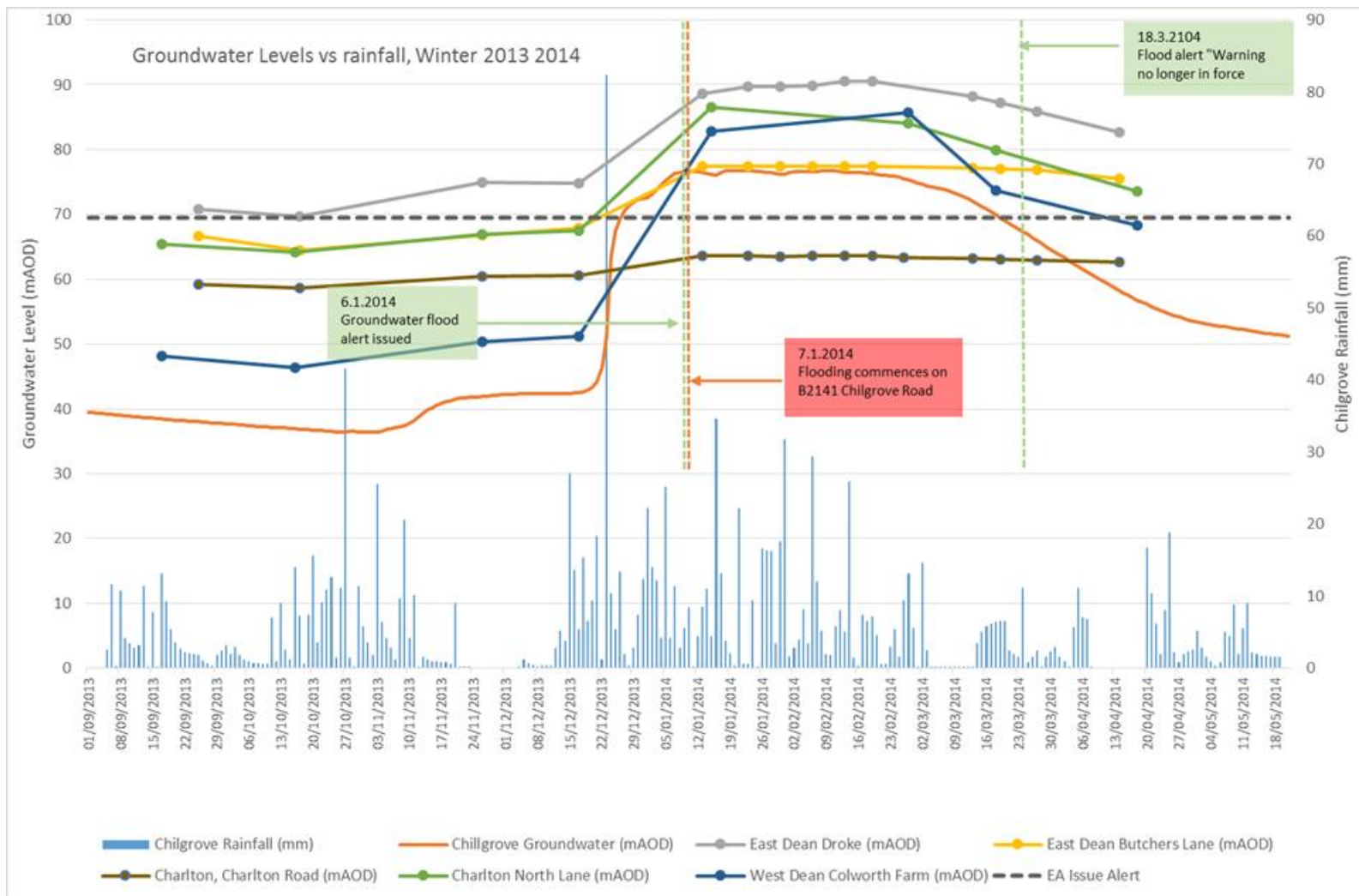


Flood and groundwater levels at Chilgrove

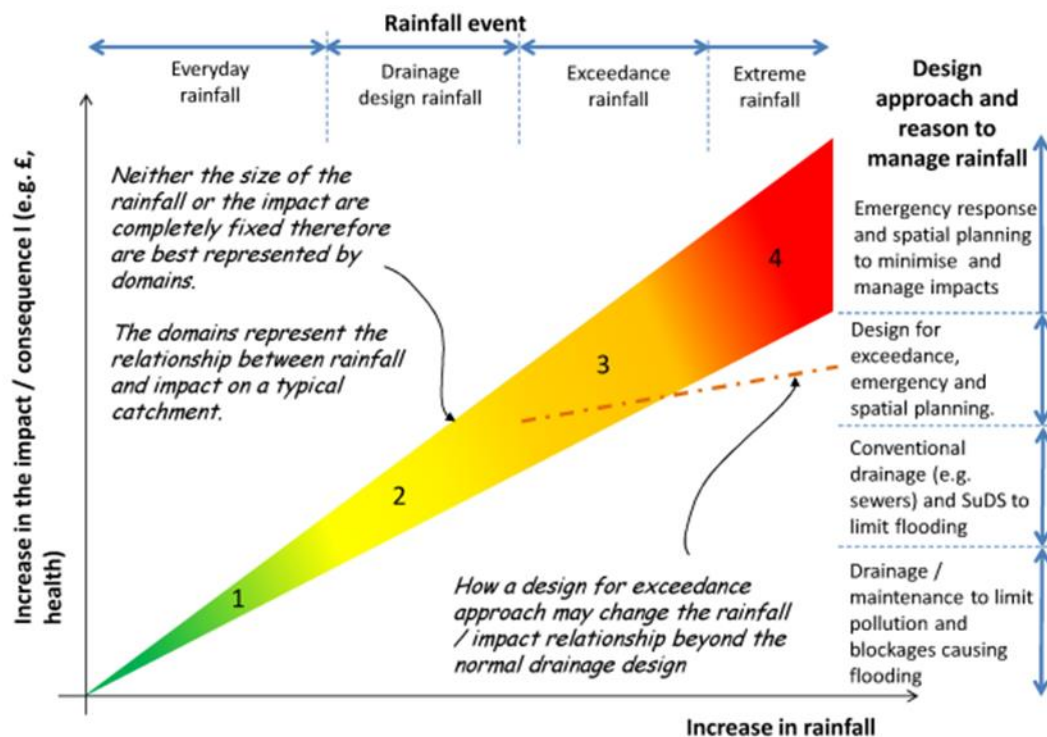
Groundwater level at Chilgrove (mAOD)	Catchment groundwater response
57mAOD	River Lavant flowing/rising groundwater levels (EA consider issuing groundwater briefing note)
69.5mAOD	Catchment behavior becomes more flashy, significant further rainfall likely to lead to flooding (EA issue groundwater flood alert)
76.3 mAOD	Flooding occurs on Chilgrove road, flooding in West Dean, Singleton, Chilgrove and East Dean likely within 5-15 days. Fluvial flooding in Mid/ East Lavant likely to occur within 5-10 days

- Water levels have been measured at Chilgrove House since 1836.
- Believed to be the longest continuous observation of water levels in the UK, and possibly the world.
- Deepened in March 1934 to a depth of 62.03 m.

Graph showing relationship between groundwater level, rainfall and commencement of flood events



Flood risk management concept applied in the Upper Lavant Valley (taken from CIRIA's Designing for Exceedance guidance)



Short-listed options for main settlements

SECTION 4

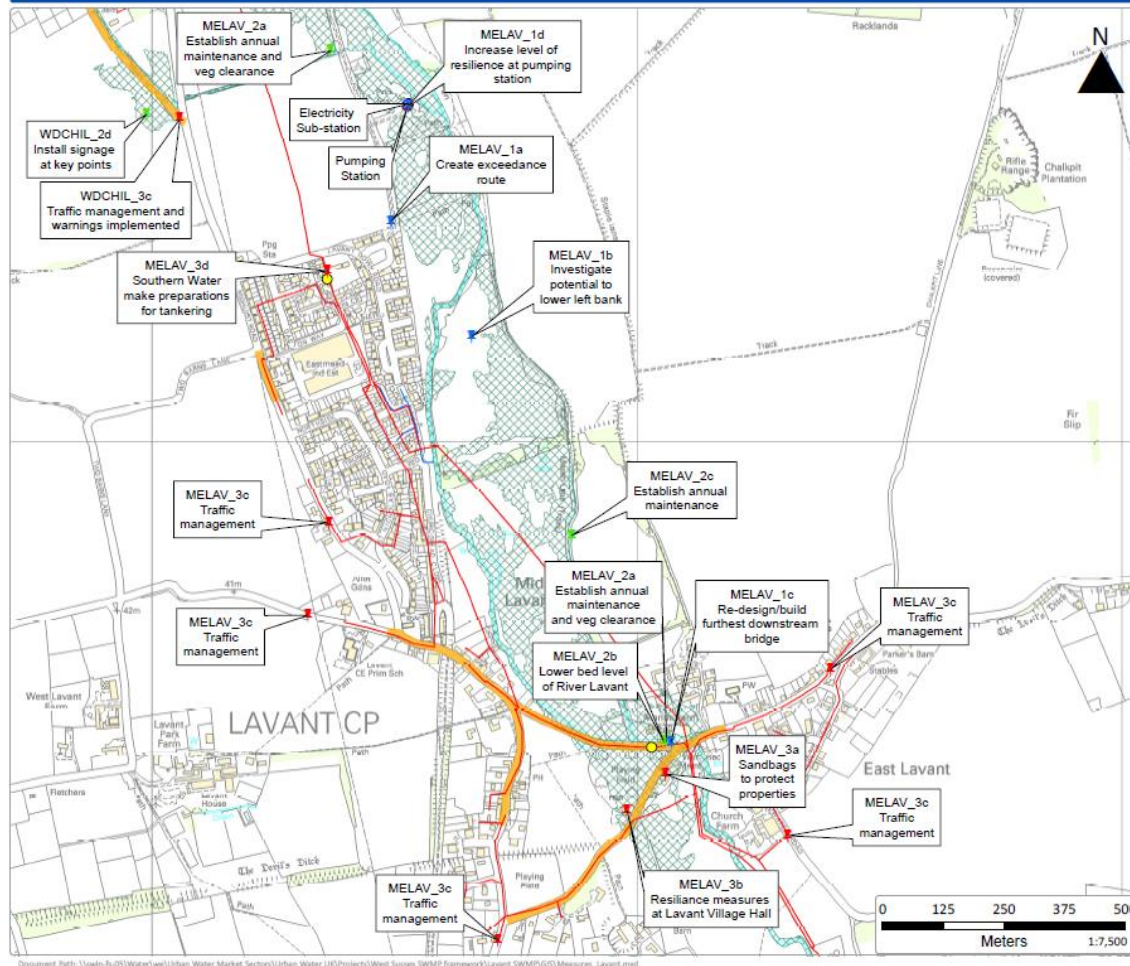
4.3.1 Mid and East Lavant

Table 4 Proposed actions for Mid and East Lavant

Flood Issue / Concern	Potential Measures			Comments
	Capital Improvements	Enhanced Maintenance	Emergency Planning and Actions	
<ul style="list-style-type: none"> Risk of flooding to properties on Lavant Down Road – following the 1994 floods on the estate a twin culvert and small bund were established at the north-east corner of Lavant Down Road where there is a track along the disused railway. Residents remain concerned about the maintenance of that twin culvert and the possibility of exceedance causing a residual risk to properties on Lavant Down Road. 	<ul style="list-style-type: none"> MELAV_1a. Create an exceedance route along the track to the north-east of Lavant Down Road to divert water away from properties if the new twin culverts are exceeded. This should be done by lowering the road immediately south of the twin culverts so it will act as an exceedance route [EA/WSCC/Chichester DC (who own the access road)] MELAV_1b. The field to the east of Springfield Close remains quite dry during winter flooding, and the Parish Council would like to investigate whether the left bank of the river could be lowered to allow the field to flood. [EA/WSCC] 	<ul style="list-style-type: none"> MELAV_2a. Establish annual maintenance and vegetation clearance of the River Lavant at key structures (bridges and culverts to maximise conveyance), in particular the twin culverts to the north-east of Lavant Down Road, and the river as it runs parallel to Sheepwash Lane. [EA] MELAV_2b. Lower bed level of River Lavant near Manor Farm which is silted [EA] MELAV_2c. Establish annual maintenance of ditch along Marsh Lane Track [WSCC/Riparian Owner] 	<p>With respect to the River Lavant, once the Environment Agency flood warning is issued:</p> <ul style="list-style-type: none"> MELAV_3a. Properties on Pook Lane should be sandbagged to protect flooding of properties [Local residents/Parish council] MELAV_3b. Resilience measures at Lavant Village Hall should be put up [Parish council] MELAV_3c. Traffic management should be established on Pook Lane and Sheepwash Lane to divert traffic away where possible or to advise proceeding with caution (NB: it is not believed the roads needs to be closed) [WSCC] <p>Note: Preparations for the above deployment actions should be discussed with Environment Agency when Chilgrove borehole reaches 76.3mAOD.</p>	<ul style="list-style-type: none"> Local residents are concerned that any conveyance improvements or changes to the flood plain storage upstream may exacerbate flooding in Mid and East Lavant. The EA Flood Warning Area “the River Lavant at Mid Lavant and East Lavant” covers this area. Local residents should be encouraged to sign up to flood warnings, and encourage awareness about how to respond to flood alerts/warnings Environmental issues to be considered (e.g. Vole habitats) with respect to maintenance and clearances
<ul style="list-style-type: none"> Flooding to properties on Pook Lane and Memorial Hall – in the winter of 2013/14 sandbags were placed by the properties on Pook Lane and the memorial hall flooded. This is a repeated issue and the memorial hall has installed property level protection measures 	<ul style="list-style-type: none"> MELAV_1c. Re-design/build the furthest downstream bridge along Sheepwash Lane which causes backing up due to restricted capacity. [WSCC/Riparian Owner] 			
<ul style="list-style-type: none"> Function of the foul sewer network during the winter – Southern Water were tankering on Lavant Down Road because of problems with sewer backing up and toilets flushing over the winter 2013/14 	-	-	<p>With respect to function of the foul sewer network:</p> <ul style="list-style-type: none"> MELAV_3d. Southern Water should make preparation for tankering at Potnere (MH3303) and MH0301 as per winter 2013/14 5-10 days following levels at Chilgrove reaching 76.3mAOD [SW] 	<ul style="list-style-type: none"> Actions for Southern Water will be reviewed in light of other actions they are taking as part of the IRP [SW] Communities should be pre-warned when tankering will be taking place [SW]
<ul style="list-style-type: none"> Resilience of Portsmouth Water pumping station to flooding 	<ul style="list-style-type: none"> MEL_1d. Increase level of resilience at Pumping Station to the north-east of Lavant Down Road [Portsmouth Water] 	-		<ul style="list-style-type: none"> This is a decision for Portsmouth Water depending on the business case for investment. Any bunds to keep water out of the site may result in loss of flood plain, so building and borehole specific measures would be more appropriate

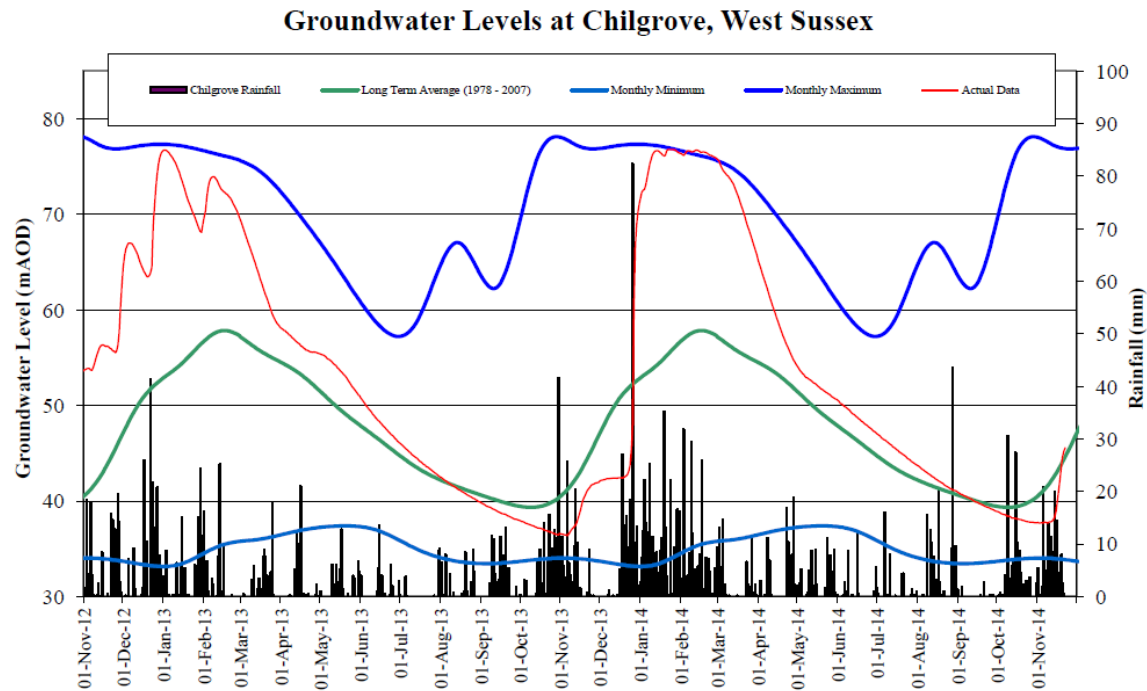
Short-listed options for main settlements

Lavant SWMP



Current Chilgrove borehole data – November 2014

Updated: 20 November 2014



Thank you

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