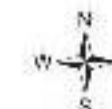


Appendix B

Flood Map for Planning (Rivers and Sea) - Centred on 178a West Street, Havant - Created on 27 August 2019



Scale 1: 1,193



Flood Map for Planning (Rivers & Sea)

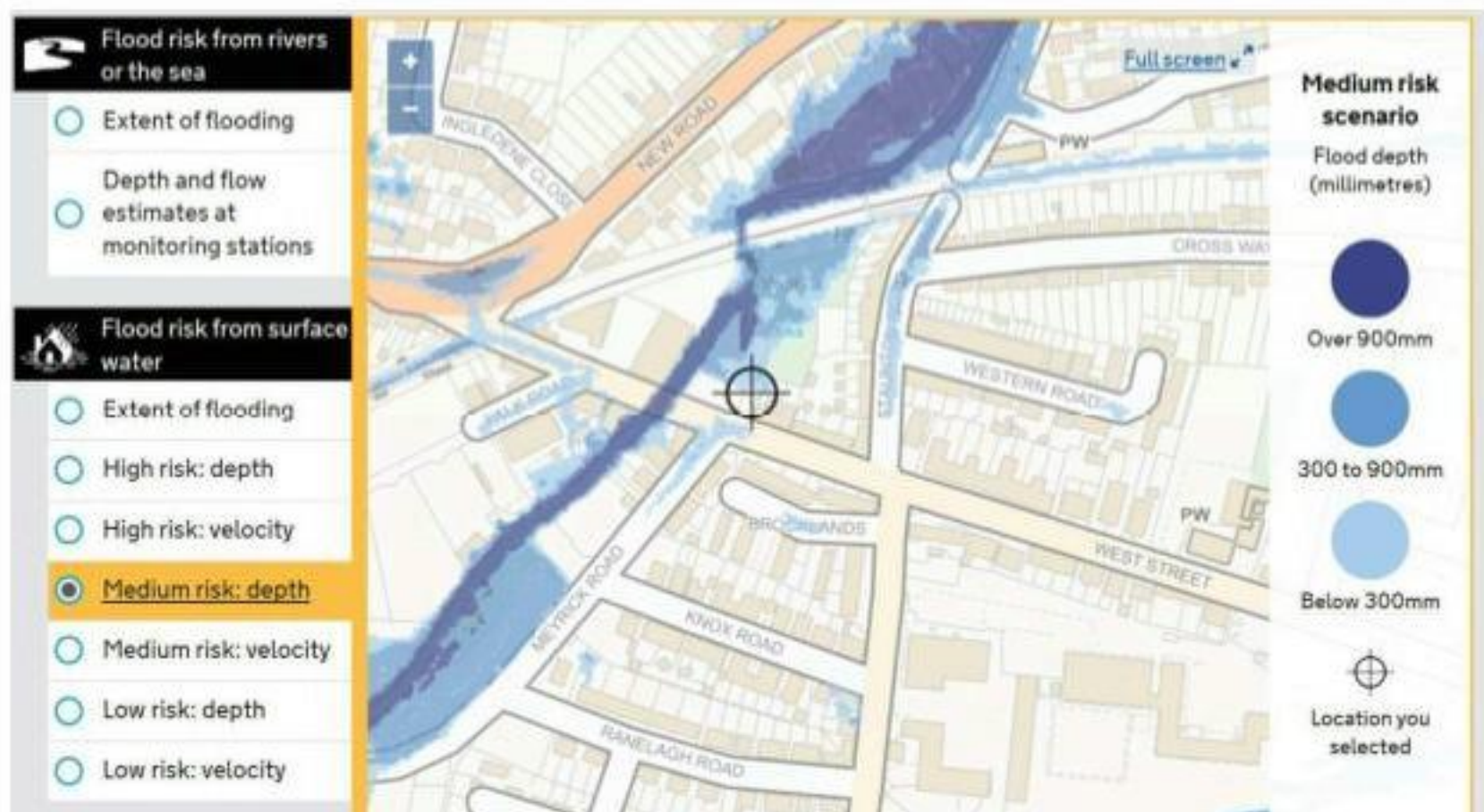
- Defences
- - - Flood Storage Areas
- ▣ Areas benefiting from flood defences
- Flood Zone 3
- Flood Zone 2

Flood Map Areas (assuming no defences)

Flood Zone 3 shows the area that could be affected by flooding:

- from the sea with a 1 in 200 or greater chance of happening each year
- or from a river with a 1 in 100 or greater chance of happening each year.

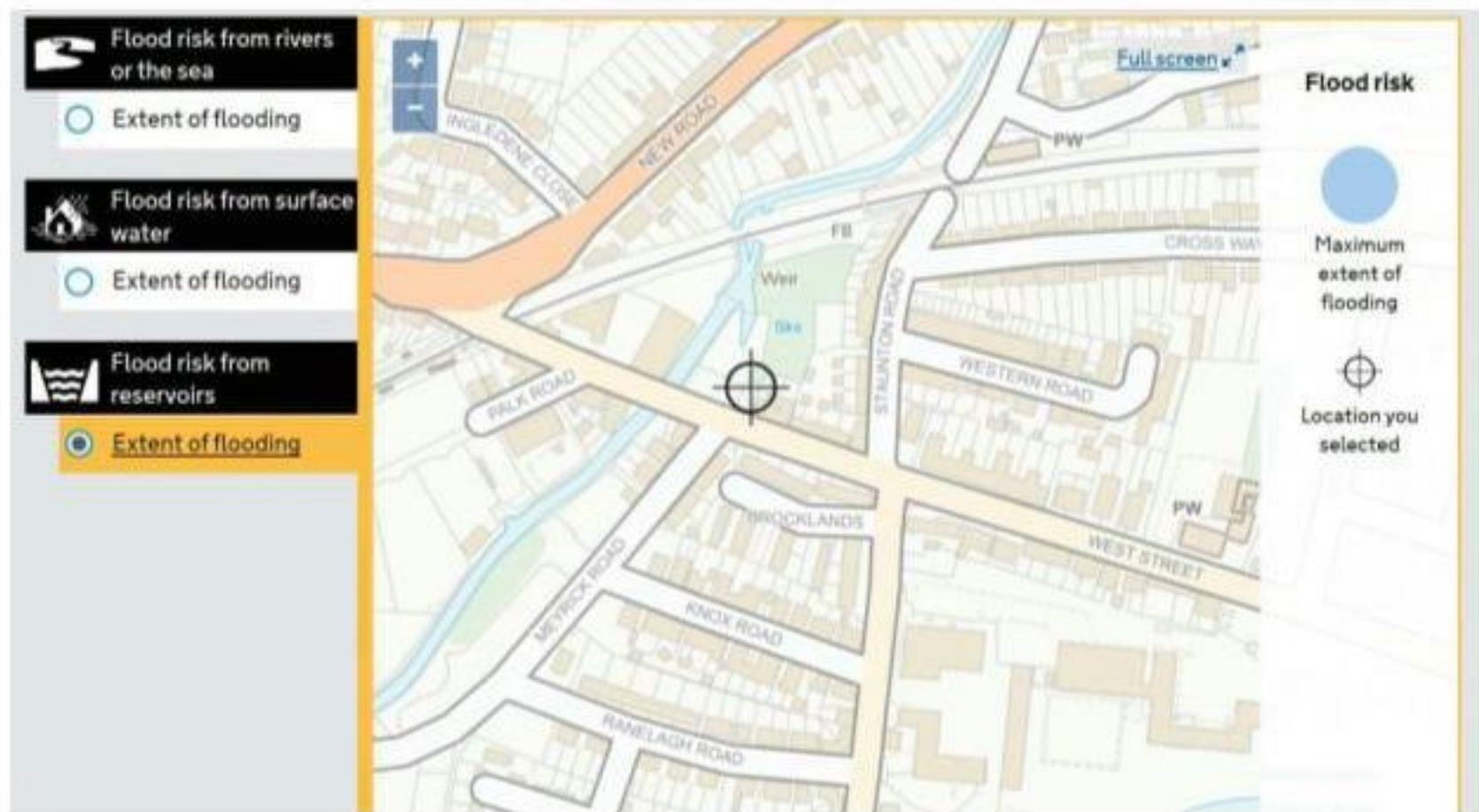
Flood Zone 2 shows the extent of an extreme flood from rivers or the sea with up to a 1 in 1000 chance of occurring each year.



Surface water 1.0% AEP flood risk



Low Surface water flood risk to front of site

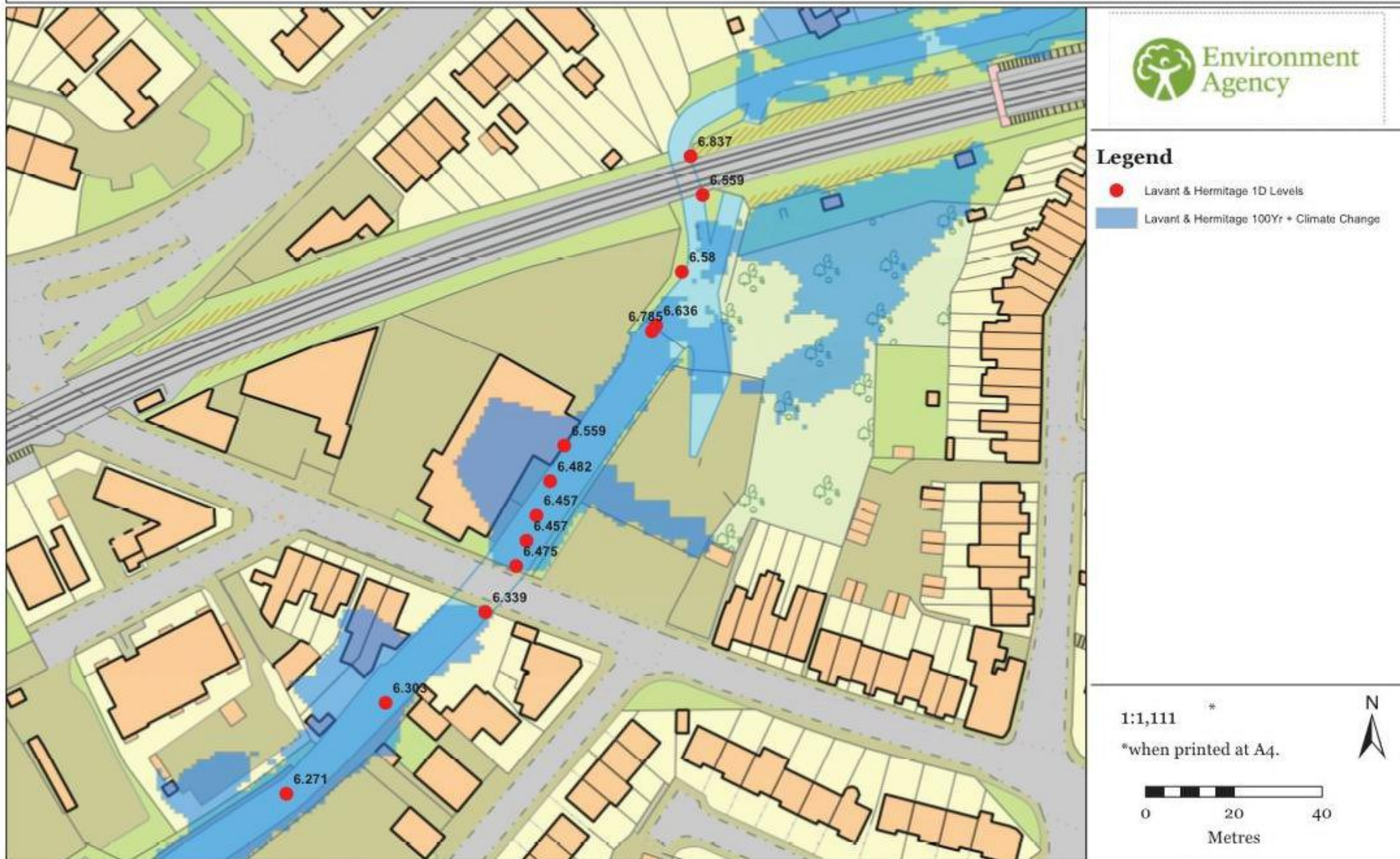


Reservoir flood risk

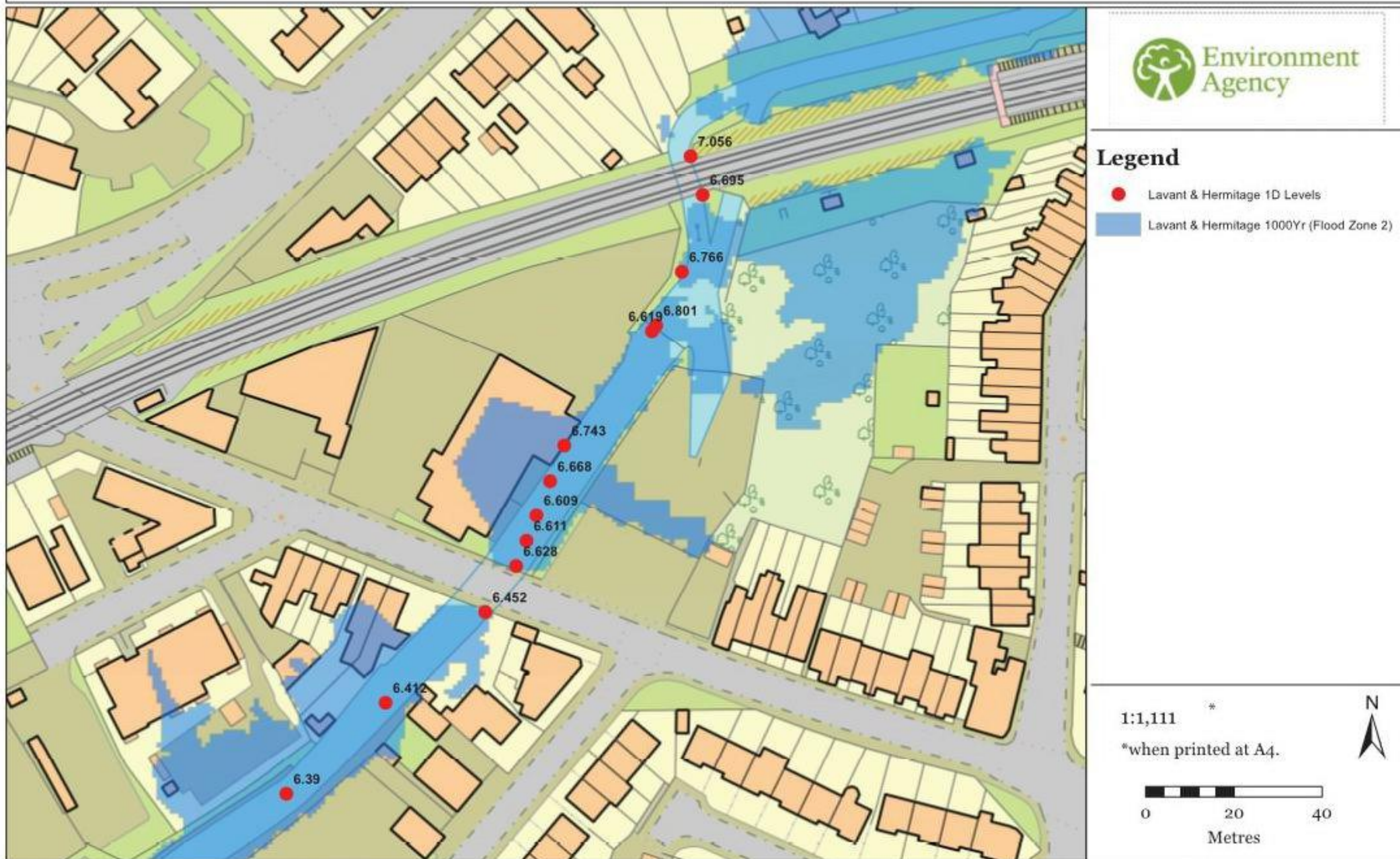
100 Year Flood Levels Map Centred on 178A West Street, Havant - Created on 27 August 2019



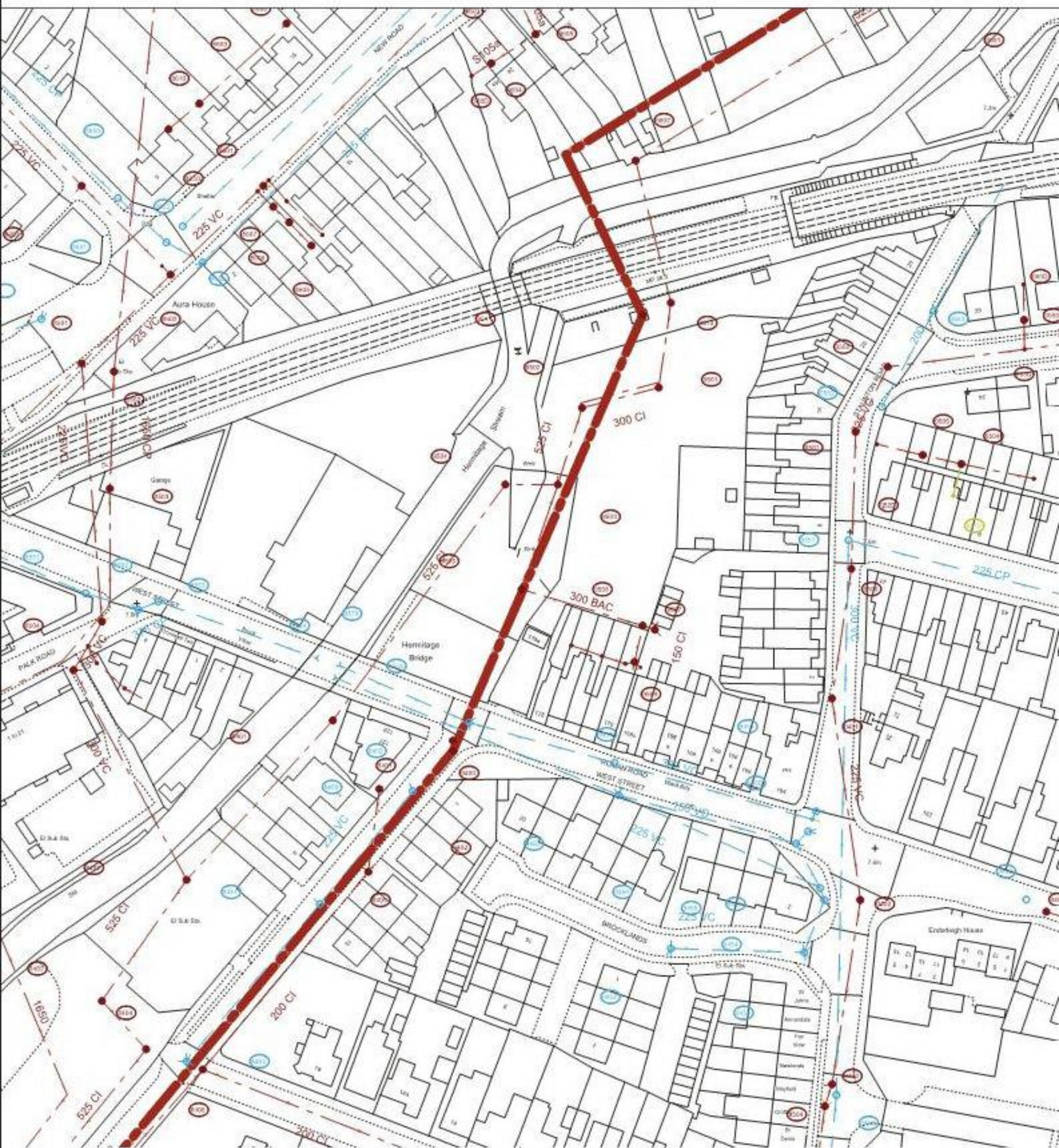
100 Year Flood Levels Map Centred on 178A West Street, Havant - Created on 27 August 2019



100 Year Flood Levels Map Centred on 178A West Street, Havant - Created on 27 August 2019



SOUTHERN WATER



The positions of pipes shown on this plan are believed to be correct, but Southern Water Services Ltd accept no responsibility in the event of inaccuracy. The actual positions should be determined on site.

Based upon Ordnance Survey Digital Data with the permission of the controller of H.M.S.O. Crown Copyright Reserved Licence No. WU 298530

O.S. REF: SU7006NE

Scale: 1:1250

Sewer Plot

WARNING: BAC pipes are constructed of Bonded Asbestos Cement

WARNING: Unknown (UNK) materials may include Bonded Asbestos Cement



Printed By: Mercy

Date: 26-9-2019

Site Plan

Requested By:





Andy Traves
Aqua Callidus Consulting
52 Common Lane
Titchfield
Fareham
Portsmouth
Hampshire
PO14 4BU

Your ref

Our ref
DS_CC_PDE-112927

Date
09 October 2019

Contact

Tel 0330 303 0119

Dear Mr Traves,

Site: 178 West Street, Havant, Hampshire, PO9 1LR.

We have completed the capacity check for the above development site and the results are as follows:

Foul Water

Following initial investigations, there is currently adequate capacity in the local sewerage network to accommodate a foul flow for the above development at/downstream of manhole reference SU70068405. Please note that no surface water flows (existing or proposed) can be accommodated within the existing foul sewerage system.

It should be noted that this information is only a hydraulic assessment of the existing sewerage network and does not grant approval for a connection to the public sewerage system. A formal S106 connection application is required to be completed and approved by Southern Water Services. Please see the link below:

<https://developerservices.southernwater.co.uk/ConnectiontoPublicSewer/ApplicationForm>

Should you require any further information, please contact us at the above mentioned phone number or address shown in the footer.

Yours sincerely,



Tim Peacock-Bjurström
Technical Delivery Lead
Business Channels

Please note: - The information provided above does not grant approval for any designs/drawings submitted for the capacity analysis. The results quoted above are only valid for 12 months from the date of issue of this letter.



Figure 3 – Trial Hole Plan

Project

The Burrows, West Street,
Bedhampton, Havant, Hampshire
PO9 1LR

Client

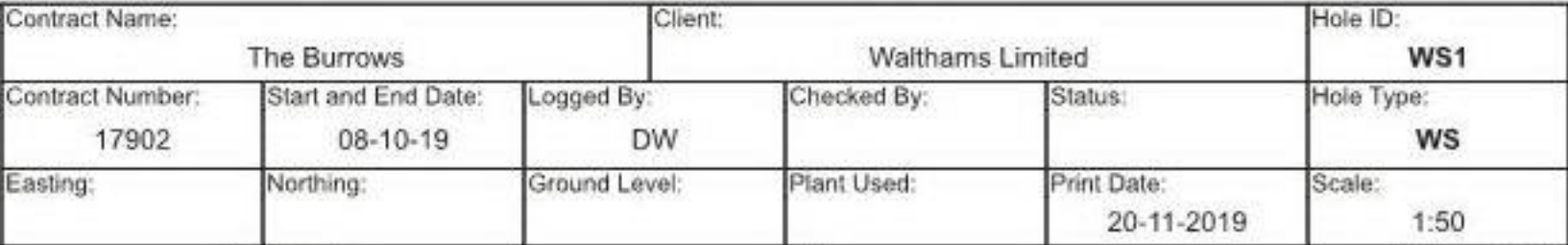
Walthams Ltd.

Date

November 2019

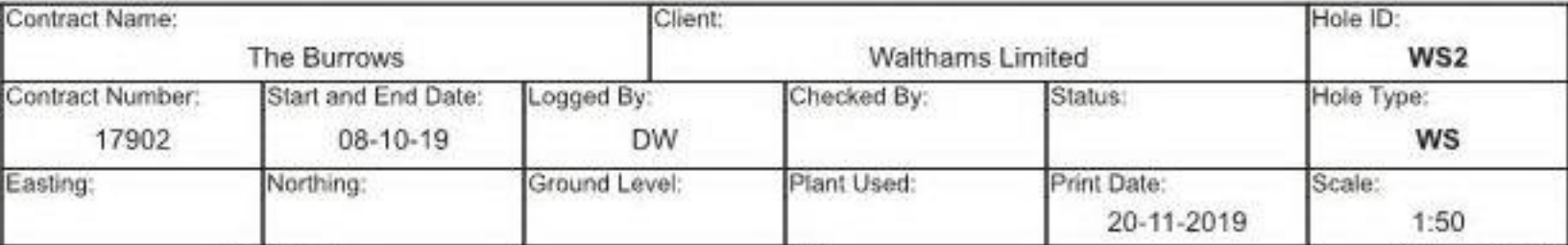
Job Number

17902



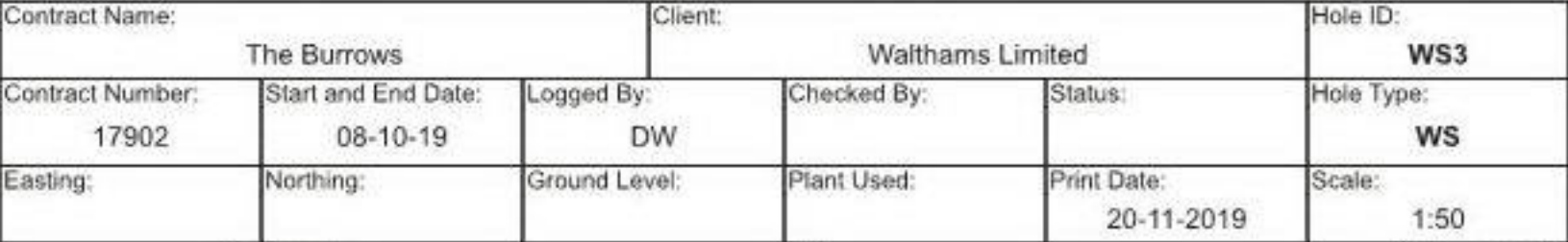
Weather: Termination: Sheet 1 of 1

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Rootlets observed to 1.4m bgl					
					Water Strikes									
Chiselling					Installation				Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)						
					0.00	1.00	PLAIN	33						
					1.00	4.00	SLOTTED	33						
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														



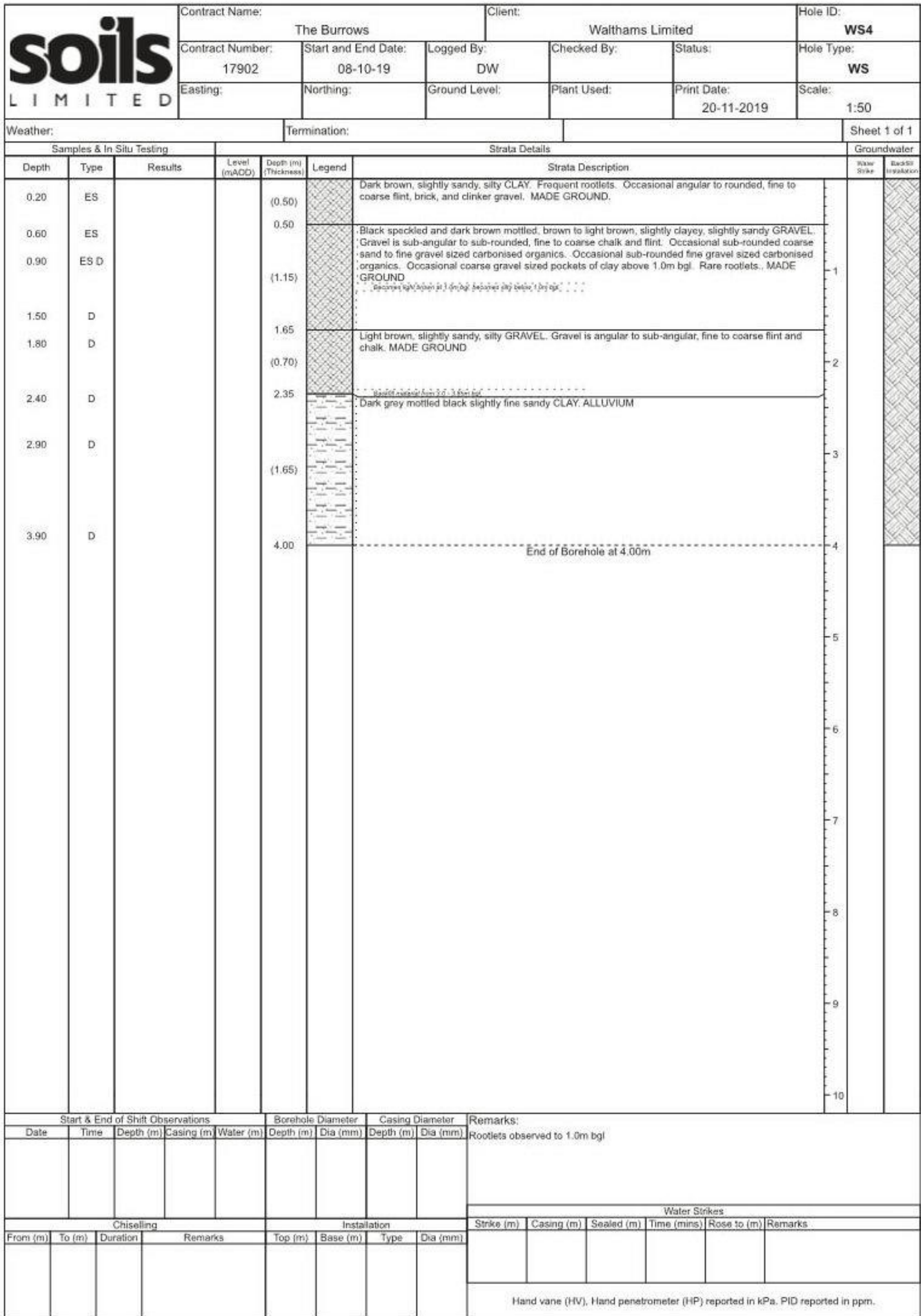
Weather: Termination: Sheet 1 of 1

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Rootlets observed to 1.2m bgl					
									Water Strikes					
Chiselling					Installation				Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)						
					0.00	1.00	PLAIN	33						
					2.00	4.00	SLOTTED	33						
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														



Weather: Termination: Sheet 1 of 1

Start & End of Shift Observations					Borehole Diameter		Casing Diameter		Remarks:					
Date	Time	Depth (m)	Casing (m)	Water (m)	Depth (m)	Dia (mm)	Depth (m)	Dia (mm)	Rootlets observed to 1.4m bgl					
									Water Strikes					
Chiselling					Installation				Strike (m)	Casing (m)	Sealed (m)	Time (mins)	Rose to (m)	Remarks
From (m)	To (m)	Duration	Remarks		Top (m)	Base (m)	Type	Dia (mm)						
					0.00	1.00	PLAIN	33						
					1.00	4.00	SLOTTED	33						
Hand vane (HV), Hand penetrometer (HP) reported in kPa. PID reported in ppm.														



Waltham Contracting Ltd.Via email only: pam@walthamltd.co.uk

March 2020

Our Ref.: 18075/FLR Rev 1.01

Thomas Telford House, Sun Valley Business Park
Winnall Close
Winchester
SO23 0LB01962 673 330
soilslimited.co.uk

Dear Maurice

Re: The Burrows, West Street, Bedhampton, Havant, Hampshire PO9 1LG

We are writing regarding the supplementary intrusive investigation undertaken at the above-named site.

This letter report must be read in conjunction with Soils Limited report ref.: 17902/MIR_R27, dated November 2019.

Brief

Soils Limited quotation (Q22283, dated 5th December 2019) set the scope of the investigation. The investigation was to comprise installation additional groundwater monitoring wells onsite and groundwater monitoring over the winter period (2020). In addition, laboratory contamination testing was to be undertaken on near surface soil samples to delineate potential contamination identified during the previous intrusive investigation undertaken onsite.

Site Works

On 6th January 2020, two windowless sampler boreholes (WS101 – WS102) were drilled to depths between 2.80m bgl and 4.00m bgl at locations selected by the client. Monitoring standpipes were installed in each windowless sampler borehole to allow for continued monitoring of both groundwater and soil gas, where present. Details of the installations are shown in the Field Logs presented in Appendix A.

Four trial pits (HDP1 – HDP4) were hand excavated each to a depth of 0.80m bgl around WS3 location (from main investigation) to delineate a potential lead hot-spot contamination.

All trial holes were scanned with a Cable Avoidance Tool (C.A.T.) and signal generator (Genny) prior to excavation to ensure the health and safety of the operatives.

Approximate locations of the trial holes have been included as Figure 1.



Soils Limited is a limited company registered in England and Wales number 1612073. VAT number 318273558

Registered Office: Newton House, Cross Road, Tadworth, Surrey KT20 5SR

Ground Conditions

Full details of the ground conditions encountered are presented within Field Logs in Appendix A.

Groundwater

Groundwater "strikes" were recorded within WS101 and WS102 and was struck at depths of 1.00m bgl and 1.10m bgl respectively.

Further groundwater monitoring was conducted within the standpipes installed onsite and commenced in December 2019 and concluded March 2020. The results have been presented in Table 1.

Table 1. Groundwater Monitoring

Trial Hole	Depth to Water (m bgl)						Base of Well (m bgl)
	16/12/19	31/12/19	18/01/20	27/01/20	02/03/20	19/03/20	
WS1	1.13	1.12	1.13	1.16	1.02	1.10	4.00
WS2	1.21	1.31	1.30	1.35	1.30	1.35	4.00
WS3	1.51	1.54	1.55	1.57	1.54	1.55	4.00
WS101	Well installed		0.31	0.42	0.00	0.05	3.30
WS102	06/01/2020		0.42	0.50	0.42	0.57	1.90

Note: 0.00 – water level recorded at surface.

Chemical Analysis Summary

Samples were selected for contamination testing as instructed by the client.

Table 2 outlines the specification for each sample tested.

Table 2. Chemical Analysis Specification

Substance	Locations: Depths (m bgl)					
	HDP1:0.50 ^s	HDP2:0.50 ^s	HDP3:0.50 ^s	HDP4:0.50 ^s	WS101:0.20 ^s	WS102:0.50 ^s
Asbestos Screen					✓	✓
Total Phenols					✓	✓
Organic Matter					✓	✓
pH					✓	✓
Metals	✓	✓	✓	✓	✓	✓
Metalloids	✓	✓	✓	✓	✓	✓
Organics					✓	✓

Notes: **Metals:** Cd, Cr, Pb, Hg, Ni, Se, Cu, Zn, Bo, V. **metalloids:** As. **organics:** USEPA 16 speciated PAH, TPH Texas, **Asbestos screening** was undertaken in accordance with HSG 248. ^s = Soil sample.

The results from the chemical analysis are presented in Appendix B.

The following attachments make up the remainder of this letter report.

Figure 1. Trial Hole Location Plan

Appendix A. Field Logs

Appendix B. Chemical Laboratory Results

Should you have any queries, please do not hesitate to contact the undersigned.

Yours sincerely

A black rectangular box redacting the signature of Tim Rudkin.

Tim Rudkin BSc. (Hons.), MSc., FGS.
Geo-Environmental Engineer
tr@soilslimited.co.uk

For and on behalf of Soils Limited.

Enc.



Figure number
1

Title
Trial Hole Location Plan

Project
The Burrows

Date
February 2020

Client
Waltham Contraction Ltd.

Reference
18075/FLR

Appendix A – Field Logs

