

Other Information

Is there a Meter fitted at the property? Yes

If not, Rateable Value used for charging purposes: N/A

ADDITIONAL METER INFORMATION

Southern Water does not hold meter serial or location details for this property. This is because Southern Water does not supply the water for this property.

DISCLAIMER - These replies and information, including that shown on the enclosed plans(s), are given on the distinct understanding that neither the company nor any of its representatives is legally liable for its accuracy or for any action or omission to act whatsoever by anyone on the strength of that information, save as to obvious error. In particular, any person proposing to construct or excavate on land on the basis of information hereby provided should carry out all necessary on-site investigations.

A GUIDE TO NEW DEVELOPMENT

WASTEWATER INFORMATION

The information contained below is for general guidance only. It is recommended that Southern Water's Network Development department be contacted for further details concerning new infrastructure development.

Sewer Requisitions

It may be necessary for a developer to request that Southern Water provides a public sewer to connect a development site to the existing public system. The developer is responsible for the cost of the work, although a discount will be applied based on the future predicted income from the development served by the new sewer.

Sewer Diversions

If a public sewer crosses private land, it may be possible for the landowner/developer to request the sewer be diverted. In the majority of cases Southern Water will allow the developer to undertake this work under close supervision. Whether Southern Water or the developer undertakes the diversionary works the costs are the responsibility of the developer.

Building-over Sewers

Public sewers are afforded statutory protection and consequently there is no right to build over or in close proximity to a public sewer. If an existing public sewer either crosses a development site or is located in close proximity to a development site it is essential that a developer contact Southern Water.

Sewer Connections

A developer can serve notice on Southern Water that it wishes to make a connection to the public sewerage system. The developer must provide 21 days notice and the work will be supervised by Southern Water.

Contact Us

For specific information on Southern Water's Network Development service, including details on how to contact the right person, please visit our website on:-

FURTHER QUERIES

SOUTHERN WATER LAND SEARCH SERVICE

If you have any queries regarding this Commercial Landsearch, please do not hesitate to contact the Southern Water Land Search Service using the details below.

Mailing Address:	The Land Search Service SOUTHERN WATER SOUTHERN House Capstone Road Chatham Kent ME5 7QA
Email Address:	searches@southernwater.co.uk
Helpdesk Tel:	0330 303 0276
Helpdesk Fax:	01634 844514
DX:	400450 Chatham 5

SOUTHERN WATER NETWORK DEVELOPMENT SERVICE

Contact Us

For specific information on Southern Water's Network Development service, including details on how to contact the right person, please visit our website on:-

www.southernwater.co.uk/developers

COMMERCIAL DRAINAGE & WATER ENQUIRY **TERMS AND CONDITIONS**

Customer and Clients are asked to note these terms, which govern the basis on which this commercial drainage and water report is supplied

Definitions

'Company' means the water service company operating within the Southern Water drainage area that provides information to Southern Water for this commercial search Report.

'Order' means any request completed by the Customer requesting the Report.

'Report' means the drainage and water report prepared by The Company in respect of the Property.

'Property' means the address or location supplied by the Customer in the Order.

'Customer' means the person, company, firm or other legal body placing the Order, either on their own behalf as Client, or, as an agent for a Client.

'Client' means the person, company or body who is the intended recipient of the Report with an actual or potential interest in the Property.

Agreement

1. Southern Water agrees to supply the Report subject to these terms. The scope and limitations of the Report are described in paragraph 2 of these terms. Where the Customer is acting as an agent for the Client then the Customer shall be responsible for bringing these terms to the attention of the Client.

The Customer and Client agree that the placing of an Order for a Report indicates their acceptance of these terms.

The Report

2. Whilst Southern Water will use reasonable care and skill in producing the Report, it is provided to the Client on the basis that they acknowledge and agree to the following:-

2.1 The information contained in the Report can change on a regular basis so Southern Water cannot be responsible to the Client for any change in the information contained in the Report after the date on which the Report was produced and sent to the Client.

2.2 The Report does not give details about the actual state or condition of the Property nor should it be used or taken to indicate or exclude actual suitability or unsuitability of the Property for any particular purpose, or relied upon for determining saleability or value, or used as a substitute for any physical investigation or inspection. Further advice and information from appropriate experts and professionals should always be obtained.

2.3 The information contained in the Report is based upon the accuracy of the address supplied by the Customer or Client.

2.4 The Report provides information as to the location & connection of existing services, and details of trade effluent consents. It should not be relied upon for any other purpose. The Report may contain opinions or general advice to the Customer and the Client and Southern Water cannot ensure that any such opinion or general advice is accurate, complete or valid and accepts no liability therefore.

2.5 The position and depth of apparatus shown on any maps attached to the Report are approximate, and are furnished as a general guide only, and no warranty as to its correctness is given or implied. The exact positions and depths should be obtained by excavation trial holes.

Liability

3.1 Southern Water shall not be liable to the Client for any failure defect or non-performance of its Obligations arising from any failure of or defect in any machine, processing system or transmission link or anything beyond Southern Water's reasonable control or the acts or omissions of any party for whom Southern Water is not responsible.

3.2 Where a Report is requested for an address falling within a geographical area where Southern Water and another Company separately provide Water and Sewerage Services, then it shall be deemed that liability for the information given by Southern Water or the Company as the case may be will remain with Southern Water or the Company as the case may be in respect of the accuracy of the information supplied. Where Southern Water is supplying information which has been provided to it by another Company for the purposes outlined in this agreement, Southern Water will therefore not be liable in any way for the accuracy of that information.

3.3 Where the Customer sells this Report to a Client (other than in the case of a bona fide legal adviser recharging the cost of the Report as a disbursement) Southern Water or the company as the case may be shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss or damage whatsoever (save to the extent provided by clause 3.4) and the Customer shall indemnify Southern Water in respect of any claim (other than a claim covered by clause 3.4) by the Client.

3.4 Southern Water shall accept liability for death or personal injury arising from its negligence.

3.5 The entire liability of Southern Water or the Company as the case may be in respect of all causes of action arising under or in connection with the Report (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) shall not exceed £2,000,000 (two million pounds); and Southern Water or the Company as the case may be shall not in any circumstances (whether for breach of contract, negligence or any other tort, under statute or statutory duty or otherwise at all) be liable for any loss of profit, loss of goodwill, loss of reputation, loss of business or any indirect, special or consequential loss, damage or other claims, costs or expenses;

Copyright and Confidentiality

4.1 The Customer and the Client acknowledge that the Report is confidential and is intended for the personal use of the Client. The copyright and any other intellectual property rights in the Report shall remain the property of Southern Water. No intellectual or other property rights are transferred or licensed to the Customer or the Client except to the extent expressly provided.

4.2 The Customer or Client is entitled to make copies of the Report (other than any maps contained in the, or attached to the Report, where no copying is permitted).

4.3 The Customer and Client agree (in respect of both the original and any copies made) to respect and not to alter any trademark, copyright notice or other property marking which appears on the Report.

4.4 The maps contained in the Report are protected by Crown Copyright and must not be used for any purpose outside the context of the Report.

4.5 The Customer and the Client agree to indemnify Southern Water or the Company as the case may be against any losses, costs, claims and damage suffered by Southern Water or the Company as the case may be, as a result of any breach by either of them of the terms of paragraphs 4.1 to 4.4 inclusive.

Payment

5.1 Unless otherwise stated all prices are inclusive of VAT. The Customer shall pay for the price of the Report specified by Southern Water, without any set off, deduction or counterclaim. Unless the Customer or Client has an account with Southern Water for payment for Reports, payments for Reports must be received in full by Southern Water before the Report is produced. For Customers or Clients with accounts, payment terms will be as agreed with Southern Water.

General

6.1 If any provision of these terms is or becomes invalid or unenforceable, it will be taken to be removed from the rest of these terms to the extent that it is invalid or unenforceable. No other provision of these terms shall be affected.

6.2 These terms shall be governed by English law and all parties submit to the exclusive jurisdiction of the English courts.

6.3 Nothing in this notice shall in any way restrict your statutory or any other rights of access to the information contained in the Report.

SEWER RECORDS PAGE 1 OF 2



108165

107877

O.S. REF. 471905		Drawn by: chowdha		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. WARNING: BAC pipes are constructed of Banded Asbestos Cement. WARNING: Unknown (UMK) materials may include Banded Asbestos Cement. Based upon Ordnance Survey Digital Data with the permission of the controller of H.M.S.O. Crown Copyright Reserved Licence No. WU 298530.	
SU7208SW		Scale: 1:1250			
Title: Scottish and Southern Energy P		Date: 03/03/2015			
				N	

472378

SEWER RECORDS PAGE 2 OF 2

Node	Cover	Invert	Size	Material	Shape
0001X	20.85	19.25	225	VC	CRC
0050X	20.37	18.4	300	VC	CRC
0150X	21.45	19.6	225	VC	CRC
0152X	21.64	20.11	225	VC	CRC
0851X	18.7		750	CP	CRC
0852X			750	CP	CRC
0900X	19.09	16.96	300	VC	CRC
0901X	19.43	17.16	300	VC	CRC
0950X	18.96	16.44	675	CP	CRC
0951X	19.31	17.81	750	CP	CRC
0952Y	18.93	17.62	375	CP	CRC
0952X	18.93		750	CP	CRC
0953X	18.91		675	CP	CRC
0954X	18.65		450	CP	CRC
0955X	18.37		675	UNK	CRC
1000X	20.24	17.92	300	WC	CRC
1050X	20.04	18.45	750	CP	CRC
1100X	21.47	19.42	300	VC	CRC
1101X	21.82	18.91	300	VC	CRC
1150X	21.49	19.09	750	CP	CRC
1151X	21.74	19.49	750	CP	CRC
1805X			UNK	VC	CRC
1850X	18.47	17.79	375	CP	CRC
1900X	18.63		300	WC	CRC
1950Y			375	CP	CRC
1951X			375	CP	CRC
1950X			300	CP	CRC
2050X	21.95	19.91	450	CP	CRC
2051X	22.31	20.26	450	CP	CRC
2100X	22.09	20.39	225	VC	CRC
2150X	22.86	20.45	750	CP	CRC
2850X	18.63	18.08	UNK	UNK	CRC
2851X	18.75	18.24	150	CRC	CRC
2950X	18.67		300	CP	CRC
2951X	18.92	18.4	150	UNK	CRC
2951X	-1		UNK	UNK	CRC
3100X	23.96	21.56	225	VC	CRC
3150X	22.86	20.73	450	CP	CRC
3151X	23.68	21.88	225	VC	CRC
3950X	22.01	21.17	200	VC	CRC
3951X	20.17	19.2	200	VC	CRC
3952X	19.23	18.67	200	VC	CRC
3954X	20.05	18.62	150	PVC	CRC
9000X	18.82	16.87	225	VC	CRC
9002X	19.76	18.03	225	VC	CRC
900DX	19.9	18.9	225	VC	CRC
9050X	18.46	16.66	225	VC	CRC
9051X	18.2	16.9	300	VC	CRC
9900X	17.99	16.35	225	VC	CRC
9901X	18.39		225	VC	CRC
9902X	18.6		225	VC	CRC
9950X	17.97	16.07	225	VC	CRC
9951X	18.16	17.06	300	CP	CRC
9952X	17.7	16.73	300	CP	CRC
9953X	17.48	16.18	300	CP	CRC

LINE STYLES / COLOURS

MATERIALS

LEGEND - BEHAVIORS

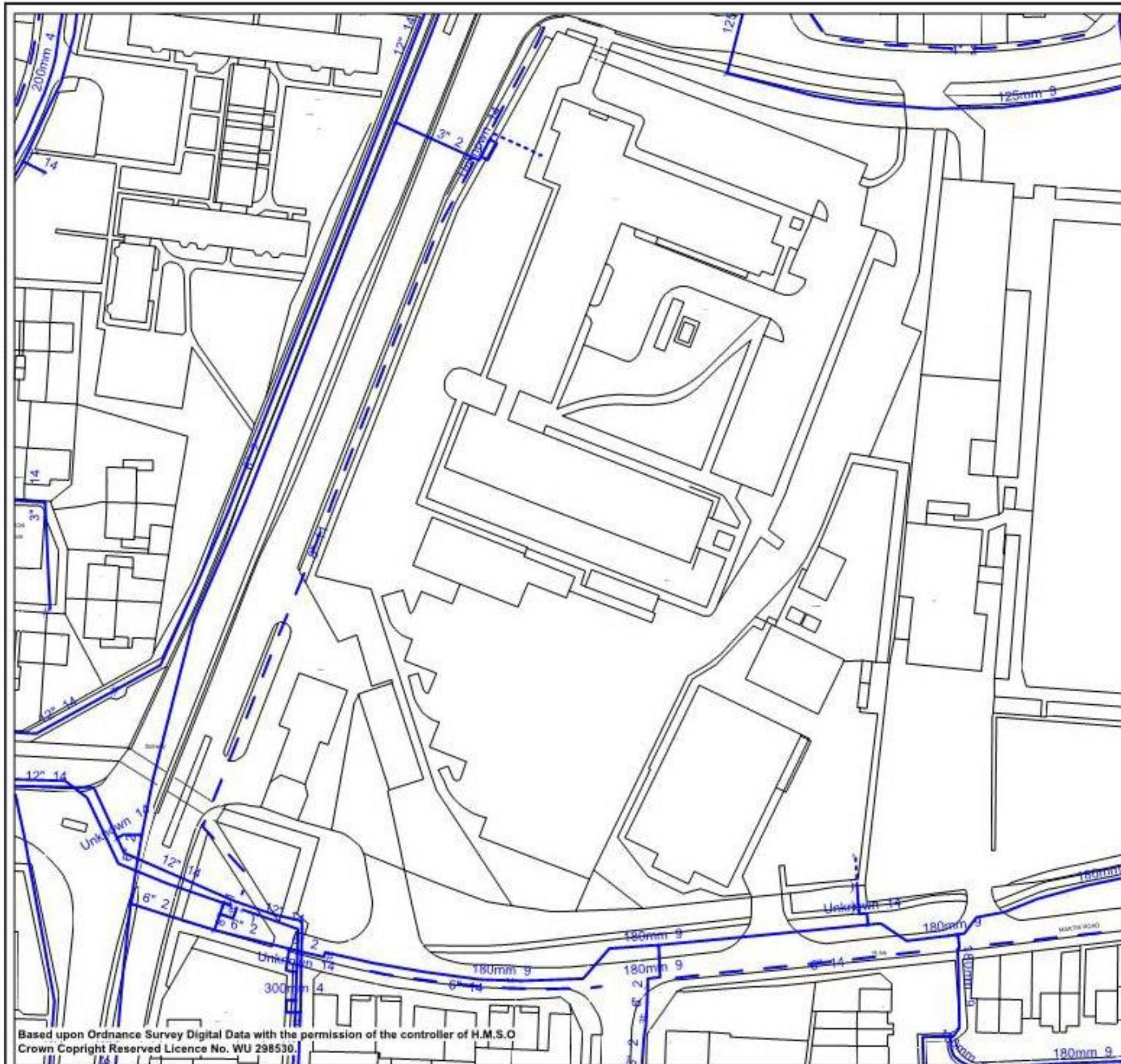
EMERUS

[illegible]

Drawn by:	chowdha
Title:	Scottish and Southern Energy P
Date:	03/03/2015







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This information is provided as part of a
CON29DW by:

**LandSearches
from
Southern Water**

Southern House
Capstone Road
Chatham
Kent ME5 7QA
Telephone: 0845 270 0212
Fax: 01634 844514

The information supplied is given in good faith as a guide to locating underground apparatus. It's accuracy cannot be guaranteed, nor does it include comprehensive information about the existence or location of services pipes or cables to individual premises. The responsibility for locating and avoiding damage to apparatus on site shall be that of the persons proposing to excavate in the street who shall be liable to the apparatus owner and any third party who may be affected in any way for any loss or damage caused by their failure to do so.

Legend

	Water Main
	Abandoned Main
	Private Main
	Hydrants / Washout Hydrants
	Valves / Fittings

Materials

BP	Black Polyethelene	MDPE	Medium Density Polyethelene
CI	Cast Iron	PSC	Pre-Stressed Concrete
CP	Copper	PVC	Polyvinyl Chloride
DI	Ductile Iron	ST	Steel
FRC	Fibre Reinforced Cement	??	Unknown
HDPE	High Density Polyethelene		

Scale 1:1250

Date: 3.3.2015

Portsmouth Water Ltd
Public Record - Water Quality Summary
01/01/2013 to 31/12/2013
Walderton Supply Zone

General Information	ZONE – WALDERTON	2013
Comments on Water Quality: Based on all the samples taken in 2013, this water meets the chemical and microbiological requirements of the Water of the Water Supply (Water Quality) Regulations 2000 (Amendment) Regulations 2007.		
Action taken to comply with Section 19 undertakings Phosphate is dosed in the water to reduce pick-up of lead from lead pipework.		

Determinands Analysed

METALS		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Antimony	These metals can occur naturally in source water at low levels. Some may also come from plumbing systems and industrial processes. The standards provide wide safety margins on known levels of toxicity.	5.0 µg /l
Cadmium		5.0 µg/l
Chromium		50 µg /l
Nickel		20 µg/l
Mercury		1.0 µg /l
Selenium		10 µg /l
Aluminium	Aluminium occurs naturally and is also used during treatment to remove impurities. Concerns have been expressed about a link between aluminium and Alzheimer's disease, but there is no proven connection, although research on this is ongoing.	200 µg/l
Arsenic	This occurs naturally in water at low levels.	10 µg /l
Boron	Low levels of boron can be found in some waters due to its use in detergents.	1.0 mg/l
Copper	Traces of copper can sometimes be found in water, usually as a result of old, corroding plumbing or new plastic pipes. This can cause a metallic taste.	2.0 mg/l
Lead	Lead is rarely present in water sources but many properties built before the mid-1960's have a lead supply pipe or some lead plumbing. Portsmouth Water adds phosphate to most of the water supplied to reduce the amount of lead dissolved from pipes.	25 µg /l (In Dec 2013 the standard dropped to 10 µg /l)
Iron	Iron can naturally occur in some water sources and is removed during treatment. Iron in the water supplies may also be derived from old iron mains or domestic pipe work. This is not a health hazard, but can cause the water to become discoloured.	200 µg/l
Manganese	This can naturally occur in some water sources and is removed during treatment. Disruption to water mains can stir up sediment, containing manganese.	50 µg/l
Sodium	Sodium is a naturally occurring substance that can increase as an effect of softening the water. If you use a water softener you should retain an un-softened supply for drinking.	200 mg/l

NON-METALS		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Ammonium	Ammonia occurs naturally in many water sources. It is not harmful and is normally removed by treatment.	0.5 mg/l
Bromate	Bromate can potentially form when hypochlorite or ozone are used in water treatment. We control the treatment process tightly to minimize this.	10 µg/l
Chloride	Chloride occurs naturally in water but may give a salty taste to the water and contribute to corrosion.	250 mg/l
Cyanide	Cyanide is rarely found in water. When it is detected it is normally in areas of heavy industry.	50 µg/l
Fluoride	Fluoride occurs naturally at low levels in some of Portsmouth Water's supplies. None of our supplies are artificially fluoridated.	1.5 mg/l
Nitrate	Nitrate arises from the use of fertilizer on agricultural land.	50 mg/l
Nitrite	Nitrite occurs at much lower levels than nitrate and conversion from one form to another occurs readily. The regulations also require that the Nitrate:Nitrite ratio $[\text{nitrate}]/50 + [\text{nitrite}]/3 \leq 1.0$.	0.5 mg/l at Customers tap 0.1 mg/l at Water Treatment Works
Sulphate	Sulphate occurs naturally in water and comes from mineral deposits.	250 mg/l

BACTERIA		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Faecal Coliforms (E.coli)	These bacteria are specific inhabitants of the digestive systems of warm blooded animals. They are an indication of possible contamination (with other harmful bacteria possibly being present). Any detection is investigated as a matter of urgency.	0 per 100ml
Total Coliforms	These are bacteria that provide a general and very sensitive measure of microbiological quality. They are removed by water treatment processes, but where they are detected it is often because they can grow within taps in the home. Any detection is investigated as a matter of urgency.	0 per 100ml
Enterococci	As with coliforms, the presence of these organisms can indicate possible contamination in the water supply so they are investigated as a matter of urgency.	0 per 100ml
Colony Count at 37°C	Small numbers of bacteria can be present in treated water. The information obtained from these tests is used to maintain the efficiency of the water treatment processes and the cleanliness of water mains. Any unusually high levels are investigated.	No abnormal change from a long term average. Number per 1ml
Colony Count at 22°C		
Clostridium Perfringens	As with coliforms, the presence of these organisms can indicate contamination in the water supply so they are investigated as a matter of urgency.	0 per 100ml

ORGANIC CHEMICALS: PESTICIDES

SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Aldrin	Pesticides consist of chemicals used by farmers, local authorities and gardeners. The traces of these found in untreated water are typically far less than the maximum advised to protect public health. The pesticides tested for will vary from area to area, depending on the usage of pesticides in the surrounding area of each water source.	0.03 µg/l
Dieldrin		0.03 µg/l
Heptachlor		0.03 µg/l
Heptachlor epoxide		0.03 µg/l
Other individual Pesticides		0.1 µg/l
Total Pesticides	This is the total amount of each pesticide detected in the water sample tested.	0.5 µg/l

ORGANIC CHEMICALS: OTHERS

SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Benzene	Benzene is rarely found in water but is removed in treatment processes. It arises from petroleum products and industries.	1.0 µg/l
Trichloromethane ^	These compounds are known as trihalomethanes (THM's). They are formed when chlorine comes into contact with organic compounds in untreated water.	100 ug/l (^For the total amount of these four compounds)
Dichlorobromomethane ^		
Dibromochloromethane ^		
Tribromomethane ^		
Tetrachloromethane	These substances are known as solvents. They arise from industrial processes and are removed from the water during the treatment stage.	3.0 µg/l
1,2 Dichloroethane		3.0 µg/l
Trichloroethene * and Tetrachloroethene *		10 µg/l (*For the total amount of these two compounds)
Benzo-a-pyrene	These compounds are known as polycyclic aromatic hydrocarbons (PAH's). They are rare substances and are seldom found in water. Where they do occur, the cause is usually coal tar pitch lining from iron mains.	0.01 µg/l
Benzo-b-fluoranthene *		0.1 µg/l (*For the total amount of these four compounds)
Benzo-k-fluoranthene *		
Benzo-ghi-perylene *		
Indeno-123-cd-pyrene *		

OTHER PARAMETERS		
SUBSTANCE TESTED	WHAT IT MEANS	REGULATORY STANDARD
Colour	Chemical changes in the water source or pressure changes in the distribution main can give the water a tinge of colour.	20 mg/l Pt/Co
Conductivity	This is a measure of the level of natural mineral salts contained in the water. This is measured by passing an electrical current through the water.	2500 μ S per cm at 20°C
pH (Hydrogen Ion)	This is a measure of the acidity or alkalinity of the water. A pH of 7 is neutral.	Between 6.5 and 9.5
Taste Dilution Number	This is to check if the water has any unpleasant taste or smell. It is measured using panellists to taste and smell the water in strictly controlled conditions.	Dilution Number 0 at 25°C
Odour Dilution Number		
Temperature	Temperature is checked to monitor changes in the water system.	No legal limit
Total Chlorine	Sufficient chlorine is added to all our supplies to ensure the absence of harmful bacteria. Portsmouth Water also aims to keep the levels at customer's taps low to minimize associated taste and odour issues.	No legal limit
Free Chlorine		
Total Organic Carbon	TOC is a measure of the organic material present in the water. It varies naturally depending on the source of the water and is monitored for any unusual changes (which could be caused by oil spills or other pollutants).	No abnormal change
Turbidity	This is a measure of suspended material in the water.	4.0 NTU at Customers tap 1.0 NTU at Water Treatment Works

APPENDIX G HAMPSHIRE COUNTY COUNCIL (LLFA) CONSULTATION

Nick Bosanko

From: Reghif, Sarah <sarah.reghif@hants.gov.uk>
Sent: 18 November 2020 08:07
To: Nick Bosanko
Cc: planning.development@havant.gov.uk; FWM Statutory SWM Consultee mailbox
Subject: RE: Bartons Road, Havant ref: APP/20/00658

Dear Nick.

Yes, if you can provide the calculations to show that you can comply with the rates below, that would be acceptable.

Apologies, I meant to reply from the other mailbox so if you could make sure and information / replies are sent to SWM.consultee@hants.gov.uk it would be appreciated

Regards

Sarah

From: Nick Bosanko <Nick.Bosanko@vectos.co.uk>
Sent: 16 November 2020 16:07
To: Reghif, Sarah <sarah.reghif@hants.gov.uk>
Cc: planning.development@havant.gov.uk
Subject: RE: Bartons Road, Havant ref: APP/20/00658

Hi Sarah

Thank you for your email.

Please can you confirm that the proposed rates below will be satisfactory?

Return Period	Average Rainfall (mm/hr)	Existing Runoff Rate (l/s)	Proposed Discharge Rate (l/s)
1 in 1	12.5	38.7	50.9 38.7
1 in 10	23.5	72.7	50.9
1 in 30	30.2	93.3	50.9
1 in 100	39.7	122.6	50.9
1 in 100+40%CC	-	-	50.9

Regards, Nick

Nick Bosanko
Associate Director

-

0117 203 5240
07947 220 321

-

5th Floor, 4 Colston Avenue
Bristol, BS1 4ST

From: Reghif, Sarah <sarah.reghif@hants.gov.uk>
Sent: 12 November 2020 16:02
To: Nick Bosanko <Nick.Bosanko@vectos.co.uk>
Cc: planning.development@havant.gov.uk
Subject: Bartons Road, Havant ref: APP/20/00658

Dear Nick,

Santi has forwarded this to me and in terms of the Barton Road site, I have the following comments.

Firstly you have submitted this information directly to us but we are a statutory consultee and not the decision making body so you must include the LPA case officer in these emails. In this instance we have reviewed the information but any other requests need to come via the proper channels or you would need to request a separate review which would be a chargeable element.

The proposed flow rates for any new development must be no greater than the existing 1:1, 1:30 and 1:100 year storm return periods. Please amend the design flow rate and provide calculations that demonstrate that existing flow rates will not be exceeded. At present, you have demonstrated that there would be additional water leaving the site at the lower storm return periods which is not acceptable.

Regards
Sarah

Sarah Reghif
Flood and Water Management
0370 779 7497
SWM.consultee@hants.gov.uk

Economy Transport and Environment
EII Court West
The Castle
Winchester
Hampshire
SO23 8UD

Hampshire Services offers a range of professional consultancy services to partner organisations.
www.hants.gov.uk/sharedexpertise

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Hampshire County Council's response to the Covid-19 is available here
(<https://www.hants.gov.uk/socialcareandhealth/coronavirus>).

In line with Government advice to reduce non-essential travel and work from home where possible, Flood and Water Management officers are now working remotely. Whilst we will endeavour to conduct our services in a timely manner and to meet statutory timescales where we can, there may be some impact to the services we deliver.

From: Nick Bosanko <Nick.Bosanko@vectos.co.uk>
Sent: 03 November 2020 09:29
To: FWM Statutory SWM Consultee mailbox <SWM.Consultee@hants.gov.uk>
Cc: Lizzie Todd-Davies <Lizzie.Todd-Davies@vectos.co.uk>
Subject: RE: Surface Water Management Pre-Application Advice/Historic Flood Information Request

Hi Santi

We were sent the LLFA initial consultation response, as attached.

We have prepared a reply to this, which is also attached. Hopefully, this gives you the information needed to reply in full. How quickly do you think you'd be able to reply in full please? Our reply was sent to the case officer on Friday, but I understand she was on leave so to help things along we considered it sensible to send it to you direct too.

Please note that McDonald's have requested a number of changes to the layout etc to the north part of the scheme. The drainage strategy will need to be revised, but it is prudent to wait for your comments before we make those changes.

I'll wait to hear from you.

Thanks, Nick

Nick Bosanko
Associate Director

-

0117 203 5240
07947 220 321

-

5th Floor, 4 Colston Avenue
Bristol, BS1 4ST

vectos.

 Consider the environment. Do you really need to print this email?

Bartons Road, Havant

Reply to LLFA Consultation Response

195104/N01

Introduction

1. Vectos prepared a Flood Risk Assessment (FRA) dated July 2020 to support the mixed-use redevelopment at Bartons Road, Havant (APP/20/00658).
2. The Hampshire County Council Lead Local Flood Authority (LLFA) prepared a consultation response dated 26 October 2020. An extract from this response is provided below.

In order for us to provide a substantive response, the following information is required:

- Please provide existing run-off rates for the 1:1 year, 1:30 year and 1:100-year, proposed rates are based on the 10-year rainfall profile.
3. It is the purpose of this note to provide this information so that the LLFA can respond in full.

Runoff Rates

4. The proposed runoff rates were based on the assumption that the surface water drainage from the brownfield site was designed to accommodate the 1 in 10 year event (with no climate change).
5. Once this rate was estimated, a 30% reduction was proposed, and this was adopted for all storms up to and including the 1 in 100 plus 40% climate change event.
6. Whilst it was assumed that the drainage was designed to accommodate the 1 in 10 year storm, in reality, the brownfield site would generate a much greater runoff rate in more extreme conditions. This would run off the site as overland flow. We have ignored this additional contribution, given that this would have no direct connection to the public sewer. The approach adopted is therefore considered to be conservative and will offer further betterment.
7. The LLFA has requested existing runoff rates for the site. These have been estimated using the Wallingford Procedure and the assumptions outlined in the FRA.
8. Therefore, the existing runoff rate has been estimated using the following:
$$Q = C \times I \times A$$
9. Further details are enclosed with the FRA. However, the average rainfall intensity has been calculated using MicroDrainage (see enclosed). The impermeable area was estimated to be 1.14 ha. The

following table presents the runoff rates requested by the LLFA. It also presents the proposed discharge rate.

Return Period	Average Rainfall (mm/hr)	Existing Runoff Rate (l/s)	Proposed Discharge Rate (l/s)
1 in 1	12.5	38.7	50.9
1 in 10	23.5	72.7	50.9
1 in 30	30.2	93.3	50.9
1 in 100	39.7	122.6	50.9
1 in 100+40%CC	-	-	50.9

Conclusion

10. We assume that the information provided will be sufficient to allow the LLFA to respond in full.

Unit 704
The Paintworks
Bristol BS4 3EH

Date 30/10/2020 12:39
File

Designed by Nick.Bosanko
Checked by



XP Solutions

Network 2019.1

Rainfall profile

Storm duration (mins) 60

FSR Data

Region England and Wales

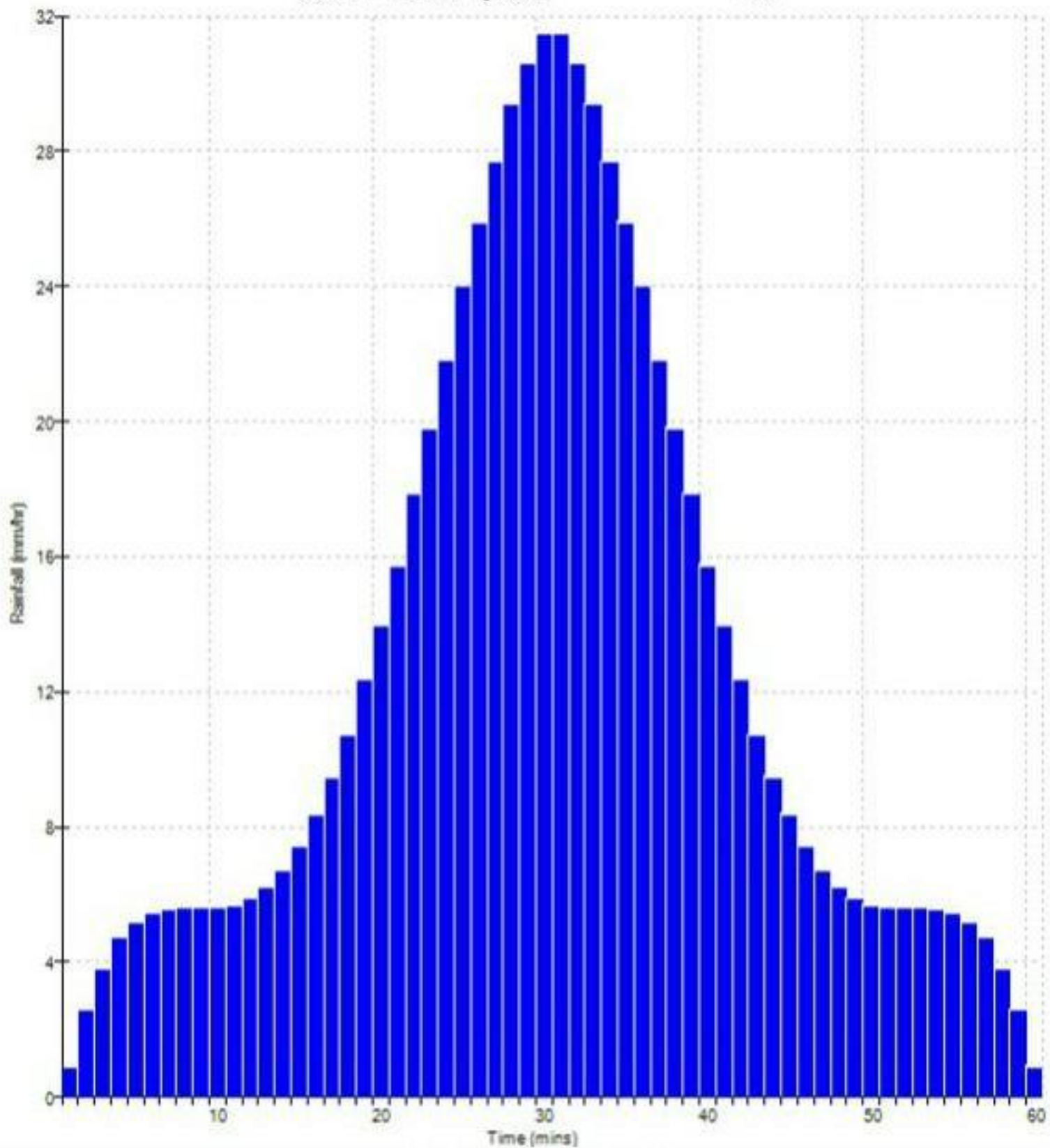
M5-60 (mm) 19.600

Ratio R 0.346

Peak Intensity (mm/hr) 31.473

Ave. Intensity (mm/hr) 12.513

Return Period (years) 1.0



Unit 704
The Paintworks
Bristol BS4 3EH

Date 30/10/2020 12:42
File

Designed by Nick.Bosanko
Checked by



XP Solutions

Network 2019.1

Rainfall profile

Storm duration (mins) 60

FSR Data

Region England and Wales

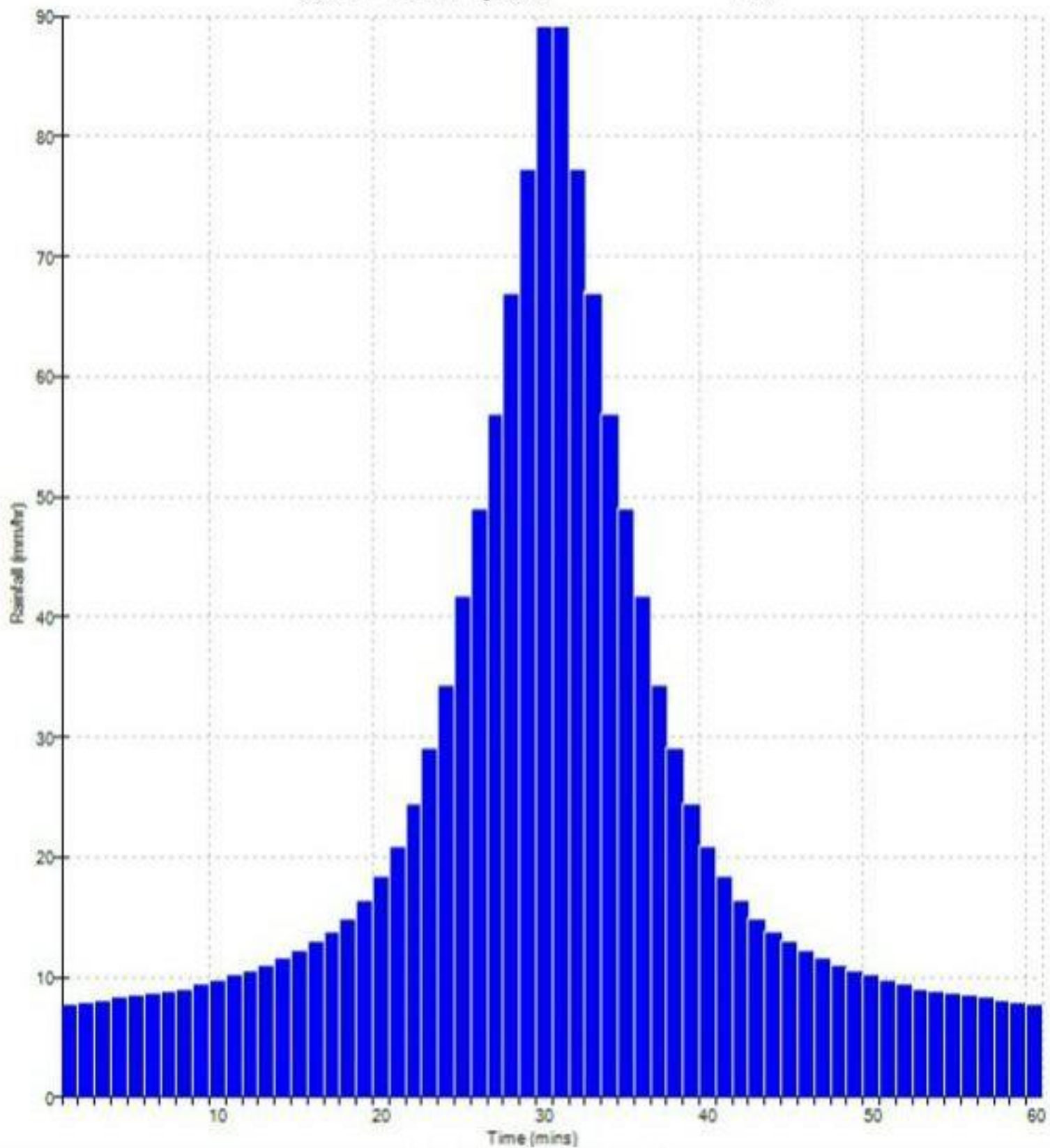
M5-60 (mm) 19.600

Ratio R 0.346

Peak Intensity (mm/hr) 88.994

Ave. Intensity (mm/hr) 23.519

Return Period (years) 10.0



Unit 704
The Paintworks
Bristol BS4 3EH

Date 30/10/2020 12:40
File

Designed by Nick.Bosanko
Checked by



XP Solutions

Network 2019.1

Rainfall profile

Storm duration (mins) 60

FSR Data

Region England and Wales

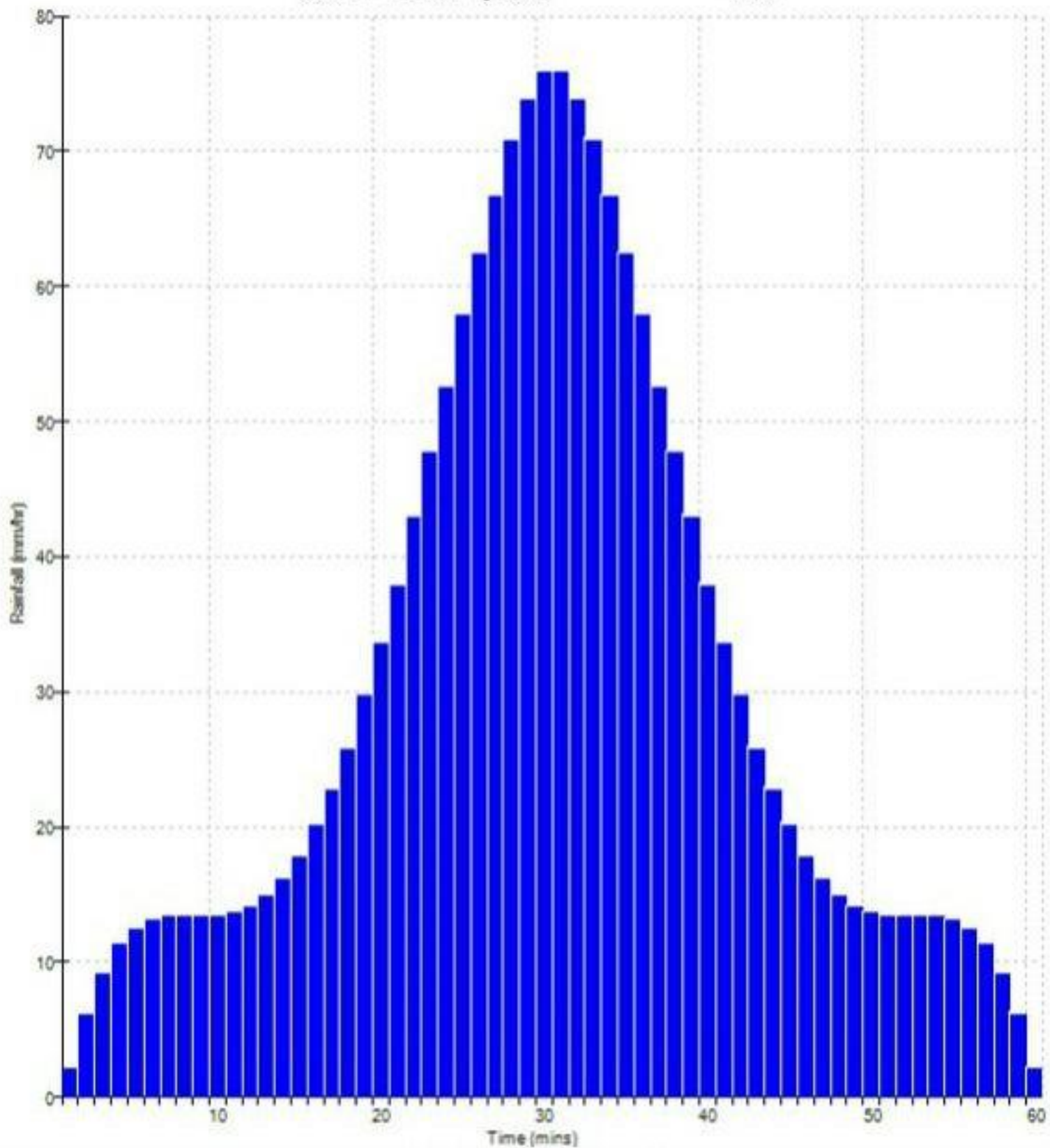
M5-60 (mm) 19.600

Ratio R 0.346

Peak Intensity (mm/hr) 75.920

Ave. Intensity (mm/hr) 30.183

Return Period (years) 30.0



Vectos (South) Limited		Page 1
Unit 704 The Paintworks Bristol BS4 3EH		
Date 30/10/2020 12:43 File	Designed by Nick.Bosanko Checked by	
XP Solutions	Network 2019.1	

Rainfall profile

Storm duration (mins) 60

FSR Data

Region England and Wales

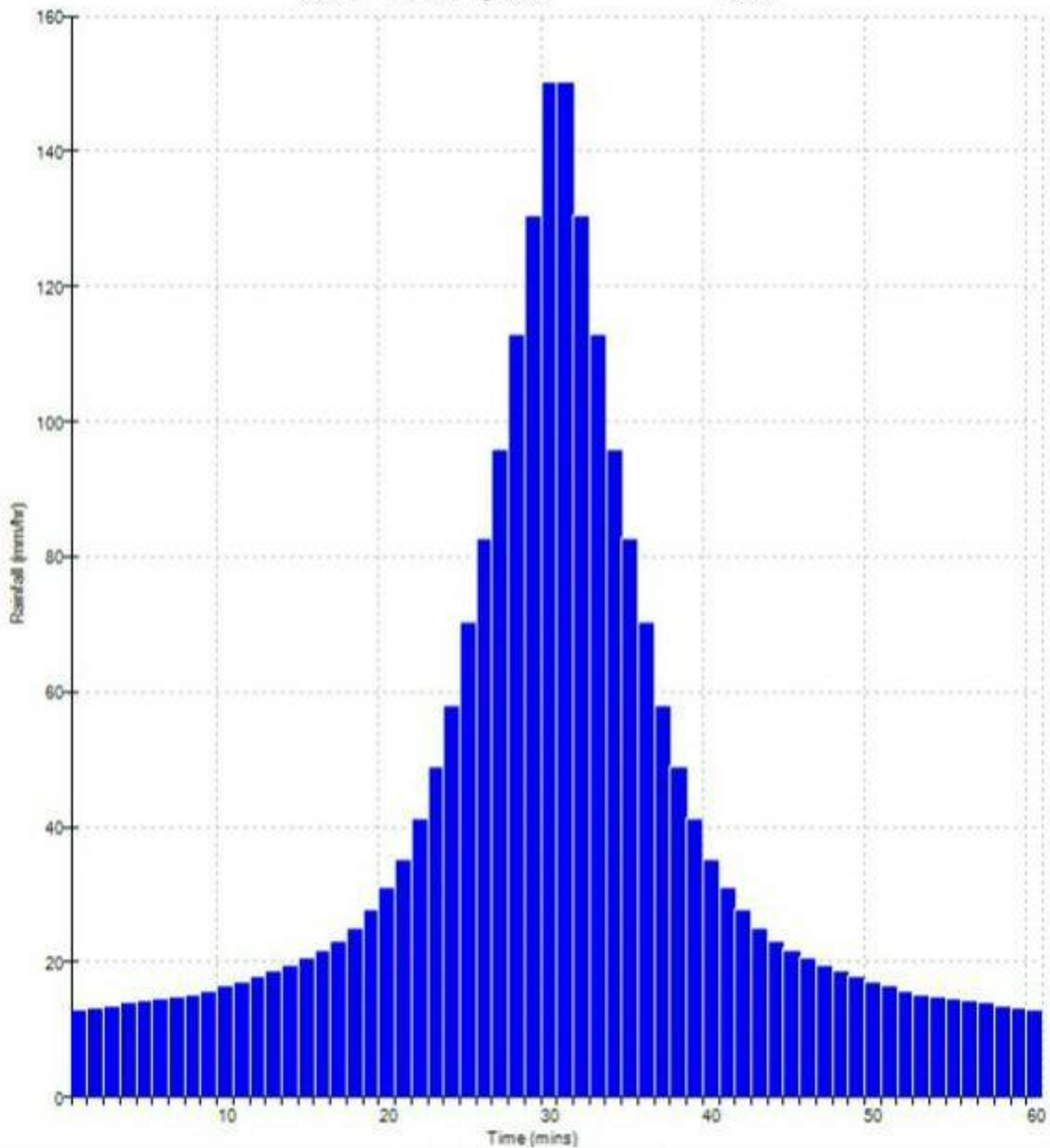
M5-60 (mm) 19.600

Ratio R 0.346

Peak Intensity (mm/hr) 150.127

Ave. Intensity (mm/hr) 39.674

Return Period (years) 100.0



Nick Bosanko

From: FWM Statutory SWM Consultee mailbox <SWM.Consultee@hants.gov.uk>
Sent: 26 March 2020 15:06
To: Nick Bosanko
Cc: FWM Statutory SWM Consultee mailbox; Lizzie Todd-Davies
Subject: RE: Surface Water Management Pre-Application Advice/Historic Flood Information Request

Follow Up Flag: Follow up
Flag Status: Flagged

Hello Nick,

Thank you for your email.

I confirm that keeping site levels on the boundaries where the 1 in 1000 flow path enters the site as close to existing site levels as possible, and then allowing a route through the site safely (proposed arrows), will be sufficient to demonstrate that the existing overland flow route will not be blocked, and to establish that exceedance flow routes within site will be managed safely.

Bearing in mind the existing site characteristics, I also confirm that the 150mm elevation of residential development ground levels will be adequate.

Considering that the infiltration test showed that infiltration is not feasible at the site, and in the absence of any nearby watercourse, we will consider acceptable to discharge surface water runoff to the surface water public sewer network. Bearing in mind that this is a brownfield site, we would also accept a 30% betterment of existing discharge rates. However, since an alternative point of discharge from the application site is not available, we will request agreement from Southern Water for the connection(s) and proposed discharge rate(s) when the application is submitted, as they will have implication in the design detailed drainage system.

I hope this helps but contact me on the details below if you want to discuss it.

Kind regards,
Santi

Santiago Manzanero
Flood and Water Management Engineer
01962 846777
07784 261707
Santi.Manzanero@hants.gov.uk

Economy Transport and Environment
EII Court West
The Castle
Winchester
Hampshire
SO23 8UD



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The HCC Flood and Water Management team offer a Flood and Water Management information service for Local Authorities and developers offering both historic site information and a full Pre-Application assessment of a proposed development's Surface Water Drainage features. For specific information please visit the ['Reducing flood risk in planning'](#) webpage or for general information see [HCC Flood & Water Management](#)

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From: Nick Bosanko <Nick.Bosanko@vectos.co.uk>
Sent: 19 March 2020 22:17
To: FWM Statutory SWM Consultee mailbox <SWM.Consultee@hants.gov.uk>
Cc: Lizzie Todd-Davies <Lizzie.Todd-Davies@vectos.co.uk>
Subject: RE: Surface Water Management Pre-Application Advice/Historic Flood Information Request

Hi Santi

Thank you for the information provided. I have provided an extract of this below.

We understand that the old building is demolished and would have influenced the EA modelling. As a result, surface water flowing through the site will most likely be different and will require review.

Bearing in mind that the existing overland flowpaths are for a rainfall event with a 1 in 1000-year annual probability of occurrence, we will require that the exceedance flow routes within the development are appropriately assessed, in accordance with the proposed ground levels, to ensure property and infrastructure would not be adversely affected and. However, blocking these overland flowpaths will increase flood risk at Petersfield Rd which is already at surface water flood risk (including during rainfall events with a 1 in 30 annual probability of occurrence). Therefore, we will require that existing ground levels within the overland flowpaths are retained as much as possible, especially close to Bartons Rd to Martins Rd, to ensure no displacement of flood water.

We will also require that finished ground floor levels of any residential development should be sufficient to ensure that surface water does not pose a flood risk in the 1 in 100-year event plus 40% climate change allowance.

I have also provided an extract of the 1 in 100 year surface water floodplain below. As you can see, there is only a small part of the site impacted by this. Are your comments above suggesting that we need to make an allowance for the 1 in 1000 year flow paths through the site?

As you know, the former building has been demolished and levels/flow paths on site are likely to change. We can try to ensure that the levels on the boundaries where the 1 in 1000 flow path enters the site are kept as close to existing as possible and then allow a route through the site. The ground levels fall in a southerly direction, so therefore the flows paths will do the same, similar to existing conditions. Will you be satisfied if we show these by some arrows on the site layout plan informed by the proposed site levels?

We don't have any flood levels for the 1 in 100 plus 40% climate change surface water flood event to inform finished ground floor levels. We would normally recommend that these floor levels are elevated by 150mm above surrounding ground level. Please can you confirm if that is adequate?

Medium risk: depth



Surface water flood risk: water depth in a medium risk scenario

Flood depth (millimetres)

Over 900mm 300 to 900mm Below 300mm

Please note that we have undertaken infiltration testing and this was not successful. Therefore, water will need to be disposed to the surface ware sewer that passes alongside the site. It is understood that the former site also disposed surface water to the public sewer and given its brownfield nature, it would seem more reasonable to discharge at a brownfield rate with a betterment imposed – we would normally adopt a 30% betterment. Please can you comment on this? We'd obviously need to agree this with Southern Water subsequently.

Regards, Nick

Nick Bosanko

Associate Director

0117 203 5240 (T) 07947 220 321

5th Floor, 4 Colston Avenue, Bristol, BS1 4ST

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From: Lizzie Todd-Davies <Lizzie.Todd-Davies@vectos.co.uk>

Sent: 12 March 2020 15:08

To: Nick Bosanko <Nick.Bosanko@vectos.co.uk>

Subject: FW: Surface Water Management Pre-Application Advice/Historic Flood Information Request

Lizzie Todd-Davies

Assistant Flood Risk Consultant

0117 203 5240 (T) 0117 905 8888

5th Floor, 4 Colston Avenue, Bristol, BS1 4ST

From: FWM Statutory SWM Consultee mailbox <SWM.Consultee@hants.gov.uk>
Sent: 12 March 2020 09:25
To: Lizzie Todd-Davies <Lizzie.Todd-Davies@vectos.co.uk>
Cc: FWM Statutory SWM Consultee mailbox <SWM.Consultee@hants.gov.uk>
Subject: RE: Surface Water Management Pre-Application Advice/Historic Flood Information Request

Good morning Lizzie,

Please find attached our Pre-app advice.

If you have any questions, please do not hesitate to contact me on the details below.

Kind regards,
Santi

Santiago Manzanero
Flood and Water Management Engineer
01962 846777
Santi.Manzanero@hants.gov.uk

Economy Transport and Environment
EII Court West
The Castle
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From: Lizzie Todd-Davies <Lizzie.Todd-Davies@vectos.co.uk>
Sent: 11 March 2020 16:41
To: FWM Statutory SWM Consultee mailbox <SWM.Consultee@hants.gov.uk>
Subject: FW: Surface Water Management Pre-Application Advice/Historic Flood Information Request

Good afternoon,

Following our discussions over the phone, please find attached a site layout plan (9303-100.pdf) in relation to our pre-application and historic flood information request.

Pre-application reference number is **102656934**.

If you need any further information, then please do not hesitate to get back in touch.

We look forward to your reply.

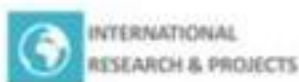
Best wishes,
Lizzie.

Lizzie Todd-Davies
Assistant Flood Risk Consultant



0117 203 5240 (T) 0117 905 8888
Lizzie.Todd-Davies@vectos.co.uk

5th Floor, 4 Colston Avenue, Bristol, BS1 4ST



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From: C4C Technical Team (DO NOT REPLY) <donotreply@hants.gov.uk>

Sent: 03 March 2020 11:42

To: Lizzie Todd-Davies <Lizzie.Todd-Davies@vectos.co.uk>

Subject: Surface Water Management Pre-Application Advice/Historic Flood Information Request



Dear Sir or Madam,

Thank you for completing a Surface Water Management Pre-Application Advice/Historic Flood Information Request, a copy of which is attached.

Your reference number is: **102656934**

We endeavour to process these applications within 2 calendar months of receiving a complete application and payment.

If you have any queries please contact us:

General enquiries: 01962 846730

Email: owc@hants.gov.uk

Website: <https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/floodriskarea>

www.hants.gov.uk

This email was sent by Hampshire County Council, The Castle, Winchester SO23 8UJ

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Elizabeth II Court West, The Castle
Winchester, Hampshire SO23 8UD

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0300 555 1388 (Roads and Transport)
0300 555 1389 (Recycling Waste & Planning)
Textphone 0300 555 1390
Fax 01962 847055
www.hants.gov.uk

Enquiries to	Santiago Manzanero	My reference	PRE-Scottish and Southern Energy
Direct Line	01962 846730	Your reference	-
Date	12 March 2020	Email	SWM.consultee@hants.gov.uk

Dear Sir/Madam,

BROWNFIELD ALLOCATED SITE CONSISTING OF RUBBLE LEFT OVER FROM DEMOLITION. LOCATED IN SPZ 1C. PROPOSALS CONSIST OF RESIDENTIAL, CARE HOME AND DRIVE THROUGH. SCOTTISH AND SOUTHERN ENERGY MARTIN ROAD, HAVANT, HAMPSHIRE PO9 5TH.

Hampshire County Council as Lead Local Flood Authority has provided comments in relation to the above pre-application in our role as statutory consultee on surface water drainage for major developments.

In order to assist applicants in providing the correct information to their Local Planning Authority for planning permission, Hampshire County Council has set out the information it requires to provide a substantive response at <https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/planning>

The County Council has reviewed the following documents relating to the above application:

- PRELIMINARY SITE PLAN 9303/100; dated: DECEMBER 2019.

Detailed Advice:

Assessment of Flooding.

The Environment Agency (EA) maps show that the entire site is with the extent of Flood Zone 1. Additionally, the EA updated flood map for surface water shows two overland surface water flowpaths flowing through the site from Bartons Rd to Martins Rd with surface water being stored at the site,

Director of Economy, Transport and Environment
Stuart Jarvis BSc DipTP FCIHT MRTPI

including during rainfall events with a 1 in 100 annual probability of occurrence, before it drains away.

We understand that the old building is demolished and would have influenced the EA modelling. As a result, surface water flowing through the site will most likely be different and will require review.

Bearing in mind that the existing overland flowpaths are for a rainfall event with a 1 in 1000-year annual probability of occurrence, we will require that the exceedance flow routes within the development are appropriately assessed, in accordance with the proposed ground levels, to ensure property and infrastructure would not be adversely affected and. However, blocking these overland flowpaths will increase flood risk at Petersfield Rd which is already at surface water flood risk (including during rainfall events with a 1 in 30 annual probability of occurrence). Therefore, we will require that existing ground levels within the overland flowpaths are retained as much as possible, especially close to Bartons Rd to Martins Rd, to ensure no displacement of flood water.

We will also require that finished ground floor levels of any residential development should be sufficient to ensure that surface water does not pose a flood risk in the 1 in 100-year event plus 40% climate change allowance.

Surface Water Disposals (check with the secured outfall of the checklist).

The British Geological Survey (BGS) data indicates that the application site is underlain by Bognor Sand Member (Sand), London Clay Formation (Clay, Silt and Sand), and Head Superficial Deposits (Clay, Silt Sand and Gravel). The variable geology at the site will most likely present highly variable permeability.

Therefore, any proposals for the use of infiltration at the application site must be supported by infiltration testing in accordance with the BRE365 (2016 publication) methodology and groundwater monitoring between autumn and spring. The infiltration testing should be carried out at a depth and location commensurate with the proposed infiltration features. The groundwater should demonstrate that there will be 1m unsaturated zone between the base (Inver Level) of the proposed infiltration features and the highest groundwater level recorded.

The entire site is within the extent of the Environment Agency (EA) Source Protection Zones (Zone 1) and the EA Groundwater Vulnerability Zones. Therefore, if infiltration is proposed for surface water disposal, we will require that the EA is consulted regarding the potential contamination associated with infiltration. Unless the EA raises no objection, we would not consider infiltration acceptable at the site.

The Detailed River Network data that we hold does not show any Main Rivers, Ordinary Watercourses, Ditches or Drains within or adjacent to the application site. Therefore, if proposals include to discharge surface water to any of the

aforementioned watercourses, we will require additional information on the watercourse location, flow direction route, evidence of gravity connection to another watercourses and evidence which demonstrate adequate capacity and condition the proposed discharge rate and connection.

If the infiltration testing/groundwater monitoring show that infiltration is not feasible at the application site, and in the absence of any available/suitable watercourse, the applicant could consider discharging surface water to a surface water/combined sewer. Any connection to existing surface water assets should have the principle of the connection agreed with the asset owner (public/private sewer network, highways...) before the planning application is submitted.

Surface water to any watercourse or existing surface water sewer should be limited to existing greenfield runoff rates for all rainfall events including the 1 in 1, 1 in 30 and 1 in 100 (plus an allowance for Climate Change) rainfall events.

SuDS Design and Selection of Drainage Features.

SuDS encompassing the multiple benefits in accordance with the SuDS Manual should be provided unless it can be proven that these are not appropriate. This should include an element of biodiversity, amenity as well as water quality / quantity. We will therefore request that above ground SuDS features are consider for the drainage strategy and added to the proposed masterplan.

Surface Water Checklist:

Bearing in mind the different information and level of details required by the different stages within the planning process (outline, reserved matters and full planning applications), please see attached our Surface Water Checklist with the different levels of information requested for each stage, that we ask developer to follow and submit with all major planning applications.

<https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/planning>

SURFACE WATER CHECKLIST GUIDANCE

Hampshire County Council as Lead Local Flood Authority (LLFA) is a statutory consultee on all major planning applications in Hampshire in relation to Surface Water Drainage.

This guidance is designed to provide advice to developers and applicants and define the information we require to assess planning applications in relation to Surface Water Drainage and has been developed based on the National Planning Policy Guidance as well as utilising best practice information as set out in the Non Statutory Technical Guidance and Ciria SuDS Manual (C753). If guidance or best practice information is required to be used other than the SuDS Manual or NPPF then it will be identified within this document.

An accompanying checklist is provided on our website which must be completed and included in any drainage submissions to ensure all the relevant information is provided and to signpost us to the correct documents. This is also intended to ensure that the applicant is aware of the legal responsibilities and will certify that the information provided is correct.

THESE PROFORMAS MUST BE SUBMITTED WITH ALL MAJOR APPLICATIONS

Given that a different level of information and detail is required depending on the different stage within the planning process (outline, reserved matters and full planning applications), we have identified the information required for all applications and then provided tables, for ease of reference, depending on whether an outline planning application with some matters reserved including layout, or full planning application is submitted.

INFORMATION ON THE PRE-DEVELOPMENT SITE

Description:	Format:
Topographical Survey.	Drawing(s)
Existing Drainage Confirm what the existing drainage arrangements on site are including Drainage Features and Catchment Areas.	Drawing(s)
Discharge rates and Volumes Calculations will be required demonstrating the pre-runoff rates and volumes. (1)	Calculations
Existing Overland Flow Paths Evidence of and information on the existing surface water flow paths for undeveloped (greenfield) sites.	Drawing(s)
Site Investigations i.e. Site Geology, Infiltration Testing and Groundwater Monitoring. (2) (3)	Test Results & Interpretive Reports.

Guidance notes:

- (1) To be completed using a suitable method such as IH124 or FEH. Information is available from UK Sustainable Drainage: Guidance and Tools. Calculations must show that the proposed run off rates do not exceed the existing run-off rates. This must be shown for the 1 in 1, 1 in 30, 1 in 100 year (plus climate change allowance) annual probability of occurrence.
- (2) Infiltration testing should be carried out in accordance with the BRE365 (2016 methodology) at a depth and location commensurate with the proposed drainage features. If infiltration is thought to be feasible, groundwater monitoring should be undertaken between autumn and spring and demonstrate that there will be at least 1m unsaturated zone between the base of the infiltration features and the highest groundwater recorded.
- (3) If infiltration is not proposed, during the detailed design (Full Planning/Reserved Matters application), the impacts of high groundwater on the drainage system and development proposals should also be assessed by groundwater monitoring. This is particularly important if there is potential for groundwater to enter storage features such as basins or permeable paving such that tanking may be required.

OUTLINE PLANNING PERMISSION.

Applications for outline planning permission seek to establish whether the scale and nature of a proposed development would be acceptable to the local planning authority (LPA), before a fully detailed proposal is put forward.

This type of planning application allows fewer details about the proposal, including drainage, to be submitted. Once outline permission has been granted, a Reserved Matters Application will be required before any construction commences on site.

Outline design requirements are set out in The SuDS Manual (CIRIA C697), this guide is the recognised industry guidance document to the non-statutory technical standards for the design, maintenance and operation of SuDS.

Key tasks: Confirm outline design standards, flow routes, approximate storage requirements and adoption arrangements. Carry out ground investigations and surveys where applicable.

Output: Outline Surface Water Drainage Strategy to support an outline planning application.

*Please note that if the layout approval is also being sought within the Outline Planning Application, we therefore would consider it as a Full Planning Application. This is because since the layout will be fixed, changes to the drainage strategy should be addressed before permission is given to avoid unnecessarily restricting potential drainage design solutions.

Therefore, Hampshire County Council as the Lead Local Flood Authority (LLFA) will require the following information for planning applications for Outline Planning Permission:

OUTLINE DRAINAGE STRATEGY	
Description:	Format:
Confirmation of a discharge location This must be in accordance with the drainage hierarchy of infiltration, discharge to watercourse, discharge to surface water sewer. (1), (2)	Drawing(s)
Surface Water Calculations This must include post development runoff rates for the 1:1, 1:30 and 1:100 + climate change together with the proposed storage requirements and attenuation features.	Calculations
Flood Risk Assessment and / or Drainage Strategy Evidence must be provided demonstrating compliance with the relevant standards i.e. restrictions on discharge rates, demonstration of no increased risk on or off site. This is covered under the standard Flood Risk Assessment guidance produced by the Environment Agency.	Report Statement /
Potential Flood Risk This must include an assessment of existing flood risk and the impact of the development on flow routes, flood plain, surface water flood risk areas (high / medium). If there are areas of flood risk within the site, evidence will be required to demonstrate how they have been managed. (3)	Drawing(s), Report Statement /
Drainage Layout Plan	Drawing(s)

This must be an engineering plan showing the location of SuDS features, conveyance paths, discharge points, storage and treatment areas.	
--	--

Guidance notes:

- (1) This should include agreement in principle within the relevant organisation/third party landowner if the discharge point is outside of the site extent together with a good understanding of discharge point sensitivity relating to the receiving water body (including groundwater sensitivity if appropriate).
- (2) Although considered as infiltration, deep bore soakaways are considered to be an option of last resort in terms of the drainage hierarchy due to the potential pollution risk to the aquifer as well as issues with siltation and maintenance. If this is to be considered as an option then discussions must be held with the LLFA as soon as feasible to avoid delays to the application and to confirm the additional requirements that will apply if this is to be progressed.
- (3) It is the LLFA's preference that existing surface water flow routes are retained within green spaces with ground levels being maintained along them to ensure no changes in flood risk as a result of the development. If this is not considered, we will require that finished ground floor levels of any residential development are sufficient to ensure that surface water does not pose a flood risk in the 1 in 100-year event plus climate change allowance. Proposals should make room for existing overland flow routes flowing through the application site and demonstrate no displacement of flood water to adjacent sites. This may require 2D surface water hydraulic modelling.

FULL PLANNING PERMISSION INCLUDING RESERVED MATTERS APPLICATIONS.

Applications for Full Planning Permission should provide certainty on a suitable drainage design that works within the proposed layout and to the standard required by legislation and best practice guidance documentation.

Conditions can be applied to a full application however only those that will not have an impact on the fundamentals of the drainage design will be considered for conditions. The provision of hydraulic calculations or geotechnical testing is not considered suitable for a condition.

Full Planning Applications should be considered to be a detailed design stage with the requirements listed in the table below as well as key elements from the outline design (if not already submitted as part of an outline application. Detailed design requirements are set out in this guide and the industry guidance document to the non-statutory technical standards for the design, maintenance and operation of SuDS.

Key tasks: Confirm detailed drainage design including drawings and calculations, maintenance roles and responsibilities and water quality provision.

Output: Drainage statement and / or Flood Risk Assessment to include the detailed design layout and assessment to support a detailed planning application.

DETAILED DRAINAGE STRATEGY	
Description:	Format:
Detailed Drainage Assessment A technical summary detailing any changes and key criteria agreed under an outline application must be provided	Report / Statement
Detailed Drainage Layout Drawings These must be at an appropriate scale (minimum 1/500), indicating catchment areas, referenced drainage features, manhole cover and invert levels and pipe diameters, lengths and gradients. (1)	Drawing(s)
Detailed Hydraulic Calculations Full network calculations are required for all rainfall events including the 1 in 1, 1 in 30, 1 in 100 year (plus climate change allowance) annual probability of occurrence. (2)	Calculations
Water Treatment Evidence that sufficient water treatment has been provided in accordance with the methodology in the Ciria SuDS Manual. (3)	Report / Statement
Exceedance Flows This should highlight the overland flow routes post development if the drainage system blocked to ensure that properties and key access / egress points are kept clear. If flooding is shown at the 1:100 + climate change storm, this should be highlighted on the plan with accurate extents and depths of any ponding shown.	Drawing(s)
Urban Creep Evidence that Urban Creep has been considered in the application and that a 10% increase in impermeable area has been used in calculations. (4)	Report / Statement.

Maintenance Maintenance schedules must be provided for each drainage feature type regardless of ownership. Confirmation of maintenance responsibilities / adoption will also be required. If features are to be adopted by third parties i.e. Highways Authority, Water Company etc, evidence will be required that they will accept the adoption. If adoption is still to be progressed, a fall back position needs to be identified in case the adoption of the drainage can not be agreed. (5)	Report / Statement
---	---------------------------

Guidance notes:

- (1) The drainage features should have the same reference as those used in the hydraulic calculations.
- (2) Calculations should consider the hydraulic connectivity of the between the entire proposed drainage system, including the discharge allowance. The results should include the half-drain time for the 1 in 10year event and the 1 in 100year event (plus climate change allowance).
- (3) In accordance with the Ciria SuDS Manual C753 and using the Simple index Criteria (Box 26.2). If the methodology in the Design Manual for Roads and Bridges is used then the Simple Index Approach should also be assessed and the most onerous treatment requirements followed.
- (4) Urban Creep is only applicable for residential developments and excludes flats or apartments.
- (5) For larger/phased sites, we need to see evidence of measures taken to protect and ensure continued operation of drainage features during construction.

We would also recommend that the applicant directs to our website <http://www3.hants.gov.uk/flooding/hampshireflooding/drainagesystems.htm> for further information on recommended surface water drainage techniques.

Please note that Hampshire County Council as Lead Local Flood Authority will not comment on the fluvial systems as these are outside our remit.

As a statutory consultee, the County Council has a duty to respond to consultations within **21 days**. The 21-day period will not begin until we have received sufficient information to enable us to provide a meaningful response.

Please ensure all data is sent to us via the relevant Local Planning Authority.

This response has been provided using the best knowledge and information submitted as part of the planning application at the time of responding and is reliant on the accuracy of that information.

Yours faithfully,



Flood and Water Management Team
Economy, Transport & Environment Department,
Hampshire County Council, 1st Floor, Ell Court West,
The Castle, Winchester, Hampshire SO23 8UD
Web: <http://www3.hants.gov.uk/flooding/watercourses.htm>

General guidance for the application

It is important to ensure that the long-term maintenance and responsibility for Sustainable Drainage Systems is agreed between the Local Planning Authority and the applicant before planning permission is granted. This should involve discussions with those adopting and/or maintaining the proposed systems, which could include the Highway Authority, Planning Authority, Parish Councils, Water Companies and private management companies.

For SuDS systems to be adopted by Hampshire Highways it is recommended that you visit the website at:

<https://www.hants.gov.uk/transport/developers/constructionstandards> for guidance on which drainage features would be suitable for adoption.

Where the proposals are connecting to an existing drainage system it is likely that the authorities responsible for maintaining those systems will have their own design requirements. These requirements will need to be reviewed and agreed as part of any surface water drainage scheme.

Works in relation to ordinary watercourses

PLEASE NOTE: *If the proposals include works to an ordinary watercourse, under the Land Drainage Act 1991, as amended by the Flood and Water Management Act 2010, prior consent from the Lead Local Flood Authority is required. **This consent is required as a separate permission to planning.***

Information on ordinary watercourse consenting can be found at the following link <http://www3.hants.gov.uk/flooding/hampshireflooding/watercourses.htm>

It is strongly recommended that this information is reviewed before Land Drainage consent application is made.

*For guidance on providing the correct information, we recommend you use our **Ordinary Watercourse Consents Pre-application service** and help avoid delays occurring at the formal application stage. A Pre-application service for Ordinary Watercourse Consents is available, allowing consents to go through in a smoother, often more timely manner. For full information please visit:*

<https://www.hants.gov.uk/landplanningandenvironment/environment/flooding/WatercoursePreApplication>