From:	Jonathan Lloyd
Sent:	07/03/2018 11:37:31
To:	Higgins, Michael
Cc:	Guy Wakefield; Andrew Clay
Subject:	FW: Surface Water Drainage Strategy - Exeter Royal Academy of Deaf Education WR 2790011
Mike,	
connection	our conversation, please see below SWW confirmation on discharge rate and point of n for the care home. Andrew has spoken to Joshua Lewis who has confirmed that his nments are agreed in principle and will provide his formal response later today.
through th	we provided no in-principle objection so these are points of detail, largely addressed the SWW response. I understand this is sufficient for your committee response but we'll arry a formal response from Joshua.
Regards,	
Jon	
Jonathan Ll	oyd
Director	
Vectos	
013 9226 72	274 (T) 07539 465 339 (M)

The Senate, Southernhay Gardens, Exeter, EX1 1UG

From: Developer Services Planning < Developer Services Planning @southwestwater.co.uk >

Sent: 07 March 2018 09:47

To: Andrew Clay < Andrew. Clay @vectos.co.uk >; Developer Services Planning

<DeveloperServicesPlanning@southwestwater.co.uk>
Cc: Jonathan Lloyd < Jonathan.Lloyd@vectos.co.uk>

Subject: RE: Surface Water Drainage Strategy - Exeter Royal Academy of Deaf Education WR

2790011

Andrew this discharge rate and point of connection for surface water drainage is acceptable to South West Water.

Regards

Martyn Dunn Development Coordinator



D: 01392 443702

Peninsula House, Rydon Lane, Exeter, EX2 7HR

www.southwestwater.co.uk

Please note that the Water Act 2014 has brought in changes that mean that all water companies are being asked to modify the way they <u>charge customers for Developer</u> <u>Services related activities from April 2018</u>.



From: Andrew Clay [mailto:Andrew.Clay@vectos.co.uk]

Sent: 06 March 2018 16:58 **To:** Developer Services Planning

Cc: Jonathan Lloyd

Subject: Surface Water Drainage Strategy - Exeter Royal Academy of Deaf Education WR 2790011

Afternoon Martyn,

Many thanks for taking my call earlier regarding the surface water drainage strategy for the proposed development of Exeter Royal Academy of Deaf Education. This comprises a residential component (in the eastern part of the site) and a care home component (in the western part of the site).

The LLFA have reviewed the Flood Risk Assessment that accompanied the planning application (reference 17/1640/FUL). They have no in principle objection, but raised three observations. One of these was to confirm whether an agreement was in place with yourselves to accept surface water runoff from the site into the SWW surface water sewer, and also to confirm whether the proposed discharge rate from our site would be acceptable.

A ground investigation of the site has now been completed. This confirmed that the potential for infiltration is limited at the high corner of the site (which is little use for a drainage strategy) and negligible in the rest. This restricts the use of an infiltration-led surface water drainage strategy.

With the existing land use of the site, surface water runoff is largely conveyed to the south-east towards the SWW surface water sewer that is located in Trews Weir Reach, as below. This surface water sewer has a 225mm diameter, and I understand it drains south and discharges out

to the River Exe. We propose maintaining the drainage of surface water runoff from the site to the SWW surface water sewer, but at an attenuated rate.

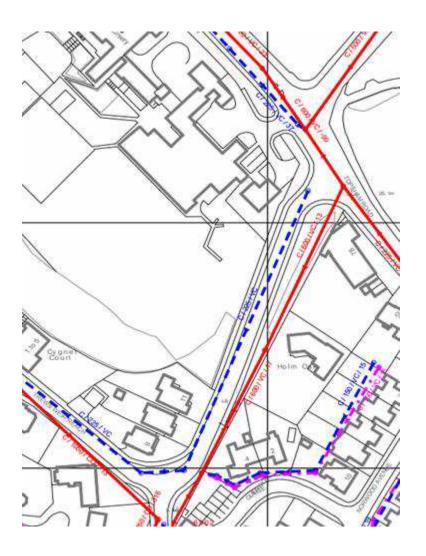
We have assumed that attenuating the surface water runoff from the developed site to the Q_{bar} rate would be acceptable with SWW. This equates to 6.0 l/s for the residential component and 1.8 l/s for the care home (giving a combined discharge from the site 7.8 l/s). In accordance with NPPF, the attenuation considers the 1 in 100-year rainfall event including a 40% increase in peak rainfall intensity to account for climate change.

We have completed MicroDrainage calculations including a network model to determine the attenuation volume required to achieve a surface water runoff rate from the site to the Q_{bar} rate. The attenuation from the residential site would be accommodated through the use of underground attenuation tanks and culverts whereas for the care home it would be accommodated through using a private cellular tank or similar. We have attached a surface water drainage strategy showing the location of these attenuation features and the conveyance route across and from the site.

I was hoping that you could confirm the approach that we have adopted in providing attenuation to achieve the Q_{bar} runoff rate, and also that you would be happy to accept surface water runoff from the site to the SWW surface water sewer in Trews Weir Reach. This will allow us to respond positively to the LLFA on the observation that they have made, in relation to an agreement with yourselves on accepting the surface water runoff.

If there is further information that you require, could you please let me know.

Kind regards, Andy



Andrew Clay

Associate Director



0117 905 8888 (T) 07535 149 504 (M)
Andrew.Clay@vectos.co.uk
Broad Quay House, Prince Street, Bristol, BS1 4DJ













Ian Dix





Paul Wheller

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Registered Office:	
Peninsula House	
Rydon Lane	
Exeter	
Devon EX2 7HR	