

MEMO

Project name **Station Hill Phase 1**
 Project no. **1620004716**
 Client **Lincoln MGT**
 To **Reading Borough Council**
 From **Keith Jones**

Drainage Strategy Supplementary Memo

Date 12/06/202

This memo responds to the planning queries raised on the Drainage Strategy Report version C04. In particular the email from Darren Cook to Stephen Vigar dated 26th May 2020.

Comment 1

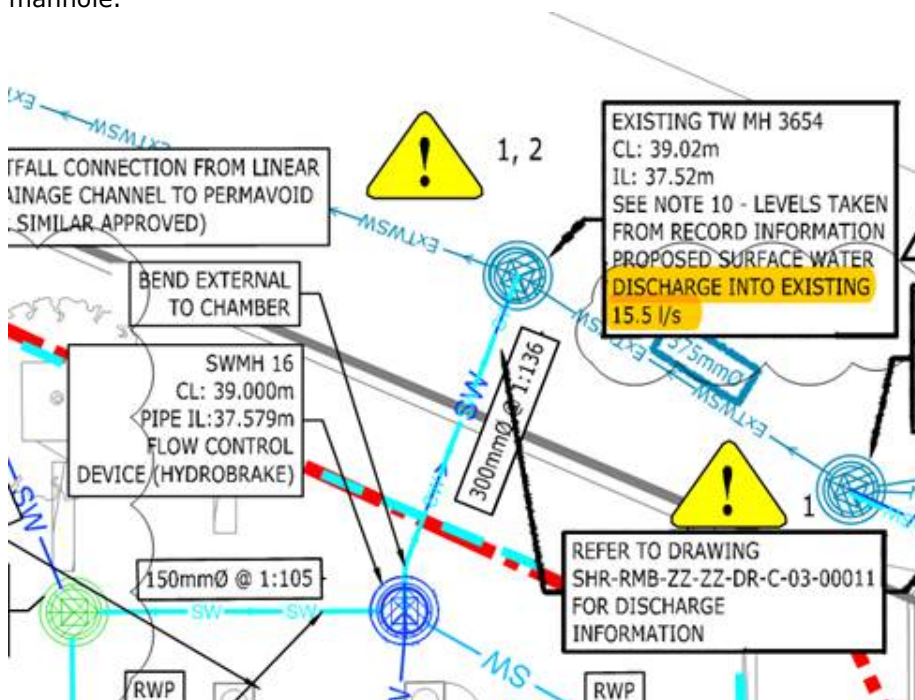
The proposed permavoid and attenuation tanks have been combined so that the discharge rates do not exceed those previously approved. However, I note that the discharge rate from the hydrobrake for Block E (North) has not been indicated on the drawing, this must be updated.

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Response to Comment 1

The discharge rate is noted on the existing manhole rather than the hydrobrake manhole.

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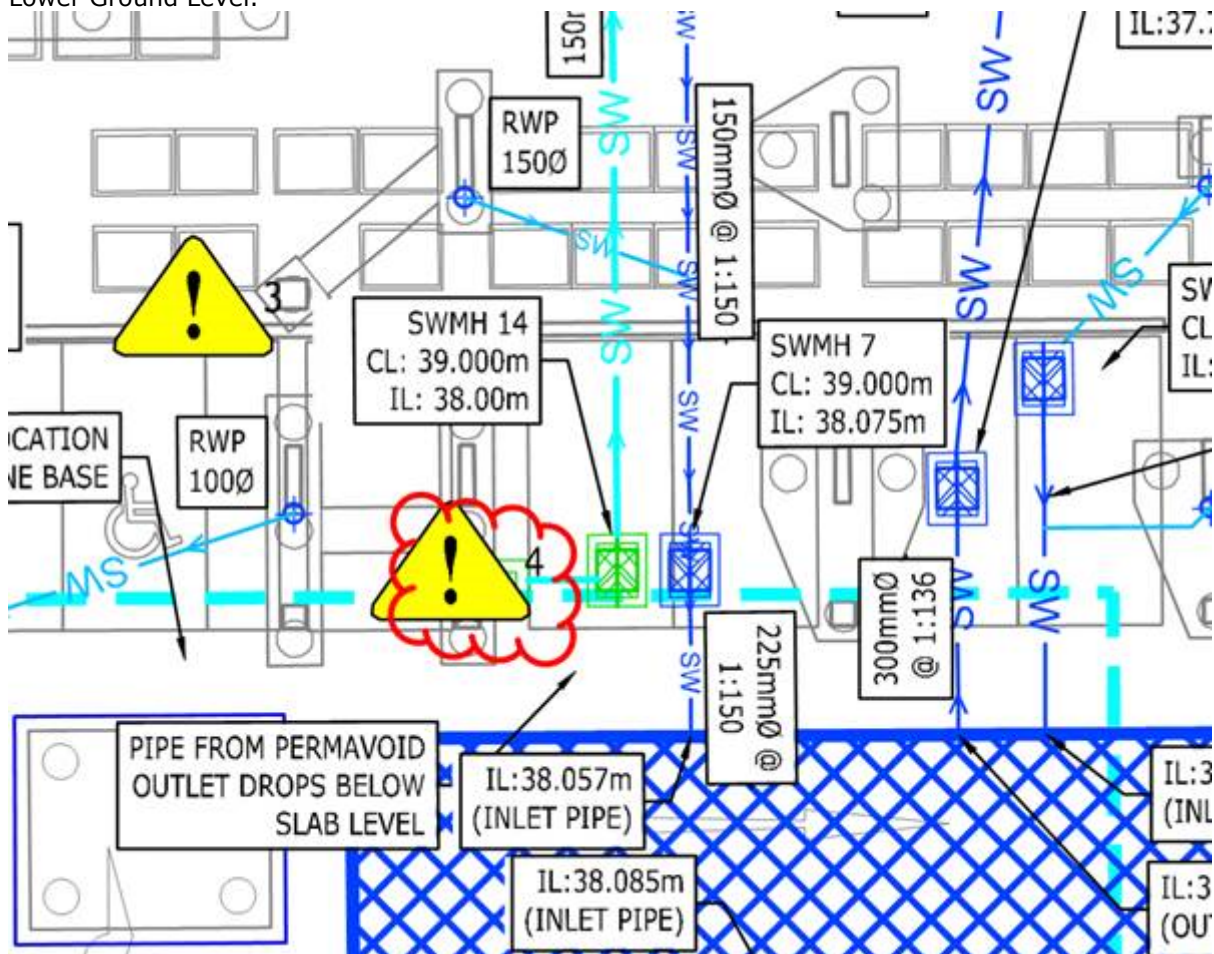
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Comment 2

As previously stated to the north of Tank B the pipe from the permavoid drops down to the Lower Ground Floor, whereas before this dropped down in the middle of the car park aisle width this now drops down into the middle of a car parking space. This must be revised.

Response to Comment 2

The drop is not in the middle of a car park space, it is adjacent to a column (as clouded in image below). The SWMH14 is in the car park space however as noted the cover level of this manhole is at Lower Ground Level.



Comment 3.

As previously stated the permavoid on Garrard Street although located within the redline area is still located on what is likely to be included within the adoption area so that a continuous footway is provided along the site frontage. This should be confirmed/reviewed.

Response to Comment 3

There is currently no agreement in place to increase the area of adopted land. The drainage strategy is based on the current adoption plans and as such the strategy is correct in that it restricts the rate of discharge from the land within the redline area which discharges into the public sewer network. If as part of the S278 works agreement, further areas of land are adopted then the permavoid will be removed from these areas and the storm water will discharge directly into the existing sewer network unattenuated.

Comment 4

As previously noted Section 2.10 of the drainage strategy states that 'It is proposed that the surface water run-off is attenuated within under-ground storage tanks and above ground podium-level cellular storage reservoirs located below the proposed vehicle and pedestrian hard landscaping and paving prior to discharging into the existing Thames Water sewerage network' however the permavoid is to be located beneath the landscaped courtyard area. This area is to be planted which includes the provision of trees and raised planters. It would need to be confirmed that the proposal would not compromise the delivery of a landscape scheme and that sufficient maintenance, repair and replacement could be undertaken without detrimentally impacting the landscaped area.

Response to Comment 4

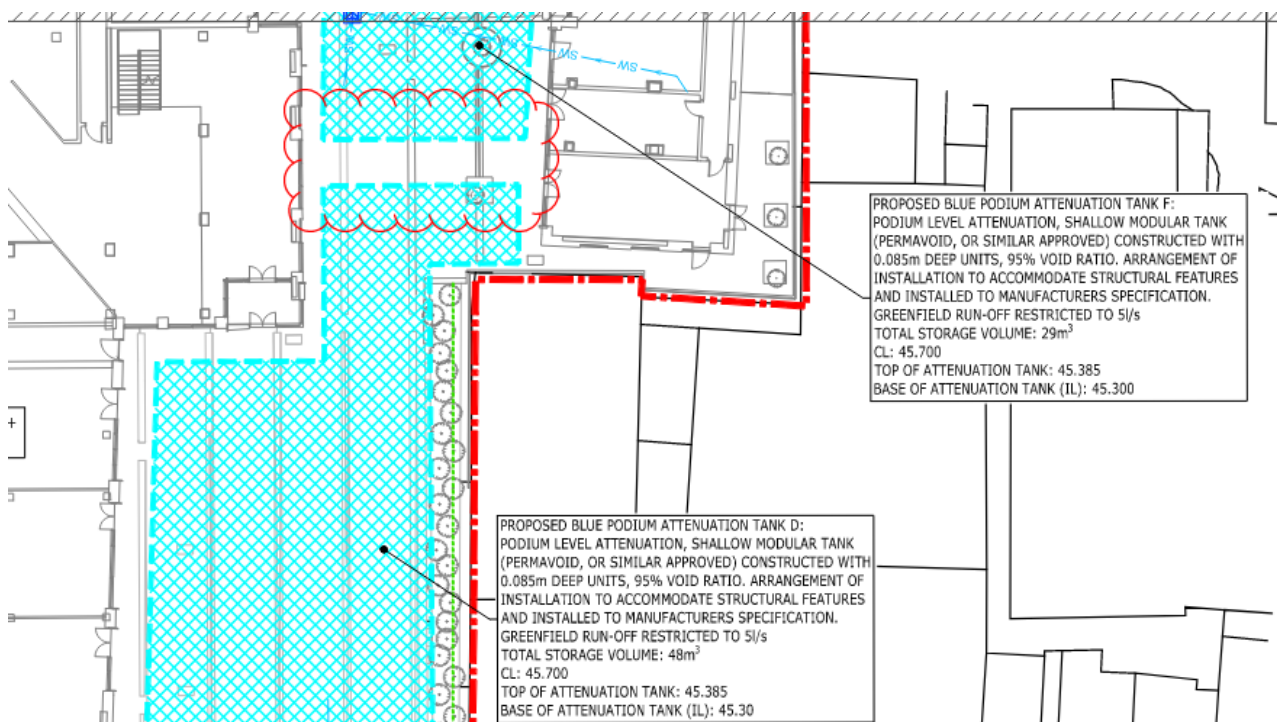
The proposed solution has been coordinated with the landscape scheme and will not compromise it's delivery. It is not envisaged that repair or replacement of the permavoid drainage will be required. Maintenance would be in the form of flushing out the permavoid to remove any build up of silts. This can be done via a single access point.

Comment 5

Following a review of the drawings submitted at the application stage there are trees proposed within the development that are to be planted directly into the ground that are located in areas that the permavoid is located, it would need to be confirmed what impact this would have on the storage capacity.

Response to Comment 5

Final coordination between the trees planted in the ground and the permavoid will be completed at detailed design stage. The drainage strategy is demonstrating the area of permavoid that is required can be provided. The entire podium has not been filled with permavoid (see area clouded below), so there is capacity to remove permavoid in one area and move into this area to suit the final tree planting strategy.



Comment 6

In addition to the above the strategy states that green/brown roofs are not feasible however external landscaped areas are being provided throughout the scheme where surface water will be stored but this does not appear to have been calculated within the scheme design and could reduce the amount of hard infrastructure required.

Response to Comment 6

It is acknowledged that green/brown roofs have been incorporated into the overall landscaping of the scheme. However, a conservative approach to the drainage strategy was not to consider them in calculating the attenuation to be provided. In winter the amount of rainfall which can be stored in a green/brown roof is significantly reduced as the evaporation rate is very low. Thus if a second high intensity rain events occur within a short time period of an initial event, then the green/brown roof is already highly saturated and will not provide attenuation. As the green/brown roofs only account for a percentage of the overall roof area then in the winter case calculation the reduction in the below ground attenuation tanks will not be significant.