

Assessment item as per the agreed pro-forma	Sufficient evidence provided	Approved/ Rejected	Comments on application	Mechanism for resolution of comment	Technical standards requirement	Conisbee Response	
1. Site Details	Yes		The required information has been provided, and indicates the proposal is in line with the SuDS requirements.				
			Redevelopment of the existing Highgate Newtown Community Centre and Fresh Youth Academy and the change of use of the People's Mission Gospel Hall to provide replacement community facilities (Use Class D1) and 31 residential units (Use Class C3) with associated public open space, landscaping, cycle storage, plant and disabled parking.				
2. Flood Risk	Yes	Approved	The required information has been provided, and indicates the proposal is in line with the SuDS requirements.				
			No mention of whether site is in critical drainage area				Added to FRA p.14
3. Existing and Proposed Impermeable Area	No	Approved	A plan showing the finished levels, SuDS and drainage arrangements should be provided.	A plan showing impermeable areas positively draining into the proposed system should be provided			
			No plan showing impermeable areas has been provided	A sub-catchment plan showing permeable and impermeable areas should be provided			Refer to the design notes on drawings C100, C102 and C103, this provides a breakdown of the proposed and existing permeable and impermeable areas for the site.
4. Proposed Discharge Points for Surface Water	No	Approved	No calculations have been provided	Provide calculation results		Greenfield runoff rates are provided on drawings C100, C102 and C103, and have been added to the FRA in Appendix G	
5b. Peak Discharge Rates – Brownfield Sites	No	Approved	Restriction on the proposed discharge should comply with the requirements of the lead local flood authority sewerage regulator and the EA or other stakeholders	Evidence of stakeholder consultation with regards to the allowable discharge to be provided	For developments which were previously developed, the peak runoff rate from the development to any drain, sewer or surface water body for the 1 in 1 year rainfall event and the 1 in 100 year rainfall event must be as close as reasonably practicable to the greenfield runoff rate from the development for the same rainfall event, but should never exceed the rate of discharge from the	Section 106 application will be submitted to Thames Water	
			No calculations have been provided, nor has evidence of approval from Thames Water to discharge to their system	Provide calculations and evidence of agreement to discharge from Thames Water			
6. Flow Controls	No	Approved	Pre-treatment measures should be provided upstream of SuDS/flow control structures to mitigate the risk of blockages and facilitate maintenance.				
			Calculations should be provided to support the results summary that has been submitted.	Submit relevant calculation record			Refer to Appendix G of the FRA
			p18 of FRA states two different discharge points with a flow control on each discharge point. Potential to connect Area B outfall to Attenuation Tank 1 to reduce discharge to a single location??				
			Half drain down time of the system is longer than 24h. The design should be amended to reduce the drain time.	Ensure and demonstrate half drain times for storage areas are under 24 hours, adjusting scheme design where necessary. This is to ensure that successive events can be catered for by the proposed system	The runoff volume from the development to any highway drain, sewer or surface water body in the 1 in 100 year, 6 hour rainfall event must be constrained to a value as close as is reasonably practicable to the greenfield runoff volume for the same event, but should never exceed the runoff volume from the development site prior to redevelopment for that event.		

			<p>If the discharge of surface water volumes into a sewer or watercourse cannot be reduced to the greenfield/brownfield runoff volumes pre-development, long term storage or a total discharge to the Qbar should be provided.</p>		<p>Where it is not reasonably practicable to constrain the volume of runoff to any drain, sewer or surface water body, the runoff volume must be discharged at a rate that does not adversely affect flood risk.</p>	
7. Volume control	No	Rejected	<p>Green roof areas sit under PV panels (presumably?) so will they function as green roofs? Also, assumed maximum water depth of 100mm (same as blue roofs) which seems unrealistic.</p> <p>Drawing C100 gives attenuation tank 1 as 3x22x1.6=105.6m³ volume Drawing C103 gives attenuation tank 1 as 75m²x1.6=102m³ (rather than 120m³?)</p> <p>In any case the total volume is larger than the 160m³ stated</p> <p>No drainage calcs provided of information on drain down times</p>	Provide calculation evidence and drain down times		<p>For details of green roof construction refer to drawing C134, this shows how 100mm of attenuation will be incorporated into the green roof structure and will provide attenuation under the PV panels Attenuation tank volumes have been updated on both drawings</p> <p>Refer to Attenuation notes on drawings C100, C102 and C103 for details on how the required attenuation volume is provided</p> <p>Required attenuation volumes have been added in Appendix G of the FRA</p>
			<p>Calculation results of the overall drainage system (including any upstream/downstream drainage network) should be included to assess the effect of the pipe capacities and levels in the hydraulic performance of the SuDS system.</p>	Provide calculation results including any upstream or downstream network in the drainage system		
8. How is Storm Water Stored on Site?	No	0	<p>FRA and plans describe green roofs and attenuation tanks, although there is also evidence for PV panels on building roofs and no indication of attenuation tanks on cross sections. No consideration of drainage approach for hardstanding area to south east of site</p> <p>164.8m³ stated as required volume, but no evidence to back this up</p> <p>p27 of FRA states exceedence flows will be routed "away from buildings". Finished floor levels only slightly higher than tarmac'd area, so potentially for flooding from surface water. More understanding needed.</p>	Clarify drainage design, provide evidence for required attenuation volume and exceedence flow paths		<p>Shallow no dig permeable paving added to the area southwest of the site to provide drainage and retain water on site.</p> <p>Evidence added for required attenuation volume in Appendix G of the FRA</p> <p>Finished Floor Levels will be a minimum of 150mm above the proposed ground levels. Should an event exceed the design criteria the water will flow away from the buildings into the roads to the north and south of the site, upto this event the all water will be retained on site and discharged at controlled volumes</p>
			<p>SuDS on highways have not been considered</p>	Confirm highways authority will adopt solutions on roads		<p>The vehicle accessible areas within the development will not be adopted by the highways authority.</p>

9. SuDS for Roads	No	Rejected	No SuDS for roads proposed, or drainage plan for access to Croftdown Road. Site elevations currently northwest to southeast, so unclear where this water will go			Permeable pavement added to control flow of water west ward into Croftdown Road, and retain it within the site drairage system.
10. Additional Consideration	No	Rejected	Overland flow routes should be considered and shown on the proposed drainage layouts to understand the consequences of failures/exceedance in the system.	Details of how the system would cope during any exceedance events, both on the site itself and any adjacent land affected	The drainage system must be designed so that, unless an area is designated to hold and/or convey water as part of the design, flooding does not occur during a 1 in 100 year rainfall event in any part of: a building (including a basement); or in any utility plant susceptible to water (e.g. pumping station or electricity substation) within the development. The design of the site must ensure that, so far as is reasonably practicable, flows resulting from rainfall in excess of a 1 in 100 year rainfall event are managed in exceedance routes that minimise the risks to people and property.	The site levels are designed so that in the event of a storm greater than the 1 in 100 year plus climate change event water will be discharge off site into the adjacent roads to the north and south of the site.
			No mention in construction management plan of drainage during construction period	Provide information on how drainage will be managed during construction		Refer to note 19 on drawings C100, C102 and C103, drainage to be CCTV surveyed after construction to confirm conditon
11. Drawings	Yes	0	The required information has been provided, and indicates the proposal is in line with the SuDS requirements.			
			Cross section do not show attenuation tanks (e.g. AA) Cross sections do not show pitched PV installation shown on plans at end of FRA No cross sections of flow controls or SuDS elements			Details provided on drawings C130 to C134 showing details of flow control and SUDS elements
12. Construction	Yes	Approved	The required information has been provided, and indicates the proposal is in line with the SuDS requirements.		Damage to the drainage system resulting from associated construction activities must be minimised and must be rectified before the drainage system is considered to be completed.	
			No mention of drainage in construction management plan			Refer to note 19 on drawings C100, C102 and C103, drainage to be CCTV surveyed after construction to confirm conditon
13. Management and Maintenance of SuDS	No	Rejected	No maintenance or adoption plan provided.	A statement regarding the maintenance and adoption of the proposed drainage is to be provided		A SUDS and drainage maintenace plan has now been provided.