

82C 39/08/22

1. *Please provide greenfield runoff calculations. Not provided, please provide. I note you have an impermeable area of 1.587ha, according to UKSuDS this gives a Qbar rate of 3.19l/s. Please provide justification for your discharge rate, including calculations. SGC 30/08/21 -- Greenfield runoff calculations provided within re-submission, please refer to 1103-20079_RePH2-Dev Area.pdf. In addition to this, we would like to add that the RCF Design Flood Risk Assessment (U1260/FRA 1.4 dated 08/09/2020) states that post-development flows are not to exceed 13.8l/s (the calculated Qbar rate).*
2. *~~Please provide 30-year calculation results. Provided.~~*
3. *~~Please include details of flow control devices within causeway printouts. Provided, okay~~*
4. *Please provide cover levels on plans. Cover levels of attenuation tanks should be provided on layout plan too. CL of CC12 is incorrectly detailed on plan. Please also see comment 6 below. SGC 31/08/21 -- Cover levels of attenuation tanks added to plan & CC12 cover level corrected, see drawings; 20079/116-118 & 20079/116-118.*
5. *Please detail all pipe diameters and falls on plan. Not provided, please provide for Private Drainage network. SGC 30/08/21 -- All pipe diameters added and falls illustrated, see drawings; 20079/116-118.*
6. *Please detail pipe networks from housing on plan. Cover levels and invert levels, pipe diameters and falls all need to be shown on plan as per checklist requirements. I would also request that more of the network is modelled to evidence that appropriate pipe sizes and falls are being provided and that flooding does not occur. SGC 30/08/21 -- All pipe diameters added and falls illustrated, see drawings; 20079/116-118.*
7. *~~Please detail gully levels. Okay.~~*
8. *Please clearly show permeable paving extents, finish and formation levels of these areas, and how they connect to the wider drainage network. Broadly okay, greater network detail is required, with invert levels of collectors very clearly shown along with the accompanying network. SGC 30/08/21 -- All Permeavid collectors have invert levels and connections to sewer network illustrated along with the accompanying network, see drawing; 20079/101-103 for sub-base formation levels and 20079/116-118 for Permeavid collector invert levels and connections to drainage network along with the accompanying network levels.*
9. *Please provide details of how your proposals will ensure adequate water quality prior to discharge. And how they provide treatment at source and via a treatment train as is required. Not elaborated on. How is satisfactory treatment being provided, e.g. for highways that are not permeable. SGC 30/08/21 -- We have reviewed the SuDS Manual in regard to Surface water treatment and as per Table 26.2 and Table 26.3 below we can advise the following: The proposed development consists of 'Residential roofs' and 'Individual driveways, car parks & low traffic roads', the anticipated 'total suspended solids', 'Metals' and 'Hydro-carbons' are no greater than the treatment we are providing. For example, the total expected 'TSS' 'Low traffic roads' provides a pollutant index of 0.5. As per Table 26.3 the basin provides a pollutant mitigation index of 0.5 which will counter act the anticipated TSS.*

Type of SaaS component	Bilateral elements		
	T&S	Monitors	mitigation plans
Water only	0.3	0.4	0.3
Water +soil	0.4 ^a	0.5	0.4
Soils	0.5	0.5	0.6
Recreation options	0.6	0.6	0.8
Overseable pasture	0.7	0.6	0.7
Demarcation fence	0.7	0.5	0.6
Tree ^b	0.7 ^a	0.7	0.5
Subsidy	0.8 ^a	0.8	0.9
Proportion business revenue ^c	These have also controls that have not applied for all of the sub-sectors types be acceptable, due to impact events, is approximately the 1 to 1 year value. Select area, for other categories relevant to the control measures, are		

- ~~10. Please provide a catchment area plan. Please clearly show where urban creep allowances have been applied. Provided.~~
- ~~11. Please provide an exceedance flow route drawing. Provided.~~
- ~~12. Please make the attenuation tank online rather than offline. Both tanks are offline, please make these online. SGC 30/08/21 ~ The tanks must remain offline as this is to the adopting authorities' requirements (JC05A) and to make them online would mean no infrastructure drainage can be put forward for adoption.~~
- ~~13. Please provide a catchpit upstream of the tank. A minimum of 300mm sump is required in manholes upstream of tanks. SGC 30/08/21 ~ As per above response to comment 12.~~
- ~~14. Please provide construction details of the attenuation basin, this should include a minimum of two perpendicular cross sections. Provided.~~
- ~~15. Please provide full construction detail drawings. Please provide construction detail drawings of catchpits, ACO drains, permeable paved roads, etc. SGC 30/08/21 ~ Full set of Construction Details provided within latest submission including ACO drains and permeable paved roads. Please refer to drawings: 28079/321, 28079/325, 28079/326, 28079/328, 28079/329, 28079/332, 28079/336, 28079/337, 28079/338 & 28079/331.~~
- ~~16. 300mm of freeboard must be provided all around the basin. If an emergency spillway is provided, this should be set a minimum of 300mm above maximum predicted water levels. Okay.~~
- ~~17. Can design be adjusted to ensure no flooding? Otherwise, please provide a plan which clearly shows flood extents, surrounding kerb levels and FFLs. No flooding shown in network that has been modelled, as requested in point 6 above a greater network extent should be modelled. SGC 30/08/21 ~ Master Drainage Network calculations provided for 2 Year, 30 Year & 100 Year + 40% Climate Change. Minor flooding (less than 1.2m) occurs across the network within the 15 min duration 100 Year + 40% CC event, flood routing plan illustrates flood routing paths, see drawing: 28079/361. It should be noted that in most cases where minor flooding occurs, it is within close proximity to permeable paving which will intercept flood paths. Where this does not occur, our levels design and drawing demonstrate the flood routing to either the attenuation basin and / or the proposed ditch.~~
- ~~18. Please refer to our checklist for full details of our requirements for a discharge of conditions application. SGC 30/08/21 ~ Checklist reviewed and no further comments / actions.~~
- ~~19. I note that a 300mm high bund is proposed along the northern and western boundary to "divert overland flows away from the development". It will need to be evidenced that this will not increase flood risk off site. SGC 30/08/21 ~ The 300mm high bund simply diverts any existing overland flows away from the development and initiates the current pre-development situation.~~