

From: Rebecca Payne on behalf of Planning Scanning
Sent: 19 August 2020 10:59
To: Planning Scanning
Subject: FW: FW: 22995 - Manor Nursery A/86/20/DOC - Designer Response

From: Amanda Scholes <Amanda.Scholes@arun.gov.uk> **On Behalf Of** Planning.Responses
Sent: 18 August 2020 11:42
To: Planning Scanning <Planning.Scanning@arun.gov.uk>
Subject: FW: FW: 22995 - Manor Nursery A/86/20/DOC - Designer Response

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Save the environment - think before you print.

From: Michael Eastham <Michael.Eastham@arun.gov.uk>
Sent: 18 August 2020 11:40
To: Planning.Responses <Planning.Responses@arun.gov.uk>
Subject: FW: FW: 22995 - Manor Nursery A/86/20/DOC - Designer Response

Please upload onto Ocella the email trail below which is a further consultation response from **ADC Drainage Engineers** to discharge of condition application **A/86/20/DOC** regarding Manor Nursery, High Street, Angmering.

Thanks,

Michael

Michael Eastham
Principal Planning Officer,
Planning Department

T: 01903 737772

E: michael.eastham@arun.gov.uk



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From: Laura Gibbons [REDACTED]
Sent: 18 August 2020 11:28
To: Michael Eastham <Michael.Eastham@arun.gov.uk>
Cc: Paul Cann <Paul.Cann@arun.gov.uk>
Subject: Re: FW: 22995 - Manor Nursery A/86/20/DOC - Designer Response

Hi Michael,

Thank you. Therefore, our response is as follows in red.

Condition 21- surface water drainage design

1. Groundwater monitoring was undertaken at only two locations on site, and not the entire winter period as outlined in the Condition. It is deemed that the level of data presented is insufficient.

Groundwater monitoring was carried out between 5th December 2018 and 15th May 2019, which includes the wettest period of winter (data attached).

The Planning Condition does not state the number of testing locations required and as the site is relatively small and has consistent geology throughout then two locations are appropriate.

Groundwater was not encountered throughout the testing period within either borehole both of which were monitored by data loggers and did not record any groundwater above 4.63m and 4.93m below ground level. This gives a robust window of analysis to determine if there will be any effect on the drainage system from groundwater and if high any groundwater is likely to be encountered. We therefore request this objection is removed based on the information meeting the requirements of the Planning Condition and being robust and 'fit for purpose' in this instance.

We have attached the Groundwater monitoring data log results and location plan.

Two locations is small for a development of this size, however fortunately the geology is fairly consistent. GW 4 to 5m bgl is what I would expect in that area, and is consistent with other developments in the area. After consideration and further examination we have decided that we will accept this on this occasion. However, in the future the applicant needs to agree the location and number of boreholes required.

2. Infiltration testing was undertaken in June. Winter infiltration testing must be undertaken.

Planning Condition 2.1 states 'Percolation testing to BRE 365, or similar approved, will be required to support the design of any Infiltration drainage.'

The Planning Condition makes no mention of winter infiltration testing, only Percolation testing to BRE 365. Infiltration testing was undertaken in June 2019 and has been undertaken in accordance with BRE 365

requirements. Seven locations were monitored by Oakland Site Investigation and three tests in each location have been recorded and presented. We therefore request this objection is removed based on the testing meeting the requirements set out in Planning Condition 21. The condition states "Winter groundwater monitoring to establish highest annual ground water levels and Percolation testing to BRE 365, or similar approved, will be required to support the design of any infiltration drainage." This is one sentence which should be read as winter percolation testing, after consideration and consultation with the planners we will agree that this was too vague and that the summer infiltration rates may be used as long as a factor of safety is applied to design.

We know that permeability does vary considerably seasonally. In order to proceed we will need to see factors of safety applied to design in accordance with the table in our checklist, we recommend treating garden soakaways as having a consequence of failure of minor inconvenience.

Size of Area to be Drained	Factor of Safety Table					
	Consequences of failure					
	No damage or inconvenience		Minor inconvenience, e.g. surface water on car park		Damage to buildings or structures or roads.	
	Cv=1.0	Cv=0.75	Cv=1.0	Cv=0.75	Cv=1.0	Cv=0.75
<100 m ²	1.5	2	2	3	10	13
100m ² to 1000m ²	1.5	2	3	4	10	13
>1000m ²	1.5	2	5	6.5	10	13

The applicant must note that this would be for this application only, and a lack of winter infiltration tests will not be entertained on any future applications. It is worth noting that in 2014 our drainage consultation response noted the requirement for winter infiltration testing.

3. All infiltration tests were undertaken at circa 2.5m depth, yet some of the soakaways are considerably shallower than this.

The design notes only two soakaway designs with the base shallower than 2.5m blg. These are SA8 and SA9 and both are located within the gardens of the properties along the southern boundary of the site. Soakage testing was undertaken at a depth of 2.5m within the gravel strata below the site. The trial pit logs within this area, TP1, TP2 and TP3, confirm the gravel strata is located at between 2.1 and 2.2m below ground and extends to the base of the trial pits. SA8 and SA9 soakaways are situated within this gravel strata. We therefore request this objection is removed based on the designed soakaways' depth extending into the tested soil strata where they will have the same performance as the tests. We have attached the Trial Pit data and location plan. Acknowledged that the same strata does just about extend to base, however ring soakaways are proposed which rely upon sides for infiltration only therefore they will not be utilising this gravel strata. We would recommend that these soakaways are made deeper to extend further into the gravel strata, but the base must be kept above peak groundwater levels/ base of monitoring wells.

We will require further information on how adequate treatment of surface water is occurring prior to discharge to ground in accordance with chapter 26 of CIRIA C753. There is no evidence of any pollution mitigation prior to discharge to soakaways. This is a particular concern regarding water from highways where pollution hazard indices are higher.

Condition 22- maintenance of SuDS

It is not appropriate to review this condition until the drainage design is agreed.

Given the response to the Conditions above we request the SuDS Maintenance Plan be reviewed and approved. *This will be reviewed once the surface water drainage strategy and design for the site has been agreed.*

Condition 6- Discharge of Surface Water to the Public Highway

We have provided information to support the surface water design as required by the Planning Conditions. The design includes gullies to intercept surface water at the highway boundary as is standard for a bell mouth entrance. The surface water design submitted included all calculations and the backup data is attached to this response. We request that this is reviewed and assessed against the Planning Conditions imposed. *WSCC Issue*

Thanks,

On Tue, 18 Aug 2020 at 09:59, Michael Eastham <Michael.Eastham@arun.gov.uk> wrote:

Laura,

In your email below you ask me to give a view on the interpretation of Condition 21. I have highlighted the text in yellow. The condition refers to winter groundwater monitoring but does not refer specifically to winter percolation testing or winter infiltration testing; and it could be argued that the condition was too vague and the applicant will have to apply a factor of safety to design .

Thanks,

Michael

Michael Eastham

Principal Planning Officer,

Planning Department



T: 01903 737772

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