

From: publicaccess@lichfielddc.gov.uk
Sent: 07 March 2021 22:06
To: jwalton467@btinternet.com
Subject: Comments for Planning Application 20/00359/FULM

Mr John Edward Walton,

You have been sent this email because you or somebody else has submitted a comment on a Planning Application to your local authority using your email address. A summary of your comments is provided below.

Comments were submitted at 10:06 PM on 07 Mar 2021 from Mr John Edward Walton.

Application Summary

Address: Land North Of Dark Lane Alrewas Burton Upon Trent
Staffordshire

Proposal: Variation of conditions 2 (Approved Plans), 6
(Drainage) and 13 (Landscaping) of permission
18/01491/FULM relating to plot substitution of 52 of
the approved 121 dwellings, updated landscaping and
drainage schemes

Case Officer: Vanessa Morgan
[Click for further information](#)

Customer Details

Name: Mr John Edward Walton
Email: jwalton467@btinternet.com
Address: 56 Park Road, Alrewas, Burton Upon Trent,
Staffordshire DE13 7AJ

Comments Details

Commenter Type: Member of public

Stance: Customer objects to the Planning Application

Reasons for comment:

Comments: Following the posting on 05 March 2021 of the "Hydrogeological Assessment" and "Proposed drainage, gas main crossing section" I continue to object to this Planning Application on the following grounds:

a) It is noted that the Hydrogeological Assessment recommends that the Infiltration Basin (now referred to as the Detention Basin) and the Infiltration Blanket (now referred to as the Drainage Blanket) both have their connection with groundwater severed - paragraphs 2.7.1 and 2.7.3 refer. It is not stated anywhere that Crest Nicholson have accepted and will actually implement these recommendations.

b) For the periods when the River Trent 1 in 100 years flood event (plus 20% for Climate Change) occurs it causes the "Flap-valve" (non-return valve) on the Surface Water Sewer (SWS) outfall to close (which could be several

weeks), and hence the ability of the SWS to accommodate rainfall events, including the 1 in 100 years plus 30% for Climate Change has not been demonstrated for this period.

c) Proposed drainage, gas main crossing section - For such a critical point on the SWS system, it is astounding that the crown of the gas main is stated on Drawing P18-336:131 as being 50.860mAOD or 50.303mAOD (557mms difference). But of more significance, whilst National Grid are referenced on the specification for the reinforced concrete cover slab and the polyethylene slab, there is still no evidence that the National Grid Gas Transmission plc have approved the detail, specification, methodology and contractor selection for the crossing works.

Comments on the Hydrogeological Assessment:

Hydrogeological Assessment (Reference:

SHF.1132.253.HY.R.001.B as shown on the front cover or

SHF.413.396.HY.R.001.B as shown on subsequent pages)

Status - Final, dated January 2021

1) Of most significance is the absence of reference to the combined effect of the River Trent 1 in 100 years plus 20% for Climate Change event and a 1 in 100 years plus 30% for Climate Change rainfall event. In particular, the River Trent Flood Zone 3 reaching the "Flap-valve" at the outfall via the Drainage Ditch, and the associated raising of the groundwater level.

2) Reference is made to Drawing Numbers P336-001 Rev C6 and P336-005 Rev 09. I am unable to locate these Drawings on the LDC Planning Portal.

3) Reference is made to the Geoenvironmental Assessment Dark Lane Alrewas Report Number 17178/1 dated February 2018 by Georisk Management. I am unable to locate this document on the LDC Planning Portal.

4) The Geoenvironmental Assessment extract states Borehole BH1 was installed on 7 June 2019 but also states that groundwater levels were taken at this BH1 on 17 and 29 January 2018 and 12 February 2018.

5) The Construction Period commenced in August 2019 and subsequently, both Crest Nicholson/Chasetown Civil Engineering and Severn Trent Water (the latter connecting the Foul Water sewers to the Dark Lane Pumping Station) have encountered groundwater at high level, necessitating well-point dewatering. Why was there no data included in the report from these sources? Indeed, no data in the report covered the winter period.

6) Storms Ciara and Dennis affected the site in February 2020. Why was there no mention of the River Trent flood levels and associated groundwater levels caused by these Storms?

7) Paragraph 2.6.4 refers to the discounting of groundwater as a key issue and source of flood risk. Referring to the Flood Risk Assessment & Drainage Strategy (FRA&DS) which is a condition of the Planning Approval 18/00491/FULM (Planning Conditions 6 & 15). In particular, the FRA&DS (WS Atkins, 19 January 2015) also discounts groundwater flood risk due to no groundwater being found in the four Trial Holes (1.6 to 1.8 m deep). The original site investigation was carried out on 24 July 2013. This followed a prolonged hot dry period. Unsurprisingly, groundwater was not encountered in the four Trial Holes that were dug and hence was not accounted for in the ensuing drainage calculations.

(NB Met Office - Past Weather Events - Records extract - Hot dry spell July 2013 "From 3 to 23 July 2013 the UK experienced a spell of hot, sunny weather with an area of high pressure established across the UK.")
<https://www.metoffice.gov.uk/weather/learn-about/past-uk-weather-events#y2013>

Notwithstanding the above, it is welcomed that the Hydrogeological Assessment recommends the severing of the routes for groundwater to enter the SWS system. However, the recommendation for the Infiltration Blanket (now referred to as the Drainage Blanket) does involve considerable excavation and reconstruction works at the frontage of the site, right outside the Show House. It is not clear whether the proposed geomembrane wrapped underground crate storage system will occupy the same volume as the gravel it replaces. If it does, then the storage at this location will be tripled, i.e. the 30% voids in the gravel gives 112m³ but the crate system will give approaching 100% voids.

The Infiltration Basin (now referred to as the Detention Basin) is somewhat more problematic from a maintenance viewpoint. The removal of build-ups of debris and vegetation to maintain storage capacity, normally a machine operation, could damage the low permeability welded geomembrane and allow groundwater to enter the SWS system.

Storage within the SWS system:

Assuming that the above works are carried out, then the SWS system becomes a closed system, segregated from the groundwater. So effectively, when the River Trent rises in flood to 51.470mAOD, the "Flap-valve" will commence closing. When the River Trent flood level is 51.920mAOD the "Flap-valve" will be completely closed. When the River Trent flood level reaches 53.4mAOD it will be at the 1 in 100 year flood event level. Subsequently, the River Trent will subside giving the reverse effect on the "Flap-valve". The Environment Agency and/or the Canal and River Trust should be able to calculate the likely time that this sequence takes.

So, for however long the "Flap-valve" is closed, which could be weeks, the SWS system has got to accommodate the rainfall. Effectively, the SWS system now becomes a vessel. Likely rainfall patterns and intensities should be available from the Met Office.

The following observations are made for the rainwater stored in the SWS system:

- a) When it reaches 53.196mAOD, it will start to leave the SWS system via the gullies at the eastern end of the site and discharge into Micklehome Drive
- b) Accordingly, the maximum level of the water in the Infiltration Basin (now referred to as the Detention Basin) will be 53.196mAOD or thereabouts, i.e. some 260m³ or thereabouts.

So, in summary, the rainfall that occurs during the period when the "Flap-valve" is activated by the River Trent rising and falling flood water level, can take the following paths:

- i) Be stored in the SWS system pipework and manholes.
- ii) Be stored in the Infiltration Basin (260m³ or thereabouts)

- iii) Be stored in the Infiltration Blanket (112m3 or 336m3 or thereabouts - see above)
 - iv) Push open the "Flap-valve" depending on the difference in hydraulic head either side and its own mechanics
 - v) Discharge through the gullies into Micklehome Drive
 - vi) Be unable to enter the full SWS system and find the easiest route by gravity across the surface of the development - this should be to the north but would appear to be capable of heading south towards properties in the village.
- I have not seen any modelling or calculations for the above scenarios.



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