

Further Responses from North Lincolnshire Council LLFA – 15 May 2021

Q1. Please find attached documents with regards to the FAS as requested, hopefully these will assist with your questions however if not please ask.

Q2. The capacity of the pump was never reduced it was always design at 25litres/ second by the consultants, the 38 litres /second seems to have been generated from a general conversation based on an off-cuff calculation and not borne from factual evidence. The agreed discharge into Skeggar Beck was and is 25ltrs/sec.

Q2.1 Keigars development will not be allowed to place any more water in the system than already runs from the existing site and as such there will not be a material increase in the system. Clearly the pumps are designed to run and pump 25 litres per second however that does not mean that Woodland View and Chestnut Grove feed into pumps at this rate, indeed they should only feed the standard greenfield run off rate of 3litres per second. This being the case capacity is already within the pumped system to cope with the new development.

Q2.2 In extreme rainfall events pumps can be operated manually and for short periods both can be switched on and as such double the outflow, care must be taken however so as not to effect properties downstream of the outfall. I reiterate there has been no reduction in pump rates this system was always designed at 25 litres / second. The comment about being 25 litres in general is simply that if 25 litres are not available to pump then the lesser amount will travel through the pumps to outfall.

Q3. There is no reduction in capacity pumps will operate at 25 litres per second unless manually overridden to pump at a greater rate.

Q3.1 There is no gully effect from the pond as it still has to build a head of water to flow from this into the system. Yes, a second pipe was placed into the dry pond to make its discharge more effectively however this is still within its operating parameters.

It is worth noting that a gully can also be a metal grid set in the roadside channel to capture water flow.

Q4. No reply required.

Q5. As there is a 225mm pipe installed (2020), this means a weir plate is not required, this may be considered at a later date if any issues were to arise. This was a tweaked improvement following the event to assist with future discharge from the dry pond should groundwater re-emanate moving forward. Creating an additional discharge point from the dry pond into the system.

Q5.1 Roadside gullies will only allow a specified rate of discharge into the mainline system and as such will fill and flow to the next available gully pot again. I must point our there is no reduction in

pumped flow and in 2019 it was simply the rate at which rain fell meaning that systems were full but operating well, although water was contained on the carriageway until the intense rain passed at which point it dissipated. The reason tankers were on site was to assist the dry pond by removing water from it due to that individual deluge. It is worth noting that on any subsequent rainfall events Feb 2021 being the last no pumping has been required and as such the amendments made to the pond ratified. The main issue was groundwater (natural phenomenon), which was entering the dry pond area. The designed estate system was managing the rainfall event inflows adequately and functioning as designed.

Q6, it is neither but simply volumes falling which cannot be accounted for regardless of the underground system.

Q7 High Level Beacon Installed March 2021. Amber light signals technical failure issue with the unit (requires attendance for inspection) and Red light indicates pump station not operating (total failure/emergency response) – NLC out of hours response. High Level Beacon details/contact number to be distributed to property owners on the new adjacent Keigar Homes site to enable assistance and understanding with monitoring. The telemetry system relies on reliable/strong comms signal and supported IT software. Previous NLC experience and discussion with relevant contractors has identified that more false alarms are recorded than actual faults therefore the telemetry option was disbanded, and the high-level beacon option selected.

Q8 No reply required.

Q9. Yes, both pumps can be operated in extreme times however you will not achieve 50l litres per second due to the pumped outfall, it is more likely to be around 40 litres per second. High level not involved. The second pump will operate in response if failure to the initial duty pump. Pumps work in alternate cycles. Pumped discharge as designed at 25 Ltrs/sec however in manual override the pumps can be operated independently achieving a discharge rate of approx. 38 Ltr/sec (pump curve performance chart so some variation to this figure).

Q10, as outlined in question 9 estimated around 40 litres per second due to outfall. Max discharge agreed at 25 Ltr/sec so as not to compromise Skeggar Beck. Keigars site & Coop site at agreed restricted discharge into NLC system into storage (designed 1 in 100 year return period).

Q11. Discharge rate into Skeggar Beck, always agreed at 25 Ltr/sec. Only way to discharge more into Skeggar Beck is manually override the pumps. As LLFA we have to accept calculations and that the software used is the most up to date available, providing they demonstrate an effective system which mitigates issues we have to accept their design, if however, it is built incorrectly then a breach of planning has occurred, and enforcement can take place. Inspection dates are contained within the attachment as requested in question 12.

Originally the dry pond had a soakaway outfall however this was improved with an additional fast exit outfall to assist in times of high groundwater exceedance.

Q11.1 is fundamentally the same as question 11 as LLFA we must accept calculations and that the software used is the most up to date available, providing they demonstrate an effective system which mitigates issues we have to accept their design, if however, it is built incorrectly then a breach of planning has occurred, and enforcement can take place.

Q12 Please find attached list of inspection dates since 2019 there were no inspections prior to this.

LLFA are responsible for ensuring riparian owners fulfil their duty along with any internal drainage boards. Once the development is hand over any adopted water courses will belong to the water authority any riparian duties will be set out to the new purchasers as a part of their purchase agreement. In the event of a flood and where riparian duty has not be carried out insurers will look to recover costs from the owner. Riparian owners will be made aware at the point of purchase by their land conveyer, any existing owners will be informed by the LLFA as and when required. If the parish has a newsletter, it would be nice to get a slot in it to include some riparian information so all residents are aware.

Q13 The standard has been applied and standard run off into the beck is set at (greenfield runoff rate) 5 litres per second.

Q14 As LLFA we have made comment and accepted mitigation proposals as such I do not know why it's not been updated on the portal.

Q15 Skeggar beck has multiple riparian owners and we do possess the latest land registry details however as LLFA we can only request maintenance and not betterment and as this is a natural water course this must account for it being allowed to react in a natural way as per natural rivers and watercourse guidance. Although we possess the land registry not all riparian owners known, Parish Council engagement required to assist with local knowledge.

Q16. There is no reduction for other residents.

Q17, As stated all water will be managed within any new development and not allowed into FAS system over and above the natural flow which already enters this system anyway.

Q18 Only detail available we cannot comment on developments we have had no prior knowledge of from a LLFA perspective as this development was pre 2015 when the LLFA was formed as a result of the Flood & Water Management Act 2010 & Pitt report 2009. All development in the future will have to contain water so as not to disadvantage any existing developments and by doing so protect the estate and the FAS.

Q19. Sorry I do not understand your comment on question 19. Please can we discuss for clarification?

Q20. To install a bend pipe will seriously restrict flow and as such have the potential for upstream impact, lets install the wall and assess its performance first, clearly this has not happened since 2007 and as such may have simply been a freak event. The height of the wall is unknow at this time however it will be of an appropriate height to mitigate its need.

Q21. A job exists on our current programme (Job No. 1028800) and is prioritised accordingly and will scheduled when resource and availability dictate. Clearly the works programme identifies the areas of greatest need in priority order.