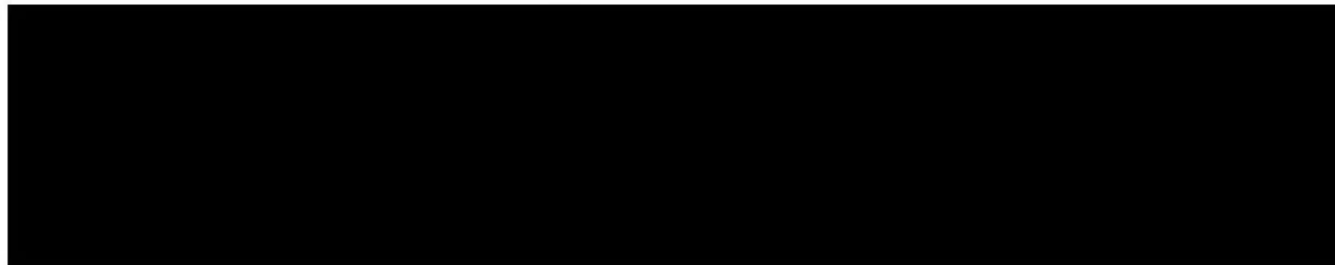


APPENDIX 4.1

CONSULTATION WITH LEAD LOCAL FLOOD AUTHORITY

Alison Barnes

From:
Sent:
To:
Cc:
Subject:



Morning Dean

See notes below in Red

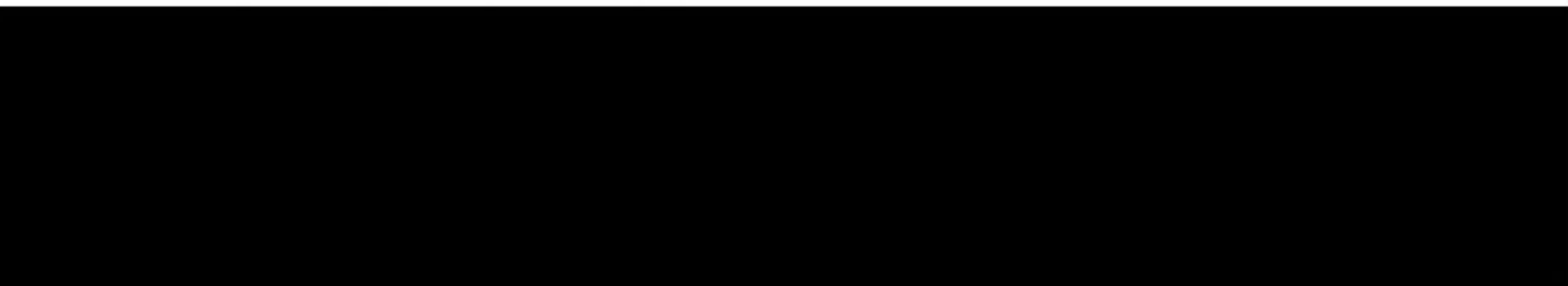
Kind Regards

Steven Halls

Flood and Water Engineer
Flood and Water Management
Growth, Highways & Infrastructure
Suffolk County Council
Endeavour House, 8 Russell Road, Ipswich, Suffolk. IP1 2BX



*****SCC's Local SuDS Guide has been updated! If you're involved in the planning, design and construction of new developments this may be of interest to you. You will be expected to comply with this new local guidance. More information can be found here; <https://www.suffolk.gov.uk/roads-and-transport/flooding-and-drainage/guidance-on-development-and-flood-risk/>*****



Hi Steven,

Thank you for your input on Wednesday is seemed a positive meeting and I think we have ways forward on most fronts now.

In terms of the points we discussed on drainage I just wanted to confirm what we agreed.

- We will move Pond 4.1 and 4.2 west into the area previously indicated for a play area to create more dry space within the meadow/green corridor next to the relocated play area. **Noted**
- Conveyance swales can be used for storage if needed or we want to slow flows. **Our preference is only to do this where swales follow contours i.e. where it's not too steep, that would always be our preference. Also will need some form of throttle for this i.e. pipe or weir and just concerned about who will maintain these. Can't recall natural gradients but how much storage will actually gain without the use of check dams?**
- Preferred LTS convention is as indicated currently on the drainage and Suffolk guidance and not using the option of attenuation in the top pond with the LTS offline/downstream. Preferred method is discharge everything at 2.31 l/s/ha and don't use LTS at all. Obviously that takes up a bit more space.
- LTS/base line flow agreed as $Q_{bar} + Q_1$ flows with attenuation discharge flow a max of Q_{100} . This will allow us to review the size of the ponds needed and potentially increase the dry green space. If using multiple

basins i.e. separate LTS and Attenuation basins then you should follow the sketches in our guide. If using single basin, LTS & Vol₁ storage to be discharged at Q_{bar}, Vol₃₀ at equivalent Q₃₀ and Vol₁₀₀ at equivalent Q₁₀₀. Could also have a setup using two hydrobrakes, one at high level to control the larger events. But not sure how effective this method is though because of a hydrobrakes' characteristic hydraulic curve, they only start to throttle once above a certain threshold "Flush-Flo". So as the basin water level rises you would get a little bit of unrestricted flow from the second hydrobrake added to the first level hydrobrakes Q_{max}. Hopes that makes sense!!

- Exceedance events accepted can flood the green corridor. Fine, if footways effected that should be warnings in place.

If you could confirm the above is as you understood we agreed it would be appreciated and then we can progress the refinement of the design.

Thanks

Dean Johnson BEng(hons) MCIHT FIHE

Associate Group Director – Transport UK

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