Outlook

[Official] : FW: Concerns re hydrology | LA@WGP

From [redacted]
Date Thu 28/05/2026 11:58
To Planning <planning@eastdunbarton.gov.uk>

Hi Validation,

Please can you log the below email as a further representation from [redacted] as a general comment and acknowledge receipt.

Kind Regards,

Fraser McNair, BSc (Hons)
Planning Officer
[redacted]

sustainable thriving achieving
East Dunbartonshire Council
www.eastdunbarton.gov.uk

From: [redacted]
Sent: 28 May 2026 11:53
To [redacted]
Cc
<A
Subject: Concerns re hydrology | LA@WGP

Dea[redacted]

I have been in touch with SEPA with regard to grave concerns that I have regarding the interaction between the proposed drainage infrastructure and the Bothlin Burn, including specific concerns about potential hydraulic behaviour during extreme events and the assumptions underpinning the modelling.

SEPA has thanked me for my technical points and has asked me to submit my concerns directly to the Planning Authority "to ensure they are fully considered as part of the determination process."

Accordingly, here are the concerns :

A) In their 2015 document East-Dunbartonshire-Flooding-and-Drainage-Development-Guidance-Rev-B-Final-1.pdf EDC say "EDC will require that no SUDS features should be proposed within a functioning flood plain to avoid the risk of: 1), SUDS features becoming redundant during possible inundation from adjacent watercourses and 2), risk of contaminants from the development washing to the adjacent watercourses during such events"; yet the entire Curtins drainage strategy

is based around burying SUDS tanks in unstable peat in a functioning flood plain. How can this be reconciled without enormous cost implications?

B) Table 2 of the Kaya Consulting Flood Risk Assessment explicitly states that during the 1-in-200-year plus climate change event, the Bothlin Burn will be surging at "82.2 cubic metres per second." Figure 10 of the FRA shows that at this flow rate, the river's water level rises to 50.8 m AOD, submerging the site's drainage outlet pipe under roughly 2.8 metres of water. The developer's computer models assume the site can freely drain into empty space. In reality, the drainage system will be trying to push water against river water flowing at 82.2 m^3/s.

There are several problems here:

1) This provides a potential hydrological connection from the Bothlin Burn *to* Drainage Channel One that has not been contemplated.
2) The difference in calculated AOD at Drainage Channel One and the burn in a 1/200yr +CC event is small.
3) This difference may change when more accurate ground truthing requested by SEPA is done.
4) I believe the Kaya have modelled the cross-section of the burn at a different place , one with a very different profile; it certainly looks like that from the diagram provided in the FRA. *Can you confirm the exact location of the cross-section?*
5) The outflow sits immediately after a bridge, which reduces the profile cross-section dramatically.
6) The outflow sits before a bend in the burn; there is no bend where Kaya appear to have modelled the burn.
7) No account seems to have been taken of dynamic pressure from the water flow and what effect that might have; as you may know, pressure increases with the square of the velocity.
8) No account seems to have been taken of the possible venturi effect from the narrowing at the bridge.
9) No account seems to have been taken in the modelling of the multiple storm outflows from neighbouring residential areas that flow into the connection between Drainage Channel One and the Bothlin Burn and the "Moncrieff drainage", which is mentioned by Kaya.

In other words, there are variables that *might* mean the principal outflow from Drainage Channel One to the burn may act in the *opposite* direction and be an inflow to the site, causing inundation at the same time. Multiple storm outflows from neighbouring residential areas would themselves be blocked from exiting to this connection.

This possible hydrological connection to the site seems *possible*.
I don't think that it can be said with *absolute* certainty that "the risk from the Bothlin Burn is low", as Kaya maintained.

I note that the connection has not yet been surveyed by CCTV and indeed the exact *route* of the connection is still, as of today's date, unknown.

This connection is, as you will know, responsible for 75% of the storm overflow from the site *and* "10 ha including the 0.7 ha attenuated runoff from Aldi from west of the A806 Initiative Road and 4.5 ha from east of the A806 part of the housing estate on Larkfield Road" (as per Curtins report), in addition to the storm overflows from two adjacent housing estates (as per Scottish Water plans).

If these concerns turn out to be correct, I would anticipate that they might be fatal to the whole project.

I would be grateful if you could ensure that your team fully considers these as part of the determination process, as recommended by SEPA. I would of course be keen and grateful to hear that what their responses are and trust that the FOI procedure would be unnecessary to obtain these responses.