

Statement of Case: Flooding of Proposed Ellenbrook Quarry Development

Submitted to the Appeal at the request of the Inspector reference APP/M1900/W/24/3346607, Land at former Hatfield Aerodrome.

Introduction

1. The area of Ellenbrook has been subject to severe flooding as recent as May 2024, when Ellenbrook Lane was flooded, and the Ellen Brook came very close to overflowing.
2. This highlights the fact that the area is already at risk and any additional water flow from quarrying at Ellenbrook Fields could potentially have a major impact on the local area.

Location of Residential Areas in proximity to the quarry site and the impact

3. The quarry location slopes from 80' above sea level in the NW to 73' in the SE. As a result, natural surface water runs into the NAST, an ephemeral brook crossing the site where it eventually joins the Ellenbrook River, just south of the A1057 road. Therefore, residential areas of Ellenbrook and Smallford are lower than the quarry site with water running downhill!

Loss of semi permeable land

4. The loss of a large amount of semi-permeable land will increase surface water flooding.

Climate change

5. There is no doubt that climate change is here, and that flooding is no longer a rare event but one that is increasingly occurring. Data shows that the annual rainfall has increased dramatically over the last 3 years and that Ellenbrook and Smallford are suffering.
6. There has been some extreme flooding events over the last few years, notably in June 2024, when Ellenbrook Lane was flooded, Ellen Brook was full, and Oaklands Lane was impassable.
7. The current flood defences are at full capacity, any additional water coming as a result of the quarry process will mean that the high level of risk we are at already, accompanied by an increase in occurrence due to climate change will put the area at greater all-round risk of experiencing a severe flood.

Environment Agency and Local Lead Flood Authority

8. The area around the proposed quarry site has already been identified as a flood risk by the Environment Agency.

9. The Local Lead Flood Authority has recognised the potential flood risk on Ellenbrook Fields and has now imposed several conditions regarding the flooding.

Lagoons

10. The planning application states that there are to be two lagoons. We believe that the second lagoon is no longer required for the following reasons:
- The second lagoon was originally designed to de-water the LMH excavation. As no pumping of water from the LMH is now agreed then this 8m depth lagoon is not required and is an inappropriate development in the green belt.
 - It is flawed to have two lagoons connected as this poses an unnecessary risk of transferring bromate between the two lagoons
 - It is risky to dig such large lagoons so close to the bromate and risk disturbing it.
 - The first lagoon cannot hold enough water in the event of a 1 in 100 event storm.
 - If the first lagoon will not hold enough water in the event of a 1 in 100 event storm, then the upper mineral lagoon (UML) overflows. It is expected to then fill the second lagoon LML but no details of this action are available.
 - The Nast is also an overflow from the lagoons. It cannot take excess water in a storm event resulting in flooding downstream.

Nast

11. The proposed quarry means that the Nast must be used to divert any excess water from the site. In the event of a storm, we do not believe that the Nast has sufficient capacity to absorb the rainwater overflow. The Nast is not a river it is an ephemeral brook and is too small to cope with a discharge of water resulting from a 1 in 100 year + 45% storm.
12. The Nast is not a “Main River” only a brook, it cannot take excessive rainfall from the plant site.
13. The Nast is also an overflow from the lagoon. It cannot take excess water in any storm event.
14. The Nast is diverted to between the lagoons and the workings areas against following EA conditions:
- EA condition - involving quarrying or excavation within 16 metres of any main river, flood defence (including a remote defence) or culvert
 - EA condition - in a floodplain more than 8 metres from the riverbank, culvert or flood defence structure (16 metres if it's a tidal main river) and you don't already have planning permission.
(EA NE/2021/133848/02-LO1 31/32023)

15. Pictures supplied in POE show the Ellenbrook river overflowing and above the water gauge, the culverted section overflowing the banks and the roads just passable. Adding any more water from a quarry site in the event of excessive rainfall will completely flood these urban areas.

Technical memorandum

SLR/Brett Technical Memorandum for the HCC, LLFA (Lead Local Flood Authority) project No 403 009885 00024.

16. This Technical Memorandum in response to the LLFA request shows drainage designed after the quarry is completed in the year 2064. It does not consider events during the active part of quarrying and therefore is not fit for purpose.
17. This Technical Memorandum study is for rural landscapes and not for an operational quarry – and then only applies in the restoration period in 40 years' time.

Conclusion

18. The area of Ellenbrook has recently been subject to severe flooding when Ellenbrook Lane was flooded, and the Ellen Brook came very close to overflowing. This highlights the fact that the area is already at risk and any additional water flow from quarrying at Ellenbrook Fields could potentially have a major impact on the local area.
19. The Brett / SLR Technical Memorandum shows drainage designed after the quarry is completed in the year 2064. It does not consider events during the active part of quarrying and therefore is not fit for purpose.
20. The loss of a large amount of semi-permeable land will increase surface water flooding putting the Ellenbrook area at risk of flooding particularly as the residential areas of Ellenbrook and Smallford are lower than the quarry site with water running downhill
21. The impact of climate change means that flooding is no longer a rare event but one that is increasingly occurring.
22. The second lagoon is no longer required and is an inappropriate development in the green belt.
23. The Nast is not a "Main River" only a brook, it cannot take excessive rainfall from the plant site or take excess water in any storm event.
24. The above issues highlight the fact that the area is already at risk and any additional water flow from quarrying at Ellenbrook Fields could potentially have a major impact on the local area. We therefore ask that the application be rejected.