

Erosion at Dolphin Road

The Environment Agency asked Redditch Borough Council to withdraw the Flood Defence Consent Application at Dolphin Road Allotments because the consent (as submitted) is contravening the Water Framework Directive (which requires that there must be no deterioration in the quality of any watercourse) and the Wildlife and Countryside Act (which affords protection to the White Clawed Crayfish), as well as our requirement under the Environment Act to ensure that our Consents do not result in environmental harm.

Erosion is a natural process in all rivers and forms an essential function in maintaining the ecological and geomorphological functioning of a river system. Indeed one of parameters of the Water Framework Directive (WFD) is the Hydromorphology of the river. Hard engineering disrupts these natural processes and has a detrimental impact upon aquatic wildlife. Where erosion is threatening essential infrastructure or buildings it is entirely appropriate to carry out erosion protection measures to prevent further erosion. However it is important to note that this will not necessarily resolve the problem. It merely transfers it elsewhere in the system.

In the case of Old Forge Drive the erosion protection works are necessary to protect both the road and the exposed sewer. Failure to tackle these erosion problems will result in significant environmental harm and disturbance to the road and sewer infrastructure. However these erosion protection works are likely to result in further erosion downstream, unless and until the channel gradient stabilises. However, in accordance with the Geomorphology Report commissioned by the Council the erosion is likely to occur in an area of low risk, so this will be acceptable.

In the case of Dolphin Road the erosion is occurring adjacent to an allotment site, which contains a number of vacant plots. Costly erosion protection work to the river at this location is likely to result in the problem being pushed up or downstream. This has the potential to result in the undermining of sensitive sections of the River Arrow which cannot be allowed to erode.

In addition to the physical problems associated with erosion protection and the fact that the work would result in a reduction in the hydromorphological status of the river under WFD, the River Arrow also supports a population of white clawed crayfish, which are extremely rare and as such are afforded protection under the Wildlife and Countryside Act 1981. The presence of white clawed crayfish does not prevent erosion protection work from being carried out. However the work must be carried out under Licence from Natural England and must result in a conservation benefit to white clawed crayfish. In simple terms this means that crayfish must be rescued by a licenced ecologist and safeguarded during the work and the work itself must also benefit crayfish and their habitat.

It is important to note that the application (as submitted to the Environment Agency) for Dolphin Road would not be acceptable irrespective of the presence of white clawed crayfish as it would result in a deterioration of the Hydromorphology (under the Water Framework Directive).

I have suggested to the Council that they look at the cost benefit of relocating the allotment holders currently at risk to the vacant lots and allowing the erosion to continue against the cost of carrying out the erosion protection work (including likely costs for crayfish protection and mitigation measures).

If it is deemed that the erosion protection work is necessary and cost beneficial then the Council will need a licence from Natural England prior to seeking consent from the Environment Agency and they will need to demonstrate that appropriate mitigation measures are in place to offset the hydromorphological harm caused as well as protecting crayfish. Often the best way to achieve this is by removing an equivalent length of existing erosion protection from elsewhere in the reach which is not protecting essential infrastructure.

The Council recently commissioned a very good Geomorphology Study of the erosion occurring at Old Forge Drive. This document is very useful in helping to understand the river processes in relation to erosion and deposition and the historic influence of human interventions, which are now surfacing as problem erosion.

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