



Blackhouse Farm Pond 2 Wildscapes Planning Application Station Road, Thornton Curtis DN39 6XF

Flood Risk Assessment

INTRODUCTION

This planning application is for the construction of one wildlife pond with hibernacula on land south of Station Road, Thornton Curtis, North Lincolnshire, DN39 6XF.

Background

The proposed wildlife ponds are delivered by Wildscapes to provide compensation ponds for Natural England's District Level Licensing scheme. The pond will enable the development under the North Lincolnshire local plan as a part of an area based strategy for the great crested newts, by acting as compensation for losses as a result of development under the plan.

The estimated lifespan of the development is a minimum of 25 years and, with appropriate reactive maintenance, there is no projected expiration of the life of the development.

The site is located on land owned by Dave Roe of Blackhouse Farm, Thornton Curtis, North Lincolnshire, DN39 6XF. The location of the pond is described by the grid reference; TA1027118026. This sits within a field approximately 420m South South East of Station Road on the eastern edge of the settlement of Thornton Curtis.

The site comprises rough grazed grassland bordered by drains and high hedging within a wider area of mixed arable and stock land.

This Flood Risk Assessment (FRA) has been written in accordance with the National Planning Policy Framework (NPPF) (Ref.1) and the associated technical guidance (Ref.2) and considers the flood risk from all sources.

Development Proposal

The proposed works comprise the excavation of 1 small wildlife pond including buffer area and hibernacula. These pond will be 150m² in size with designated buffer area of 3 meters around each in its entirety.

Site Description and Environmental Setting

The site is currently the border area of an agricultural field. Ground elevations across the majority of the site are in excess of 19m AOD

Adjacent fields surrounding the site are bounded in part by a network of rhyes (drainage ditches) and minor tracks and road.

The Humber Estuary is the nearest major watercourse and lies approximately 6.7km to the North of the site.

The EA flood risk assessment rates the site as having a high risk for flooding from surface water and precipitation. This is a greater than 3.3% risk of flooding annually. The risk of flooding from rivers and sea is low.



The soils generally comprise alluvium. These soils can be affected by high groundwater levels and occasional winter flooding, resulting in them being seasonally wet or waterlogged. The underlying geology consists of a geological border position of white and grey chalk subgroups.

National Planning Policy Framework

The key planning elements in relation to the flood risk requirements set out in the National Planning Policy Framework are addressed in **Table 1**.

Table 1: Key planning elements

Planning Element	Site Status
Flood Zone	Flood Zone 3
Vulnerability Classification of Proposed Works	Water Compatible Development (nature, conservation and biodiversity).
Vulnerability and Flood Zone Compatibility	Development is appropriate.
Sequential Test	N/A- This is a small wildlife pond, appropriate to a wetland location and a Minor Development.
Exception Test	N/A. No requirement to pass the Exception Test.

Flood Zone

The proposed site is located in Flood Zone 3. The wildlife pond is classified as Water-Compatible and is therefore appropriate for this flood zone.

Loss of Flood Storage

The proposed works would result in a loss of floodplain storage of a maximum of 206.01m³. The pond has graded banks of a maximum bunded height of 1m with a maximum radial displacement of 8m which, using (pi x radius squared) x height. For the pond this will be (pi x 8²) x 1 = 206.01m³.

This displacement has the potential to increase the flood level in the event of a breach in the local flood defences. However, it has been estimated that the loss of storage would result in a negligible increase in flood level of a maximum of 0.0017m increase in calculated flood level across an adjacent area of 10 hectares.

Mitigation

This kind of development, which seeks to enhance the local natural landscape in a way that improves and provides habitat for local, natural wildlife, isn't suitable for the inclusion of any proportional mitigation measures as these would compromise the integrity and outcome of the development. Furthermore, due to the protections provided to the area by existing flood defence works and their local cellular design, as well as the negligible impact of the development on the potential flooding of adjacent land and properties, the inclusion of any mitigation measures and their associated works and maintenance would not be beneficial.



Based on current modelling the development will not increase the number of people or buildings at risk. Nor will it create a meaningful impediment to the flow of flood water or access routes required for the maintenance of adjacent water courses.

The proposed development does result in a small reduction of the water storage capacity of the flood plain. However, as this is at a minimal level then any mitigation implemented would have a net detrimental effect on the local environmental ecology and biodiversity whereas the development on its own will result in a net benefit. Further to this, as the development establishes over the following months and years the environment will evolve naturally to have an increase on the local ground water storage capacity and inhibit ground erosion in the event of a flood which will have a net benefit on local flood resilience.

Relevant Policies, Strategies and Frameworks

- National Planning Policy Framework

Paragraph 163; As the development of ponds is classified as flood zone compatible, the advice of the Ministry of Housing, Communities and Local Government in conjunction with the Department for Environment, Food and Rural Affairs is that neither the sequential test nor the exception are relevant or need to be passed for this type of development.

Paragraph 165; As the development of ponds is classified as flood zone compatible, the advice of the Ministry of Housing, Communities and Local Government in conjunction with the Department for Environment, Food and Rural Affairs is that neither the sequential test nor the exception are relevant or need to be passed for this type of development.

- National Planning Practice Guidance – Flood Risk and Coastal Change.

The Environment Agency have recommended that Paragraphs 20, 21 and 22 of the National Planning Practice Guidance – Flood Risk and Coastal Change be addressed as part of this risk assessment.

Paragraph 22: With regards to the impact of flooding on the development, Wildscapes and our funding organisation, Natural England, are aware that a proportion of ponds created under the District Level Licensing scheme will be in locations that have a recognised risk of flooding. We have reviewed the Environment Agency's data on the probability and probable frequency of flooding at the location of this planned development and consider likelihood to be within our acceptable level of risk in order for the development to achieve the intended outcomes of the scheme. We do not intend any measures of flood prevention or mitigation to be incorporated into the design of the development. In the event of the development being flooded, it is expected that a small amount of landscape remediation may be required and the remainder of restoration will be down to natural recovery. If the ponds prove to be non-viable due to flooding over the course of their early lifetime then they will be retired from the scheme with appropriate decommissioning.

We have made calculations on the risk of exacerbation of flooding to adjacent properties and due to the potential displacement of flood waters caused by the construction of the pond bunding, find that this is not significant.

As stated above, there will be no preventative or mitigative measures incorporated into the design and construction of the ponds as they are not required to achieve the aims of the development.



As shown in Table 1 above, the National Planning Policy Framework does not require that the sequential test or exception test be applied to developments of this nature so they have not been carried out.

Paragraph 21: The Strategic Flood Risk Assessment for the location of this development along with the linked Local Flood Risk Assessment Strategy published by North Lincolnshire Council, the above detailed core strategies and the NPPF have been considered in relation to this development. The development fits within the requirements of those assessments, strategies and framework as detailed above and they provide no prohibitive impact on the development. In contrast, a number of elements of the strategies are supportive of the secondary outcomes of the development in enhancing local flood resilience and favour granting of permission for the development to proceed, particularly at the local scale in which they will be constructed. This has been detailed above.

Paragraph 22: The development is not large. While the development may be subject to flooding over the course of its projected lifetime of a minimum of 25 years, the impacts of flooding on the development and the desired outcomes of the scheme through which they are being constructed mean that they should not be classified as vulnerable for the purposes of this risk assessment.

Conclusion

The flood risk associated with the small wildlife ponds is considered low and the proposed works would not significantly increase flood risk adjacent to the site or elsewhere. The impact of flooding on this development at the frequency and severity laid out by the Environment Agency is within the acceptable risk level for this development. Any requirements arising from our discussions with the Environment Agency and the local land drainage board will be incorporated into the plans for the proposed development to ensure that the flood risk doesn't increase.