

Scraggs Bank, Newent

Summary Report to Newent Town Clerk

5th March 2024

Drafted by: **Newent Neighbourhood Flood Association (NNFA)**

Website: <https://newentflood.org>

NNFA are affiliated to the **National Flood Forum** <https://nationalfloodforum.org.uk>

Introduction

In 2019 the bund at Scraggs Bank, Culver Street, Newent was constructed upstream by FODDC for the purpose of assisting the control of waters in Peacock Brook as they approach the town of Newent.

As can be seen from the Environment Agency flood mapping (figure 1) a large number of residences and several of the businesses and shops on Broad Street/High Street, the Lowell Street car park, the Library etc. are at risk of flooding and/or access restrictions. Thus the implementation of this flood resilience measure was welcomed by the town at the time of its construction.



This bund was constructed by FODDC and is maintained by them. Thus it is our understanding that maintenance, including clearance of the trash screen and repair of the banks after overtopping is the responsibility of the FODDC.

Lowell Street Car Park & Lake Area:



Construction of the Bund

Detailed as-built drawings of the bund have not been made available to NNFA but it is our understanding that the design and construction of the bund was to include a clay core and a spillway over the central area which includes a matting material for extra strength.

Our local residents have advised us that the bund actually overtopped prior to first grass seeding taking hold after construction and as such washed away a significant top layer.

This top layer was repaired by FODDC but not with the designed spillway. The opinion of NNFA is that the repair has left a weakness in the bund surface such that each time it overtops it scours more material. (such scouring has been dismissed by FODDC as due to ‘animals or vandals’ but it is evident by the photographs and eye witness accounts record water damage)



December 2020

Please see separate report and our website for pictures of the devastating town centre flood into Christmas Eve 2020. This flood occurred after the bund was constructed and flooded business and houses.

As a further example, in Feb 2020 a similar overtopping had occurred. See photo below.



Whilst overtoppings are considered a design allowance for such bunds, it is the nature of these overtoppings that became concerning to local Newent residents and thus we established the NNFA to collate data and liaise wherever possible with all local authorities to try and prevent similar flooding occurrence within the town.

We believe we have been successful with a number of measures including highways drain clearance and CCTV surveys and installing natural flood management (NFM) measures by catchment land owners. However, a remaining and main area of concern is the uncontrolled flooding caused by the bund at Scraggs Bank.

During our investigations, weather data recordings and local observations downstream we have found that

1. Scraggs Bank frequently overtops (3 such events are recorded to have occurred so far this winter)
2. There is capacity in the downstream channels through town to take water away from the town, but
3. The blockage of the trash screen is the primary cause for preventing water from leaving the Scraggs Bank area.

4. The continuous upstream water entry into Scraggs Bank therefore has no other option but to build until it can overtop and (potentially) flood the town.
5. Each overtopping degrades the downstream face, which over time degrades the integrity of the bund.
6. Without a spillway, the water overtops in an uncontrolled manner.

FODDC flood lead has advised that the clearance protocol for the trash screen is a 'reactive service' but it is unclear to NNFA as to what data or information is needed for FODDC to make such a reaction and clear the screen.

Nonetheless, and given the points made later regarding the woodland catchment and CIRIA screen re-assessment, it seems that a 'reactive service' in this case is ineffective and not sustainable in the long term.



It is also proven not to work as the screen has frequently not been cleared by FODDC at times of rainfall. In this case if the screen is not cleared prior to rainfall then operatives are unable to reach the screen because of increasing water levels.

CIRIA C786, Culvert, Screen and Outfall Manual

Weblink to manual:

https://www.ciria.org/CIRIA/News/CIRIA_news2/Culvert_screen_and_outfall_manual_C786_PR.aspx

The Construction Industry Research and Information Association has prepared a detailed and very useful guidance manual for the design and maintenance of culvert screens such as the one installed by FODDC at Scraggs Bank.

Among other things CIRIA advise that such screens should be reassessed for their effectiveness.

Extract form CIRIA C786:

4.7.1 Reason for a re-assessment

Formal assessment of assets is a fundamental part of good asset management (see **Chapter 7**). Routine assessment of assets happens informally during every event when the structure performs its function up to the original design standard.

Formal assessments are required to determine whether the:

- performance of the screen will meet the current policy or operational requirements or performance specification
- original design standards are still relevant
- the screen is operating at an optimum performance level.

A re-assessment may be prompted by:

- obvious non-compliance with past or current good practice
- changes to the characteristics of the watercourse and associated debris
- changes to the flood discharge under which the asset was assessed previously to perform satisfactorily
- changes to the asset management/maintenance regime applied by the operating authority
- recognition that the screen has reached the end of its design life
- 'failure' of the debris screen (eg problems in being able to clear the screen, damage to the screen, a flood resulting from or contributed to by a screen)
- identification of a health and safety issue, either during an incident at the screen or at another screen that results in an assessment of all screens
- feedback of poor/inadequate performance from a similar screen design or by other stakeholders.

NNFA considers that the use of a trash screen is a useful tool in preventing blockages further downstream within the town, however the current design of this screen is ineffective given that the catchment area of Peacock Brook starts in the woodland of May Hill and continues throughout wooded farmland until it reaches Newent.

NNFA therefore consider that 1. It was incorrectly designed for the catchment and is not fit for purpose and 2. Its design and implementation should be re-assessed in accordance with the good practice recommended by CIRIA.

Notwithstanding overwhelming evidence and requests to FODDC flood lead during Multi-Agency Meetings (established under the guidance of the National Flood Forum) FODDC have rejected any request to undertake an assessment of the screen at Scraggs.

NNFA have a number of technically capable and experienced persons within our group (including in water structures, hydrology and construction). We have therefore made a number of proposals to FODDC to improve the situation at Scraggs Bank but none have been taken forward for further discussion. Examples of NNFA proposals are:

1. Reinstating the as-designed spillway to control overtopping speed and volume;
2. Constructing a second outfall pipe of the same diameter above the original to act as a controlled over-spill;
3. Inserting a second trash screen upstream to reduce the blockage frequency at the outfall pipe.

Our NNFA team all live in Newent and many have property through which Peacock Brook passes. We therefore have first hand and very specific current and historical local knowledge to assist FODDC in their review and enquiries should they wish to consult with us. We are always available to discuss any of the above options with FODDC.