

Written evidence submitted by Doncaster Council

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1. Introduction to Doncaster

Doncaster is the largest metropolitan borough in England, covering an area of approximately 568 square kilometres, with a population of 302,400 (2011 census). Doncaster's topography is predominantly flat (some of it below sea level). It relies heavily on an extensive system of man-made drainage channels, pumps and other control structures to drain the land effectively.

Doncaster is the third highest flood risk authority (out of 14 Yorkshire Local Authorities), with 10% of Yorkshire's Fluvial/Tidal risk within its boundary. To provide detailed facts and figures in relation to Doncaster's flood risk can be complex, as there are a number of different sources of flooding, with some that are a combination of fluvial, pluvial and groundwater. Therefore, to illustrate Doncaster's Flood Risk the table 1 below sets out the type, level and scale of the risk Doncaster residents current live with.

Table 1 - Flood Risk Type & Scale

Fluvial Flood Risk	
Significant Risk (AEP >1/75)	2,365 Properties
Significant Risk in 20% most deprived areas	648 Properties
Moderate Risk (AEP 1/200 to 1/75)	5,032 Properties
Low Risk (AEP <1/200)	21,645 Properties
Surface Water Flood Risk	
1/30yr Storm	28,500 Properties
1/100yr Storm	64,000 Properties
1/1000yr Storm	81,000 Properties

2. Flood Extent in November 2019

In total over 700 homes were flooded across Doncaster, and more than 50 business properties. The most extensive flooding of properties was experienced in the Bentley and Fishlake areas of Doncaster, where homes were flooded and three of the four roads in to Fishlake had to be closed cutting village off from all major transport routes. Some of these areas were also flooded in 2007, but to a lesser extent, whereas others such as Fishlake have not flooded for over 100 years. This indicates the severity of this flood event and that similar events in the future could have a similarly serious impact.

Key statics:

- 3,931 evacuation notices were issued to householders.
- Over 700 properties were flooded internally, largely in rural areas to the east and north, ie Bentley, Fishlake, Kirk Bramwith, South Bramwith and Fosterhouses.
- More than 180 flooded homes did not have insurance.
- A retaining wall for the Don was damaged (temporarily repaired with sandbags).
- Several pumping stations failed due to capacity issues.
- Large amounts of highway flooding caused widespread disruption and there was over £1 million of damage to highways.
- Rail services between Doncaster and Hull were cancelled or diverted for five days due to flooding at Kirk Sandall, whilst services to Hatfield station were also diverted.

Following Novembers flood event, Doncaster Council has procured a consultant to carry out a two-stage section 19 (Flood & Water Management Act 2010) investigation into the causes of flooding in each location across the Borough, as well as proposing possible future mitigation schemes to reduce the flood risk to properties. Stage one of the investigation will use EA data and personal accounts from council officers and the public to produce a high level cause and effect report highlighting possible mitigation measures. Stage two of the report will follow a more traditional process and as a result will return a more detailed representation of the event using micro simulation and other data sources to more accurately model the causes and produce a clear strategy for future mitigation of Flood Risk. It is expected that the Stage 1 Section 19 report will be completed by September 2020 with the stage two report following approximately 12 months later.

3. Recovery & Resilience Proposals.

Doncaster has experienced two 250-year storm events in the last 12 years that have affected around 5000 properties, echoing the recent events played out in Calderdale in February, which highlighted the urgency to implement these essential schemes before the next devastating event comes along. The borough is in need of urgent and significant funding to carry out a range of hard engineering flood mitigation measures combined with a full catchment natural flood management programme to slow the flow and provide its residents with a fighting chance to protect their properties and business.

Future Resilience

Doncaster Council has carried out a community based property resilience assessment for three of the urban areas affected by the floods, which included over 500 of the residential properties that experienced internal flooding. Potential community schemes and individual property resilience measures are being investigated with over 200 applications for the governments PFR grants having been received and being processed.

In terms of wider resilience and flood mitigation measures the authorities mid-term plan includes the works highlighted in table 2 which includes schemes required to repair and rebuild assets following Novembers floods.

Table 2 - Mid-Term Plan

Location	Description	Estimated Cost
Tickhill Mill Dam, Tickhill	Culvert Replacement, increase capacity for watercourse to protect 22 properties	£150,000
Church Lane, Bawtry	Replace large section of	£120,000

	surface water sewer that has been damaged and is under capacity. Protecting 8 businesses	
Sycamore Crescent, Bawtry	Install a positive drainage system, current soakaways are inadequate. Protecting 15 properties.	£900,000
Fishlake	Rebuild barrier bank that has subsided by 1.4m. protecting 198 properties	£1,000,000 (EA have also highlighted this to be repaired)
Scawthorpe	Increase the size of culvert and capacity within the watercourse protecting 170 properties	£700,000
Jefferson Avenue, Clay Lane	Installing attenuation, Surface water system under capacity, protecting 22 properties	£300,000

Damage & Recovery

Immediately following the flooding event Doncaster Council carried out a programme of works funded from existing capital and revenue budgets, to recover from the asset damage left in the wake of floods. Table 3 sets out the vast amount of work already carried out within the Borough to recover from the November 2019 event and subsequent heavy rainfall events throughout January and February 2020.

Table 3 - Remedial Work Completed.

Location	Task Completed
Stoney Lane, Tickhill	De-Silting of dyke
Paper Mill Dyke, Tickhill	De-silting of watercourse
High Street, Austerfield	De-silting of watercourse
Pinfold Gdns, Fishlake	De-silting of watercourse
Thorpe Lane, Thorpe in Balne	De-silting of watercourse
Holme Hall Lane, Stainton	De-silting of watercourse
Main Street, Austerfield	De-silting of watercourse
Plum Tree Hill Lane, Fishlake	De-silting of watercourse
Doncaster Rd, Pickburn	De-silting of watercourse
Keep Moat, rear Lakeside area	De-silting of watercourse
Hollywell Lane, Braithwell	De-silting of watercourse
Barnsley Road, Marr	De-silting of watercourse
Paper Mill Dyke, Tickhill	Nut block and sensor Installation for sluice gate
Bawtry Road, Bessacarr	Attenuation Installation
Crow Tree Lane, Adwick Upon Dearne	Pipework repair and installation
Melton Road, Sprotbrough	Gully and pipework installation
Ridings Close, Bessacarr	Installation of dyke and outfall
Paper Mill Dyke, Tickhill	Non-return valves installed
Wadworth Barr Culvert	Culvert repaired
Rushley Close, Auckley	Drainage repair
Bawtry Rd Bessacarr	Dyke Installation

Pinfold Lane, Fishlake	Cleansing of drainage after oil spill
Adwick Park, Adwick	Drainage Installation
Clayton Pond, Clayton	Pipework repair and installation
Wentworth Court, Bawtry	Raised bank and non-return valves to bank
Warmsworth Road roundabout	Gully and pipework installation
Harlington Road, Adwick	Dyke installation and gully connection
Chapel Lane, Sykehouse	Pipe Jacking for new installation of pipework
Stockbridge Lane, Bentley	New drainage installation
Clifton Hill, Conisbrough	New drainage installation
Borough Wide, Doncaster	Telemetry check and installation
Bawtry Road, Bessacarr	Install gully and pipework in carriageway
Sunderland Street, Tickhill	Clear trash screens and de-silting of dyke
Borough Wide, Doncaster	Grips dug into verge and inlet kerbs
Plantation Road, Thorne	PFR Installation 1 property
Thorne Road, Wheatley Hills	Excavate and install poly channels
Pembridge Park, Auckley	Ordinary watercourse enforcement
Bawtry, Doncaster	Ordinary watercourse enforcement
Harlington Road, Adwick	Water ingress onto public highway enforcement
Crabgate Lane, Skellow	Water ingress onto public highway enforcement
Adwick on Dearne	Ordinary watercourse maintenance
Park Crescent, Warmsworth	Flooding from third party land
Hollywell Lane, Braithwell	Lining of surface water sewer, ditching of watercourse
Newington Lane, Austerfield	De-silting of watercourse; trash screen design in p

The scale and level of flood risk post 2007 floods hasn't significantly changed, this makes it clear that the events of November 2019 illustrate the need for significant further investment to address the damage caused to business properties and homes; minimise the economic impacts of flooding; and further strengthen defences for potential events in future years.

Response to Specific Terms of Reference Questions

1. Are the current national and local governance and co-ordination arrangements for flood and coastal risk management in England effective?

Individually the current governance measures are clear and effective providing a hierarchy of asset ownership and the funding mechanisms to ensure all stakeholders are held accountable, with the ability to apply for funds to carry out flood mitigation schemes. Establishing a good working relationship with the regional PSO is key to providing clear channels of communication for both strategic input and scheme feasibility.

However being geographically located between two EA regions working from different strategic priorities and different governance processes can cause issues and burden the authority due to duplication of funding bids. – e.g. TOMS for East Mids & Levy Bids form for Yorkshire. The two regions do not always communicate effectively and improvements of regional boundary works would be beneficial especially while in times of flood such as November 2019.

We would like to see a stronger leadership across the RMA's to engender the partnership approach ethos of the 2010 Flood & Water Management Act beyond the LA / EA relationship to include the regions water companies (Yorkshire Water & Severn Trent) and various IDB's.

2. What lessons can be learned from the recent floods about the way Government and local authorities respond to flooding events?

Working with the EA during the Nov 2019 flood event and subsequent flood risk events throughout January and February 2020 was overall a positive experience, however there are many lessons to be learnt and measures that can be implemented to improve future responses.

Overall knowledge or information around the EA's main river network and how the flood plains and corridors are designed to function, were not widely available outside of the EA. This resulted in the local authorities relying heavily on EA staff input that was not readily available or readily forthcoming. Presentations on conveyance of water flows, joint agency training and emergency planning exercises around main river flooding, would be beneficial for a more balanced and effective response for future flooding events.

Years of austerity and underfunding has left local authorities operating with minimum viable resources in respect of flood risk, additional funding and a more joined up stakeholder source to sea approach in flood risk management, is essential to ensure land drainage, land use and flood mitigation schemes benefit the public by taking all risk management authorities priorities into account.

3. Given the challenge posed by climate change, what should be the Government's aims and priorities in national flood risk policy, and what level of investment will be required in future in order to achieve this?

Strategy groups including the Humber 2100 strategy and the Isle of Axholme flood risk management strategy are currently working towards improvements for climate change with ambitious plans to reduce flood risk over the next 100 years.

The development of a policy that clearly sets out the government's strategy for the compulsory purchase of land and property where they are considered uneconomical to reduce the risk of flooding.

In terms of flood risk mitigation and climate change, natural flood management schemes are often overlooked due to cost benefit analysis feasibility during scheme appraisals. A review of the way these types of "slow the flow" schemes are funded and benefits calculated is required to make sure these low carbon and sustainable measures are viable.

4. How can communities most effectively be involved, and supported, in the policies and decisions that affect them?

Community hubs and flood wardens are established in all high flood risk areas within our Borough, this allows the capture of community input and local knowledge into proposed mitigation schemes and local flood response plans / strategies.

The Borough's Emergency Planning team, who provide a direct link into the local authority and the Flood Risk team maintain support of the flood wardens.

The floods experienced in November 2019 have reinforced this community engagement allowing residents to feed into the section 19 and PFR schemes currently being investigated.

5. With increasing focus on natural flood management measures, how should future agricultural and environmental policies be focused and integrated with the Government's wider approach to flood risk?

In future agricultural and environmental policies need to include more guidance on living with water and allowing land classes as agricultural or farm land, to be designated as temporary attenuation of storm water within flood events.

6. How can housing and other development be made more resilient to flooding, and what role can be played by measures such as insurance, sustainable drainage and planning policy?

Our local plan does not allow any developments to be designated within flood zone 2 or 3 resulting in a reduction in new high flood risks developments. Further improvements have been made through consultations with planning to reduce the risk to developments.

Implementing section 3 of the Flood and Water Management act would improve developments by providing a more sustainable drainage network and allow local authority's to manage the SuDS process more efficiently.

Additionally the following measures could also be considered as mandatory to any housing development being built within an established flood zone:

- PFR measures should form part of any planning conditions where properties are built within flood zone.
- Raised finished floor level, either above known flood level or built 300mm above ground level.