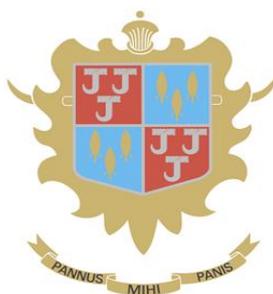


KENDAL TOWN COUNCIL

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14 March 2015

Dear Director of Flooding, The Environment Agency North West

FLOODING RELATED QUESTIONS ARISING FROM THE DECEMBER 2015 KENDAL FLOODS

I am writing on behalf of Kendal Town Council with questions relating to the December 2015 flooding of the town. The questions below will be addressed to all the appropriate responsible bodies although not all may be applicable to your organisation. We would ask that our questions be considered and responded to in writing as well as being taken into account in any investigation and resilience reporting which you may undertake. We may then wish to invite you or a representative to attend a Council meeting to further discuss your responses. To facilitate the addressing of such a serious event we would ask for your response **by the end of April 2016**.

Pre-amble

Whilst the questions here reflect recent events, we are concerned that they form the basis of future flood resilience especially as most, if not all, now accept that exceptional storm events are likely to occur with increased severity and frequency.

Unfortunately with this pattern of uncertainty we can expect a higher frequency of such extreme weather conditions, and flooding could doubtless become both more severe and more frequent.

In building up the appropriate level of future resilience we need to map out past and recent events in order to assess as accurately as possible our future vulnerabilities, and would ask the authorities to include the Town Council in both the collection of information about the floods and considering potential solutions. In order to facilitate this, **please send a map showing which areas of Kendal are recorded by you as being flooded** so that individual Ward Councillors can add any additional ones if necessary.

Additionally we really would wish to raise a question about flood warnings. There was an anticipated flooding incident several weeks before the flooding of 5th

December which generated a well-co-ordinated response with an appropriate level of warnings given. Luckily there was no flooding on that occasion. But there was no such co-ordinated series of warnings on 5 December when high rainfall was widely predicted. **We would like an explanation as to why these warnings did not take place.**

A diagram of responsibility chains within your organisation and between the responsible bodies would be useful for us to understand lines of communication now and for any future event. **Please could you supply such a diagram.**

Flooding Questions

1. Give precise details as to why all individual areas in Kendal flooded, distinguishing which areas had not flooded before, the flood source and what were the precise reasons for all of them flooding in December 2015? This should also show areas flooded in the last ten years, including Highgate, for example, and distinguish between waters derived from the river, from groundwater coming off the nearby hills, rainfall within urban developments, or from sewers.
2. In addition, give details of areas of subsidence which occurred as a result of the heavy rainfall and associated water flows and explanations as to why this occurred. Attention is drawn to the situation which occurred at the junction of Bellingham Rd, Wattsfield Rd and Stonecross Green where houses suffered subsidence rather than flooding. Significantly the properties appear to be 1960's "infill" with insurance companies investigating the possibility of "fines" being washed from "made" ground.
3. Which areas were flooded because of poor maintenance (the non-clearing of drains/culverts etc.)? Why was this allowed to happen? What will be done to ensure it will not happen again? In particular there are major questions at the Mart development in Sandylands where there is a suspicion that drains have been filled in and this needs to be investigated.
4. Was the gravel cleared from the River Kent on a regular maintenance basis and what part did this play in the flooding?
5. What part did Bird's Park Reservoir and its water collection systems play in flooding on the east side of Kendal?
6. Huge ponds and run-offs already appear behind Ullswater Road, Whitbarrow Close, Grizedale Avenue and the top of Oak Tree Road. What account is being taken of these?
7. Did work carried out/not carried out by the railway authorities (c.f. Parkside Road and above Stock Beck and its 'tributaries', for example) affect flooding. To what extent do agencies work with the former to manage flood risk within the urban area?
8. There are well known areas of development which apparently flooded and/or caused flooding elsewhere. Upper Sandylands (Rydal Road area) is one recently built example. Were there any others? Why did their drainage systems not handle the rainfall, and can their SUDs/attenuation tanks provide any assistance when the ground is already saturated in long periods of high rainfall.

9. Which properties were affected by water coming up into them from underground? For example, properties on Lound Street, Queen Katherine Street and Aynham Road have flooded 3 times within 11 years (2004, 2009 and 2015), with water coming up through the floors. (Prior to this period there was very little indication of this sort of flooding.) Even tanked out properties have suffered. The survey in 2009 indicated that the size of the waste water pipes was inadequate. When will this situation be reviewed? And who is liable for ensuring that such pipes are adequate?
10. Why, with no discernible difference in height along Shap and Appleby Roads and along others such as Mintdale, have some properties flooded to a depth of two feet and others not at all?
11. Why was so much of the flood water contaminated with foul waste?
12. There was major flooding at the Waste Water Treatment Plant. Were pipes crossing a footpath pumping water into the River Kent? Was any of this water contaminated? How will the WWT plant be flood-proofed in the future?
13. How will agencies ensure that the water coming off hillsides, such as Benson Knott, Hayfell, Castle Howe or Windermere Road, will not flood parts of Sandylands, Highgate or Hallgarth again?
14. Will the Local Development Framework (LDF) policy encouraging “infill” between existing properties be challenged and the individual sites re-assessed as a result of recent storms/weather events which led to flooding? This ground was avoided because it was obviously going to create problems. That was certainly the accusation made by residents of Lowther Park when they were last flooded. Similarly when housing was erected at Sparrowmire in the late 1970’s the plans were changed when dumper trucks reported the ground wobbling below them; a situation which led to the realisation that the circular layout of some of the existing housing on Hallgarth reflected avoidance of boggy areas. In fact, both the Sparrowmire/ Hallgarth and Lowther Park areas include former areas of natural flood storage. It is, therefore, necessary for “flood resilience” and for the LDF to recognise that flooding is and will not be confined to “floodplains” but will involve former low lying areas associated with sink holes and underground water courses which were not built upon previously because they were known to flood in winter (and therefore provided vital flood water storage).
15. Do agencies have the necessary powers to ensure that developers put measures in place to ensure that flooding will not occur either on or off a site, given the predicted increased rainfall in Cumbria?
16. Will all current and future housing developments in the Local Plan (not just those on the flood plain) now be re-assessed as to their suitability for development in the light of recent events? Will that re-assessment be taking into account the effect of that development on all other areas of Kendal?
17. To what extent will the Environment Agency be re-drawing its flooding zones and maps in the light of recent experiences? Will it also include ‘kettle holes’ and areas adjacent to tributary streams in that exercise? Will the County Council be reviewing its maps of ordinary water courses, and

include underground springs and streams, and areas of natural flood storage?

18. River bank erosion has led to the loss of riverbank amenities, such as has happened at Carus Green Golf Course where an emergency footpath diversion has had to be created. In addition trees can be uprooted and enter the river causing structural damage to bridges downstream or blockage of the watercourse. What action is to be taken to avoid further problems in these areas?
19. In considering what measures might be taken upstream of Kendal is data available to show what volumes/proportions of the water were delivered by the river in Kentmere, and by the rivers Gowan, Sprint and Mint? In the light of this data has temporary flood storage been considered in the catchment area? Has consideration been given to the draining of the Kentmere reservoir over a period of time in order to increase its capacity for periods of heavy rainfall?

We hope that these questions will be useful to you in compiling your response to the Kendal flooding both in terms of the incident report and future resilience and we look forward to your response on the specific questions asked.

Yours sincerely

Liz Richardson
Town Clerk

Cc The Mayor of Kendal, Cllr Chris Hogg
The Chair of Management Cmttee, Cllr Sylvia Emmott

Letter also sent to: South Lakeland District Council, Cumbria County Council,
United Utilities and Network Rail.

Director of Flooding
The Environment Agency North West
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