Leeds CITY COUNCIL

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Report of the Director of City Development

East (Outer) Area Committee

Date: 6th November 2007

Subject: Follow-up to June 2007 Flooding in East Leeds

Electoral Wards Affected:	**Specific Implications For:**
	Equality and Diversity ☐
	Community Cohesion ☐
☐ Ward Members consulted (referred to in report)	Narrowing the Gap ☐

Council Function ☐	Delegated Executive Function available for Call In ☐	Delegated Executive Function not available for Call In Details set out in the report ☐

Executive Summary

Between 15 and 25 June 2007 widespread flooding affected areas across the whole Leeds district, including a number of parts of East Leeds which had been subject to flooding on previous occasions. Properties at the Dunhills estate at Halton, West Garforth and Kippax suffered particularly bad instances of internal flooding.

Subsequent to the flooding, Council officers conducted investigations into specific flood locations and, where the causes have been determined, mitigatory measures are now in place or are at the planning stage. However, a considerable number of investigations are still on-going.

This report provides a description of the flooding experienced in a number of key areas and what is happening to progress matters in these areas and enhance our ability to address flood risk.

1.0 Purpose Of This Report

1.1 This report provides a description of the significant flooding that occurred in the Outer East Area in June 2007, the response by the Council and the progress that has been made in addressing some of the problems in response to a request from the Committee at its meeting on 18 September.

2.0 Background Information

2.1 In June 2007 the Leeds district experienced three severe rainfall events (14-15/6, 19-20/6, 25/6), each of which led to flooding in diverse parts of the city. The Met Office stated that this was the wettest June since records began with an average of over 153mm falling throughout June in northern England and around 100mm falling in the 24 hour period covering 25 June.

2.2 The most serious flooding took place on 25 June and affected most of the Leeds district albeit through several distinct sources: vulnerable properties were flooded in the city centre from the River Aire; watercourses overtopped their banks in multiple areas; but the biggest problems came from surface water run-off or a surcharging of the drainage systems highlighting an inability of the ground or the drainage infrastructure to absorb the extreme volumes of water. The total number of domestic properties internally flooded has been estimated at between 250 - 300 which appears comparatively modest against the experience of East and South Yorkshire. However, this severe rainfall was originally predicted to track across Leeds and, had it done so, would probably have caused more serious economic and social consequences due to the size of the city, its natural and built environment and the significance of the city to the life of the region.

2.3 In recent years, Leeds has experienced a number of serious flooding incidents and the Council set-up the cross-departmental Water Asset Management Working Group (WAMWG) in 2005 in response to these challenges. WAMWG is charged with developing and co-ordinating the implementation of diverse actions to address issues relating to the maintenance of the Council's water assets (watercourses, culverts, highways gullies, reservoirs and lakes) and the way in which it responds to flooding incidents. In a short period of time, the Group has been able to make great in-roads in addressing flood risk – as demonstrated in the progress report, 'A New Departure', provided to elected members earlier this year. However, WAMWG has consistently emphasised that this work requires long-term commitment and that its on-going survey, data collection and risk assessment work will give rise to the need for further capital and revenue funding beyond the initial £1.1m provided.

2.4 In light of the impact of the flooding across the district, the initial report on the nature of the flooding, actions undertaken by responding services and officers' proposed response to the incidents was submitted to Executive Board on 4 July.

3.0 Main Issues

3.1 The following paragraphs provide a description of flooding in the worst affected parts of the Committee's area in June 2007 (see map at Appendix 1) together with an update on any actions which have been undertaken to address known problems or flood risks. As noted above, flooding occurred throughout Leeds and the specific sites discussed do not represent all of the problems that occurred in the East (Outer) Area, and many other problems are still being investigated.

Dunhills Estate, Halton

3.2 Between 50-70 houses on the Dunhills Estate were flooded internally from the Wyke Beck for the third time in four years in June 2007, previous incidents having occurred in August 2004 and May 2005. Once again, the flooding was caused by lack of capacity in the beck channel and culverts, although it is not thought that blockages played a significant role this time as was the case previously. The number of supermarket trolleys in the beck has reduced dramatically since electronic wheel locking was introduced (under pressure from the Council and the Environment Agency (EA)) at ASDA Killingbeck, and a new abandoned trolley

collection scheme was introduced (monitored by the Enforcement Section). Moreover, a coarse trash grid installed on the beck upstream of York Road (and cleared every fortnight) by Land Drainage has also helped.

3.3 Given the fundamental lack of capacity in the beck to deal with the volumes of water in severe rainfall events, the obvious solution to this problem is the implementation of the Wyke Beck Flood Alleviation Scheme by the EA (who are responsible for enforcement on the beck as a 'main river'). Significant work has already been undertaken on this, including the modelling of the catchment, and this is currently in the 'Pre-Feasibility' stage. The EA hopes to have defined the available options by Christmas, after which a process of priority appraisal and detailed design would have to be carried out. Council engineers are co-operating with the EA in the development of realistic options. There is not yet any guarantee, however, that the scheme will be assigned a high national priority and get funded for construction.

3.4 In the meantime, there have been several positive developments. Firstly, having installed telemetry on the Wyke Beck, the EA has now implemented a flood warning scheme to provide residents and partner agencies with a warning about impending flooding. Secondly, the EA has developed a 'Flood Warden' scheme with local residents to help alert the local community more quickly when a flood warning is issued (flood wardens are contacted directly by the Agency and they pass the information onto neighbours). Thirdly, a scheme is being implemented to protect individual houses in the Dunhills from flooding prior to the development of a possible flood alleviation scheme. This is being funded by £150,000 provided by the Council, £90,000 from DEFRA for this to be run as a national pilot scheme, together with £10,000 from the Yorkshire Regional Flood Defence Committee. The solution is likely to result in a protection system in the shape of floodboards and air-brick covers being installed at each property by late January 2008 (tenders were returned in mid-October). A newsletter for the project is attached at Appendix 2.

Ramsden Street, Kippax

3.5 Serious internal flooding occurred in at least 13 houses in Ramsden Street and our investigations have shown that much of the flood water had escaped from Kippax Beck, which was in full spate. The resultant flows ran overland and accumulated in the field adjacent to Ramsden Street and then over a boundary wall into the gardens and houses. A possible escape route from the field could have been provided by an existing 4-pipe culvert under Station Road, but the grid guarding the entrance to this was thoroughly blocked. The Kippax Beck culvert under Station Road was clear of blockages at the time of the flooding, but this may not have had sufficient capacity to deal with the extraordinarily high flows. Problems may have been exacerbated by partially-blocked highway gullies.

3.6 Several actions have been undertaken in response to this event. Firstly, the culvert grid (previously not on our records) was cleared immediately after the incident and has since been placed on a list of 'hot spots', which are cleared every fortnight by the Land Drainage term contractor (currently Peter Duffy Ltd). Secondly, the highway gullies were also cleared after the incident and a request has been made that they are placed on a higher frequency inspection rota.

3.7 However, there are issues which require further analysis. The capacity of the Kippax Beck culvert needs to be assessed in the near future as part of a rolling programme of highway culvert risk assessment to establish whether this is adequate. The 4-pipe culvert from the field leads to a single pipe public sewer and it may be that this sewer has insufficient capacity. However, this is difficult to determine in the context of flooding from Kippax Beck which Yorkshire Water (YWS) cannot be expected to accommodate in the public sewers. The performance of this sewer needs to be kept under surveillance after the Kippax Beck capacity issue has been resolved.

West Garforth

3.8 In West Garforth many houses suffered internal flooding, most notably in Barleyhill Road. This demonstrated once again the inadequacy of the existing surface water drainage system, which relies on a network of culverts. This area is already the subject of an on-going DEFRA-funded integrated urban drainage pilot study being jointly undertaken by the Council, Bradford City Council, the EA, YW and the Pennine Water Group (Bradford and Sheffield Universities) and the flooding gives added urgency to this. The project team is due to report in early 2008 and it is hoped that recommendations will include a mix of measures which stakeholders (including the Council) are willing to implement in accordance with their respective responsibilities and capabilities. The project's latest newsletter from August 2007 is attached for information (see Appendix 3).

Kennerleigh Avenue

3.9 Flooding occurred once again at the low point on Kennerleigh Avenue (near no. 14). This has been previously investigated and sewer blockage and possible sewer incapacity was identified as the principal cause. It is not clear whether the steepness of the highway is a factor in preventing highway run-off from entering the sewer. YW has confirmed the sewer incapacity through computer modelling and has now proposed a capital scheme for Kennerleigh Avenue with the purpose of replacing the existing sewer with a larger one so as to cope in a 1 in 30 year return period rainfall event. The cost is estimated to be about £160,000 and construction is expected to start in late 2007 or 2008. 'Solutions authorisation' has been given within YWS and 'build approval' and project start dates are now awaited.

Whitkirk Lane

3.10 Although the Land Drainage Section has not received confirmation that properties in Whitkirk Lane flooded again in June 2007, it was clear from the joint LCC-YW investigation of previous incidents in 2004 and 2005 that there was a problem with sewer capacity. In a CCTV survey, part of this problem was found to be due to a blockage which was then cleared by YW. Computer modelling has also confirmed that there is a capacity issue and, according to YW, Whitkirk Lane is included in their 'Business Risk Model' with a view to consideration for a long-term solution. We understand that this has not yet progressed into their capital programme, but they are unable to advise whether any scheme may progress.

Swillington Common

3.11 Previous flooding has occurred near the junction of Swillington Lane and Leeds Lane. Despite works by a local farmer to improve the ditch next to local properties, internal flooding of 'Oakdene' on Swillington Lane occurred in June 2007. Highway Services has identified funding to allow the upsizing of the downstream culverts under Swillington Lane and Leeds Lane and it is intended that this will take place this financial year (subject to the necessary environmental approvals). It will also be necessary in turn for the relevant farmer to clear the ditch downstream of these culverts.

Station Road, Allerton Bywater

3.12 Flooding occurred at properties along the south side of Station Road due to a malfunction at the YW pumping station on the north side of the road. This in turn led to reports that the new balancing pond on the south side of the road did not seem to have filled. Although this was unrelated to the pumping station malfunction and could not have intercepted the resultant flood flows, it was a cause for some concern. Land Drainage has investigated this matter and found that appropriate connections into the pond had been made, but the on-site works at the Millennium Village have not yet been implemented which would result in significant inflow to the pond. When the development is nearer to completion, the pond should come into regular use.

Overview of Proposed Wider Response to Flooding

3.13 Following the report to Executive Board on 4 July, officers from relevant services have considered how to respond to the flooding and participated in debriefs with professional partners to identify lessons learned and an appropriate way forward. Draft proposals for a revised Stage 3 Action Plan for WAMWG have been developed, but their potential for implementation is - in part - subject to the availability of additional funding (both capital and revenue) and will have to be considered in forthcoming budget discussions.

3.14 Proposals which do not require additional funding and which can be progressed include:

- transforming liaison with EA and YW with three levels of multi-lateral partnership: firstly, a senior management group to oversee a mutually-aligned strategic approach to the development and maintenance of the drainage infrastructure; secondly, a technical group to investigate identified problems and recent incidents; thirdly, a group of drainage and planning officers to review drainage implications of major new developments;
- engaging better with Planning functions following impending completion of the Strategic Flood Risk Assessment (SFRA) through, for example, the inclusion of relevant officers in WAMWG, delivering briefings to planners on the SFRA and responding to flood risks, delivering briefings to Elected Members on Plans Panels on flood risk and their implications for the planning process.
- developing a Geographical Information System application for mapping the location, source, impact and response to multiple flooding locations for use in managing our response to multiple flooding sites more coherently.
- improving existing processes for prioritising requests for, and deploying, flood mitigation resources (e.g. sandbags, air brick covers etc).
- working with the DEFRA, EA and YW towards creating a single point of telephone contact which the public could use for reporting flooding in an emergency.

3.15 Proposals which would necessitate additional capital or revenue funding for which there is currently no identified funding source include the following:

- bringing forward the completion of data-gathering and assessment of the location and condition of the Council drainage infrastructure by one year to 2009 to inform the capital and revenue budgetary implications at the earliest opportunity.
- resubmitting a capital bid for highway drainage improvement schemes for the 10 highest priority sites where properties are regularly flooded or which pose a flooding risk (including sites at Ninelands Lane, Swillington Lane, Selby Road).
- injecting a major sum annually into the capital programme for a ‘Land Drainage capital programme’ to fund on-going remediation works following damage to water assets, improvements following surveys identifying issues with Council-owned watercourses and culverts, and flood alleviation schemes to prevent run-off from Council land.
- increasing staffing within Land Drainage to enable fuller technical assessments of the drainage needs of individual schemes on behalf of Development Control.
- enhancing Street Cleansing capabilities to enable a 25% increase in cleaning frequencies at routine locations (to every six months from eight) and 5,000 identified ‘wetspots’ (to every three months from four), together with a standing out-of-hours provision and a capability to pump-out domestic properties which is currently lacking.
- providing access to CCTV networks in the Emergency Control Centre and Land Drainage to monitor water levels during incidents on watercourses and roads near cameras.
- implementing robust out-of-hours arrangements for key services such as Land Drainage, Bridges, and Streetscene Services to respond to emergencies.

Potential Role of the Area Committee

3.16 Although officers will do most of the work required to take improvements forward, elected members could perform a number of valuable roles to underpin this, particularly in relation to maintaining the profile of the water asset management agenda on an on-going basis. As our work demonstrates, this issue relates more to ensuring that the city's infrastructure is developed to respond to the challenges of climate change and the environment than reacting to flooding incidents as and when they happen. To be clear, it will never be possible to remove the risk of flooding completely, nor will it ever be easy to respond to a significant number of incident locations simultaneously, but we should be able to limit the scope and impact of severe weather events and enhance our resilience to these.

3.17 In this vein, we would suggest the following actions for members of the Committee:

- reviewing the Council's policy on 'Maintaining Water Resources and Responding to Flood Incidents' to understand the scope of the Council's and partners' current roles and responsibilities.
- ensuring that flood risk management and drainage needs receive adequate provision and prioritisation in Council budgets.
- reviewing the content of the forthcoming SFRA to understand the relationship of drainage issues to planned development.
- posing questions around the drainage and flood defence needs of local developments to obtain some assurance that these are being appropriately addressed by the developers, the Council and its partners.
- discussing specific flood risks, schemes or strategies in the Committee's area through invitations to its meetings to the Council's partners (e.g. YW and EA).
- acting as a conduit for water-related problems identified by the public and flagging these up with relevant services.
- supporting and participating in community resilience initiatives where residents and businesses are encouraged to help themselves through joining flood warning schemes, developing community flood plans (as in Methley), purchasing their own flood protection products or more resilient furniture and fittings, complying with their common law responsibilities for clearing private stretches of watercourse, reporting flytipping etc.
- highlighting areas where these types of initiatives might be of benefit and contributing to the funding or implementation of these, where possible.
- ensuring that flooding incidents for which the Council has some involvement are drawn to the attention of Land Drainage or Emergency Planning in a timely fashion via the appropriate contact numbers.

4.0 Implications For Council Policy and Governance

4.1 In May 2006 Executive Board approved the 'Policy on Maintaining Water Resources and Responding to Flood Incidents' which clarified the Council's roles and responsibilities relating to: its statutory duties and permissive powers on maintaining water resources; assessing and mitigating the risks arising; responding to related flooding incidents; and supporting the communities affected by these. This policy has been recently reviewed and does not require any revision subject to legislative change or reallocation of service responsibilities. The proposals set out within this paper are consistent with, and in pursuance of, this policy.

5.0 Legal and Resource Implications

5.1 The resource implications of draft proposals will be reviewed as part of forthcoming budget discussions.

6.0 Conclusions

6.1 As noted in the report to Executive Board in July, the Council responded well to the serious challenges posed by widespread flooding at multiple incident locations. Moreover, it is clear that work already undertaken by services represented on WAMWG had a tangible impact on the level of flood risk faced by the city. However, the latest series of incidents make clear that further steps need to be taken by the Council to respond to the extreme challenges posed by climate change.

7.0 Recommendations

7.1 It is recommended that Committee notes the contents of this above report.