



EXECUTIVE BOARD

Meeting to be held in Civic Hall, Leeds on
Wednesday, 4th July, 2007 at 1.00 pm

Councillors

M Harris (Chair)
A Carter
R Brett
J L Carter
R Harker
P Harrand
J Procter
S Smith

MEMBERSHIP

K Wakefield
J Blake

R Finnigan

*non voting advisory member

CONFIDENTIAL AND EXEMPT ITEMS

The reason for confidentiality or exemption is stated on the agenda and on each of the reports in terms of Access to Information Procedure Rules 9.2 or 10.4(1) to (7). The number or numbers stated in the agenda and reports correspond to the reasons for exemption / confidentiality below:

9.0 Confidential information – requirement to exclude public access

9.1 The public must be excluded from meetings whenever it is likely in view of the nature of the business to be transacted or the nature of the proceedings that confidential information would be disclosed. Likewise, public access to reports, background papers, and minutes will also be excluded.

9.2 Confidential information means

- (a) information given to the Council by a Government Department on terms which forbid its public disclosure or
- (b) information the disclosure of which to the public is prohibited by or under another Act or by Court Order. Generally personal information which identifies an individual, must not be disclosed under the data protection and human rights rules.

10.0 Exempt information – discretion to exclude public access

10.1 The public may be excluded from meetings whenever it is likely in view of the nature of the business to be transacted or the nature of the proceedings that exempt information would be disclosed provided:

- (a) the meeting resolves so to exclude the public, and that resolution identifies the proceedings or part of the proceedings to which it applies, and
- (b) that resolution states by reference to the descriptions in Schedule 12A to the Local Government Act 1972 (paragraph 10.4 below) the description of the exempt information giving rise to the exclusion of the public.
- (c) that resolution states, by reference to reasons given in a relevant report or otherwise, in all the circumstances of the case, the public interest in maintaining the exemption outweighs the public interest in disclosing the information.

10.2 In these circumstances, public access to reports, background papers and minutes will also be excluded.

10.3 Where the meeting will determine any person's civil rights or obligations, or adversely affect their possessions, Article 6 of the Human Rights Act 1998 establishes a presumption that the meeting will be held in public unless a private hearing is necessary for one of the reasons specified in Article 6.

10.4 Exempt information means information falling within the following categories (subject to any condition):

- 1 Information relating to any individual
- 2 Information which is likely to reveal the identity of an individual.
- 3 Information relating to the financial or business affairs of any particular person (including the authority holding that information).
- 4 Information relating to any consultations or negotiations, or contemplated consultations or negotiations, in connection with any labour relations matter arising between the authority or a Minister of the Crown and employees of, or officer-holders under the authority.
- 5 Information in respect of which a claim to legal professional privilege could be maintained in legal proceedings.
- 6 Information which reveals that the authority proposes –
 - (a) to give under any enactment a notice under or by virtue of which requirements are imposed on a person; or
 - (b) to make an order or direction under any enactment
- 7 Information relating to any action taken or to be taken in connection with the prevention, investigation or prosecution of crime

A G E N D A

Item No K=Key Decision	Ward	Item Not Open		Page No
a)			<p><u>DEVELOPMENT AND REGENERATION</u></p> <p>IMPACT OF FLOODING EVENTS IN JUNE ON THE LEEDS DISTRICT</p> <p>To consider the joint report of the Director of City Development and the Director of Resources on the impact of a number of significant flooding incidents between 15th and 25th June 2007 and the effect on areas across the Leeds district.</p>	1 - 42
b)			<p>LEEDS LOCAL DEVELOPMENT FRAMEWORK - LOCAL DEVELOPMENT SCHEME</p> <p>To consider the report of the Director of City Development to formally bring the Local Development Scheme into effect from 5 July 2007.</p>	43 - 46

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Originator: R. Davies

Tel: 74513

Report of the Director of City Development / Director of Resources

Executive Board

Date: 4 July 2007

Subject: Impact of Flooding Events in June on the Leeds District

Electoral wards affected:

Specific implications for:

Ethnic minorities

Women

Disabled people

Narrowing the gap

Eligible for call In

Not eligible for call in
(details contained in the report)

Executive Summary

1. A series of severe weather events in June have given rise to a large number of flooding incidents across Leeds and Yorkshire caused by unprecedented rainfall levels, which the natural and built environments have been unable to cope with.
2. The Council has responded well to this challenge, although a number of residents find themselves out of their homes for some time. We now need to meet urgently with our professional partners to establish what lessons can be learned and to push for flood defence schemes to be implemented in key locations.
3. Following this analysis, there will need to be further consideration of how the Council and its partners need to respond to the challenges to its area and the lives of its citizens being posed by climatic change and related phenomena.

1.0 Purpose of this report

- 1.1 This report outlines the impact of a number of significant flooding incidents between 15 and 25 June 2007 which affected areas across the whole of Leeds district. It highlights the nature of this flooding and our initial understanding of its causes, and makes some preliminary suggestions on how the Council and its partners might seek to respond to these events.

2.0 Background information

- 2.1 Every year Leeds experiences a number of flooding incidents from causes which can significantly impact the lives of residents for a prolonged period. These incidents may arise from a variety of sources, but it has been noted that a growing number of these derive from *non-main river* sources, such as becks, sewers, highway gullies and drains as well as surface water run-off. In response to several factors (including climate change), the frequency and intensity of flooding in Leeds and elsewhere appears to be increasing and Met Office weather forecasters are now stating that we should expect these types of events to occur on a regular basis.
- 2.2 The city has already had a foretaste of these changing conditions. In August 2004 and May 2005 several areas of the city, predominantly in East Leeds, experienced significant flooding due to an unusually intense rainfall and the inability of the drainage infrastructure to cope with the increased volumes of water. Although the weather giving rise to the flooding was extreme, the incidents did highlight several key shortcomings relating to: (i) the resources available to maintain our assets and respond to floods; (ii) key players' understanding of their responsibilities relating to water; and (iii) the level of co-operation between agencies with responsibilities for water maintenance and enforcement.
- 2.3 In response to these shortcomings, a cross-departmental Water Asset Management Working Group was set-up and developed a range of costed recommendations to address a range of problems and 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. An additional, recurring resource of £1.1m was provided to relevant services to fund an enhanced service provision as well as to continue the development of other recommendations.
- 2.4 A report is attached at Appendix 1 ('A New Departure: The Council's Response to the Lessons Learned from Major Flooding in 2004 and 2005') which highlights the significant progress we have made in developing and implementing these recommendations. However, although we believe the changes made have reduced flood risk overall and enabled a better emergency response, this report makes clear that this work will not eliminate (new) flooding from extraordinary rainfall impacting our communities. More effective flood defences and mitigation will require significant on-going work and investment on the part of key agencies at the local, regional and national levels in partnership.

3.0 Main issues

- 3.1 The recent flooding experienced by residents in Leeds is the culmination of severe rainfall over a period rather than the consequence of a single event. This period arguably began with the intense rainfall (measured at over 100mm at Farnley Hall rain gauge) falling over the 48 hour period between 14 - 15 June. This gave rise to widespread flooding across the city (see map at Appendix 2), including incidents at Northern Street (city centre), Wortley (Outer Ring Road, Branch Road, Pudsey Road), Guiseley (Victoria Road), Swillington (Neville Grove), Beeston (Southleighs), Pudsey (Chaucer Avenue), Howden Clough (Howley Mill Lane), Methley (A639 Methley Lane) and Otley (A660). It is clear that this downpour contributed to the ground becoming saturated and set the scene for the flooding incidents which occurred 10 days later.

- 3.2 The second bout of intense rainfall, which fell during a violent lightning storm on the night of 19th-20th June, closed train services to London and Harrogate and caused flooding in the city centre (Northern Street), Halton (gardens of Dunhills), Pudsey (properties in Turkey Hill), and Methley (Newmarket Lane).
- 3.3 The most serious flooding then took place on Monday, 25 June 2005 and affected most of the whole of the Leeds district (see map at Appendix 3) rather than in a limited number of disparate locations as is more commonly the case. This attests to the unprecedented nature of the rainfall: according to preliminary data, northern England has just experienced its wettest June since records began. In June 1980 an average of 121.2mm of rain fell over the month compared to over 153mm this June in northern England, with around 100mm falling in the 24 hour period covering Monday. This would help to explain why the vast majority of locations – whether houses, businesses or roads - were flooded by 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. There were, however, notable examples of watercourses overtopping their banks to cause major damage.
- 3.4 It is of no surprise then that, whilst some of these affected areas previously experienced severe flooding in August 2004 and May 2005 and yet others are known to have on-going flooding problems, some locations appear to have experienced flooding for the first time on 25 June. This report will now highlight the known areas affected and the sources of the flooding as far as this is understood.

Flooding from Rivers and Becks

- 3.5 The main locations where flooding of domestic properties occurred from watercourses overtopping their banks were:
- Halton (Dunhills, Veritys, Whitebridges): approximately 50+ houses affected by flooding from the beck for the third time in five years. The Wyke Beck is now classified as a 'main river' and has been overseen by the Environment Agency since April 2006.
 - Collingham (Mill Beck Green): approximately 30 domestic properties flooded by the Collingham Beck which managed to circumvent an existing flood defence bund at No. 4 Lowcroft.
 - Wortley: a number of properties flooded from the Wortley Beck at Wortley (Ring Road, Branch Avenue, Pudsey Road).
 - Rothwell: a wide swathe of Springhead Park adjacent Gillett Lane flooded by River Dolphin inundating the depot to 4' and the aviary causing the death of 80 birds.
 - Meanwood: the Meanwood Beck overtopped its banks to flood a Millside Nursing Home, a number of residential properties at Monkbridge Terrace and Mill Pond Close, businesses at Meanwood Close as well as Meanwood Valley Farm.
 - Mabgate: the Sheepscar Beck overtopped and inundated businesses in the Mushroom Street area to around 4 feet.
 - Kippax: around twelve houses in Ramsden Street flooded by an unnamed watercourse.
- 3.6 Possibly our biggest concern on 25 June was the risk that the River Aire would breach its banks along Kirkstall Road, throughout the City Centre and further downstream at Mickletown which could have caused widespread and long-term damage to both homes and businesses as has happened in South Yorkshire. The Aire appeared to be running at higher levels than experienced in October 2000 and August 2002 and did cause flooding of a limited number of roads and properties in the Waterfront/Calls, Dock Street and East Street/Neptune Street areas of the city centre.

Surface Water Flooding and Drainage Surcharging

- 3.7 Flooding from surface water run-off and surcharged drains affected hundreds of domestic and business properties to one degree or another in areas across the city that are too numerous to detail. By way of example, around a dozen or more properties in the Barley Hill Road, Derwent Drive, and Queensway areas of West Garforth were inundated in places to around 4 feet of water’.
- 3.8 Thus far, we are aware of a limited number of schools which were affected by flooding or had to be closed. Amongst the primary schools affected were: Ashfield PS (Otley); Beechwood PS (Seacroft); Garforth Green Lane PS; Parklands PS (Seacroft); Mount St. Mary’s PS (Richmond Hill); Carlton PS (Carlton WF3); Grimes Dyke PS (Stanks); West End PS (Horsforth); and St Nicholas’ RC School (Gipton). High schools affected include: Garforth Community College; Royds HS (Oulton); Corpus Christi RC HS (Halton Moor). Green Meadows North-west SILC.
- 3.9 In addition to this significant impact on properties, the flooding caused chaos to the city’s transport infrastructure. Services from Leeds City Station were cancelled on most lines for most of the day and passengers had to make do with replacement bus services, although train services were restored for many of these destinations on a limited basis with the exception of those serving South Yorkshire for which there are still problems. The roads were also hit hard and the following major roads were closed or under water: Outer Ring Road at Wortley; A62 Gelderd Road; A65/A660 at Otley; and A659 Pool Road.

Actions Undertaken by the Council

- 3.10 It is our view that, whilst the scale of the actual downpour and its impact could not have been predicted, the Council did respond well to incidents that we were made aware of. It is, however, possible that we were not informed about certain incidents either by the public or our partners. Where we were made aware, the Council was able to respond preemptively and reactively to evolving events to address the community’s and city’s needs:
- Sandbags: officers from Highways began filling and deploying large volumes of sandbags to a range of locations preemptively from Sunday 24 June and reactively throughout Monday 25 June and days following this in anticipation of further incidents. The EA also delivered large quantities of sandbags to the Dunhills on Monday afternoon after the flood had occurred and high water levels persisted. The Council also deployed over 400 air brick covers and 50 flood boards to vulnerable locations.
 - Deployment of incident co-ordination staff: the new Emergency Co-ordination Vehicle was deployed to great effect at the Dunhills, but this was but one of many locations where this could have been used. Area Management Teams were able to assist in identifying needs in other areas, including Halton and Collingham, and this approach can be developed further.
 - Watercourse maintenance: Land Drainage officers visited at-risk sites throughout the city throughout the week to ensure preventative and reactive maintenance work was undertaken by our contractors at identified problem sites (some of which are the EA’s responsibility).
 - Structural safety: officers from Building Control and Bridges section assessed the safety of buildings and bridges across the city to ensure these were structurally sound.
 - Street cleansing: the 6 gully cleansing vehicles were deployed across the city to assist in the cleaning down of properties and pumping of gullies following flooding and where it was feared that there might be a recurrence.
 - Area management: officers from area management played an important role in providing reassurance and co-ordinating the distribution of large numbers of sandbags and skips (to enable the disposal of damaged household effects) to residents at the Dunhills and Collingham.

- Environmental Health advice: officers were deployed to all areas reported as having experienced flooding to distribute leaflets and give advice on the dangers of flood water and on how to clean-up after this subsides.
- Rest centres: a rest centre was set-up at Fearnville Leisure Centre in Gipton for residents of the Dunhills and other locations choosing to leave their homes to be sheltered and fed. A rest centre was also set-up at Leeds Town Hall for use by commuters stranded in the city centre due to transport problems, although this was able to close late on Monday evening due to lack of need.

Potential Next Steps

3.11 Given the unprecedented scale of the downpour and the large of number of incidents across the city, it is vital that any actions to be taken by the Council and its partners are informed by rigorous analysis and options appraisals. In light of this, it remains too early to provide detailed lessons learned and actions plans which can be agreed by members and senior officers at this stage.

3.12 However, we would suggest the following actions which should be acted upon urgently:

- firstly, material and welfare support and guidance should continue to be offered to those already affected by flooding;
- secondly, Council officers from responding departments should meet at the earliest opportunity for a debrief in order to compare experiences and identify lessons learned. Key concerns should be whether existing service provisions are adequate to cope with both existing and anticipated increases in demand.
- thirdly, officers from PEPU and Land Drainage should meet their peers from partner agencies in the emergency services, Environment Agency, and Yorkshire Water to consider what went well and where we need to learn lessons. This should focus on whether the EA provided as much information and alerting as they ought to have done and whether recently enmained watercourses like the Wyke Beck and Collingham Beck are sufficiently high in the priorities of the Agency.
- fourthly, information from the above should be used to review the Stage 2 Action Plan of WAMWG and determine whether any additional work needs to be added to this or if any additional resourcing is needed. A key consideration here will be the potential need for there to be a more dedicated, formal structure in place to oversee the strategic development of initiatives in this area rather than this being an adjunct to existing posts.
- fifthly, pressure needs to be brought to bear upon the Environment Agency urgently to ensure that flood defences commensurate with identified flood risks are developed and put in place on the River Aire from Kirkstall to Knowsthorpe, and along other 'main rivers in the city, including the Wyke Beck, Wortley Beck at Wortley, and Collingham Beck at Mill Beck Green, Collingham. As members are already aware, the Council was working with the EA to develop a major flood defence scheme for the city centre costing more than £100m, but this was deferred by the EA in their latest capital programme. These schemes should be addressed on 13 July when the Leader is meeting the Chief Executive of the EA, Barbara Young, along with representatives of Land Drainage and emergency planning.
- sixthly, given that any initiatives by the EA are likely to take time to be developed and agreed, the Council and the EA should discuss actions which they might jointly or severally undertake to reduce or mitigate the flood risk in the interim (e.g. provide all households with floodguards).
- seventhly, that the risk of flooding is fully taken account of in all new proposed developments in conjunction with the city-wide Strategic Flood Risk Assessment to be completed shortly.

4.0 Implications for Council Policy and Governance

4.1 In May 2006 Executive Board approved a policy statement on 'Maintaining Water Resources and Responding to Flood Incidents' which clarified the scope of the Council's roles and responsibilities in terms of its:

- statutory duties and permissive powers in relation to maintaining water resources;
- assessing and mitigating the risks arising;
- responding to related flooding incidents;
- and supporting the communities affected by these.

4.2 It is considered that this policy provides an adequate and robust framework to enable Council services to undertake their responsibilities, but this document will be reviewed as part of the lessons learned process.

5.0 Legal and resource implications

5.1 Resource issues will be addressed as part of the lessons learned review process and reported back to senior management and Executive Board in due course.

6.0 Conclusions

6.1 A series of extreme severe weather events have given rise to unprecedented levels of rainfall for June across Leeds and Yorkshire. The rain occurred to such an extent that both the natural and built environments were unable to cope with the volumes of water generated and flooding occurred in areas across the whole of the city. Whilst the impact on communities has been heavy, Leeds has been extremely lucky not to have experienced the degree of hardship faced by residents and businesses in South Yorkshire and the Council has responded well in the circumstances. To be clear, this flooding is not the result of failures by the Council or its partners and recent increases in resources and improvements by the Council, though unable to prevent this, undoubtedly mitigated the effects and enabled an improved response.

6.2 Weather forecasters are now suggesting that we should now expect this unpredictable type of weather to become the norm and the Council and its partners will have to work more closely together to identify how the worst effects of climate change can be mitigated to lessen the impact on citizens. However, this is something which requires action at the national and global levels rather than merely at a local level and this degree of challenge will necessitate significant changes in land use and the level of investment currently deployed by the Council and its partners in this area.

7.0 Recommendations

7.1 Executive Board is requested to note the comments contained within this report and endorse the preliminary actions proposed.

A NEW DEPARTMENT

The Council's Response to the Lessons Learned From Major Flooding in 2004 and 2005

report by the
Water Asset Management Working Group
April 2007



Introduction

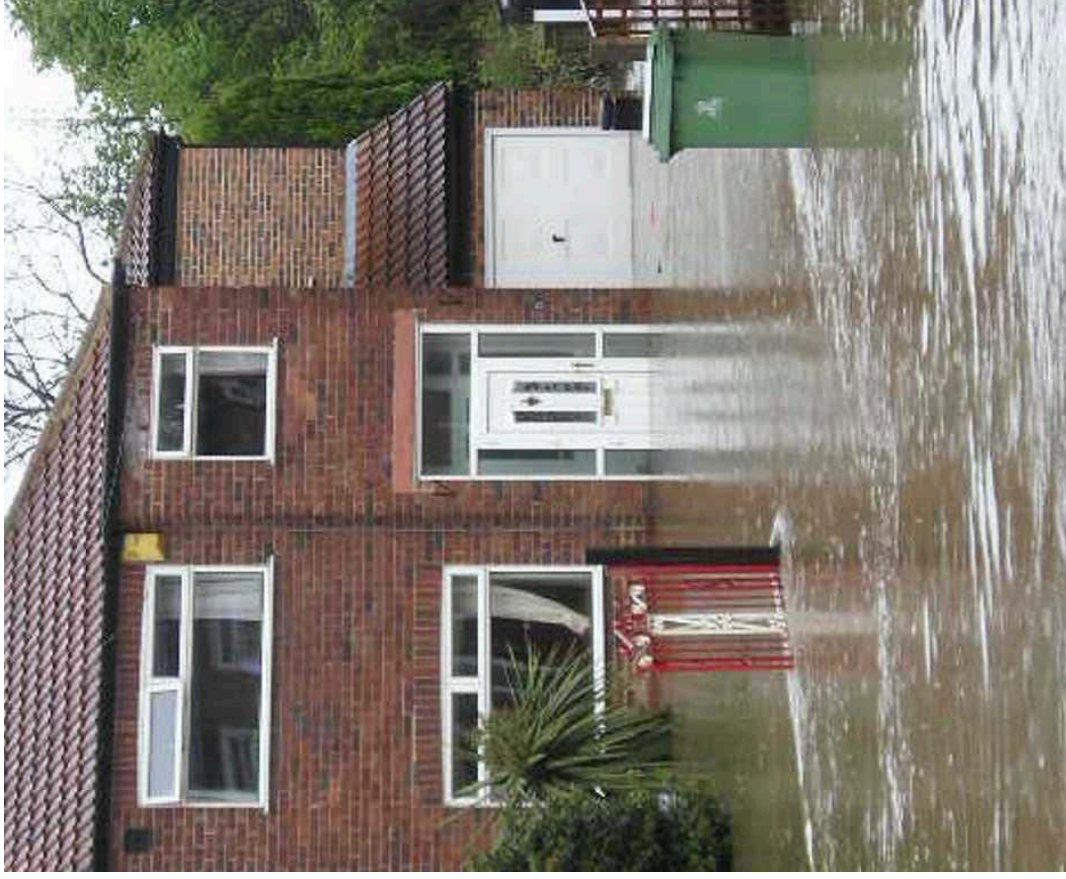
In August 2004 and May 2005 several areas of Leeds experienced significant flooding due to an unusually intense rainfall and the inability of the drainage infrastructure to cope with the increased volumes of water. The incidents highlighted several areas for potential improvement in terms of the resources available to maintain our assets and respond to floods.

On 9 March 2005 Executive Board approved the set-up of a cross-departmental working group to develop costed recommendations for implementation. The **Water Asset Management Working Group (WAMWG)** was consequently set-up and consisted of senior representatives from Land Drainage, Highways Services, Streetscene Services, Enforcement, Asset Management, Bridges Section, and Audit & Risk.

The **33-point Action Plan** of the WAMWG were referred to Leader-Management Team on 7 July 2005 and, following this meeting, funding was put in place to commence implementation of the recommendations in the Action Plan.

A dedicated **Flooding Scrutiny Commission**, initiated in August 2005 to investigate flooding and drainage issues in Leeds, gave its support to the Action Plan as well as making further recommendations.

This report gives an account of the elements of the Action Plan which fall within the remit of relevant Council Services and how they have been implemented.



Flooding adjacent to Wyke Beck on 3rd May 2005

LAND DRAINAGE SECTION

Flood Defence Activities in 2006



For further information, please contact:
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Principal Engineer (Land Drainage)
Tel: (0113) 24 75240
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Flood Action Plan

Action Plan points [numbered] relevant to Land Drainage:

Direct maintenance of Council-owned watercourses by the Land Drainage Section, rather than functional Departments, to ensure that blockages and flood risk are minimised [3].

Additional staff for beck inspection, record maintenance, vetting of planning applications for flood risk, and technical assistance [4].

Improved systems for recording water assets – including watercourses, culverts, ponds and lakes [6].

Support for private owners and communities in fulfilling their responsibilities – including participation in flood fairs [7].



Support for the Bridges Section in assessing the capacity of existing highway culverts and the development of a risk-based rolling programme of upgrades [20].

Identification and **recording all lakes and dams** in order to facilitate a programme of hazard assessment [23].

A **dam inundation study** for Waterloo Lake [24].

A **multi-agency technical forum** with the Environment Agency and Yorkshire Water [26].

Helping in the **development of flood alleviation measures** for the Wvke Beck catchment [28].

Council Watercourse Maintenance (1)

Since 1st January 2006 Leeds CC watercourses have been maintained by the Land Drainage Section using a specialist Contractor – Peter Duffy Ltd – under a 24 month term contract.

Grids and Hot-spots

Routine maintenance is now managed on the basis of risk assessment. **32** specified grids and other hotspots are visited and cleared of debris on a fortnightly basis. A further **4** are visited and cleared on a monthly basis. The current table of these locations is given in *Appendix 1*.

If a Flood Watch notice is issued by the Environment Agency or a Severe Weather (rainfall) notice is issued by the Meteorological Office, then the highest risk locations are visited immediately, so far as is practicable.



**Cock Beck grid at Stanks (4 Sep 06)
before (left) and after (right)
fortnightly clearance**

At the commencement of each hot-spot visit the Contractor takes a photograph of the state of the grid, etc. After clearance of any debris a further photograph is taken (see below). In this way, the effectiveness of the visits is monitored, information is gathered which will help us reassess the frequency of visits in the future and evidence is collected that might be useful in the investigation of flooding events.

Prior to the commencement of the new maintenance regime the hot-spots and grids were frequently the cause of flood incidents. No flooding at these locations has occurred since and - although new flooding from extraordinary rainfall can never be ruled out - it seems clear that the new regime has significantly reduced the flood risk during the last 12 months.

The annual cost of the routine maintenance of grids and hot-spots is expected to be **£70,000**.

Council Watercourse Maintenance (2)

Planned Maintenance

Planned maintenance of open channel watercourses has been prioritised in accordance with perceived risk. This has included the **clearance of about 10,200 metres of watercourse** and the **repair of 2,400 metres of retaining walls or channel fabric**. The total contract cost of this work is estimated to be **£161,000**.

The planned work has been at Ederoyd Drive, Middleton Grove, Finkle Lane, Sugarwell Mount, Topcliffe beck, The Hollies, Wyke Beck, Spring View (Gildersome), Sheepscar Beck, Neville Grove, Cock Beck (Stanks), Stain Beck, Weetwood Mill Lane, Allerton Bywater, Kippax, Stonegate.

One factor that has loomed larger than expected, and has caused work to proceed at only a modest rate, is the care that needs to be taken to avoid disturbance to wildlife habitats. Before any work instruction is issued to the Contractor for the clearance of any section of open watercourse, an **ecological appraisal** has to be carried out. Usually this will be procured from ecologists in the Wildlife and Countryside Team, but has also been done by Consultant ecologists.

Where it does not pose a flood risk, **natural woody debris is left in place** or secured to the banks of a stream in order to provide wildlife habitats.



Removal of a mature tree from the centre of Wyke Beck (behind the Foxwoods) as part of the planned maintenance. Flooding in May 2005 affected properties adjacent to this stretch of beck

Council Watercourse Maintenance (3)

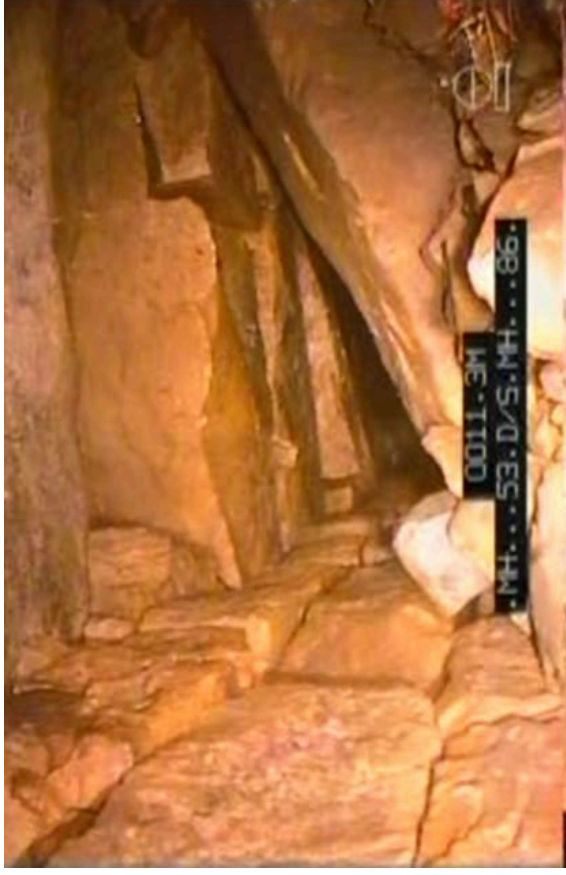
Reactive Maintenance

Reactive maintenance is carried out when the Becks Inspectors or others (including Councillors, members of the public, or other Departments) notify blockages – from fly-tipped debris, etc. Priority is given on the basis of flood risk. Over **430 metres of watercourse have been cleared** in this manner, at a cost of **£23,000**.



Fancy a bath? Flood risk at Kel Beck, Otley

CCTV image of structural damage on Cotton Mill Beck culvert (Morley) adjacent to the site of flooding



CCTV inspection and desilting of culverts

Most of the culverted watercourses owned by the Council have not been inspected internally for decades. Consequently, blockages and structural problems have gone undetected, until flooding is caused. This year a substantial programme of inspection and repair has been commenced. Often access is only possible after manhole replacement or construction.

CCTV inspection and desilting of 11,600 metres of culvert has cost about **£143,000**. Some repairs will require capital works.

Council Watercourse Maintenance (4)

New grids and inlets

Effective, well-maintained grids and inlets to culverts are an essential flood-prevention measure. This year we have provided **new grids or inlet structures** at Wyke Beck (upstream of York Road), Troydale Lane (Pudsey), and Southleigh Garth (Beeston), at a cost of **£30,000**. A further one at Neville Grove (Swillington) has just received EA approval and will be constructed early in the new year.

Culvert lining and repair

The watercourse maintenance term-contract has been used to carry out repairs of short lengths of Council-owned culvert at High Moor Avenue (Moortown) and Foundry Lane (Seacroft) at a cost of **£8,000**.

Dam Maintenance

Maintenance work has been carried out on the embankment of Fenton Dam (Ardsley) under instruction from the Supervising Engineer in the interests of safety, at a cost of **£11,000**.

“I have noted several times the lorry of Peter Duffy & the workmen on High Moor Avenue. It is such a relief to me & my family to see the end of the flood water on my property.”

- extract from resident's letter to Land Drainage (May 2006)



Rig set up for hot cured resin lining of culvert at High Moor Avenue (Moortown)

Other Actions (1)

Additional Staffing

A number of appointments have been made following the decision to take on additional staff:

On 1st September David Oldknow started as Group Engineer (Maintenance) managing the maintenance of Council-owned watercourses.

On 27th November Howard Underwood took up his role as Assistant Becks Inspector, allowing us to step up our monitoring of all ordinary watercourses in the District.

On 28th December Mike Emery took up a permanent position as Engineer (Development Control), after having already been seconded for a few weeks in the same work. Mike was covering for the protracted absence of a member of staff following a major operation.

On 22nd January 2007 Jan Cassidy joined us as the new Asset Engineer. Following this appointment a marked improvement in the state of our records system is anticipated.

Due to the difficulties with staffing levels and the increased number of planning applications requiring detailed comment, a significant backlog of applications built up. We are now starting to make inroads into this.

Improved system for recording water assets

This work is now in progress following the appointment of the Asset Engineer (see above).

Support for private owners and communities

The Land Drainage team took part in a 1-day flood fair organised by the Environment Agency in September at the Royal Armouries.

Other Actions (2)

Support for the Bridges Section

The Land Drainage Section has collaborated with the Bridges Section in commencing an assessment of major highway culverts which may have flow capacity restrictions.

A physical model of the Elland Road (Churwell Hill) culvert on **Farnley Wood Beck** was commissioned (see picture below). This shows inadequate capacity. Results of the study have been discussed with a view to developing a capital scheme for improvement.

Similar assistance has been given to Highways Services in identifying minor highway culverts (less than 900mm diameter) and drawing up a programme of improvement works for culverts and highway drains.



Identification and recording of all lakes and dams

A database of lakes and dams in Leeds has been created, in order to assist in hazard identification (where these bodies of water are not registered as 'large raised reservoirs' and not subject to any statutory inspection).

Dam inundation study for Waterloo Lake

This is now complete and initial meetings have taken place with Parks and Countryside to collaborate on the preparation of appropriate contingency arrangements.

Multi-agency technical forums

Regular meetings take place with the Environment Agency and Yorkshire Water to assess specific flooding problems. It is intended that there should be a permanent standing forum (taking up development control issues as well as flooding).

Flood Alleviation Measures for the Wyke Beck and Farnley Wood Beck catchments

The Land Drainage Section is collaborating in Environment Agency appraisals of flood defence measures for both of these newly 'enmained' watercourses.

Emergency Planning and Standby

7 day 24 hour standby backup is now available from our Contractor in the event of major flooding emergencies.

APPENDIX 1

Watercourse	Location	Asset Type	Description	Frequency
Hol Beck	Farnley Lane, Otley	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
None Shown	Farnley Lane, Athelstan Lane, Otley	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
Kel Beck	Green Lane, Otley	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
Hol Beck	Carr Bank Bottom. Otley	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
Kel Beck	Weston Lane, Otley	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
Nunroyd Beck	Ghyll Royd, Yeadon	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly
None Shown	Parkland View, off Henshaw Lane, Yeadon	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly
None Shown	Troydale Lane, Troydale, Pudsey	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
Nunroyd Beck	Leeds Road, Guiseley	Inlet Grid	Inlet Grid to Highway Culvert - Structure No 1005	Fortnightly
Red Beck	Oaklands Road, Farsley	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly
Bagley Beck	Farsley Lane, Farsley	Outlet Grid	Outlet Grid to Watercourse Culvert	Fortnightly
Stain Beck	Meanwood Road, Meanwood	Inlet Grid	Inlet Grid to Highway Culvert - Structure No 1082	Fortnightly
Throstle Carr Beck	Robin Hood	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly
Cock Beck	Barwick Road	Inlet Grid	Inlet Grid to Highway Culvert - Structure No 1123	Fortnightly
Gledhow Lake	Gledhow Valley Road, Gledhow	Outlet Grid	Outlet Grid to Lake and Entrance to Watercourse Culvert	Fortnightly
Gledhow Lake	Gledhow Valley Road, Gledhow	Sluice Manhole	Flow control Chamber	Fortnightly
Wyke Beck	Halton Moor	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly

Wyke Beck	Pontefract Lane	Outlet Grid	Outlet Grid to Watercourse Culvert	Fortnightly
Mill Shaw Beck	Dewsbury Road,	Balancing Pond	Outlet Grid	Fortnightly
Mill Shaw Beck	Dewsbury Road,	Balancing Pond	Inlet Grid	Fortnightly
Mill Beck	Westwood Road, off Dewsbury Road	Inlet Grid	Inlet Grid to Highway Culvert - Structure No 1184	Fortnightly
Farnley Wood Beck	Old Close, off Elland Road	Bridge and Open watercourse	Open section of Watercourse including Structure No 1134	Fortnightly
Wyke Beck	Wykebeck Valley Road	Primary Trash Screen	Trash Screen to Watercourse	Fortnightly
Fleakingley Beck	Astley Lane, Swillington	Bridge	Bridge Structure No 1152	Fortnightly
Hollins Beck	Station Road, Kippax	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly
None Shown	Southleigh Garth, Beeston	Inlet Grid	Inlet Grid to Highway Culvert	Fortnightly
Gledhow Beck	Gledhow Valley Road, Gledhow	Inlet Grid	Inlet Grid to Highway Culvert - Structure No 1127	Fortnightly
WykeBeck	Off Wykebeck Valley Road	Footbridge	Culvert beneath footbridge	Fortnightly
Un-Named	Off Middleton Grove, Middleton Park, Middleton, Leeds	Inlet Grid	Inlet Grid to Watercourse Culvert	Fortnightly
WykeBeck	Off Brooklands Crescent, Seacroft, Leeds	Pipe beneath bridge	Public sewer crossing watercourse	Fortnightly
Tyersal Beck	Tyersal Lane, off Smalewell Road, Tyersal, Pudsey	Footbridge/ Ford	Ford across Tyersal Beck	Monthly
Un-Named	Finkle Lane, Gildersome	Inlet	Inlet to Culverted Watercourse	Monthly
Un-Named	Swillington Lane, junction with Leeds Lane, Swillington Leeds	Inlet	Inlet to Culvert Beneath Highway	Monthly
Un-Named	Off Queensway, Yeardon, Leeds	Inlet Grid	Inlet Grid to Watercourse Culvert	Monthly

BRIDGES SECTION

Flood Defence Activities in 2006



For further information, please contact:
John Whitaker
Acting Bridges Manager
Tel: (0113) 24 76202
Email: John.Whitaker@leeds.gov.uk

Highway Bridges clearance



Tree trunks removed from under bridge on the River Wharfe at Wetherby (sawn into sections ready for removal)

Debris clearance under highway bridges

Bridges Section will remove debris from the major rivers running through Leeds City Council area (Rivers Aire, Calder and Wharfe) where a bridge or culvert has caused a build up of debris.

A term diving contractor is being used to remove debris from major rivers as specialist personnel and equipment are required to carry out this work.

Bridges Section carries out debris clearance work on a reactive basis when notified of blockages.

Debris clearance at entrance to large highway culverts

In conjunction with Land Drainage Section Bridges Section is involved with debris clearance from blockages to culverts.

Significant effort and expense is sometimes involved in getting the necessary machinery into these locations to remove these obstructions.

This activity is costing **£10,000** per annum.



Highway culvert capacity survey

Culvert survey work

Bridges Section has engaged the services of our private sector partner Mouchell Parkman to carry out survey work to existing culverts. The work involves surveying all culverts supporting a highway with a diameter greater than 0.9m.

The survey work involves collecting simple but important data about each culvert. Data collected includes:-

- Access details
- Distance of the culvert from a road
- Can the culvert be inspected from the highway
- Details about the size of the culvert
- How far is it to the nearest property

Discounting structures on the rivers Wharfe, Aire and Calder there are 350 highway culverts to be surveyed. Up to the end of February 2007 a total of **136 culverts have been surveyed** at a cost of **£20,000**.

Once collected the survey work is passed to Land Drainage Section to determine the capacity of the culvert. Any culverts found under capacity will be considered, on a risk basis, for inclusion in the Bridges Section Culvert Upgrading Programme.

Survey work has included photographs at upstream and downstream ends of culverts.



Entrance (above) and exit (below) to Carlton-Bramhope highway culvert.



ASSET MANAGEMENT SECTION

Flood Defence Activities in 2006



For further information, please contact:
Mark Cordingley
System Supervisor
Tel: (0113) 22 43820
Email: Mark.Cordingley@leeds.gov.uk

Flood risk to Council assets

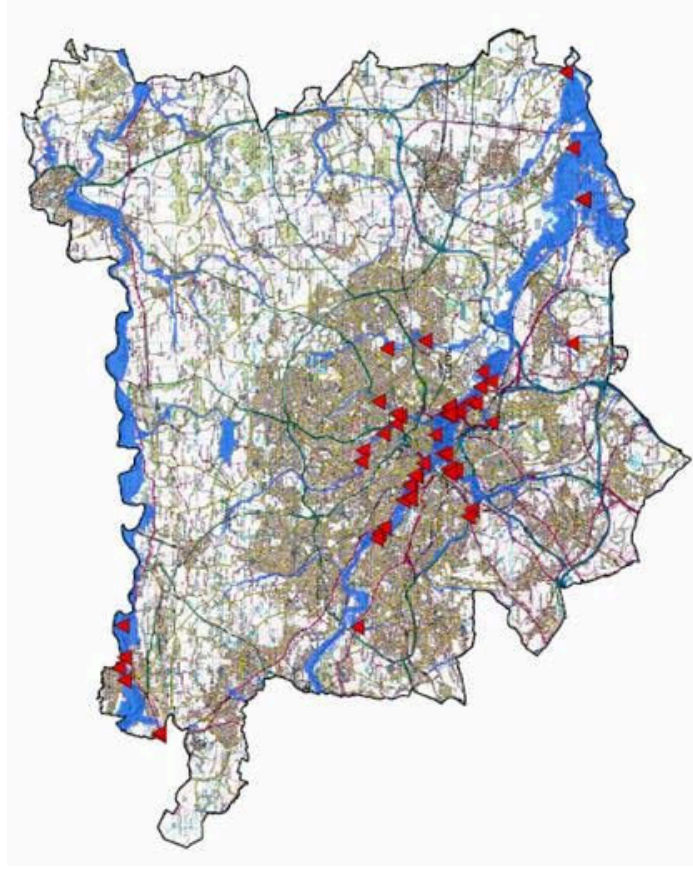
Council asset risk assessment

The Council has more than 20 separate databases holding property information and is part way through a 4 phase programme to bring these into the new 'Caps' geographical information system to allow greater sharing of information and flexibility of use.

The position of Council properties has now been plotted within the new system and compared against *flood risk maps* relating to the city's 'main rivers' provided by the Environment Agency as well as data from Land Drainage on previous incidences of flooding from non-main river sources. This has enabled Asset Management to identify **a total of 60 Council properties at risk of flooding** from identifiable sources of potential flooding.

A programme of inspections has been instigated to assess the actual level of risk and the buildings' vulnerability in order to determine what steps can be taken to reduce the vulnerability and potential impact should flooding occur.

Additionally plans from the new Caps have now been made available to the Land Drainage Section to help them quickly identify Council ownership of land or property should blockages or potential flooding on watercourses be identified.



HIGHWAYS SERVICES

Flood Defence Activities in 2006



For further information, please contact:
Andrew Molyneux
Acting Highway Network Manager
Tel: (0113) 24 75316
Email: Andrew.Molyneux@leeds.gov.uk

Gully data collection

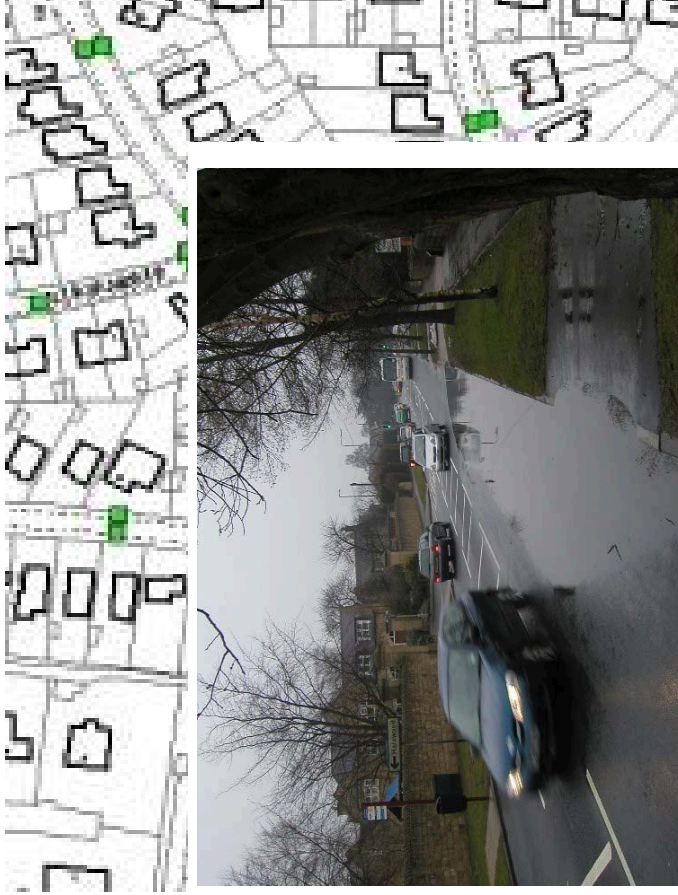
Gully survey

In support of water asset management activities, Highway Services have begun a project to collect a set of detailed information and location for each gully across Leeds. Approximately 30,000 have been visited so far, but with an estimated 130,000 gullies across the city the project will run until March 2009.

The data will be used to improve the efficiency of cyclical cleaning activities, and allow more sophisticated targeting of maintenance work on problem areas.

Geographical information systems (GIS) are used to display the position of the gullies and to act as a link between the detailed attributes of each gully and other computer systems used for asset valuation, fault reporting and maintenance planning. GIS also facilitates the sharing of information across the Council and with partner agencies to provide a holistic approach to drainage management.

Data collection in West Garforth has been expedited in order to be of assistance in the DEFRA-funded, multi-agency, study of flooding problems in that locality



Typical hazard resulting from blocked gullies and drain connections



GIS record of freshly surveyed gully locations in West Garforth

Sandbag service

Provision of rapid sandbag filling machines

Highways Services has now obtained three rapid sandbag filling machines. These are located at depots together with quantities of sand and unfilled bags.

During a flood or, in certain cases, in anticipation of a flood, the Council may provide sandbags to householders and other parties. To ensure they are deployed to maximum effect, sandbags are issued in the following order:

- To vulnerable individuals or establishments;
- To residential properties;
- To business or other non-residential properties.



**Rapid sandbag filling machine in use
at a Council depot**

ENVIRONMENTAL SERVICES

Flood Defence Activities in 2006



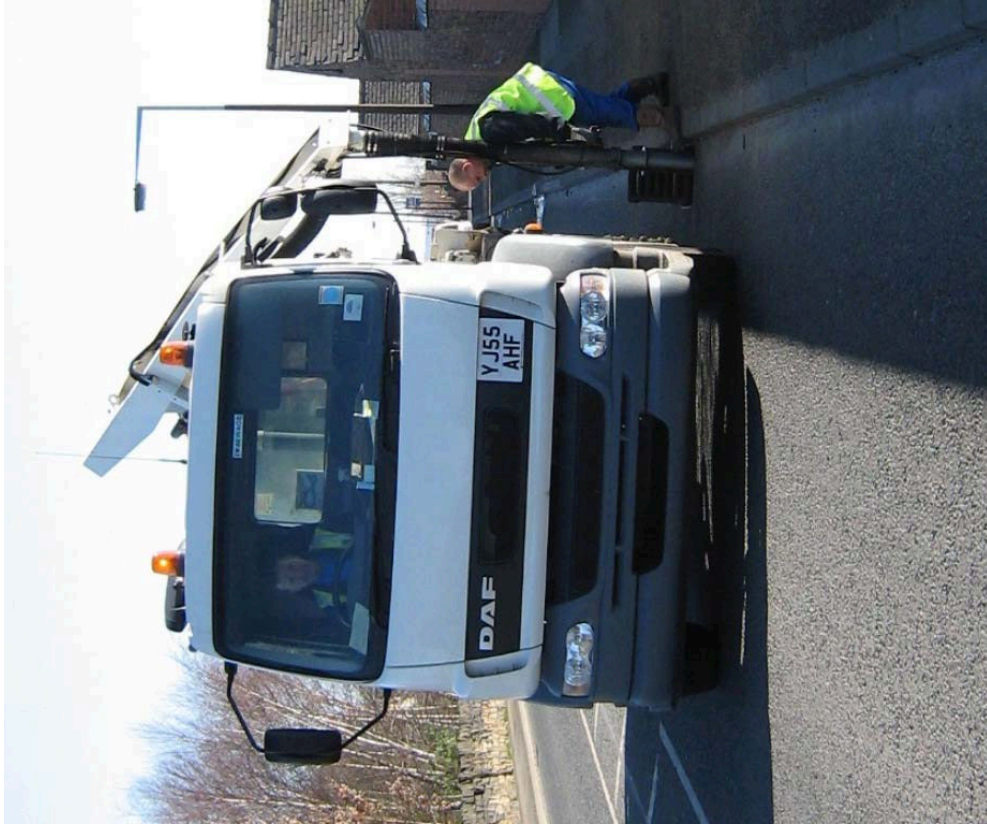
For further information, please contact:
Stephen Smith
Head of Environmental Services
Tel: (0113) 24 74902
Email: Stephen.Smith@leeds.gov.uk

Highway Gully Cleansing

Additional gully cleansing machines

Streetscene Services have leased two extra vehicles and recruited additional staff to provide a significantly enhanced gully-cleaning arrangements. They have also developed informal out-of-hours call-out arrangements for flooding responses via existing service provision and are working towards formalising these in the near future.

The standard frequency of gully cleansing is every eight months. **The two additional machines have allowed an increase in frequency at the hotspot areas** to every three months. The areas were identified using information from Highways Services (their 'wet spot' list) and information from PEPU in the form of complaints about flooding. Approximately 4700 gullies are now receiving the higher frequency cleansing. This additional service started in November 2005.



'Wet Spot' team at work with one of the new gully cleansing machines



ENFORCEMENT SECTION

Flood Defence Activities in 2006



For further information, please contact:
Graham Wilson
Head of Enforcement
Tel: (0113) 39 51501
Email: Graham.Wilson@leeds.gov.uk

Flytipping

Shopping trolleys

The Council has now adopted legal powers to recover abandoned shopping trolleys, many of which were regularly causing watercourse blockages, and charge costs to the owner. A company (TCS) has been identified which will remove such trolleys at no cost to the Council.

Between 1st April 2006 and 31st December 2006, 7252 abandoned shopping trolleys have been collected and



Shopping trolleys removed from Wyke Beck after flooding event



returned to the owning supermarket for re-use or destruction.

The city has been scoured of abandoned trolleys from all types of land, including watercourses, with the support of ecology officers. Trolleys are now removed on daily patrols across the city.

PEACE & EMERGENCY PLANNING UNIT

Flood Defence Activities in 2006



For further information, please contact:
Mark Wilkinson
Acting Principal Emergency Planning Officer
Tel: (0113) 24 74338
Email: Mark.Wilkinson@leeds.gov.uk

Emergency Planning (1)

Peace and Emergency Planning Unit (PEPU) was tasked with a number of key actions as part of the Water Asset Management Working Group's work.

Ensure that a **protocol on the co-ordination and response to flooding incidents with partner agencies** is incorporated into Leeds City Council and multi-agency plans and is tested with partners [16].

A West Yorkshire multi-agency flood response protocol with clear roles and responsibilities was developed by Leeds City Council, ratified in December 2005 by all partners to flood response and incorporated into all agencies' flood plans. This protocol was recently tested in a West Yorkshire Resilience Forum Gold-level exercise (Exercise Merlin Aware) and was found to have worked well.

Develop proposals to **provide the capability for rapid deployment of flood mitigation and recovery resources** [17].

An **Emergency Co-ordination Vehicle** has recently been purchased, which will provide an essential focal and communication point for Council services at a flood incident scene. The vehicle contains a control area in the rear of the vehicle with desking, white boards, laptops, printer / fax / scanner, mobile phones and personal protective equipment such as high-visibility jackets and waterproofs. The vehicle also has a microwave and a kettle for responders to be provided with essential food and refreshments.



Exercise Merlin Aware

A **towable trailer** has also been purchased to be linked to the above, which contains a range of **flood recovery resources**, such as shovels, disposable cameras and wellington boots, to hand out to residents to aid their recovery from the effects of incidents. Further resources in the shape of air brick covers which can be provided to residents who have received warnings of predicted flooding have been procured and are held in vehicles used by Land Drainage staff and gully cleansing operatives for distribution when they are deployed to a flood incident scene.

Emergency Planning (2)

Develop and implement a **multi-agency checklist of questions and a flowchart for use in Leeds City Council and partners' call centres** for use in establishing what form of flooding was involved and who this should be referred to [18].

Flood Operator guidelines have been developed and implemented to enable calls from members of the public to be referred through to the most appropriate organisations. PEPU is also working with the Environment Agency and West Yorkshire colleagues in developing the Environment Agency's Floodline service to provide a 'one-stop' number, so members of the public can call one number to report any type of flooding.

Continue to participate in the **West Yorkshire Flooding sub-group of the West Yorkshire Emergency Planning Officers Forum** [21].

PEPU chairs the West Yorkshire Flooding sub-group and provides the impetus for much of its work, including a range of innovative solutions to longstanding problems.

Develop a package of measures to **support private riparian owners and communities** to fulfil their responsibilities, such as 'flood fairs' and public information campaigns [22].

In October 2006 the Unit assisted the Environment Agency in developing and running a **'Flood Fair'** at **the Royal Armouries** for communities at risk from flooding

PEPU is currently working with a community group in Methley/Mickleton to develop a **local flood plan** which may serve as a model for other communities and areas.



Mark Wilkinson (PEPU), Mohammed Iqbal (Lord Mayor of Leeds), Stuart Pedder (Land Drainage) and Heather Pinches (PEPU) at the Royal Armouries Flood Fair in September 2006

PARKS & COUNTRYSIDE

Flood Defence Activities in 2006



For further information, please contact:
Fred Duff
Principal Area Manager (East)
Tel: (0113) 39 57428
Email: Fred.Duff@leeds.gov.uk

Parks and Countryside were given several important actions as a result of the flooding events in August 2004 and May 2005.

Parks and Countryside to **install a primary trash screen across Wyke Beck upstream of York Road** to stop the migration of large scale detritus downstream [29].

During previous flooding large quantities of debris were washed down the upper reaches of the Wyke Beck causing blockages and exacerbating flooding around the Dunhills area of Halton

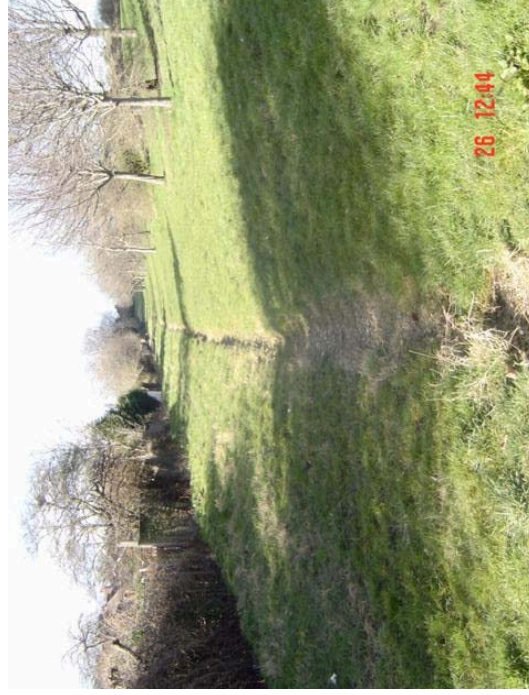
To remedy this, a trash screen was constructed and installed by Council contractors on the beck above York Road to catch large items of rubbish, such as supermarket trolleys. This screen is now subject to regular checks and has already work proved its worth in a subsequent flood event.

Install cut-off drains at King George V playing fields (behind Foundry Lane) and at the **Chantrys in Colton** to intercept surface run-off [31].

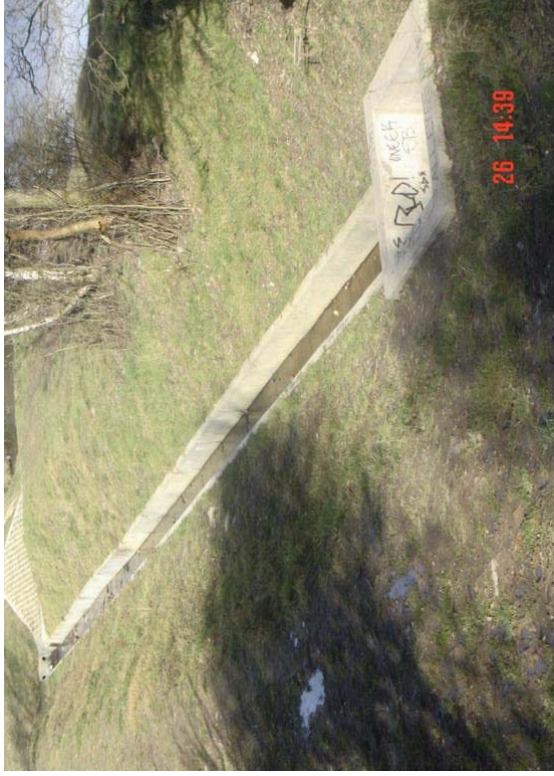
Drainage problems at two recreation sites were identified during previous flooding incidents. At Fearnville Playing Fields at Gipton a cut-off drain was designed and installed to intercept water run-off from the sports pitches and prevent this inundating houses on Foundry Lane. A similar piece of work was carried out on a green space at the Chantrys in Colton.



Wyke Beck trash screen (above) and Fearnville cut-off drain (below)



Parks & Countryside (2)



Further works related to the working group's agenda have also been carried out by Parks and Countryside. **Chippy's Pond** near Scholes is a large body of water with a weir surrounded by a grassed area which is a popular recreation area. Following a risk assessment exercise, work has been undertaken to construct a new dam and spillway as well as to regrade the embankments. New culverting has also been installed downstream to protect properties from flooding on the overflow culvert.

Water Asset Management Working Group

Overall Objective

To provide a forum for cross-departmental liaison on issues relating to the Council's water asset management responsibilities for reporting to elected members and senior officers.

Specific Aims

Corporate Consistency

- To provide a holistic approach to the identification and discussion of water issues within the Council focussed on the long-term needs of the city and community.

Legal Compliance

- To ensure that the Council's statutory and regulatory responsibilities in relation to water assets are clearly stated and understood by relevant departments and that the relevant services conform with these.

Policy Conformance

- To ensure that Council policy on maintaining water assets and responding to floods is understood by relevant departments and that relevant services conform with this.
- To review the Council's 'Policy on Maintaining Water Resources and Responding to Flood Incidents' on a regular basis to ensure this remains relevant.

Resilience and Continuous Improvement

- To maintain an up-to-date work programme seeking to ensure that the Council has plans, resources and investment strategies which fulfil Council policy, meet identified evolving needs and enhance the city's overall resilience to flooding.

Partnership Working

- To liaise on a regular, on-going basis with Council services and external partners on issues impacting upon water assets within the city to ensure that appropriate solutions are implemented.

Awareness Raising

- To report to members and senior officers on progress and relevant issues on a frequent basis to ensure that water issues receive adequate attention.

Adding Value

- To ensure that – where possible – water assets are better exploited as community resources rather than being seen as risks to be mitigated.

Application and Sufficiency of Resources

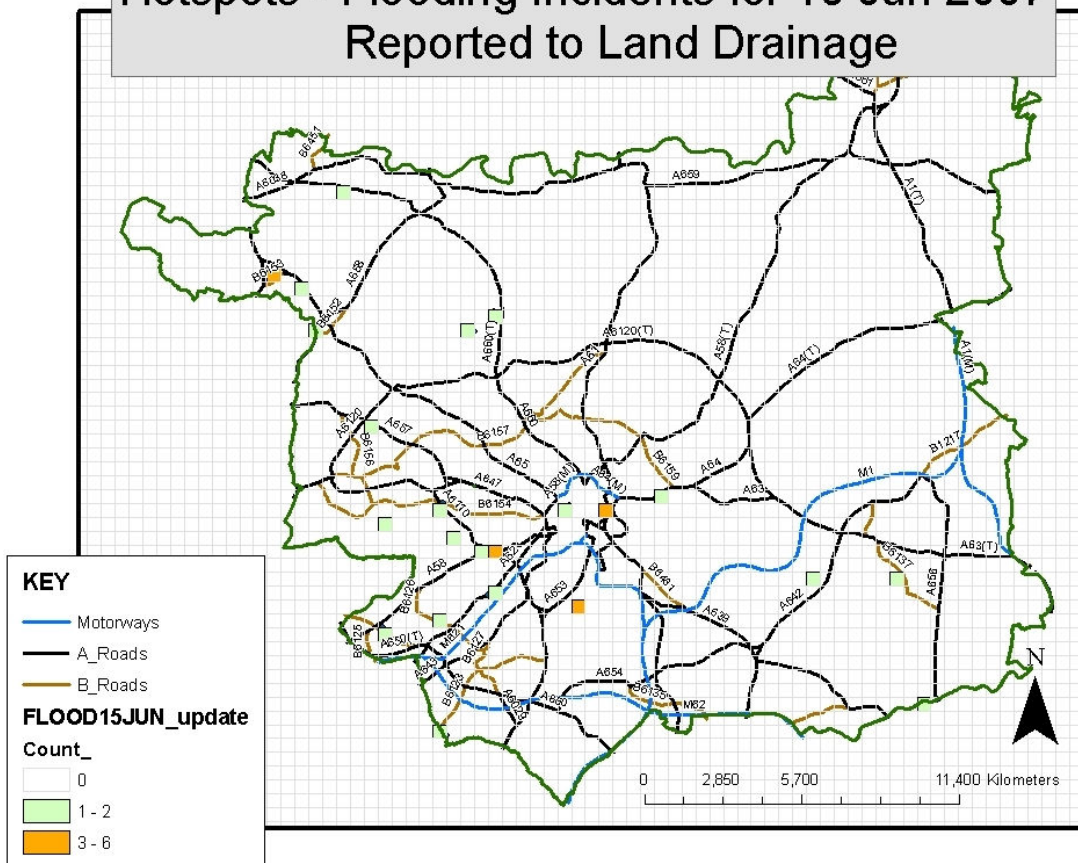
- To review the application of existing revenue budgets and ensure resources are being effectively applied.
- To provide advice to the Council on the appropriate level of investment required to fulfil our legal and policy commitments.

For further information about the work of the Water Asset Management Working Group, please contact the Group's Chair:

Richard Davies
Head of Risk and Emergency Planning
Tel: (0113) 24 74513
Email: Richard.Davies@leeds.gov.uk

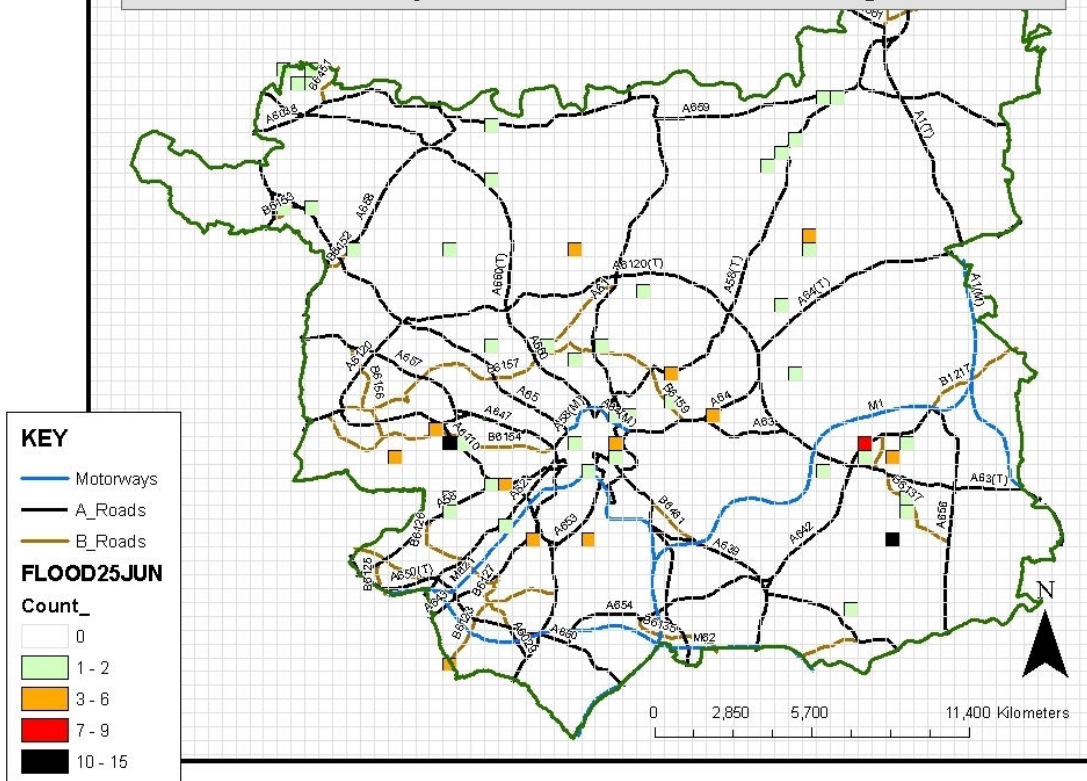
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Hotspots - Flooding Incidents for 15 Jun 2007 Reported to Land Drainage



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Hotspots - Flooding Incidents for 25 Jun 2007 Reported to Land Drainage



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Originator: David Feeney

Tel: 247 4539

Report of the Director of City Development

Executive Board

Date: 4 July 2007

Subject: Leeds Local Development Framework – Local Development Scheme

Electoral Wards Affected:

All

Ward Members consulted
(referred to in report)

Specific Implications For:

Equality and Diversity

Community Cohesion

Narrowing the Gap

Eligible for Call In

Not Eligible for Call In

(Details contained in the report)

EXECUTIVE SUMMARY

1. As part of the Local Development Framework (LDF), local authorities are required to submit a Local Development Scheme for approval by the Secretary of State. The Local Development Scheme is a three year rolling project plan, setting out the scope, milestones and timescales for the preparation of a series of Local Development Documents.
2. At Executive Board (14 March), members considered and were minded to approve the updated and revised Local Development Scheme for submission to the Secretary of State.
3. Executive Board in turn, resolved that the Local Development Scheme should be brought in to effect as from 1 June 2007, subject to a series of requirements being

met. These requirements related to anticipating the Secretary of State's response to the Scheme i.e. to approve or reject the Scheme or approve subject to amendments.

4. Following consideration by the Secretary of State, the City Council was notified (18 June) that the Scheme had been approved (and that the SoS did not intend to issue a direction under Section 15 (4) of the Planning and Compulsory Purchase Act 2004).
5. However, because the Secretary of State's response was received after the date Executive Board initially sought to bring the Scheme in to effect (1 June), Executive Board approval is again required.

1.0 Purpose Of This Report

1.1 See above

2.0 Background Information

2.1 See above

3.0 Main Issues

3.1 See above

4.0 Implications For Council Policy And Governance

4.1 See above

5.0 Legal And Resource Implications

5.1 See above

6.0 Conclusions

6.1 See above

7.0 Recommendations

7.1 With regard to the Local Development Scheme approved by Executive Board and submitted to the Secretary of State in March, following notification from the Secretary of State that he does not intend to issue a direction under Section 15 (4) of the Planning and Compulsory Purchase Act 2004, Executive Board are recommended to formally bring the Local Development Scheme into effect from 5 July 2007.

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