

A NEW DEPARTURE

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

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

LAND DRAINAGE SECTION

Flood Defence Activities in 2006



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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)



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

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)

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, Yeadon, Leeds | Inlet Grid | Inlet Grid to Watercourse Culvert | Monthly |

Bridges Section

BRIDGES SECTION

Flood Defence Activities in 2006



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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

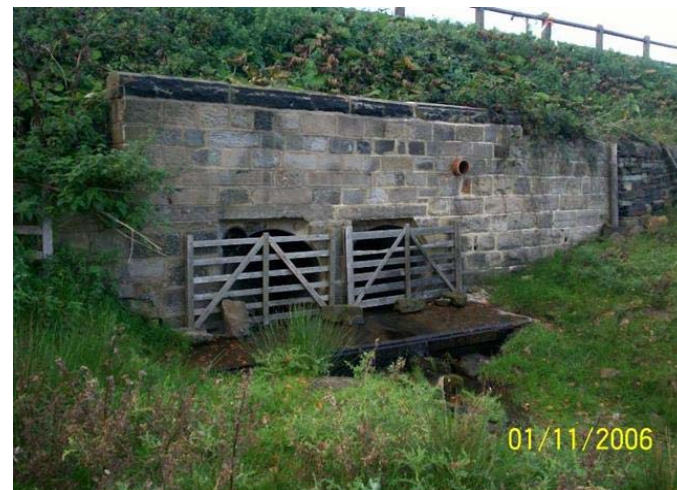
Discounting structures on the rivers Wharfe, Aire and Calder there are 350 highway culverts to be surveyed. Up to the end of February 2007 a total of **136 culverts have been surveyed** at a cost of **£20,000**.

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

ASSET MANAGEMENT SECTION

Flood Defence Activities in 2006

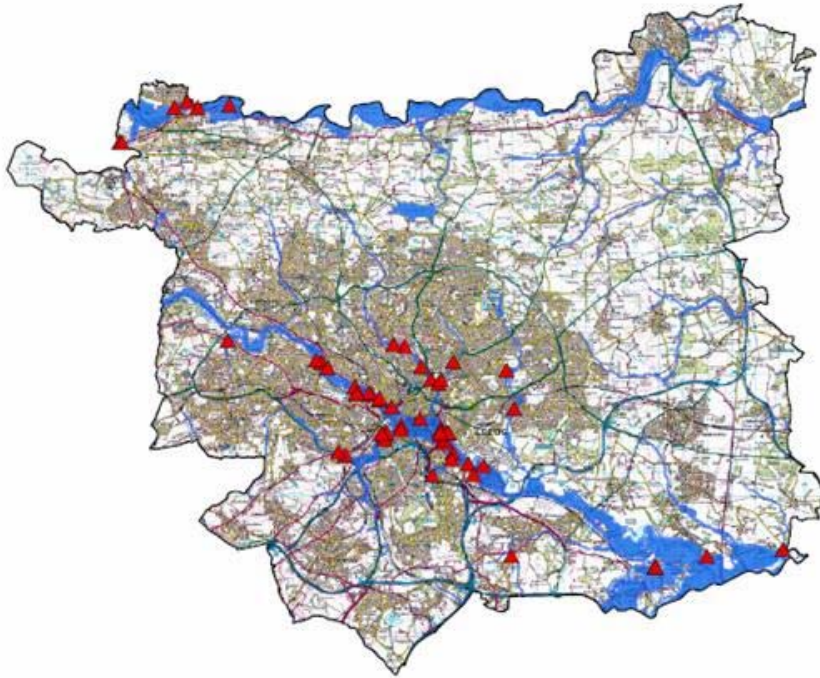


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Flood risk to Council assets

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.

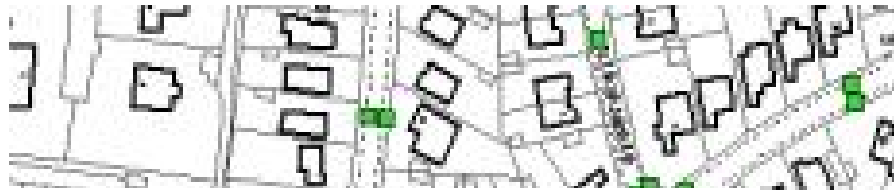
HIGHWAYS SERVICES

Flood Defence Activities in 2006



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Gully data collection



Typical hazard resulting from blocked gullies and drain connections



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

GIS record of freshly surveyed gully locations in West Garforth

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



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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

ENFORCEMENT SECTION

Flood Defence Activities in 2006



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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



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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



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Parks & Countryside (1)

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:

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