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# **Report of the Director of Development**

# **Executive Board**

Date: 17 May 2006

Subject: Report on Progress of Water Asset Management Working Group

Electoral Wards Affected:	Specific Implications For:
	Ethnic minorities
	Women
	Disabled people
Eligible for Call In	Not Eligible for Call In (Details contained in the report)

# **Executive Summary**

- 1. Following a series of flooding incidents affecting houses in Leeds in August 2004, it was agreed by Executive Board on 9 March 2005 that the Council should set-up a cross-departmental working group to: (i) review its approach to maintaining its water assets and responding to flooding incidents; and (ii) draw-up and implement proposals to respond to the issues identified.
- 2. The initial proposals were reported to Corporate Management Team in June 2005. This led to the release of funding to resource the initial recommendations in 2005/6 and this work has progressed well. The budget for 2006/7 includes an additional and recurring resource of £1.1m which will enable the full implementation of the remainder of the recommendations.

# 1.0 Purpose Of This Report

1.1 This report provides an update on the development and implementation of detailed proposals by the Water Asset Management Working Group (WAMWG) in response to major flooding incidents in Leeds in 2004 and 2005.

# 2.0 Background Information

- 2.1 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: (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.
- 2.2 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 quickly set-up, constituted of senior representatives from Land Drainage, Highways Services, Streetscene Services, Enforcement, Asset Management, Bridges Section, and Audit & Risk.
- 2.3 The initial proposals of the WAMWG were reported to and amended by Corporate Management Team in June 2005 and, following this, £503,380 was provided from contingency and asset management resources to begin the implementation of the recommendations in 2005/6. Additional full-year funding of £1.1 million per annum has been approved as part of the 2006/7 budget and will be provided for in future years.
- 2.4 In addition to earlier inquiries, a dedicated Flooding Scrutiny Commission was initiated in August 2005 to investigate flooding and drainage issues in Leeds. The WAMWG has provided both written evidence and verbal updates on its work to the Commission.

# 3.0 Main Issues

3.1 As a result of its detailed deliberations, the WAMWG developed 33 recommendations which aimed to address issues relating to the maintenance of the Council's water assets and the way in which it responds to flooding incidents. The following paragraphs provide an overview of the recommendations and a status report on the progress made towards their full implementation. A detailed action plan is attached as Appendix 2 for information.

#### **Management Oversight**

3.2 Reco. 2: The Director of Development agreed to act as senior management 'Drainage Champion' with Development Department identified as the 'lead department' for the coordination of drainage and watercourse-related issues within the Council. As a result of this, the Director has met regularly with WAMWG members to monitor progress and provided oversight to its activities. The Director of Development has also led senior management discussions with partners in the Environment Agency and Yorkshire Water.

# Maintenance of Council-owned Watercourses, Lakes and Dams

- 3.4 Reco. 3: Land Drainage has procured the services of a specialist major contractor to undertake preventative and reactive maintenance of watercourses in fulfillment of the Council's riparian ownership responsibilities. This contract is in place and work is commissioned and directed by Land Drainage on the basis of identified priorities.
- 3.5 Reco. 4: Land Drainage is increasing its capacity to undertake work and provide advice relating to the assessment of and response to flood risk arising from the existing drainage

infrastructure as well as new developments identified through the planning process by providing four additional posts. The recruitment process is in progress.

- 3.6 Reco. 5: It is vital that all new significant developments fully consider flood risks and encompass sustainable drainage funded by developers where possible, so that the Council is able to reduce or mitigate the risk of flooding. This will be aided by greater capacity in Land Drainage, but Development is also engaged in an on-going dialogue with Yorkshire Water and developers on the need for sustainable drainage solutions in new developments. A comprehensive Flood Risk Management Strategy for the whole Leeds district will shortly be procured by Development Department.
- 3.7 Recos. 6/14/23/24: Actions are in train for the identification and recording of the location, ownership and vulnerabilities/risks relating to watercourses, highway drainage, culverts, lakes and reservoirs. Data collected is being recorded in GIS for use in more effectively responding to flooding, ensuring more effective maintenance prioritisation, and informing the development of capital investment programmes (e.g. Highways Asset Management Plan) and emergency plans, and assessing how assets such as reservoirs and lakes can be better used for recreational purposes.
- 3.8 Reco. 25: Land Drainage undertook a tendering exercise for the development of a dam breach impact assessment for Waterloo Lake at Roundhay Park and this work has been procured. Officers held an initial meeting with the successful consultant and work is underway. The Head of Risk and Emergency Planning is also developing a national template document on behalf of DEFRA for the off-site planning requirements of a dam breach as part of its guidance on implementing the Water Act (2004).

# **Emergency Response**

- 3.9 Reco. 10: The contract procured by Land Drainage for maintaining watercourses also includes provision for call-out by the Peace and Emergency Planning Unit (PEPU) to respond to emergencies on a 24-hour basis (see 3.4 above).
- 3.10 Recos. 7/12/13: PEPU is working with partner agencies in the West Yorkshire Flooding sub-group of the West Yorkshire Resilience Forum (WYRF) to progress several initiatives to benefit communities, including: targeted flood fairs and public information campaigns; proposals for the rapid deployment of resources to mitigate or recover from the effects of flooding; enhanced call-handling of flood-related calls by clearer identification of the sources of flooding and who should be responding; and the sharing of GIS data on the location of each organisation's assets.
- 3.11 Reco. 9: PEPU developed a detailed protocol for the co-ordination and response to flooding incidents with its external partners which clearly sets out roles and responsibilities for all forms of flooding and trigger points at which agencies would be expected to respond. This was ratified by senior officers of the relevant organisations in December 2005. PEPU is currently revising the Council's Flooding Plan to incorporate these changes and it is planned to exercise the new arrangements in 2006-7.
- 3.12 Reco. 11: Officers have revised the approach to the provision of sandbags in flooding. The council will continue to maintain limited stocks of filled sandbags, but Highways Services has also purchased sandbag hoppers for each Highways depot to enable the rapid filling of further sandbags at the time of need.

#### **Highways and Street Cleansing**

3.13 Reco. 15: Highway Services has identified – together with information provided by Streetscene Services, PEPU and Land Drainage - a range of 'hot spots' for enhanced maintenance work and these locations are now receiving more frequent attention.

- 3.14 Reco. 16: Streetscene Services has leased two extra vehicles and recruited additional staff to enhance their gully-cleaning arrangements on an on-going basis. Formal out-of-hours call-out arrangements for flooding responses are being developed, but interim arrangements have been introduced using existing service provision.
- 3.15 Recos. 17/18: Highway Services has almost completed a programme of data gathering, mapping the location of the drainage infrastructure, and risk-assessing highway culverts less than 900mm diameter in order to ensure that cleaning occurs in the most vulnerable areas. Around 630 highways culverts have now been surveyed and recorded in GIS and the risks associated with these have been assessed for the potential impact (e.g. on properties). A report is being prepared to highlight locations most at risk and requiring maintenance or further work.
- 3.16 Recos. 19/20: Bridges Section has engaged in a programme of data gathering and risk assessment for large highway culverts and bridges susceptible to blockage for remedial action, reactive clearing, and to inform a capital programme looking to upgrade these on a priority basis. Officers have identified large culverts requiring enhanced cleaning and implemented a revised maintenance regime for these. The data-gathering exercise for culverts and bridges susceptible to flooding due to insufficient capacity is in progress and appropriate links are being made with work on the Highways Asset Management Plan.

# **Partnership Working**

3.17 Recos. 26/27: the Director of Development, together with representatives of Land Drainage and Emergency Planning, is meeting regularly with senior representatives of Yorkshire Water (YWS) and the Environment Agency (EA) to discuss issues of mutual concern. A technical forum of practitioners from the Council, EA and YWS has been established to discuss detailed issues of mutual concern and is meeting regularly.

#### **Specific Locations**

- 3.18 Reco. 28: In terms of developing a holistic approach to flood-alleviation on the Wyke Beck, it should be noted that the EA has responsibility for enforcement from April 2006 and has commissioned consultants to build a full hydraulic and hydrological model of the catchment using aerial surveys to map the topography. The modelling is now complete and the EA has received a draft final report. The EA will now determine whether remedial works are required. There have been several other developments of note. Firstly, water level monitoring telemetry (i.e. remote measuring) has been installed at South Parkway Approach at Seacroft. Secondly, YWS is mothballing their 'new' storage tank at Wykebeck Valley Road which was subject to controversy and is building a new high volume storage tank at the junction of Foundry Lane and Oakwood Lane. Construction is expected to begin at the end of March. Thirdly, the East & South-East Leeds (EASEL) programme will include substantial changes to drainage systems and the Wyke Beck and the WAMWG intends to ensure that appropriate links are in place with the EA and others.
- 3.19 Recos. 29/30/31: Land Drainage has implemented an enhanced inspection regime along the Wyke Beck and arranged for a trash screen to be installed upstream of York Road. Learning and Leisure has also installed cut-off drains to intercept surface run-off at King George V playing fields at Gipton and in the Chantrys area of Colton. Land Drainage has also commissioned a scale model of the Farnley Wood Beck channel and culvert in the vicinity of Old Road at Churwell in order to assess the flood risk to Old Close.

#### Flytipping and Enforcement

3.20 Reco. 32: In December 2005 Executive Board approved a report from Enforcement to adopt legal powers to place more responsibility for abandoned trolleys upon their owners and these are now in force. Enforcement has also identified a company which will 'sweep' the city and watercourses to identify and retrieve shopping trolleys at no cost to

the Council. It will respond to trolley finds on a 24 hour basis through a contact number. Finally, ASDA at Killingbeck has installed a secure trolley system (with electronic wheel locking) to prevent these being removed from the site.

# 4.0 Implications For Council Policy And Governance

4.1 Reco. 1: The WAMWG has developed - with advice from Legal Services - a draft policy statement on 'Maintaining Water Resources and Responding to Flood Incidents' (see Appendix 1). The purpose of this policy is to clarify and define the scope of the Council's roles and responsibilities in terms of 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. The adoption of this policy will help senior officers and members to understand better what the council should or should not undertake, provide an appropriate profile for water asset management within the Council's portfolio of responsibilities and provide a firmer underpinning for the resourcing of this area. The policy statement has the support of senior management and is now presented for the approval of Executive Board.

# 5.0 Legal And Resource Implications

- There are a range of legal implications arising from the Council's ownership of water assets, but most of these were already in existence prior to this initiative. The policy statement seeks to make these more explicit. Further responsibilities are likely to arise for the Council in relation to arrangements for large bodies of water as a result of impending guidance for the implementation of the Water Act (2004). The WAMWG will ensure that these issues are considered and addressed as part of its on-going work.
- As noted in paragraph 2.3, resources to the tune of £503,380 were provided from contingency and asset management resources to begin implementing the recommendations in 2005/6. Furthermore, full-year funding of £1.1 million per annum has been approved as part of the 2006/7 budget and will be provided for in future years. The on-going work of the group is likely to give rise to the need for further investment as the implications of its data collection and risk assessment become clearer (e.g. in relation to the Highways Asset Management Plan). This will be reported as this information becomes available.

#### 6.0 Conclusions

Overall, the information provided demonstrates that the WAMWG has made excellent progress in both developing appropriate solutions addressing lessons learned, obtaining funding to deliver these and in implementing the recommendations. This work will not be completed overnight and necessitates an on-going, long-term funding commitment and focus from the Council to ensure that it delivers on its statutory, common law and other responsibilities.

#### 7.0 Recommendations

- 7.1 Executive Board is requested to note the work and progress of the WAMWG to-date and to support its on-going work programme from which further recommendations with budgetary implications may arise.
- 7.2 Executive Board is also requested to approve the attached Policy Statement 'Maintaining Water Resources and Responding to Flood Incidents' as confirmation of its commitment to this important area of work.

# POLICY ON MAINTAINING WATER RESOURCES AND RESPONDING TO FLOOD INCIDENTS: A GUIDE FOR COUNCIL DEPARTMENTS

# Aim of the Policy

1. The purpose of this policy is to clarify and define the scope of the Council's roles and responsibilities in relation to maintaining water resources, assessing and mitigating the risks arising, responding to related flooding incidents and supporting the communities affected by these.

# **Background**

- 2. Every year Leeds experiences a number of flooding incidents affecting houses, roads and other infrastructure all of which may significantly impact residents' lives. Such events may arise from unavoidable severe weather or from problems relating to the built environment in the shape of design deficiencies or poor maintenance. Whatever the origins it is apparent that that the frequency and intensity of flooding in Leeds is increasing and is likely to lead to additional urban flooding and drainage problems.<sup>1</sup>
- 3. Although flooding problems are popularly associated with rivers, the majority of flooding incidents and the damage caused in Leeds derive from *non-main river* sources. For the purposes of this policy this is taken to mean becks, sewers, culverts, highway gullies and drains, surface water run-off, as well as Council-owned dams, lakes and reservoirs.

#### **Roles and Responsibilities**

- 4. The effective treatment and mitigation of *non-main river* flooding risks is hindered by the number of organisations with a role in maintaining 'water resources' and in planning and responding to flooding resulting from these. These include the Council (enforcement on ordinary watercourses), Environment Agency (enforcement on reservoirs covered by the Reservoirs Act), Yorkshire Water (public sewers, reservoirs) and private landowners.
- 5. The Council not only has ownership responsibilities relating to highway drains gullies, culverts, Council-owned becks and lakes), but also relating to enforcement of legal duties on third parties. Annex 1 sets out these legal responsibilities in detail.

#### **Legal Responsibilities for Enforcement**

- 6. Under the Land Drainage Act 1991, the Council as Land Drainage Authority has powers to require remedial works to becks, or to undertake these and charge costs to defaulting owners. These powers are exercised by Development Department's Land Drainage Section which undertakes a becks inspection programme in line with our Flood Defence Policy Statement.
- 7. It is the Council's policy that private landowners and householders with riparian ownership responsibilities should undertake maintenance in line with the requirements of common law. To this end, the Council will promote the need for compliance by third parties through the provision of public information and advice. In addition, the Council may use its permissive powers to undertake necessary work and recharge any costs incurred as appropriate to the circumstances where it is established that:
  - u the individuals concerned are unable to perform this duty due to unique circumstances; or
  - no owner is registered or can be found for land with riparian responsibilities

<sup>&</sup>lt;sup>1</sup> See 'Increasing Flood Risks' in "Warming Up the Region: Yorkshire and Humber Climate Change Impact Scoping Study", Yorkshire and Humber Assembly, 2002, pp.10-11.

# **Legal Responsibilities for Maintenance and Mitigation**

- 8. As a major landowner with *riparian* (riverbank) ownership responsibilities, the Council has *common law* duties to maintain its watercourses in an acceptable condition. At present, such responsibilities are vested in a range of departments and Council-owned bodies.
- 9. The Council has a number of other duties derived from statute which relate to water resource maintenance including:
  - as the Highway Authority (Highways Act 1980), the Council has responsibility for maintaining the highway of which the highway drains, gullies, culverts and watercourses under bridges form part.
  - as the owner of highways bridges and culverts, the Council has a responsibility for ensuring that related watercourses are kept clear of obstructions under the Public Health Act 1936.
  - as the owner of a range of lakes and dams, the Council has responsibilities under the Reservoirs Act 1975.
- 10. It is the Council's policy that all Council-owned water resources should be subject to regular risk assessments and maintained in line with these assessments. To enable this to happen, the Council will: (i) ensure the provision of an adequately trained and resourced capability to maintain its water assets; (ii) develop and maintain full records of the drainage systems forming part of the highway, Council-owned watercourses and culverts as well as lakes and reservoirs. Particular emphasis is given to the need for mapping known flooding 'hotspots'.
- 11. The implementation of water asset maintenance capabilities does not absolve land-owning departments from their duties to undertake grounds maintenance on land adjacent to watercourses.

# Responsibilities for Flood Prevention and Emergency Response

- 12. The Council's obligations as an operating authority for flood defence on ordinary watercourses is set out in its Flood Defence Policy Statement.
- 13. Under the Civil Contingencies Act (2004), the Council has several statutory duties impinging on potential flooding, including:
  - □ to assess the risk of an emergency either occurring or making it necessary for them to perform their functions;
  - □ to maintain plans to enable them to perform their functions in an emergency necessary to prevent, reduce, control, mitigate its effects;
  - maintain arrangements to warn the public and provide public advice;
  - co-operate and share information with other responding organisations.

In line with these duties, it is Council policy to maintain or have access to an adequately trained and resourced capability to be able to respond to water-related incidents at any time of the day whether related to watercourses, culverts or highway drains or gullies. The Council will also ensure that generic and specific contingency plans are in place to mitigate identified flood risks.

14. In addition to its statutory duties in relation to flood prevention and response, it is Council policy - on a *discretionary* basis - to perform a number of additional non-statutory roles to assist residents and communities affected by flooding in restoring their lives to normality. The cost of these efforts may be recharged where this is deemed appropriate.

# Sandbags

15. The Council may provide sandbags to householders and other parties to reduce the risk of property damage during major flooding. To this end it maintains at Highways depots a limited number of filled sandbags together with sandbag-filling machines and a strategic stock of

sandbags and sand for swift deployment. To ensure they are deployed to maximum effect, sandbags are issued in the following order:

- □ Vulnerable individuals or establishments:
- □ Residential properties; and
- Business or other non-residential properties.

#### **Environmental Health**

16. Environmental Health has a key role in protecting the health, safety and environment of residents and communities affected by flooding. Following a flood, officers will ensure that appropriate advice and guidance is provided to residents on possible contamination and cleaning. In addition, the Council may also provide a sampling service to determine whether properties are contaminated.

#### Provision of Manual Labour and Other Resources

- 17. It is Council policy that on a *discretionary* basis staff from Council departments may be deployed following major flooding to support residents in cleaning their houses, removing damaged household items or debris from their homes and gardens or the banks of watercourses for which they have responsibility.
- 18. It is also Council policy that on a *discretionary* basis Council departments may provide cleaning materials for use by residents to aid them in the clean-up and organise skips for the disposal of contaminated goods.
- 19. The need to provide discretionary services relates to the specific circumstances of an incident, but the wider the impact on a community the more likely these are to be needed. However, even in these circumstances, the Council will prioritise their provision on the basis of vulnerability and need. This policy does not imply the need for the Council to offer the same discretionary services in smaller, one-off types of incidents which can be effectively handled by the individual householder(s) affected.

# THE COUNCIL'S LEGAL RESPONSIBILITIES RELATING TO WATER MANAGEMENT

The Council's responsibilities/liabilities in relation to flooding and other water issues arises from many sources an outline of the most relevant being:

# Part 1 - Common Law Responsibilities

- 1. As a riparian owner arising out of its own land holdings of land adjacent to watercourses. Rights arise by virtue of common law and include:
  - □ the right to receive and the right of flow of water
  - subject to certain restrictions, the right to use the water
  - a right to build a defence against flooding provided it is not built in the channel so as to cause obstruction.
- 2. Liabilities of Riparian Owners include:
  - □ liability for flooding/escape of water in circumstances which amount to nuisance or negligence on the part of the owner
  - □ liability for damage which is the natural consequence of the escape or overflow of water (brought or collected on land for the owners use) under the Rule in Rylands and Fletcher (but this does not apply to water naturally on the land)
  - not to use the watercourse in such a way as to interfere with the rights of someone further downstream or pollute the water
  - □ A riparian owner is under no common law duty to clear a watercourse which becomes silted or obstructed through natural causes, but under the Land Drainage Act 1991 a local authority may require the riparian owner to carry out such works
- 3. Flood defence rests primarily with the riparian owner, but a local authority has permissive powers (but not in connection with a main river) to carry out flood defence works under the Land Drainage Act 1991.

#### Part 2. Statutory responsibilities and role of Leeds City Council

# **Reservoirs Act 1975**

4. The local authority has the duties of an undertaker where it is the owner of large raised reservoirs registered under the Act. The Council has a number of such reservoirs (e.g. Waterloo Lake, Yeadon Tarn, and Fenton Dam). It is also responsible for a significant number of sizeable lakes and ponds (e.g. Gledhow Lake, Paul's Pond, and Golden Acre Park Lake) that are not large enough to be registered. In respect of these the Council will have a duty of care in common law and would be liable (see Rylands v Fletcher) if a failure caused injury to third parties or their property.

# **Land Drainage Act 1991**

- 7. This Act makes reference to Internal Drainage Boards which have certain operational and regulatory powers. Internal Drainage Boards are in operation only in a small area of Leeds, near Wetherby.
- 8. Section 14 confers on the local authority permissive powers to maintain and improve ordinary watercourses and construct new works for the purpose of preventing flooding or mitigating any damage caused by flooding in their area.
- 9. Section 20 confers powers on a local authority to undertake drainage work for any person, but at that persons expense.
- 10. A Local Authority has powers to secure a proper flow under Section 25 and to serve notice on persons requiring them to carry out necessary works to maintain the flow of "ordinary" watercourses.
- 11. The above may require consent/consultation with the Environment Agency.
- 12. Section 66 enables a local authority to make bylaws to secure the efficient working of the drainage system in its area subject to the provisions within the Act (see below).

#### **Public Health Act 1936**

- 13. Section 259 confers statutory nuisance powers in relation to polluted watercourses which cause a nuisance or give rise to conditions prejudicial to health
- 14. Section 260 confers statutory powers to execute works, including maintenance or improvement works, in relation to drainage, where filth, stagnant waters or matter likely to be prejudicial to health or a nuisance.
- 15. Section 262 enables the local authority to require a developer to cover etc a culvert/watercourse in relation to land to be developed.
- 16. Section 263 makes it unlawful to cover over or culvert and watercourse without the agreement of the local authority to plans and sections.
- 17. Section 264 enables a local authority to require a landowner to repair cleans etc culverts in watercourses on his land.

# **Highways Act 1980**

17. Under the Act Highway Authorities have power to drain water from highways. Section 41 places a duty on the highway authority to reasonably maintain and repair the highway so that it is free of danger to users.

# Road Traffic Acts, Transport Act 2000, New Roads and Streetworks Act 1991

19. These Acts also have an effect on water management.

#### **Local Government Act 1972**

20. Section 138 enables local authorities to incur expenditure to avert alleviate or eradicate the effects or potential effects of any emergency or disaster - but these powers cannot be used as alternative powers to those available under Section 14 of the Land Drainage Act.

#### **Environment Act 1995**

21. This places a duty on the Environment Agency to exercise a supervision in relation to flood defence generally, and to provide a 24 hour flood warning service.

# **Planning Guidance**

- 22. Planning Policy Guidance Note 25 (PPG25, *Development and Flood Risk*) states that flood risk should be taken into account by planning authorities in the preparation of development plans/determination of planning applications.
- 23. A planning authority should ensure the provisions of adequate drainage arrangements in a new development.

# Local Acts/Bylaws

24. Leeds has enacted bylaws in relation to Land Drainage (under Section 66 of the Land Drainage Act 1991). These give the local authority the power to prevent certain activities that might interfere with the condition or free flow of watercourses.

# **OVERVIEW OF COUNCIL WATER RESPONSIBILITIES**

TYPE OF WATER RESOURCE	SIZE OF COUNCIL RESPONSIBILITIES	EXAMPLES OF RESOURCE	COUNCIL RESPONSIBILITIES	DEPARTMENTS INVOLVED	RECORDS AVAILABLE
Becks and watercourses	127 km	Wyke Beck Wortley Beck Meanwood/Sheepscar Beck Farnley Wood Beck Bagley Beck	As a riparian owner, ensuring that there is no impediment to the free flow of water.	ALMOs Development Education Leeds Learning & Leisure	Partial GIS record held by Land Drainage section.
Highway drains and culverts	450 km		Ensuring highway drains and culverts are maintained to standards that minimise the risk of highway flooding.	Highway Services (City Services)	136 km of highway drain recorded in GIS format by Land Drainage.
Highway Culvert Crossings <900mm	703 culverts		As above.	Highway Services (City Services)	(included in the above)
Highway Culvert Crossings >900mm Highway Bridges	153 culverts 118 bridges	Wyke Beck (A64) Easterly Road Harewood Bridge Wyke Bridge (Wyke beck) Globe Road Bridge (Hol	Ensuring that the culverts and bridges are kept clear of obstructions.	Bridges Section (Development)	Locations of bridges and culverts recorded in GIS. Additional information in Leeds Bridges Database
Lakes and reservoirs < 25,000m3	not known.	beck) Golden Acre Lake & Paul's Pond (Bramhope) Chippy's Quarry (Scholes), Farnley Hall Lake Middleton Park Lake, Woodhall Lake, Pudsey	As a responsible body, ensuring that the lakes are maintained to a high standard to avoid unacceptable risks to the local community.	Learning & Leisure	Records are inconsistent and need to be brought up to a coherent standard.
Lakes and reservoirs > 25,000m3	3	Waterloo Lake Yeadon Tarn Fenton Dam	As reservoir undertaker under the Reservoirs Act 1975, ensuring that the integrity of the reservoir is maintained and that all recommendations made by the Inspecting Engineer in the interests of safety are carried out.	Learning & Leisure	Statutory Form of Record is held by the responsible department.