

Working together to manage local flood risk

LANDFORM event: E11502

Report of a workshop organised by LANDFORM held at Greater London Authority, City Hall, The Queen's Walk, London SE1 2AA, on 17th May 2011.

Speakers	Peter Davis Ted Edwards Kevin Reid Steve Wragg	Leeds City Council Canterbury City Council Greater London Authority Hull City Council
Chairman	Fola Ogunyoye	Royal Haskoning

INTRODUCTION

This event explored the benefits and practicalities of local authorities forming partnerships to tackle flood risks. Four speakers who are already taking part in such relationships shared their experience of how various partnerships operate, their structure and the activities they are able to undertake. With cooperation and local partnerships being key themes of the Flood and Water Management Act and the Localism Bill this may be the future for all local authorities.

THE ISSUES

With current pressures on local authority spending and resources, partnerships offer a way to greatly increase efficiency by sharing information, skills, personnel and other resources. There are added benefits too, including ability to pool specialist staff with local knowledge, effective engagement with other organisations, such as the Environment Agency and water companies and cooperation across authority boundaries.

LEARNING POINTS

1. Partnerships enable a pooling of information and knowledge.
2. Pooling monetary resources can save money, for example, on shared specialist equipment.
3. Creating roles within the partnership enables sharing of specialist expertise between the local authorities. Forming a joint training scheme makes development, and succession to such roles easier and staff retention better.
4. Within the partnership, good communication is vital to get all stakeholders interested. These can include planners, emergency planners, local leisure centres, etc.
5. Partnerships between local authorities that share hydrologic systems and geographic features is logical, for example between neighbouring London Boroughs or Hull Council and East Riding and Yorkshire Council.
6. Where water companies are prepared to get involved, there are benefits to them as well as the local authorities.
7. Sharing resources means that engineering skills can be kept in-house. Local knowledge and experience can then be accumulated and this has its own benefits.
8. Trust must exist within the partnership. Often this is formalised with a memorandum of understanding.
9. Good communication between partners but also within local authorities is important to minimising and managing flood risk.

FOLA OGUNYOYE, ROYAL HASKONING

Fola introduced the event as above, stressing that individual authorities working in isolation is unlikely to cost effectively deliver the flood risk management required.

PETER DAVIS, LEEDS CITY COUNCIL

The Yorkshire and Humber Learning and Action Alliance

Peter is Flood Risk Manager at Leeds City Council. He has worked in Land Drainage/Flood Risk Management for over 15 years and was instrumental in setting up a West Yorkshire Land Drainage Group around 10 years ago. In January 2009 he was one of the founder members of the Yorkshire & Humber Learning Alliance.

Rotherham, Bradford and Wakefield Councils set up the Yorkshire and Humber Learning Action Alliance facilitated by EU project funding where a teaching tool and learning process be developed with the aim of spreading knowledge of flood risk across the region. The inaugural meeting was held in January 2009; Peter was a speaker and there were 80 attendees. The membership is now 150 and includes representatives from local authorities, the Environment Agency, water companies, consultants, universities, internal drainage boards and more. It is open to all to actively participate or simply receive information via email.

It is important that representation comes from a variety of disciplines; flood risk is not an issue for Land Drainage departments only. There needs to be engagement throughout local authorities. Planning departments, environmental health, highways and, when an emergency occurs and a place for evacuees is required, leisure centres all have a part to play in managing risks associated with flooding.

There is a lot of information and guidance available from Government and other sources. The Alliance enables sharing and spreads the burden of digesting all of this. A collective understanding of flooding is being developed, with data being shared. Joint appreciation of responsibilities and funding arrangement is emerging. Combined solutions are both efficient and effective use of resource. No one organisation can manage flood risk in its entirety. A multi-agency approach is the only way.

Having discussed new challenges, including the Flood and Water Management Act 2010, a number of working groups were set up:

- investigations
- funding
- communications and public liaison – good external communications is vital
- the Local Strategy
- legislative processes
- SuDS – an important issue
- data management and GIS – there is funding for the EA to establish a national platform

Q&A

Q? Yours is a unitary authority. How does the alliance differ from other unitary functions?

A The Learning and Action Alliance is a loose group, open to anyone. South Yorkshire, for example, has a group with much stricter membership. Other partnerships include a sub-regional group, set-up following the Pitt Review. Leeds City Council has other working relationships but their meetings are more infrequent and deal with corporate

level issues. Following the Pitt Review, when approached to work with 22 local authorities, the EA and Yorkshire Water were unable to meet such a commitment. Four groupings were formed, for North, South and West Yorkshire and East Riding and the EA and water company were able to resource dealings with these 4 groups.

TED EDWARDS, CANTERBURY CITY COUNCIL

Working with the community on flood risk

Ted is Engineering Manager, Canterbury City Council. He has a broad civil engineering experience having worked on such diverse projects as Milton Keynes new city, motorway construction in London and underground railway in Hong Kong. He joined the Council in 1986 working mainly on coastal projects and is currently the engineering manager responsible for sea defences, drainage, structures and geotechnics. Ted has a dislike of the sea and waterborne activities, which he considers is a good qualification for a coastal engineer in that he aims to keep the sea well away from him.

The East Kent Engineering Partnership was formally set up in June 2007 between the district councils of Canterbury, Dover, Shepway, Swale and Thanet, each with around 20km of coast to look after. The arrangement is semi-formal; they work together while maintaining their own staff and budgets. The Partnership has developed from sharing information to building coastal defences together. Inland flooding is less of a concern though it does occur, with some houses being flooded for up to 6 months in 2000.

Partnership Working

Regular partnership meetings are held to maintain progress, review working arrangements. The EA and Kent County Council representatives attend.

Works Programmes are used to assess staffing levels, allocate resource across the authorities and investigate joint procurement. Importantly, they review the Medium Term Plan schemes to keep them realistic.

Authority Skills – capability is shared and maintained across the partnership. Training and development is a shared responsibility and activity, and this saves money.

Shared documentation includes standard contract documents, specifications, drawings and ancillary information. These are prepared and used by all. It is also possible to arrange for just one member of staff from the partnership to attend important seminars and consultation events, feed back to everyone else and thereby save time.

All types of engineering and related projects are carried out in partnership. Not just coastal projects, but structural, geotechnical, drainage, infrastructure, amenities, and surveying are partnership projects. Kent has the longest defended coast of any English county, with the greatest value of assets being protected.

There are joint select tender lists of contractors for all medium and large schemes across the partnership for the next 4 years. Select lists are also available for use by other South East Coastal Group (SECG) members. This eases the challenge of getting the right person for the right job.

Examples of Partnership Projects

- Warden Bay Rock Revetment – a £0.6M project to ease coastal erosion
- Milton Creek Landscape Gateway Project, £2.2M; this is a park on a landfill site

- Ramsgate Harbour Floating Breakwater and pontoon, worth £1M, will service the London Array wind farm
- Deal Skateboard Park, £0.25M - novel concrete techniques were used to provide Canterbury with this facility. Dover requested help to do the same
- Kingsdown Beach Management costs £0.1M per annum but sharing contractors has saved money
- Coronation Parade Coast Protection cost £4.5M designed in-house by Shepway but used expertise on coastal slopes from Canterbury
- Strategic monitoring phases 1 & 2 (£4.2M) – a coastal monitoring has been a joint project for 9 years, allowing sharing of specialist equipment and surveyors.

Partnership Benefits

Some benefits are hard to evaluate monetarily but it is estimated that indirect benefits amount to £25K per annum on staff time. Savings include avoidance of duplicated effort on consultations and attending important seminars, sharing documentation, application procedures, reuse of previous work and standards. Partners have the ability to promote in-house training. A broad range of experience allows right person for each job, whilst using local knowledge. The setting up of the select list of contractors is efficient.

Direct benefits have included saving £60K per annum on strategic monitoring and £35K per annum on small projects by using in-house staff instead of consultants. External consultants tend to be necessary for complex projects but in-house staff rates are 65 percent the cost. £700K over 3 years saved on major capital projects with in-house design and contract fees averaging 5 percent compared to consultants fees of around 10 percent. More efficient design is achieved due to local knowledge of conditions and understanding of future maintenance regimes.

Examples

Whitstable Coast Protection Scheme is an example of the financial benefits of the partnership:

- Contract sum £6712K
- Design and contract fees £316K
- Fees 4.7% saving £356k

New timber groyne design, including recycled timber use resulted in 41% less timber, saving £223K. The 1980's groynes were unpopular with the public, deemed unsightly and inconveniently positioned.

Extending the Partnership

There is scope to extend the partnership to include other members of the SECG. There are already collaborations with Hastings and Eastbourne, and discussions with Kent County Council. SECG projects include Hastings Rock Groyne and Eastbourne Beach Management.

Further opportunities exist to assist the Environment Agency, particularly with smaller capital projects. The partnership is able to offer the EA high quality expertise at a cheaper rate. There are, though, obstructions in the EA procurement process.

Q&A

Q? How does the partnership actually work?

A There is a memorandum of understanding between chief executives to work together, making savings where they can - it is a fairly broad remit. Beyond that, there is great deal of trust between lower levels of management.

KEVIN REID, GREATER LONDON AUTHORITY

Drain London

Kevin, Principal Programme Manager, is based at City Hall, working for the GLA. He is the project manager for the Drain London project. He has worked in town planning in London for 20 years, often with a particular focus on a range of water related subjects and issues.

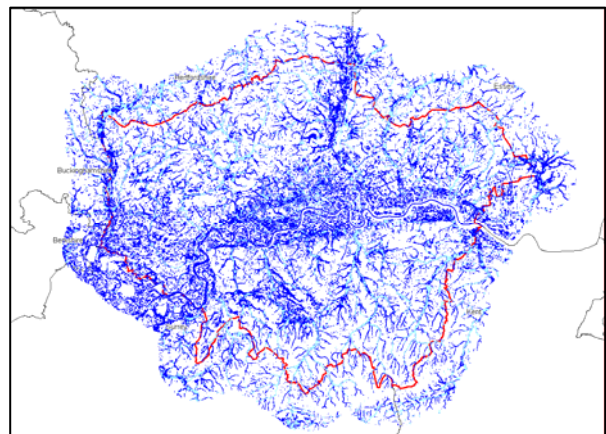
Drain London started in 2007, prior to the Flood and Water Management Act 2010, but the GLA recognised that there was great risk from surface water and collaboration was needed to tackle this. Since 2010, there will be more and stronger partnerships to come.



Drain London - Why?

The National Rank Order of Settlements (EA, August 2009) showed that in the top 15 most susceptible places to surface water flooding, there were 14 London Boroughs. In the top 50, 28 of London's 33 boroughs appear. The average borough has around 200,000 people, but the largest have more than 300,000.

The Regional Flood Risk Appraisal identified surface water risk as poorly understood and not well recorded. This draft report was published in May 2007 and was followed by devastating flooding elsewhere in the UK. Similar rainfall in London, at that time, would have caused enormous problems. This generated enthusiasm but the GLA held back the final report until 2009 when Government had reviewed and responded to the report.



The Environment Agency's (EA) national study showed the areas that would be affected by once in 200 year storms. London is shown here:

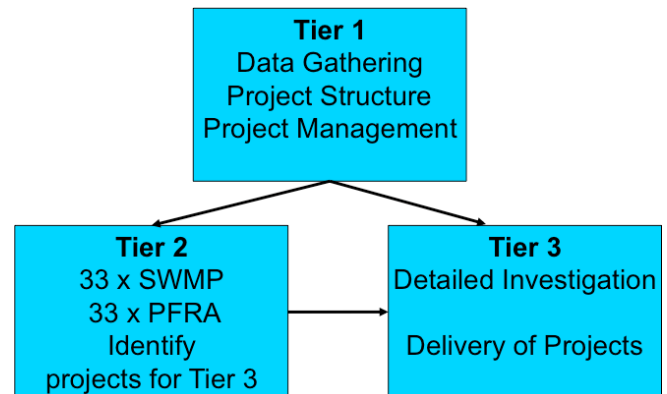
Who

Drain London was kicked off by the GLA but it was instigated by a number of organisations including Thames Water (serving 98 percent of London), London Councils and the EA. There is a programme board and a forum. The forum comprises all 33 London Boroughs, Transport for London, Defra and London Technical Advisors Group; the latter being directors from the boroughs that have a particularly technical interest.

How?

Defra funding was sought in 2009, and starting in April 2010, £3M was awarded.

Tier 2 has 8 consultancy teams. doing most of the modelling and data collection. Draft outputs came out in January; Preliminary Flood Risk Assessments in March and Surface Water Management Plans in May to June this year. Boroughs are going through a process of internal acceptance now. Tier 3 responsibilities include looking at opportunities for green roofs, community flood plans, a detailed investigation of Tier 2 flood risk areas and developing practical management solutions for these. High flood risk areas need further research. Where there is no value-for-money solution, communities are being involved, to learn to live this flood risk and reduce the damage flooding will cause.



Partnership Building

There is a multi-tiered approach to building partnerships. London-wide, there is the Drain London Forum, which is open to all and is a facility for sharing ideas, information and new knowledge.

There are eight borough partnerships across London, soon to be seven as two merge. Consultants drafted terms of reference for these groups to work together. TfL and Thames Water do not have the resource to work with each of 33 boroughs but they are able to actively participate with the seven groups. The partnership boundaries are more closely related to the hydrologic boundaries than the councils' boundaries. These are somewhat artificial and cross-boundary activities were therefore inevitable.

The GLA has no legal right to insist on partnerships within boroughs but it does encourage them.

The Practitioners Forum brings together consultants, with various specialisms, who serve the different borough partnerships to share and spread their experience and peer-review each other's work.

Partnership Benefits

- Coordination links London-wide organisations
- Links between boroughs, overcoming the artificial boundaries of boroughs
- Cost efficiency
- GLA-EA overview provides link to Defra
- Links to Regional Flood Defence Committee members
- Funding opportunities – currently making a bid for EU LIFE+ funding
- Sharing good practice and experience
- Potential to share roles and duties.

Q&A

Q? Has there been widespread buy-in from the boroughs?

A Kevin is seeing shared direction; he expects to see more, such as common reporting, etc.

STEVE WRAGG, HULL CITY COUNCIL

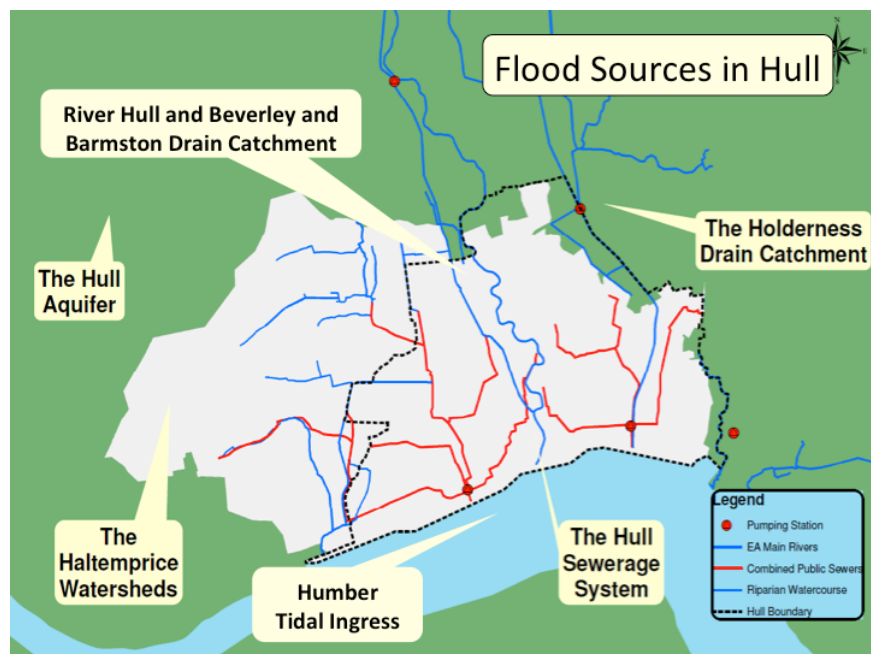
The need for partnerships - we all need to work together

Steve is Flood Risk Planning Manager at Hull City Council. He has worked in Flood Risk Management for his entire professional career. With many years experience at the Environment Agency, Steve has been involved in all of the major flood events of the past decade across Yorkshire and has managed teams delivering capital and operational improvements to the regions flood risk asset infrastructure. Steve joined Hull City Council to lead the councils flood risk management response to deliver against the emerging approaches of the Flood Risk Regulations and the Flood and Water Management Act.

Understanding flood risk in Hull

The hydrological landscape around Hull is characterised by high-level river system and low-level pumped drain system, high ground formed by the Wolds to the west and the Holderness clays to the east, and much of the land through the Hull valley being at or around sea level.

Water courses tend to flow into the city, many of which have been converted into parts of the sewerage system. Any water is flowing into a combined rain and sewerage system.



Tidal surge barrier has changed the risks. Surface water storage is planned now.

June 2007 Floods

In 2007 the Jet Stream was further south than normal, bringing weather fronts across the UK. Hull and Humber received up to 450 percent of average monthly rainfall. On the 25th June alone, enough water fell in the Hull and Haltemprice Drainage Catchment to cover the entire length of the M62 from Hull to Liverpool in 6 feet of water. In preceding days, there was also much rainfall leading to already saturated ground on that day. Many UK rivers were at record levels.

The disruption was significant. In Hull City Council (HCC) area, 7,208 properties were affected, with another 6,200 in East Riding Yorkshire Council's. Out of 99 schools in HCC, 91 were affected, with another 42 in East Riding and 125,000 hectares of prime agricultural land flooded there too. The financial cost to housing stock alone was more than £41M in HCC areas. More than 1,300 businesses were affected in Hull, including major international

companies. Tidal and fluvial flood risk was well understood but the issues arising to surface water were surprising. Legislation and the Pitt Review have since changed this.

Partnerships

HCC has developed a partnership approach. The Integrated Strategic Drainage Partnership in HCC and the Flood Resilience Board in ERYC to ensure East Riding Council, Hull City Council, Yorkshire Water and Environment Agency all work effectively together:

- Yorkshire Water are undertaking a £30M improvement program on their East Hull, West Hull and Bransholme Pumping Stations which will benefit the residents of the lower Hull valley
- The Environment Agency has long-term investment strategies to maintain and improve their flood defences in the Hull valley and on the Humber.
- Working closely with the Environment Agency to ensure people receive flood warnings and advice on what to do during and after a flood
- HCC ensures its river and drain maintenance and improvement programs work together across council boundaries
- Community engagement.

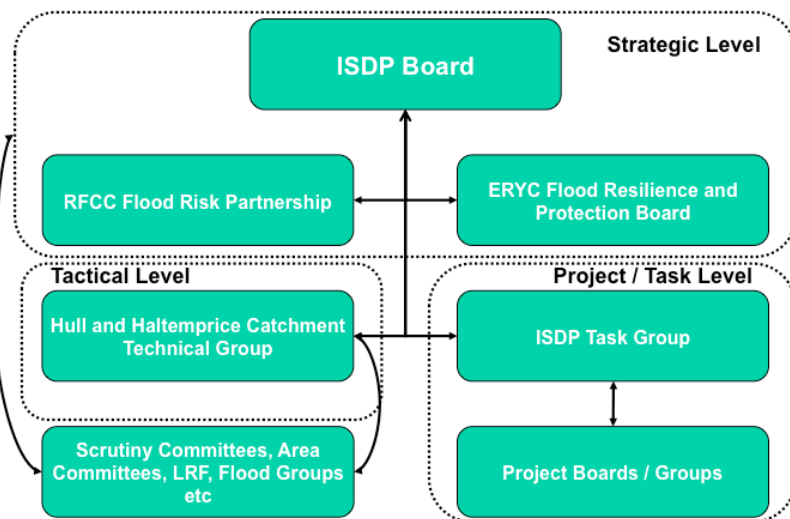
The Structure of the Integrated Strategic Drainage Partnership

Following the 2007 floods, the board was formed of chief executives and high-level officers. They are bound by terms of reference and working agreements. There is a communication plan and implementation plan. They manage issues as they arise and lobby where necessary.

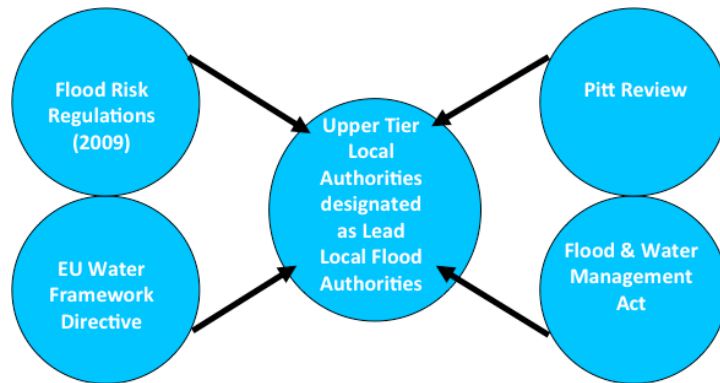
At a tactical level, there is recognition of cross-

boundary hydraulics; they are working in a catchment area where effects will be felt elsewhere, downstream. There is sharing of data and models and general approach which gives consistency and efficiency. A partnership approach is taken to feasibility studies, funding bids, communications and consultations. There is a good understanding of the processes and benefits of collaboration.

Projects are identified and steered by the Board and other committees. ISDP Task Group ensures all partners identify the best approach to procurement, data sharing, and so on. Project groups identify the relevant partners for each project.



Future Outlook



The Preliminary Flood Risk Assessment (PFRA) is to be prepared by all LLFAs by June 2011, with hazards and flood risk maps to follow two years later and management plans another two years after that.

There is a duty for all parties to cooperate and share information. There may be a Hull and Haltemprice SuDS Approval Body. Partnership

working may require a Hull and Haltemprice SuDS Approval Board, shared assessed databases and GIS, shared PFRA and future modelling / mapping / action plans and a joint approach to enforcement consenting and investigations. Partnership approach has started and this needs to continue.

GENERAL DISCUSSION SESSION

Q? Emergency planners can gain information on how to deal with floods when they occur by being involved with the partnerships discussed today. They could have a role in influencing new development too. How do you engage with them?

A Peter said that in Leeds, attempts were made to involve emergency planners but that proved difficult. Emergency planners also did not have the resources to look at site access. Flood risk is seen as only for flood risk planners. It is a wider issue though. Spatial planners have a different remit and recently their only target has been to deal with planning applications quickly.

Ted has had better experience. In his council they require planners to submit development plans that are in any sort of flood risk area to engineers. Assessment, by those engineers, includes emergency escape and access.

Internal partnerships between different functions within the local authority, are the most important partnerships.

Q? How can spatial planning be linked to Local Resilience Forums (LRFs)?

A Spatial planners are dealing with the risk; emergency planners are not involved. In Hull, Steve explained that they have a strong spatial planning strategy and that is handling the risks. It is a relatively small local authority and that helps with communications. Internal communications are very important.

Q? Some people are building up at great deal of knowledge on flooding. Will Local Strategies help engage LRFs?

A Kevin explains that he sees flood risk strategies as an ongoing process, not a one-off task. In London, they have looked at the risks to police stations, fire stations, etc., to see which will be at risk from the same incidents. In a large city, it may be possible to rely on nearby emergency services, even if some are in flood risk locations.

Q? Fola asked the audience, who is planning a joint local strategy?

- A** Kingston and Sutton councils, and others, have a memorandum of understanding for making joint statements on planning, SuDS, etc.

Ted Edwards explained that often an intelligent client is often missing from the council team. By coming together, partnered councils are able to recruit team members to fulfil such specialist roles. It was also said that by forming a training agreement within partnerships, recruitment is easier because career development is more promising. Staff retention is also better.

- Q?** **What are the challenges in broadening out partnerships beyond the local authorities to include the Environment Agency and others?**

- A** Kevin said that it was important that interaction is at a manageable level and then there can be additional benefits for those organisations. For example, Thames Water lacks the resource to work with 33 separate London Boroughs but it can work with seven or eight partnerships. GLA has influence make sure Thames Water does attend meetings. They are then able to gain knowledge and access local information on issues they need to deal with, such as seeking leaking sewers.

- Q?** **What challenges are there to working with the water companies?**

- A** Steve said it was hard to get action on theoretical risk. Having empirical evidence and a narrative can help get the message across. In his experience, Yorkshire Water has been good, investing £2.2M on modelling the entire catchment area in Hull, also in Leeds and Sheffield. People there are happy to talk to Ofwat alongside the council. Their stance was changed by the floods in 2007, either due to conflicts arising or understanding what the Pitt Review means for them.

In Kevin's experience, Thames Water have engaged in three ways

1. Officer level communications
2. CEO having regular meetings with the mayor
3. Mutual benefit – they are getting something back.

Experience in Kent is not so positive. It has been difficult to find an individual to engage with at Southern Water. An audience member reported that in Wessex, where there was recent localised flooding, they were having a more productive relationship with Southern Water.

CONCLUDING REMARKS

Fola Ogunyoye and the speakers concluded that:

- Steve Wragg: within partnerships, there must be trust across the boundaries
- Kevin Reid: looking forward, there needs to be streamlining of assessments – a single flood risk strategy to avoid duplication and people looking at the wrong things
- Peter Davis: more you put into the partnership, the more you get out.
- Ted Edwards: keep engineering skills at the local level

Fola left us with final thoughts:

1. Memorandum of understanding – there needs to be agreement at a tactical level.
2. Seek added benefits for those involved
3. Political pressure
4. There needs to be trust