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Draft strategy for skills and capacity building in local authorities for local flood risk management

Defra July 2010

Draft strategy for skills and capacity building in Local Authorities for local flood risk management

Executive summary

The purpose of this Government strategy is to increase local authority capacity and skills to help them deliver their new role in the Flood and Water Management Act 2010, the Flood Risk Regulations 2009 and other actions recommended in the Pitt Review. The strategy sets out short term actions and also looks at which elements of capacity should continue to be developed in the medium to long term.

The need to increase capacity for local authorities stems from the 2007 floods which affected large parts of England. The Pitt Review of the flooding identified that there was a gap in responsibility in managing floods from local sources, in particular surface runoff and groundwater flooding. Local Authorities were identified as the best placed bodies to take responsibility for local flood risk management. The recommendations from the Pitt Review have been taken forward and implemented into the Flood and Water Management Act 2010 (the Act). In its response to the Pitt recommendations the then government committed £1 million to support the development of local authority capacity building.

Initial surveys and studies were undertaken to understand what the current skills and resource levels are to deliver the requirements of the Act and Flood Risk Regulations 2009. The outputs of this work have been used in the development of the strategy and a programme for the first phase of skills and capacity building in local authorities to deliver the best short term outcomes from the Pitt Review funding.

Three key themes have been identified which provide the structure for the development of the strategy. These are:

- Developing knowledge and skills for existing staff
- Building capacity through provision of educational courses for new staff
- Providing information and tools primarily to support LAs and other stakeholders to develop skills.

A range of options were considered for the delivery of each theme taking account of what would be feasible to deliver in the shorter and longer term . . .

Recommendations for the key elements to take forward are identified for each theme. The recommendations for developing capacity in the three theme areas are brought together into a broad draft strategy.

The first outcome for the strategy is a programme of work up to March 2011 to enable local authorities to deliver better local flood risk management. This first phase
Draft strategy for skills and capacity building in local authorities for local flood risk management

focuses on building leadership and intelligent client skills in local authorities for developing local flood risk management strategies and other new responsibilities and providing them with the tools and information to do this.

The initial programme will deliver:

- Training to Lead Local Flood Authorities (LLFAs) and SuDS Approving Bodies (SABs) or their representatives. LAs have identified their priority needs and these are reflected in the strategy. The timing of the training needs to be coordinated with the implementation programme of the Act and Regulations which has yet to be decided but some elements can be developed immediately. Ongoing work to provide education courses and apprenticeships will also be progressed. There are 150 LLFAs all of whom are likely to require training of some kind and it is estimated that about £700,000 of the funding should be utilised for providing training.
- Provision of a web based portal giving local authorities to access all the relevant information they need and to provide a facility where latest news and good practice can be shared is the second main priority. Work has been undertaken to scope the requirements of a portal and it is estimated that setting up costs and populating it with information may cost up to £100,000.
- Other solutions such as tools, data set licences are also considered for funding but at this stage these initiatives will require further information and scoping work to enable elements to be taken forward (est. £200,000 cost).

Defra will work with other partners including Environment Agency, Local Government Association, local authorities, CIWEM, ADA, ICE and academic institutions to formulate the most cost effective and efficient delivery of the initial programme.

Further development of the strategy to address longer term needs for skills and capacity building is proposed during 2010/2011 and will take account of advice and comments received on the working draft.

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Draft strategy for building capacity and skills in local authorities for flood risk management

1. Introduction

1.1 Purpose of the strategy

This Government strategy sets in hand ways to increase local authority capacity and skills across England to help them deliver a new role in local flood risk management. The Flood and Water Management Act 2010 places new roles on county councils and unitary local authorities as Lead Local Flood Authorities (LLFAs) and appoints them as Sustainable Drainage Systems (SuDS) Approving Bodies. The Strategy identifies the skills and capacity gaps that need to be filled to undertake the new role effectively and efficiently and establishes a summary and programme of skills and capacity building to address this need.

1.2 Background

As a result of a series of recent flood events, in particular the 2007 flooding, work has been undertaken by Government to make sure that all types of flood risk are understood and managed in a more integrated way. Through this work, county councils and unitary local authorities have been identified as the best placed to take up responsibility for coordinating local flood risk management. They have also been appointed as SuDS Approving Bodies under the Flood and Water Management Act 2010 with responsibility to approve all surface water drainage in new/re-developments and to adopt and maintain SuDS where they serve more than one property. However, one key theme that has arisen during this work is that local authorities do not generally have the right skills/knowledge or the number of staff to deal with managing local flood risk management.

It has long been recognised that engineering skills in flood risk management are in decline within the public sector. Many local authorities have suffered a loss in critical mass for flood and drainage management with the loss of former Agency agreements with Sewerage Undertakers and of responsibility for Critical Ordinary Watercourses (COWs) to the Environment Agency. The skills shortage was further identified by the report (*Learning to live with rivers, 2001*) of the presidential Committee of the Institution of Civil Engineers (ICE) to Government following the major floods in Autumn 2000. Following this in 2004 the ICE carried out a review (*Engineering Skills for Flood Risk Management - A report by the ICE Task team on skills shortages*) of skills shortages in flood risk engineering and to what extent this would be a barrier to the successful delivery of flood risk management. Whilst the work identified that the private sector was adequately covered, there was a shortage

of about 10% in the public sector which was anticipated to rise to 20% in five years time.

The reason for the disparity was highlighted as lack of flexibility in remuneration in the public sector which results in difficulty in recruiting and retaining the engineering staff. In summary the report recommends that new entrants need to be i) inspired to take up relevant university courses and ii) persuade more graduates into flood work.

In the EFRA committee report on Flooding dated 2007-8 “...***If the national shortage in this profession (flood risk engineers) is not addressed, much of the Pitt Review may be impossible to implement.***” There is a compounding issue in local authorities of falling numbers of skilled and experienced individuals facing increasing demands and expectations beyond their capacity.

Thus there are specific and more general capacity issues that this strategy aims to address, with the priority being placed on developing local authority capacity to meet the requirements of the recently completed legislation, namely the Flood and Water Management Act 2010 and the Flood Risk Regulations 2009.

The objective of the development of this strategy is:

to identify a programme of skills and capacity building for local authorities to enable them to meet the requirements of the Flood and Water Management Act 2010 and Flood Risk Regulations 2009. The strategy also looks beyond this short term objective to ensure that capacity can continue to build if necessary and which elements are required for the medium to long term.

1.3 Drivers

There are several key drivers for the need to develop capacity and skills within local authorities.

1.3.1 Pitt Review into the lessons learnt from the 2007 floods

The widespread flooding in 2007 resulted in an estimated 57 000 properties being flooded due to surface water. The Pitt Review of the lessons learnt from these events highlighted the gap in role and responsibilities in dealing with surface water management.

The Pitt Review identified that different authorities were responsible for different parts of the drainage network, e.g. water and sewerage companies, highway authorities, local authorities, householders, riparian owners and the Environment Agency.

The Pitt Review made several recommendations in this area which the Government supported. These included:

- local authorities being given the lead responsibility for local flood risk management;
- developing and maintaining an asset register of flood risk management and drainage assets;
- developing partnerships to share information and cooperate with key stakeholders;
- investigating flood events to establish who is responsible;
- developing surface water management plans where appropriate; and
- resolving the issue of which organisations should be responsible for the ownership and maintenance of sustainable drainage systems.

The following paragraph from the Pitt review encapsulates the key role that local authorities will need to play under the new legislation.

Local authorities will need a strong technical centre, including relevant engineering specialists. This will enable an 'intelligent client' function within these authorities, capable of commissioning and challenging expert external advice. They will be central to ensuring that local communities are properly protected and that development that increases the risk of flooding does not take place. It also means that local authority members will need to be able to prioritise actions on flood risk against other issues of concern to the local authority, with the confidence that local authority officers understand both the technical and local issues under consideration.

Pitt recognised that local authorities would need to prepare themselves for forthcoming changes and recommendation 19 specifically picked up the need for local authorities to make an assessment of their capacity issues.

Recommendation 19

Local authorities should assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.

The Government with strong cross party backing supported all the Pitt recommendations and the findings were taken forward in the development of the Flood and Water Management Act 2010. Government set aside £16m to fund local authorities to take early action on the Pitt recommendations and to tackle local flood risk management. Surface Water Management Plans (SWMPs) have been identified as part of the delivery mechanism for local flood risk management and the Government has already provided £9.7 million to 77 local authorities at potentially highest risk of surface water flooding to produce SWMPs. An additional £5.3 million has been allocated to local authorities for quick win actions which will include small capital works and SWMPs in known areas of surface water flooding. These activities will support the implementation of the Flood and Water Management Act 2010 and the Floods Risk Regulations (2009). Thus work on local flood risk management is already underway in many local authorities.

1.3.2 Flood and Water Management Act 2010.

The Flood and Water Management Act 2010 implements the Pitt recommendations by giving local authorities new role and responsibilities. The main new roles and responsibilities that local authorities will need to prepare for are covered briefly below.

- Giving lead local flood authorities (LLFA) (County Council or Unitary Authority) the responsibility for leading the co-ordination of local flood risk management in their areas. This will avoid confusion over who has responsibility, but does not prevent partnership arrangements to make full use of capabilities and experience locally. This can be done by LLFAs delegating functions by agreement.
- Local partnerships should be formed with LLFAs taking on the organisational and co-ordination role to help manage local flood risk management. The Act gives LLFAs a wide range of flexibility in how these partnerships are formed and who does what. The Act empowers LLFA to require information from others when it is needed for their flood and coastal erosion risk management functions.
- The Act requires LLFAs to develop, maintain, apply and monitor a strategy for local flood risk management in its area. The LLFA is responsible for ensuring the strategy is in place but will need to work with partners to develop it so that there is buy-in from all parties. The LLFA will need to consult the public and flood risk management authorities. LLFAs will need to act consistently with the Environment Agency's national flood risk strategy.
- The Act places a duty on LLFAs to investigate flooding incidents in their area where no other risk management authority responds to identify who has responsibility to deal with the flood. The LLFA needs to publish the result of the investigation and to notify relevant risk organisations.
- The Act establishes a duty on the LLFA to maintain an asset register of structures or features which are considered to have a significant effect on flood risk in their area. The register will need to be available for inspection.
- The Act requires for the SuDS Approval Body (SAB) to sit at unitary or county council level and for them to be responsible for approving all SuDS in new/re-developments and to adopt and maintain those which serve more than one property.

The main benefits of the Act are that it:

- implements the recommendations of Sir Michael Pitt's report '*Learning Lessons from the 2007 Floods*';
- improves the Government's ability to manage the risk of flooding through clearly defining the roles and responsibilities of everyone involved in flood risk management, and gives the lead to local authorities in managing the risk of all local causes of floods;

- requires developers to include sustainable drainage systems wherever practicable in new housing and business developments, built to standards which would help reduce flood damage and improve water quality and amenity;
- places a duty on all relevant bodies to cooperate and share information in support of flood risk management; and
- amends the right of developers to connect direct to a public sewer, making it conditional on meeting SuDS National Standards, approved by the SuDS Approval body (SAB).

1.3.3 Adoption of sustainable drainage systems

Another area of responsibility that will to be delivered through the recent legislation is the adoption and maintenance of Sustainable Drainage Systems (SuDS) by local authorities. Local authorities will need to understand which SuDS are appropriate in different locations taking account of local factors. County councils and unitary local authorities will take on the role of the SuDS Approving Body (SAB) which will grant permission of proposed drainage systems in new developments and redevelopments. To ensure that SuDS are built to the right specification Defra are currently developing a set of national standards. Local authorities will need to check that developers have adhered to these standards before the SAB will adopt and maintain those SuDS which serve more than one property, once they have been built to approve plans. The SAB will also be required to place all approved SuDS on the register of structures and features, which will protect them against interference.

1.3.4 Flood Risk Regulations (2009) (implementing the EU Floods Directive)

Another main driver is the EU Floods Directive which requires assessments of all types of flooding including from surface runoff, groundwater and ordinary watercourses. The Floods Directive has been implemented through the Flood Risk Regulations 2009 which became active on the 10 December 2009. Local authorities will be required to carry out preliminary flood risk assessments, map and plan for local flood risk management. This includes understanding the risks from surface and groundwater flooding.

1.3.5 Continued development of expertise

Local authorities already have responsibilities regarding flood risk, such as land use planning, emergency planning and highways drainage. Through Planning Policy Statement 25 (*Development and Flood Risk – CLG 2006*) local authorities need to deliver new developments without increasing flood risk to or from these developments. Resilience planning needs to understand flood risk and to be able to plan for emergency situations caused by flooding and highways authorities need to manage surface water effectively to keep transport routes clear. Managing flood risk is a key element for communities adapting to climate change. Local authorities need

to understand the implications of climate change on flood risk and to plan for these accordingly.

For local authorities to deliver the above requirements there is a need to review existing expertise available and to assess what capacity local authorities will need for the future.

1.3.6 *Adaptation to climate change*

Local authorities are at the forefront of making sure that communities are adapting to climate change. Flooding and coastal erosion cause significant damage and disruption in England, as the events in Cumbria and 2007 showed. It is estimated that around 5.2 million properties are currently at risk of flooding, with predicted climate change potentially increasing both the level of risk and the damage it can cause.

UKCP09 suggest how our climate might change.

- All areas of the UK get warmer, and the warming is greater in summer than in winter.
- There is little change in the amount of precipitation (rain, hail, snow etc) that falls annually, but it is likely that more of it will fall in the winter, with drier summers, for much of the UK.
- Sea levels rise, and are greater in the south of the UK than the north.

Local authorities need to understand the implications of changing climate on their communities and take decisions accordingly to provide better, more sustainable local flood risk management for people, homes and businesses. Local authorities will need to factor in the implications of climate change when planning strategies for their communities.

2. The requirements for building flood risk capacity in local authorities

2.1 Initial surveys

To understand the requirements of local authorities regarding what capacity building they require Defra/LGA initially undertook a survey of all local authorities during October/November 2008 to help Government understand the baseline level of expertise and skills in local authorities. A good response rate of 66% of all LAs was received. The main findings from the survey were that 28% of local authorities were experiencing problems recruiting suitably qualified staff and that existing resources were already stretched particularly for investigating flooding incidents, maintaining ordinary watercourses and surface water runoff. This initial survey gave a clear signal that local authorities would need to enhance their capacity to deliver expanded requirements of new legislation.

To follow up the statistical analysis three workshops were held with local authorities to get a better understanding of the issues raised by the survey.

2.2 Follow up work

Subsequently three other pieces of work have been undertaken to increase understanding of local authority capacity building needs. These are:

- Scoping Study (Defra 2009) – Review of options for increasing local authority capacity for flood risk management (see Annex A)
- Joint CSS/LGA/IDeA (2009) research of local authority capacity and capability to meet their obligations as laid out by the draft Flood and Water Management Bill; and
- Defra - Local authority capacity building workshop. (February 2010)

In addition other work of direct relevance to the need to develop local authority capacity has been ongoing.

- In 2005, following the recommendations on 'integrated urban drainage management' in *Making Space for Water*, the Government carried out a review of ongoing best practice and funded pilot projects to examine different approaches to integrated urban drainage management. These identified gaps in information and knowledge which are detailed in the collaborative report '*Research Framework – The implementation of Integrated Urban Drainage*' (Environment Agency, 2009).
- Resulting from the above, Defra/EA as part of the joint research programme are undertaking a scoping study on developing an information portal for Local Flood Risk Management (Defra/EA, 2010 – to be published) which is examining the specific needs of LAs for information, guidance and sharing

good practice for LFRM, and how these can be supported by a web-based information portal (see Section 6.1).

- In April 2009, Defra consulted on a draft Flood and Water Management Bill which confirmed the direction of travel of giving local authorities new roles and responsibilities to implement the Pitt recommendations. Concerns were raised about capacity issues in the responses especially from local authorities. This has now been passed by Parliament and given Royal Assent on the 8 April 2010 (The Flood and Water Management Act 2010).
- A six monthly review of the delivery of Pitt recommendations was undertaken by Defra to ascertain what progress has been made. This process continues to raise the profile of the forthcoming changes and the need for local authorities to consider what capacity they require to deliver better local flood risk management. The review found that there was a diverse range of responses to assessing capacity and skills needs which included a full assessment of what is required to deliver legislation to wait and see what new legislation means for the local authority.
- A Defra led steering group has been established to oversee developments in capacity building and increasing the skills base for local authorities.

2.3 Summary of findings on Local Authority needs for capacity building.

From this work it is clear that local authorities are concerned about their ability to deliver the new roles and responsibilities of the Flood and Water Management Act 2010. Evidence from the three pieces of work has provided some **general** issues which can be summarised as follows:

- Existing skill levels and resources vary considerably between local authorities, e.g. asset database capability is variable;
- Wide variability in the preparedness of local authorities to deliver the new role and responsibilities in the Flood and Water Management Act 2010 and the Flood Risk Regulations 2009;
- Funding of the new roles and responsibilities is a major concern for local authorities;
- The number of water engineers employed by local authorities has dwindled over recent years as responsibilities have generally moved away from local authorities and there is a need to increase the resource base of engineers;
- Succession/knowledge planning is generally weak amongst local authorities and needs to be addressed in light of an ageing workforce;
- Reviews of capacity needs have not been widely undertaken to date by local authorities to meet the requirements of legislation;
- Partnership working is generally well established in local authorities and the new role is welcomed by local authorities. Working relationships with key stakeholders such as the Environment Agency and Water Companies are

generally good but would need to be improved further by developing closer working relationships;

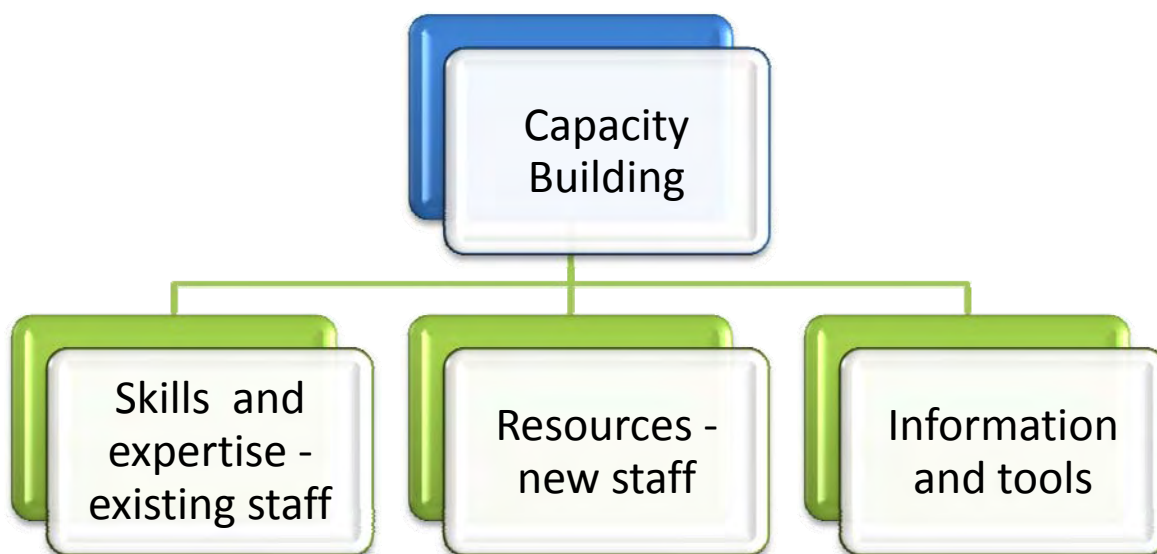
- Where flooding events had occurred recently there was a high recognition and willpower to resolve flood issues but where local authorities had not experienced recent flooding there will be greater challenges to implement the Act; and.
- Appropriate skills are required whether the Local Authority are actually carrying out activities in-house or even more importantly, if they are commissioning others to do work on their behalf i.e. acting as the 'Intelligent Client'.

More detailed findings are given in Annex A. The surveys and workshop results point to three main areas for local authority capacity building namely:

- The need to increase the skills of existing staff working in flood risk management;
- The need to provide appropriate education to enable new staff to have a grounding in flood risk management skills to enable an increase in resource overall; and
- The use of other initiatives to help local flood risk management including tools, information availability, networking, sharing best practice etc.

These three themes can provide a flexible range of solutions to help local authorities strengthen and sustain the skills required to deliver local flood risk management.

2.4 Proposed structure of the strategy for Capacity Building



These three streams form the basis of the strategy.

The summary of findings from the evidence based work is organised under these three headings.

2.5 Developing knowledge and skills – development of existing staff

- Encourage local authorities to investigate and look for new opportunities for new ways of working such as harnessing resources from district councils, knowledge transfer through undertaking secondments and staff swapping schemes and service level agreements;
- A need for short update training courses for continued professional development including technical knowledge and delivery skills such as leadership and negotiating skills. See Annex A section C for the results of the local authority workshop feedback for detailed results which have established the priority for training courses;
- Retrain existing staff through options such as the EA Graduate Diploma in River and Coastal Engineering;
- Development of e-learning to assist existing staff in develop required skills; and
- Evaluate need for seminars/workshops/conferences on key topic areas of concern.

2.6 Improve resources – new staff

- Continue to develop National Occupational Standards to form the basis for the development of NVQ level 2 and 3 qualifications for flood risk management;

- Encourage the continued uptake of the Environment Agency's existing Foundation Degree (River and Coastal Engineering) by local authorities to enable students to develop expertise which will meet local authority requirements and to gain workplace experience and skills;
- Encourage local authorities to take steps to consider the importance of succession planning/knowledge capture and to plan training to ensure staff have the relevant skills they will require for the future; and
- Recruit already skilled individuals to fill skills gap.

2.7 Increase the provision of information and tools

- Development of a web based portal tool to provide an up to date source of information on local flood risk management;
- Utilise the portal as a gateway to develop forums and sharing best practice between local authorities;
- Develop a simple asset register tool with accompanying guidance for local authorities to collate, record and maintain information on flood management assets;
- Provide guidance on what the new roles and responsibilities mean to local authorities and other stakeholders e.g. water companies;
- Identify and provide tools to facilitate sharing and data, expertise and knowledge across organisations and across administrative boundaries;
- Utilise existing initiatives which are already available such as the LANDFORM network, established LGA groups and existing local authority groups to promote sharing good practice and discussion groups; and
- Explore other potential opportunities including influencing academic institutions to include better coverage of flood risk management and engineering skills.

These themes are developed further as part of the development of the local flood risk management strategy below.

3. Development of a strategy from the scoping work

3.1 Development of strategy

The outputs from the surveys and workshop have been used as evidence to understand LA requirements and to develop the options for this strategy which will utilise the available funding in the best way possible to deliver increased capacity and skills.

Throughout all of the above work that has been carried out by Defra, Environment Agency and the Local Government Association there is a clear message that local authorities do need to increase their capacity and skills base to deliver the new roles and responsibilities coming forward under new legislation. The scoping work and workshop have provided a steer for what local authorities need most.

Whilst the workshop focused mainly on training needs there are other important solutions that need to be taken forward to improve local authority flood risk capacity. Using the three themes of the capacity building namely:

- The need to increase the skills of existing staff working in flood risk management;
- The need to increase resource overall; and
- The use of other initiatives to help local flood risk management including tools, information availability, networking, sharing best practice etc.

3.2 Outline strategy

Suggested ways of improving capacity are summarised in the table below.

Improving local authority flood risk capacity		
Improving knowledge and skills for existing staff	Training new staff	Other initiatives
<ul style="list-style-type: none"> • Better knowledge sharing between LAs and stakeholders. • Priority training such as SuDS, SWMPs, flood risk management. • Through guidance (Defra/EA), workshops, seminars, and 	<ul style="list-style-type: none"> • National Occupational Standards (NOS) and Apprenticeships. • Use NOS as performance measures - not just for 'training' • Environment 	<ul style="list-style-type: none"> • Local Authority local flood risk management portal. • LGA initiatives such as web pages and <i>Community in Practice</i> for flood risk management. • Other initiatives such as CIRIAs,

<p>conferences.</p> <ul style="list-style-type: none"> EA Graduate Diploma. 	<p>Agency Foundation Degree.</p> <ul style="list-style-type: none"> Recruit external fully trained staff. 	<p>LANDFORM, CIWEM's Urban Drainage Group (WaPUG) and River and Coastal Group.</p> <ul style="list-style-type: none"> Local Authority own initiatives. Influencing Universities to improve coverage of flood related issues in courses and promote flood risk management as a positive career option.
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Possible options to address these elements are covered in more detail below.

4. Improving knowledge and skills for existing staff

In order to understand the best, most effective and efficient way of delivering learning and knowledge to local authorities to improve local flood risk management an understanding of the underlying principles is set out below.

4.1 Underlying principles of learning and information provision

4.1.1 Levels and areas of competency

The overall aim of the learning process is to build up and sustain (by continuing development) a range of competencies in the individual (who may be non-technical or technical) to enable him or her to carry out specific tasks. To do a particular job, the individual will need to have a range of competencies covering different local flood risk management topic areas (e.g. policy; planning; operational management; etc). The level of competency needed for any particular job can range from basic understanding to expert knowledge.

This strategy, activity (e.g. the University of the West of England Foundation degree) or tool (e.g. local flood risk management portal) that aims to deliver learning and/or information should recognise (either implicitly or explicitly) this matrix of (a) topic area and (b) level of competence.

4.1.2 Education and training

In general, the aim is for the 'learning individual' to build up competency in a chosen area through a mix of (i) education which contributes to their knowledge base, and (ii) training and experience which gives them specific skills and understanding about their particular job. The mix of these and how they are delivered will vary for different tasks within a competency matrix. Each local authority will need to assess their capacity needs to target the areas where training and education are required.

For most tasks it is possible to become competent by several different means (e.g. full-time or part-time education via on campus or distanced learning; formal training agreement; apprenticeship; on-the-job training and experience etc). Time availability, past learning and cost are important factors that determine the appropriate future means of learning for any individual. Also, some means of learning suit particular types of individual more than others.

4.1.3. Basic and applied knowledge

Competency in many areas of LFRM is underpinned by basic knowledge (such as principles of hydraulics and materials science) that the individual has to learn through their education. Applied knowledge (such as the extensive guidance and

decision-making tools and techniques that are available to support LFRM) requires the user to have appropriate basic knowledge as well as practical experience in order to use it effectively.

4.1.4 *Personal development plan*

Ideally, any individual aspiring to work in LFRM or sustainable drainage systems should have a personal development plan that suits their particular needs and characteristics. This can be linked to achieving a standard of competency such as an NVQ or Engineering Council qualification. Professional guidance is desirable when drawing up a personal development plan. Existing staff within local authorities will need to assess the individual's needs to develop competencies and the best way this can be delivered.

Every 'learning individual' is likely to need elements of (a) formal education (e.g. on an accredited course), (b) self directed study (e.g. on-line reference material), and (c) practical training (e.g. guided learning on the job) in building up and sustaining their competencies. This can be referred to as 'blended learning'.

4.1.5 *Tutored (active) and self directed (passive) learning*

The 'learning individual' will need tutoring and mentoring at various stages in the learning process to achieve competency in any particular area. In formal education, this will be from an academic tutor to support the individual's particular learning needs. In practical training, mentoring and supervision play a particularly important role in building up the individual's judgement and experience.

4.2 Taking these principles forward

Whilst there must be preferred means of learning for core jobs, it is important not to be overly prescriptive on how learning in LFRM is delivered as individual needs will vary. There is not a one-size fits all approach a various blends of learning will suit different individuals. In the strategy developed below a variety of learning and knowledge transfer options are developed. This enables each local authority to assess what learning and knowledge is required and what solution may best fit their organisation and the individuals concerned.

A good example is the need - to ensure continued professional development (CPD) for existing staff so that LA staff can maintain and develop their skills to ensure that they retain their capacity to deliver effective local flood risk management. With legislative changes to LA roles and responsibilities staff will need to update their knowledge and skills. CPD can be achieved through a variety of learning activities through which employers and employees can have confidence that their skills are

current. Organisations such as CIWEM already have CPD for members and it will be important to dovetail training into such programmes.

There are several ways that knowledge and skills can be improved for existing staff in local authorities. One of the key areas where additional assistance can be given is through the provision of training which is covered below in some detail. Another important element is for local authorities to maximise opportunities to share knowledge and information themselves (see sections 4.8.1 and 6.5). One of the priorities for this strategy is to improve the training opportunities for LAs to make sure they are in a strong enough position to deliver the outcomes required by the Act and Regulations.

To deliver training to deliver the required outcomes the following questions need to be considered.

- What are the key training areas to increase knowledge and skills for local flood risk management in local authorities?
- How should training be best delivered to local authorities?
- Who is best placed to deliver this?

4.3 What training areas should the strategy focus on?

Evidence from the inputs from local authorities in the surveys and workshops referred to in section 2 and Annex A show the local authorities' key priority needs for increasing knowledge and skills. The main areas identified by local authorities for training include SuDS, risk management approaches to local flooding, delivering the legislative requirements, surface water management plans and Geographical Information Systems (GIS) and mapping skills.

Technical knowledge and skills were highest on the list of local authority preferred options whilst the delivery skills were seen as slightly less of a priority. However, the Act will require local authorities to work in different ways. One of the cornerstones of delivering local flood risk management is that LAs will need to work in partnership with key stakeholders where leadership and negotiating skills are essential. Local authority staff will need to communicate with a wide range of partners and be able to speak the same language to get issues across. Local authorities will need to assess what skills they may be able to call upon to deliver this type of working arrangement either utilising existing staff resources or whether they can call on other experts within other local authorities to fulfil this role.

Below are two options to structure training for delivery to local authorities. One way is to deliver training through an activity based framework (option 1). An alternative skills based approach (option 2) based technical, delivery and legislative skills.

Option 1 Training based on an activity framework

Activities to deliver required outcomes from the Act and Regulations	Skills required
Knowledge of legislation and what it means to local authorities	<ul style="list-style-type: none"> • Understanding of the Flood and Water Management Act such as the requirements for Lead Local Flood Authorities roles and responsibilities; new powers and duties available (see section 1.3.2); • Understanding of the requirements for the Flood Risk Regulations 2009; • Understanding responsibilities of other key stakeholders; and • Links to other legislation, including planning.
Local flood risk management strategy development	<p><i>Technical skills</i></p> <ul style="list-style-type: none"> • Undertaking Preliminary Flood Risk Assessments; • Developing surface water management plans where necessary; • Understanding causes, sources and solutions to flooding including risk based approaches which combine consequence and probability; • Adaptation to climate change; and • Mapping and modelling. <p><i>General skills</i></p> <ul style="list-style-type: none"> • Communication, negotiating and partnership working; • Leadership and coordination skills; • Links with other local functions such as land use planning/emergency planning/climate change adaptation; • Scrutiny skills; and • Communicating with the public.
Data sharing	<ul style="list-style-type: none"> • Data sharing/asset management; • Freedom of Information and data protocols; • Mapping; • Motivating and negotiating; and • Knowledge management/metadata.
Asset management	<ul style="list-style-type: none"> • Drainage and flood source understanding; • Asset management (design of new systems, assessment of existing systems, inspection, operation and maintenance, emergencies)

	<ul style="list-style-type: none"> • Regulations; and • Interpretation of data.
Decisions and delivery	<ul style="list-style-type: none"> • Benefit/cost appraisal; • Technical flood risk management; and • Project management
SuDS	<ul style="list-style-type: none"> • Understanding national standards; • Design and maintenance; • Asset management; • Planning law and practice; • Appeals; and • Regulations-technical changes and guidance.

Option 2 based on skill type

Type of skill	Area of Expertise
Technical	<ul style="list-style-type: none"> • Understanding flood risk; • Knowledge management; • SuDS technical guidance; • SuDS national standards; • Local flood risk management including SWMP development; • Planning and emergency planning; • Asset management; • Mapping and interpretation; and • Modelling.
Delivery skills	<ul style="list-style-type: none"> • Leadership skills; • Communication skills; • Managing partnerships; and • Negotiating skills.
Legislative skills	<ul style="list-style-type: none"> • Delivering the Act; • Delivering Flood Risk Regulations; and • Delivering other land drainage legislation

The content of the two options is similar but the advantage of the first option is that it could be targeted at certain individuals who will need to deliver outputs to fulfil the Act and Regulations requirements. Fundamentally flooding is a technical problem so there is a need for good technical analysis and decision making at the core, however decisions will not come into best effect if LAs do not have a complementary set of 'delivery' skills which allow those decisions to be communicated, understood and acted upon by others.

This could be used to give a framework of learning for individuals to undertake continued professional development to deliver local flood risk management in a more demanding and changing area. This option ensures that training is outcome focussed and is not training for training sake.

The second approach is simpler but may be less effective. There would be technical skills development and the softer skills development – however individuals will often need to develop both sets of skills in tandem. For example, a technical expert may need to communicate complex technical flooding issues to other key partners and the public and to manage expectations. The emphasis in one area of skills may be to the detriment of the other area. As working practices change and the emphasis is placed on partnership working then a more flexible workforce needs to be developed.

4.4 Recommended approach for training skills:

The first option is recommended as being more advantageous.

4.5 How should training be delivered?

From the feedback received to date (Annex A) the preferred methods that local authorities would like to receive knowledge and skills training is through workshops, seminars, conferences and through the provision of guidance. It should be recognised that e-learning can provide a basic level of understanding/awareness which can be built on through more formal training mechanisms.

Other popular delivery mechanisms include sharing best practice and the development of a local flood risk management portal.

Defra acknowledge that there is a need to provide local authorities with guidance to fit with implementation. Already some work is well advanced such as the Surface Water Management Plan Guidance and work is ongoing for other areas such as guidance for implementing the Flood Risk Regulations 2009. The Environment Agency as part of its Strategic Inland Role is developing guidance for LAs for Preliminary Flood Risk Assessments (PFRAs) and this should be available in the near future.

Defra will be developing an implementation strategy for the Act and building in training on the guidance will need to be an integral part of this strategy.

4.6 Who is best placed to manage and deliver a capacity building strategy?

There are a variety of options that could be considered regarding who is best placed to deliver the strategy. The table below sets out some, but by no means all of the options available.

Option	Advantages	Disadvantages
1. Defra to lead on all initiatives (with the help of an advisory group)	<ul style="list-style-type: none"> • Would enable a coordinated approach. • Feedback on training would be direct to policy leads. • Would give training programme a high profile. 	<ul style="list-style-type: none"> • Capacity issues within Defra to deliver. • Defra does not have the necessary in-house skills. • Would need to establish an internal team to deliver. • Other organisations better placed to deliver.
2. EA to lead on all capacity work streams (with the help of an advisory group)	<ul style="list-style-type: none"> • EA already have a skills champion in place and have existing flood risk skills team. • EA already work closely with LAs through Foundation Degree and with other partners generally. • Improve mutual understanding of EA/LA needs. • One organisation to coordinate. • Fulfil EA strategic role for flood risk management. 	<ul style="list-style-type: none"> • LAs and EA have different objectives to deliver which may have different requirements. • Lack of choice for training options. • Capacity issues for EA to deliver. • Messages between policy and training would need to be consistent nationally.
3. EA/Defra/LGA to lead programme with contracted out options (with the help of an advisory group)	<ul style="list-style-type: none"> • Competitive tendering should give beneficial value for money. • Will bring diversity to the ways training can be delivered making it more stimulating. • Makes use of existing expertise that has already been developed. • Can utilise experts in the field. • Bring together a larger community of providers with LFRM expertise. 	<ul style="list-style-type: none"> • More management inputs from EA/Defra/LGA. • Coordination of training will need more effort. • Time consuming to get tendering exercise completed.

	<ul style="list-style-type: none"> Jointly badged delivery of strategy will give LAs confidence in the content. 	
4. Contract all training identified to one external body	<ul style="list-style-type: none"> Easy to coordinate delivery. Reduced time in tendering for various elements of training. 	<ul style="list-style-type: none"> Unlikely that one organisation can deliver the wide range of expertise required. Sub-contracting could potentially slow the process down and make consistency / coordination more difficult. One provider is likely to be unpopular with the wider flood risk community. Other potential providers will feel marginalised. Diversion of effort on a comprehensive specification for the contractor as opposed to effective training content.

4.7 Recommended approach to managing the delivery of training skills

There are many more options that could be considered such as joint leadership with a portfolio approach of delivery mechanisms. However, feedback from local authorities has shown that it is important to them that it is clear which training is being endorsed by Defra, the Environment Agency and Local Government Association so they are confident that the training will meet the required standards. Their preferred option is to have training jointly endorsed.

Option 3 is recommended as the most workable solution once a strategy is established, namely for Defra/EA/LGA to jointly manage the programme and contract out where necessary. Defra have the policy lead for flood risk management and the Environment Agency have the national strategic overview. The LGA work closely with their local authority members and have recently developed tools to help LAs to deliver local flood risk management (see section 6.2). Defra/EA will need to coordinate closely on the production of guidance to support the delivery of the Act and Regulations and any subsequent training. LGA and its members provide important inputs into the development of relevant guidance and training.

In order to streamline delivery it is proposed that one organisation takes the lead in delivery and it is suggested that the Environment Agency would be best positioned as they have the inland strategic overview role and have established close links with local authorities through their networks.

Some of the training will be required to deliver the Flood and Water Management Act and to disseminate guidance which will be produced in the future to support the various elements of the Act.

It will be important to monitor the training and feedback from the events to ensure that funding is being utilised for maximum benefit.

4.8 Target audiences for training

It is clear from the scoping studies and workshops that there is a wide range of knowledge and skills that people have that are working on local flood risk management. Staff are often scattered across various parts of local authorities and rarely form dedicated flood risk management teams. The main sectors involved are engineers (highways and drainage) but there are also spatial planners, development control, emergency planners, landscape designers and more generalist staff. In some cases capacity issues have yet to be assessed so no lead figure has emerged within the local authority for managing flood risk.

Also, there may be a need to provide training either to enable staff that used to work in flood or drainage management to update themselves and move back into this area, or to help technical staff qualified and working in other areas to retrain in order to move to LFRM.

It is not only the teams directly involved in local flood risk management that require training but there is also the need to widen the understanding of flood risk management generally so that flood risk is considered across a range of activities. Examples of this could be those staff within local authorities working on scrutiny, elected members, provision of health services for those affected by flooding and biodiversity and land management personnel. Defra are seeking to work with the Improvement and Development Agency for Local Government (IDeA) through their Leadership Academy events to improve understanding of local flood risk issues for elected members and to ensure that cross-cutting elements of flood risk are recognised. The type of training for these staff/elected members is more likely to be high level and less technical covering the main issues relating to local flood risk and what local authorities need to do to manage it. There needs to be a general understanding of the local authority flood risk, options for managing the risk and the opportunities to work in partnerships to find solutions. E - _ learning can provide this basic level of understanding to various parts of the local authority at a relatively low cost with minimal disruption to work patterns.

External organisations such as the Environment Agency, water companies, transport organisations and NGOs will also need to be engaged but the focus of the strategy

should be to provide capacity and skills for local authorities. However, where opportunities arise, joint training should be considered.

4.9 Programming and Prioritisation of training

An important issue when delivering a programme of training courses is that it must not swamp existing local authority resources. Many local authorities already work with limited staff resources and developing and training staff could add additional pressures if not programmed sensitively. Training will need to be spread throughout the year and local authorities will need to prioritise what their greatest requirements for skill and knowledge are. Some skills may need to be brought into LAs from external sources to fill any gaps in the short term but this strategy needs to be developed to ensure local authorities can develop the required in-house skills over a period of time. The aim is to develop a programme of training that will reflect the requirements of the Act and Regulations. It is likely that the implementation will be staggered so that local authorities are not expected to deliver all aspects of the Act at the same time. The timescale for the delivery of the Regulations is split into three phases. The first phase is for the development of Preliminary Flood Risk Assessments is required from all LLFAs by June 2011.

4.10 Other options for increasing the knowledge base of existing staff

The strategy is not all about 'training'. There needs to be a variety of learning and information exchange options as covered in section 4.1. There are great value for money opportunities through better understanding of the existing strengths within organisations and secondments/mentoring /coaching within and across the FCRM sector.

4.10.1 Secondments/mentoring/coaching and work exchanges

Where LAs do not have an existing skills base there should be encouragement for staff to be able to work alongside colleagues in other local authorities with a broader skills base. Local authorities should be encouraged to seek secondments/mentoring or coaching opportunities. This could be developed further by setting up centres of excellence – perhaps on a regional basis where local authorities are encouraged to learn from one another.

There may be opportunities for LA staff to work with other organisations such as the Environment Agency and Water Companies to assist in gaining a mutual understanding of issues and to increase skills. This could be established through partnership arrangements.

This should not be a one way process. Local authorities should be encouraged to provide opportunities for other organisations staff to be placed with them. A two way process has big mutual benefits for all concerned, such as increasing the awareness of partner organisation objectives, work programmes and funding arrangements.

4.10.2 EA Diploma in Flood and Coastal Risk Management

As LAs reorganise and prepare to implement the Act they may identify existing staff who are suitable for work in flood risk management but do not have all the skills and knowledge required. The Environment Agency currently has a 2 year Diploma course designed for their own staff to meet this purpose which could be opened up to local authorities. The course is similar in structure to the Foundation Degree with block weeks at the University of the West of England and then ongoing work training at the local authority. As the trainee is an existing employee of the local authority, the main additional cost is the course fees which are estimated at £3 - 4 000 p.a.

This option is currently under consideration but some funding could be made available to support LA staff retrain through this route. A small trial could be undertaken to assess how well this approach might meet local authority needs.

4.10.3 E-learning (on-line training)

There are mixed messages from local authorities regarding the provision of e-learning. From the local authority workshop there appeared to be preference to face to face training. The feedback from scoping the portal project suggests there is strong support for e-learning. One opportunity being actively explored is the development of the teaching material for the Foundation Degree into units that can be studied on-line.

On-line training/e-learning does have several advantages:

- ideal for ensuring that the basic level of awareness and knowledge is developed across-the-board;
- it reaches 'the masses';
- is relatively cheap;
- readily accessible;
- repeatable;
- does not require travel or disruption to work time; and
- can be tackled individually or as a team.

This can then leave limited financial resources to be targeted at the higher levels of learning where workshops and seminars will equip attendees to hone their skills so that they can then act as effective Mentors and Coaches within their working relationships. The local flood risk management portal will provide the ideal platform for such training to be made available.

The detailed costs of this as yet are unknown but the University of the West of England has begun a scoping process on the feasibility of such an approach. The

work would be unlikely to commence until the next academic year (2010/11) as there would need to be a commitment to fund to get staff in place to carry out the necessary work.

There are other opportunities such as the Environment Agency's online SuDS training tool [insert link] and that developed in Scotland by the University of Abertay.

4.10.4 Delivery skills training

There may be many potential types of training course that are available for delivery skills. Local authorities may already have access to particular training which could be developed more widely for other local authorities to make use of. Further scoping work is required to assess the relevance, cost and feasibility of options. This area of training may be well suited for tender as there are several suitable suppliers already.

4.11 Recommendations for delivering a training package to local authorities

- 1) Training of existing staff is seen as a priority by LAs in increasing their skills and capacity.
- 2) Training provision should be based on the outcomes identified from the LA workshop and other evidence gathering studies.
- 3) A package of approaches should be developed to enable local authorities to have the flexibility to meet the range of needs for staff.
- 4) Technical and delivery skills should be covered.
- 5) Defra/EA/LGA jointly badged programme with contracting out to suitable providers where appropriate. EA to take the lead on delivery
- 6) Link training programme to the implementation strategy of the Act
- 7) Training should be provided on a cluster basis to ensure a good national coverage and closer local LA links.
- 8) Target audiences will need to be considered within local authorities when formulating training content – strong case for e-learning.
- 9) Work with IDeA on possibility of including local flood risk management in Leadership Academy events.
- 10) Scope out the feasibility of e-learning material for local flood risk management and options that are currently available.
- 11) Encourage LAs to seek/offer work exchanges/secondments/mentoring/coaching to improve staff skills and knowledge.
- 12) Work with other institutions to incorporate training into continuing professional development.

5. Training new staff

5.1 Background

Defra recognises that the Act will place extra responsibilities and burdens on Lead Local Flood Authorities (LLFAs) and SuDS Approving Bodies (SABs) and is committed to these being fully funded. LLFAs are set to receive £36 million a year to fund this new leadership role and Defra will be consulting shortly on how to allocate the funding fairly between authorities. Part of this funding could be used to recruit new staff.

From the scoping surveys it is recognised that local authority engineering staff are generally nearing retirement and there is a need to bring new staff into the engineering elements of flood risk management in local authorities. There is a need for local authorities to succession plan as a great deal of information is held in individuals' heads and there is a danger that this could be lost if there is no continuity planning in place.

Defra is aware of the need to attract new blood into local authority flood risk management and the need will become stronger with the Flood and Water Management Act 2010 and the need for local authorities to comply with the Flood Risk Regulations 2009 which implements the EU Floods Directive.

Defra is already undertaking actions with the specific aim of attracting new staff into local authority flood risk management. The ICE report (2004) picked up that the trend to outsource flood risk management to the private sector in the longer-term is unsustainable. In order for local authorities to contract out successfully they need to have sufficient in-house knowledge to act as the intelligent client. From the evidence in the recent scoping work this issue remains valid.

One of the overarching aims of this strategy is to develop career progression in local authority flood risk management. If there is a clear occupational path for new entrants to follow this should make a career in flood risk management a much more rewarding and attractive option.

The first level of entry into local authority flood risk management is aimed at school leavers and the unemployed.

5.2 Development National Occupational Standards for Apprenticeships

Defra has been working in conjunction with Lantra (The Skills Sector Council for the environment and land-based sector), local authorities and the Environment Agency to develop National Occupational Standards (NOS) for new apprentices into Local Authorities specifically to fill capacity gaps in flood risk management. The aim is to ensure that the NOS are fit for purpose and meet the needs of local authorities to build baseline knowledge in flood risk

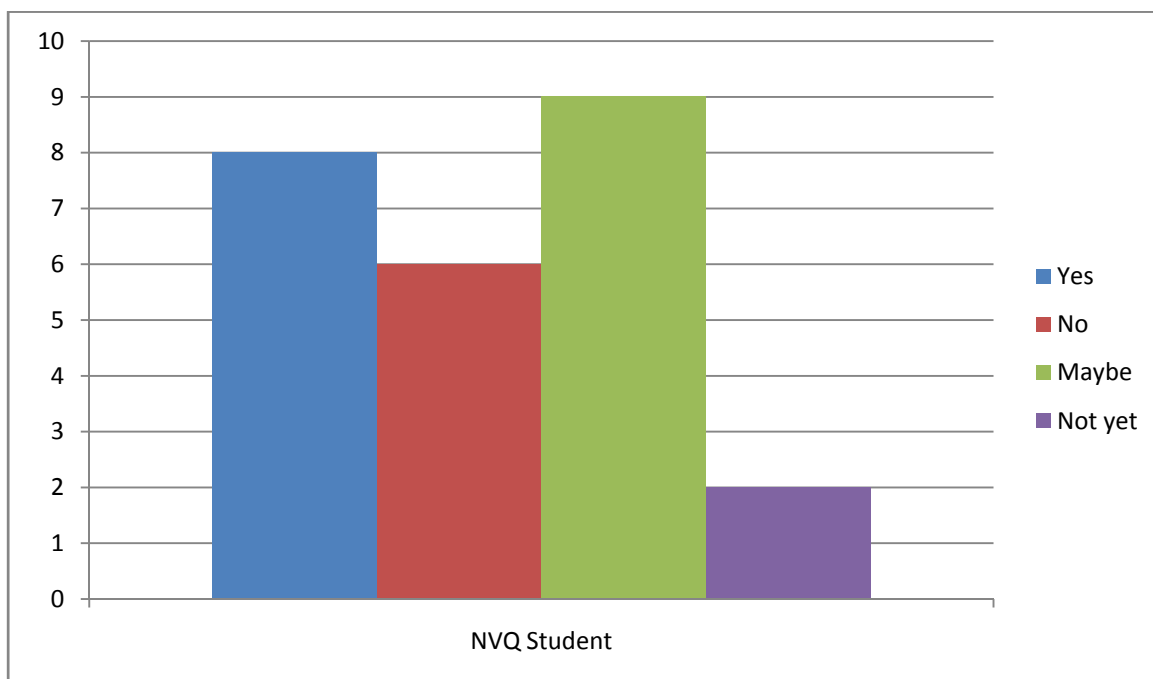
management. NOS for those in more senior roles could also be developed - to act as a basis for a performance management system and possibly - if there were a market - to be the basis for higher level vocational qualifications.

There are many skills that local authorities will need to fulfil the requirements of the Act and Regulations. Some of these involve the development of a basic understanding of drainage systems and how they function. For instance, local authorities will need to establish asset registers of drainage infrastructure, survey existing drainage assets, be in a position to investigate flood events where no one appears to have responsibility and to ensure that sustainable drainage systems (SuDS) are built and maintained to forthcoming national standards. This may be carried out in-house or placed externally. Whichever route is taken local authorities will need to make sure they have staff that can ensure that these new functions are carried out and meet satisfactory standards.

The advantages to apprenticeships are that they are an excellent way of gaining qualifications and workplace experience. Apprenticeships are attractive as they allow new entrants to earn as they learn and also gain practical skills from the workplace. There are many benefits to local authorities which include developing people with the skills local authorities require now and in the future. In a survey carried out by Populus on behalf of the Learning and Skills Council in February 2009 a majority of employers said that apprenticeships were more cost effective than hiring skilled staff, leading to lower overall training and recruitment costs.

Primarily apprenticeships are aimed at school leavers from 16 – 18, although older individuals can also apply as well as the unemployed. Generally apprentices come into an organisation with enthusiasm and can have a positive effect on the workforce environment.

At the Defra February 2010 workshop LAs were asked 'Would your LA be interested in taking on a NVQ student?' The table below gives a summary of responses.



Local authorities were generally supportive of this initiative with the main issue concerning local authorities being the funding mechanisms for apprenticeships and what the financial implications would mean to them. Organisations such as Business Link are able to advise local authorities what funding local authorities may be able to gain to support an apprenticeship.

Current apprenticeship schemes ended in March 2010 but it is hoped a replacement scheme will be established shortly. With tight local authority budgets this may be one of the most suitable options for local authorities to start to fill the skills gap at relatively low cost.

The aim is to have NOS for Flood Risk Management available to local authorities from September 2010 and the apprenticeship would last for two years. The NOS are being developed to dovetail with the Foundation Degree so there can be a natural progression for staff to continue to develop their skills and expertise in flood risk management.

5.3 EA Foundation Degree in Flood and Coastal Risk Management

The second strand of the Defra approach is to increase capacity for LAs at the graduate level.

In early discussions with the Environment Agency it was recognised that there was potential spare capacity on the existing Environment Agency River and Coastal Engineering Foundation degree course. Working closely with the Environment Agency it was announced in June 2009 that 27 places would be available for local authorities to take on trainees.

Intensive advertising and candidate assessment was undertaken together with making LAs aware of the opportunity. Successful candidates were matched with local authorities and currently 22 trainees are undertaking the two year foundation degree. A further intake is planned for another 25 local authority students in 2010.

Defra contributes 50% of the funding to support local authorities taking up a trainee. The course is run with week study blocks at the University of the West of England and e-learning together with work experience within local authorities. One of the major strengths of the Foundation Degree is that it combines academic study with practical experience which will provide qualified staff that are already geared to working within a LA environment and who understand their role.

Another major benefit has been trainees from LAs and the Environment Agency studying and working side by side. Through this close working relationship trainees get a good understanding of each organisation's roles and responsibilities. The Environment Agency has been very supportive and has developed mentoring initiatives which help LA staff develop their mentoring skills for trainees. Mentoring is an essential element to ensure trainees gain the necessary work experience and to have someone who can guide them through their qualification and encourage progression. Some LAs have taken a flexible approach to providing the necessary range of training opportunities by working together with other local authorities. This gives trainees a broad range of experience, an excellent opportunity to get involved with different approaches and bring their own skills, such as IT skills to existing LA flood risk teams.

The main area of work currently underway is to adapt some of the course content in the second year of the foundation degree to meet the specific requirements of the new legislation. In particular this will relate to surface water management for which local authorities have lead responsibility.

5.4 Direct recruitment by local authorities

As a result of the Pitt Review there was a recommendation (number 19) for local authorities to assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.

From the Review undertaken of the Pitt recommendations published by Defra in December 2009 and from feedback from the workshop, there was a mixed response to whether LAs had undertaken this recommendation. Some local authorities had undertaken a full review and identified and recruited staff, whilst others were waiting for the Bill to become law before undertaking any review. Currently there is uncertainty around the organisation within LAs as to the best way to deliver the requirements of the Act. From feedback at the LA workshop in February 2010 about 50% of LAs had little or no consideration of what their local capacity requirements need to be. LAs which had undertaken a review were able to establish a business case to recruit new staff whilst those that had not were not in a position to do so.

All local authorities should be encouraged to undertake an assessment of their capacity needs as soon as possible in order to ascertain their requirements. Because of the in-built flexibility within the Act for LLFAs in a two tier system (county councils and district councils) to delegate many of the responsibilities to district councils or other organisations such as Internal Drainage Boards (IDBs), the LLFA should work closely with district councils to establish what existing skills are available and how flexible working arrangements can be established to enable the best use of skills and resources available. One possible solution may be to develop centres of excellence overseen by the LLFA or in the case of SuDS by the SAB. Local authorities are being encouraged to improve the way they plan for their future skills needs by being as thorough as they can in their overall workforce and succession planning processes.

At the present time there appears to be some slack in the system due to the current economic climate whereby the private sector has shed staff as the engineering and construction industry has contracted in response to the recession. However, this may be a short term situation and when the economy recovers local authorities are likely to face stiff competition to retain skilled staff.

5.5 Recommendations for encouraging new entrants into flood risk management:

- 1) Continue the development of the National Occupational Standards to develop appropriate qualifications which it is anticipated will be available to local authorities in September 2010.
- 2) Encourage local authorities, once the NOS are available, to use these for performance management and benchmarking and not just to see them as the basis for a qualification. NOS, when used well, can be a very powerful and flexible tool but they are often not fully understood nor utilised effectively.
- 3) Promote sources of advice to local authorities on apprenticeship schemes and funding arrangements.
- 4) Continue to support local authorities financially to take on foundation degree trainees until the completion of their training in 2012.
- 5) Develop the foundation degree to meet the specific requirements of local authority responsibilities to deliver Act and Regulations requirements.
- 6) Assess the medium term need to maintain support for local authorities for the foundation degree, reviewing funding availability for future intakes for 2011 onwards.
- 7) Encourage local authorities to undertake capacity and skills reviews in flood risk management to assess their future needs and the best way of achieving the delivery of the Act and Regulation requirements.
- 8) Encourage local authorities to think flexibly and investigate new ways of working. This may involve working in partnership with other local authorities to maximise the use of the skills base available, setting up

agreed flexible working arrangements to deliver specific requirements.

6. Provision of information and tools to support local authority skills and capacity building

Easy access to useful information, guidance, standards and tools to facilitate the new local flood risk management role can be a very pragmatic way in which capacity can be increased in local authorities. To work most effectively these would include new arrangements for partnership working and exchange of information between organisations. This strategy puts forward a range of potential initiatives which could be taken forward in the programme to support capacity building.

6.1 Development of a Local Flood Risk Management Portal for LAs

Work is underway to scope a local flood risk management portal initially aimed at local authorities. This project is funded by Defra within the Joint Defra/Environment Agency Flood and Coastal Erosion Risk Management (FCERM) Research and Development programme. The need for a Dissemination Portal was identified as the highest priority for the research framework (The Implementation of Integrated Urban Drainage (IUD)), recognising that whilst there is substantial information available regarding IUD, dissemination and accessibility to the knowledge has remained a barrier to uptake. This includes the published outputs of past and ongoing research projects. The development of a portal was supported through the capacity scoping work carried out by Defra and the Local Government Association.

The project is split into three phases

- 1) A scoping exercise to assess what key stakeholders need.
- 2) A focused element to deliver an interim portal for local authorities and key information on local flood risk management (expected summer/autumn 2010).
- 3) The development of a long-term portal for all end users to enable the delivery of the scoping from phase 1.

The main aim of the portal is to share information efficiently and effectively to maximise outcomes. There are various aspects that a portal could include such as:

- Key guidance and sources of information;
- News page;
- Forums to share best practice and to share knowledge/ideas;
- E-learning; and
- Key contacts.

Much of the information is publicly available. Most of this is contained on a plethora of websites, although some is not available electronically. The aim of the portal is to make existing information more easily accessible. The portal can flag up documents which give the basic level of understanding and those which are more technical for the development of higher levels of competency. The portal will need additional development funding if it is to provide specific e-learning as distinct from simply

being a route to available information (as discussed in section 4.8.2 above). In order to make the portal relevant to LAs and be the authoritative place where information can be obtained there will need to be a communications programme established and a maintenance programme ensure information is up to date. Some funding is available from the R & D budget for portal development but to raise awareness and set up a communication strategy will require further short term funding. Pitt Review funding could be made available as part of this strategy.

The current scoping work will give details of the expected costs for the establishment, development and maintenance of the portal with recommendations expected in June 2010.

6.2 Local Government Association/IDeA (Improvement and Development Agency for Local Government) resources

The LGA and IDeA have recently developed the following resources to help local authorities with flood risk management. This includes:

- IDeA web pages on flood risk management;
- A Community of Practice on Flood Risk and Water Management to assist local authorities and partners to share best practice and an open forum where experiences/expertise can be exchanged;
- The ongoing development of a local authority Self Evaluation Checklist is underway;
- Compilation of good practice case studies is underway;
- Monthly News Bulletin giving up to date information on local flood risk developments to LAs; and.
- Potential to work with IDeA through Leadership Academy events to raise the understanding of flood risk for elected members.

There are strong synergies with the work LGA/IDeA are undertaking to help deliver and understand local flood risk management better. Once the portal scoping report has been completed and options and recommendations considered, there may be further collaborative work that can be considered. It is important to make maximum use of existing initiatives and not duplicate existing resources.

6.3 Asset register tool is under development.

A recent Defra/EA research project has been undertaken to develop a tool to assist local authorities to record drainage asset information. This is particularly aimed at those local authorities who have not yet developed such a tool and it will be designed to be simple to use. Guidance should be available soon.

6.4 Data availability for local authorities

To understand local flood risk management will rely on the best available information being accessible. Some datasets are already available to all local authorities but there may be other datasets which are required where each individual LLFA or SAB will have to negotiate agreements, water company information is an example. Groundwater data is another possible source of information.

Funds could be made available to set up national protocols/agreements for identified data but further work would need to be undertaken to understand which datasets LLFA/SABs currently require and what costs may be entailed.

6.5 Local Authority initiatives

There are several groups within local authorities which have already been established such as drainage networks e.g. Association of Thames Drainage Authorities, and the Yorkshire and Humber Learning Alliance. These networks are extremely beneficial for LAs to share expertise and seek the best solutions to common issues.

Local authorities should be encouraged to establish their own networks as they are in the best position to understand the challenges they face locally. The importance of knowledge transfer between local authorities is an important element of LAs being able to build up their own capacity and skills. Further work is needed to assess how widespread these networks are and how well they are functioning. These networks could be developed into regional networks to maximise their potential. The development of a nationwide set of networks could be established with some funding being made available from the Pitt Review budget.

6.6 Regional Improvement and Efficiency Partnerships (RIEPs)

RIEPs are regional improvement and efficiency partnerships and have the potential to improve local flood risk management through supporting councils.

Nine RIEPs were created in April 2008 with a three-year funding package of £185 million from Communities and Local Government. The RIEPs harness the expertise of councils to add new capacity to local government in order to accelerate the drive for greater improvement and efficiency. They build on the successful foundations laid by the former Regional Improvement Partnerships and Regional Centres of Excellence.

Put simply, they help councils and their partners to deliver better services, set through local area agreements (LAAs), by supporting them in their efforts to become more efficient, innovative and engaged with citizens.

RIEPs have the potential to help LAs to deliver better flood risk management and warrant further exploration. CLG are currently funding RIEPs in a £ 9 million

programme relating to adapting to climate change agenda and further exploratory work is needed to see whether local authority flood risk management is included.

6.7 Development of a governance steering group to support capacity building across the wider engineering sector.

Currently Defra's work on capacity is under the governance of a steering group comprising Defra/LGA/EA/ADA/Lantra/LAs and independent experts. This group has been overseeing the work that has been done to date on capacity building. There have been calls for a wider group to be established.

LGA and Defra have recently established a legislative review panel and independently it has been suggested by the Environment Agency that the Employers Forum is reformed to look at broader capacity issues in the flood risk engineering sector. It has been suggested that the existing Defra Capacity Building steering group could be amalgamated with a new broader group that could include academics and professional institutions which would report to the new Defra/LGA panel. This option is currently under review and a wider steering group could oversee the delivery of the Defra programme as well as develop other initiatives such as improving the image of engineer careers in the eyes of school leavers and improved careers advice both in schools and universities. It is desirable that academic institutions should increase the number of courses which contain flood risk management elements and recognise this growing and important area.

6.8 Working with other skills organisations

There are a large number of organisations involved in developing skills which are potentially useful for developing and assisting local authority capacity building. These include professional bodies such as CIWEM (The Chartered Institution of Water and Environmental Management), ICE (Institution of Civil Engineers), CIRIA (Construction Industry Research and Information Association), RAE (Royal Academy of Engineers), and ADA (Association of Drainage Authorities).

There are several ways in which these organisations can assist: These include:

- Setting of 'standards' for practitioners, including endorsement of the education and the professional training aspects;
- Advancement of knowledge and practice (e.g. the 'learned society') as exemplified under CIWEM for LFRM by national meetings in general and by WaPUG in technical detail;
- The broad promotional aspect of raising the profile of the LFRM sector within the overall professional area that the institution deals with; and
- The policy development engagement of the institution with government and other policy makers.

In delivering this strategy Defra will be working closely with these organisations to delivering the most cost effective way of increasing local authority capacity.

6.9 Other skills initiatives

There are many skills initiatives being undertaken by various Departments which are directly relevant to the local flood risk management agenda. There are close links with Communities and Local Government (through planning, building regulations and design and emergency planning) and there may be opportunities to combine training on PPS25 and other training initiatives under this strategy.

There may also be opportunities with other Government Departments such as Department for Transport (through transport drainage engineering) and Department of Energy and Climate Change (DECC) and Department for Business, Innovation and Skills (BIS) *meeting the Low Carbon Skills Challenge*. Departments have recently produced Climate Change Plans with Defra's focussing on adapting to climate change. A key element to this plan is flooding and coastal erosion and within the summary of actions it has been identified that capacity building for climate change adaptation has been identified. This gives an opportunity to build flood risk considerations into wider departmental objectives of adaptation to climate change with prospects for joint working.

There also many organisations involved in being able to assist in developing skills and capacity. Many have been mentioned above, such as Sector Skills Councils (Lantra have worked with other skills sector councils in developing appropriate NOS), LGA, IDeA, EA, professional organisations, academia and industry.

Other organisations such as Business Link are able to assist local authorities directly in identifying funding streams for apprenticeships etc.

Defra will continue to work with all relevant sectors to explore ways to ensure opportunities are not missed in developing better local flood risk management.

6.10 Research and development

There has been a large amount of research and development undertaken on flood risk over the past years and this can provide an important resource to those developing their understanding of flood risk.

In January 2010 an Urban Research, Development and Dissemination steering group was set up with members from the Environment Agency, Defra, UKWIR, LGA, Highways Agency, University of Sheffield, Ofwat, CLG, DfT and RFDC represented. The aim of the group includes i) identifying gaps within the research to date and to develop collaborative research between the organisations to fill these gaps; ii) raise awareness of research being carried out by all partners that may be relevant to practitioners and iii) make research results more readily available. The latter will

contribute to the anticipated Local Flood Risk Management Portal project outputs where research outputs will be easily accessible to improve dissemination.

6.11 Recommendations for provision of information, tools and other initiatives.

- 1) Promote with all partners a consistent structure for provision of information, learning and training covering all levels.
- 2) Develop the LA LFRM portal and establish a coherent maintenance and communication strategy.
- 3) Review existing LA initiatives and if appropriate encourage new local networks to enhance knowledge transfer to enable LAs to build their own capacity and skills base.
- 4) Continue to work with LGA/IDeA to develop synergies for skills and capacity resources.
- 5) Continue to develop tools that LAs need to deliver better LFRM such as the asset register tool. Assess the need for centrally funded agreements for key datasets.
- 6) Investigate what RIEPs can offer to assist in building LFRM capacity and skills.
- 7) Review Defra's governance arrangements for capacity building with the aim of broadening out the involvement to academia and professional institutions.
- 8) Work closely with other Government Departments and other organisations to realise opportunities for joint working and various aspects of capacity building.
- 9) Raise the profile of research and development outputs on urban flood risk through better dissemination, improve coordination and identify key gaps of research.

7. Components of a strategy to take forward

The overall purpose of the development of a strategy is to deliver better LFRM for LAs and the initial phase of delivery based on Pitt Review funding during 2010/2011 will aim to establish a foundation for skills and capacity building in the longer term. Any strategy needs to be costed, deliverable and offer the best value for money. In the previous sections options under the three capacity building themes have been explored with potential recommendations identified to improve local authority flood risk management capacity. In this section the recommendations are brought together under the three themes of:

- Development of skills and expertise for existing staff;
- Increase resources with in-take of new trained staff; and
- Provisions of tools and information.

Some of the recommendations will require funding but other initiatives may require a commitment to partnership working in order to deliver the required improvement to skills and capacity.

Defra and EA are already working together to deliver improved LFRM in some areas but other areas will need to be prioritised.

7.1 Developing skills and expertise of existing staff.

From the evidence gathered developing skills and knowledge is the main area of focus for the strategy to deliver in the time period (2010-2011 FY). . Maximum value for money is required from the available Pitt funding of £1 million. With the Flood and Water Management Act given Royal Assent in April 2010 there is now continued momentum for LLFAs to deliver their new roles and responsibilities. LAs have identified what their priorities are in terms of technical and legislative training as well as delivery skills such as leadership, negotiating and communication expertise.

A programme of training needs to be established which is evenly spread throughout the coming year to avoid local authorities becoming overburdened with training options and it is recommended that skills are grouped into competencies so that LAs can identify skills gaps and fill them.

It is recommended that the programme be managed by EA with support from Defra/LGA as part of their inland strategic role, with the work contracted out where necessary. There needs to be close liaison between the timing of new guidance to support the new roles and responsibilities and any accompanying training. Other training elements should be provided on a competitive tender basis to ensure value for money and to ensure any training is fit for purpose.

It is suggested that training is supplied on a cluster basis to ensure a good coverage of events. It is estimated that 4/5 events could take place to give a good geographical spread. Another benefit of clustering events is that LLFA staff will be

able to network with colleagues locally and be in a better position to share knowledge and experience. It is suggested the areas are the north, west and east midlands, south west and south east as a minimum.

Although costing such a programme is difficult at this stage, some assumptions have been made to develop a programme to potentially deliver the required training to local authorities.

Assumptions on Costs

150 LLFAs so assumption that 1 person from each LLFA area would need to attend training events.

Five regional training events to be established to ensure that there is good attendance at events – approximately 30 attendees at each event.

Estimated cost per attendee = c £300.

Estimated organisation and overheads per event c £5 000.

Overall cost per training topic = c £50 000.

Local authorities have identified the prioritised areas of training that they require. Working in combination of a logical progression of how the Act and Regulations might be implemented, a programme of training can be outlined.

For SuDS in particular it is likely that several members of staff will be involved in the implementation of the new legislation – these could include planning, highways engineers and landscape staff. The implementation for SuDS is likely to happen in 2011 and so training will be crucial in advance of the commencement date for the SuDS requirements of the Act. The table below gives a provisional programme for training.

Training area	Approximate date of delivery*	Expected attendance	Cost
Understanding Legislation	Mid 2010	150 LLFAs	£50 000
Developing Preliminary Flood Risk Assessments	Mid 2010	150 LLFAs	£50 000
Understanding local flood risk management across	Mid/late 2010	150 LLFAs plus 150 other LA staff	£100 000

LA responsibilities			
Developing a local flood risk management strategy	Mid/late 2010	150 LLFAs	£50 000
Delivery training of management skills including leadership, negotiating, partnerships and communication	2010/2011	Est. 50% attendance from LLFAs	£100 000
SuDS – general training, SuDS approval body role, National Standards	2010/2011	Est. 2 persons from each LLFA	£100 000**
GIS/Mapping and data sharing	2010	150 LLFAs	£50 000
Portal training	2010	150 LLFAs	£50 000
Operational management of LFRM systems	2010/2011	150 LLFAs	£50 000

*dates are very provisional at this stage

**some funding may fall into 2011/12 FY

Overall approximately £600 000 should be made available from the Pitt funding to provide direct training to local authorities. Further funding may need to be bid for to meet ongoing needs for training in 2011/12 and beyond. This may particularly relate to SuDS training as policy in this area is likely to commence in 2011.

As discussed in section 4, formal training is not the only solution for increasing local authority capacity building. There are several other options which are likely to be cost beneficial. A key to success is for LAs to understand the activities and competencies that they will require to deliver LFRM. Other opportunities for funding the development of existing staff include:

- Possible small funding allowance of £3k-£4k to LAs to take up EA Diploma training. A small trial could be established to see whether this works and whether there is a demand for this type of training (est. opening up to 10 LAs for the next academic intake costing £30-£40k).
- Development of e-learning programme; (cost unknown and would need to undertake further work to assess value – unlikely to commence until September 2010 – implication is that funding may be needed beyond the end of 2010/11 FY).

- Possible funding to IDeA to incorporate flood risk training through the Leadership Academy (estimate a contribution of £5k per event with up to 5 taking place (estimated cost £25k).

Further work will be needed to establish the feasibility of e-learning, the costs involved and to assess what is already available. This should be linked to the development of the portal so any training is easily accessible. Accreditation should be an important part of the training process to enable a structured continued professional development programme.

7.2 Training new staff

This is the area that has seen the most development by Defra, EA, Lantra and local authorities over the past year. There has already been an intake in September 2009 of LA trainees onto the EA Foundation Degree and another is planned for 2010. Work is well underway to establish National Occupational Standards for Flood Risk Management to enable LAs to take on apprentices in flood risk management. The development of the NOSs is expected to go live in September 2010 which will enable LAs to recruit apprentices. There are likely to be funding available for Local Authorities to take up apprentices.

Funding is available for the Foundation Degree until the end the second year intake when it is estimated that 47 trainees will have qualified and will be available to work in LA flood risk management. An assessment is required of the future needs for training new LA staff. It is estimated that one to three new members of staff will be required by LLFAs to deliver the requirements of the Act – meaning up to 450 staff will be required. Assuming that 25 students could be accommodated onto the Foundation Degree annually in order for each LLFA to recruit one person through this route would require a six year programme. There will no doubt be some loss of trainees to other sectors and organisations so in the medium term there appears to be sufficient demand to justify seeking a medium term funding commitment to the intake of trainees onto the Foundation Degree. By keeping the demand for the intake under review a longer term strategy will need to be established.

Funding for the Foundation Degree is partly being met by Defra with well over £1m already committed to funding LA trainees. It is not envisaged that the additional Pitt Funding should be used as future funding will require a longer term commitment.

A key recommendation for LAs is to make an assessment of their needs and to investigate ways of making the best use of resources. This may mean developing new ways of working across several authorities and pooling expertise. This will also assist in clarifying what the demand is likely to be for skills and knowledge development in the future. Part of this strategy should be to keep under review the changing capacity requirement of local authorities.

7.3 Other initiatives

There are several other potential funding options for other initiatives that are currently or can be developed.

Local Flood Risk Management Portal

A local flood risk management portal is being scoped for local authorities with the aim of being a one stop shop for information. Whilst the development of the portal is being funded through the Defra/EA research budget a key component of the success of the portal will be to advertise its existence and maintain the content. In the short term this could be a funding option for Pitt funding with longer term management being considered from other funding sources once it is established. As yet the scoping work has not identified the costs to maintain and publicise the existence of the portal but funding can be made available to ensure the successful launch of the portal over the first 6 months.

It has been identified that other tools may be generally useful to LAs. Defra and EA have already developed an asset register tool and guidance will be shortly forthcoming. An area where funding could be cost effective for LAs is the licensing of data which is essential to the delivery of LFRM. An arrangement could be established for LAs to obtain this data partly or completely subsidised depending on the costs involved. Further work would need to be undertaken to establish which datasets LAs require which are currently not available.

Local networks could be established along the lines of the Association of Thames Drainage Authorities or the Learning Alliance in the north east. Knowledge transfer between local authorities should be facilitated through the establishment of networks. Further work would need to be carried out to establish what exists and what works well and whether there is appetite for a full regional network. RIEPs may be an ideal organisation to help establish these and some possible funding could be made available.

If changes to governance are agreed there may be scope for some funding to be made available to undertake additional initiatives by partner organisations but these would need to be considered on a value for money basis.

Possible training on succession planning and new ways of working through a more flexible approach to maximise use of resources and through secondments and work exchanges should be encouraged by local authorities.

7.4 Longer term objectives for skills and capacity building.

During 2010/2011 further development of the strategy will be considered looking at longer term and wider objectives for skills and capacity building connected to the new roles and responsibilities set out in the Flood and Water Management Act (2010) and the Flood Risk Regulations (2009).

8. Summary of strategy

The first outcome for this strategy is to set in hand an initial programme of work up to March 2011 to enable local authorities to deliver better local flood risk management. The strategy needs to deliver local authority flood risk management staff that show leadership and can act as the intelligent client when developing local flood risk management strategies and undertaking other actions. The strategy needs to be able to deliver the right skills in the right places. The strategy will be costed, deliverable and offer value for money. Where possible, savings will be made by working with partners to share existing capacity initiatives.

The delivery of capacity building and skills will require a range of deliverables across the three main themes as identified in section 2. These are:

- Training existing staff;
- Training new staff; and
- Information and tools (other initiatives to improve LA skills)

Defra, EA and other partners are already working together to develop capacity in some areas such as getting LA trainees onto the EA Foundation Degree but other areas need to be prioritised and taken forward. Some of the recommendations will require funding but other initiatives may only require a commitment to partnership working in order to deliver the required improvement to skills and capacity.

8.1 Training existing staff

This is the main area of focus for the strategy to deliver in the time period.

8.1.1. A prioritised programme of training is established for the next ten months.

Technical skills to implement PFRA requirements for the Flood Risk Regulations 2009 will be a priority for LAs to start preparing these during 2010. To deliver the Act other key skill areas are local strategy development, surface water management plans, flood risk management and mapping, preparing for the SAB approval, adoption and maintenance roles and development of leadership, negotiating and communication skills to work with other partner organisations. It is recommended that skills are grouped into activity areas so that LAs can identify skills gaps and then take steps to fill them.

8.1.2 It is recommended that the programme should be managed by Defra/EA/LGA with the work contracted out where necessary. Understanding of new legislation may be led by Defra/EA – depending on who is producing guidance to support the legislation. There needs to be close liaison between the timing of guidance and the accompanying training. Other skills elements should be provided on a competitive tender basis. It is anticipated that EA will lead on the overall delivery of the strategy working with Defra/LGA and other partners.

8.1.3 Final costing of a direct training programme will depend on the implementation timescales for legislation. It is recommended that about £600,000 of funding is allocated for training packages for LAs with an additional £100,000 for other training (see below). Where ever possible existing training programmes will be built on for cost effectiveness.

8.1.4 Other training opportunities such as with CLG with linkages to training across land use planning and flood management.

8.1.5 Other opportunities for funding the development of existing staff include:

- A small funding allowance of £3k-£4k to LAs to take up EA Diploma training (designed to retrain existing staff - trial of 10 staff est. £40k);
- Development of e-learning programme;
- Possible funding to IDeA to incorporate flood risk training through the Leadership Academy. Work with LGA/IDeA on existing initiatives with possible funding for further development - such as Community in Practice forum (est. £30); and
- Possible training on succession planning and new ways of working through a more flexible approach to maximise use of resources and through secondments and work exchanges.

8.1.6 The estimated cost of other elements of training is estimated to be £100,000.

8.2 Training new staff

This is the area that has seen the most development by Defra/EA and Lantra over the past year.

8.2.1 There has already been an intake in September 2009 of LA trainees onto the EA Foundation Degree. Plans for another LA intake for 2010 are well advanced.

8.2.2. Continue with work to establish National Occupational Standards for Flood Risk Management to enable the development of an apprenticeship framework. The development of the NVQs is planned to go live in September 2010 which will enable LAs to recruit apprentices.

8.2.3 In the short-term LA access to the foundation degree should continue with an assessment of future funding and need kept under review over the next few months.

8.2.4 LAs must continue to make an assessment of their needs and to investigate ways of making the best use of resources. This may mean developing new ways of working across several authorities and pooling expertise.

8.3 Provision of information and tools (and other initiatives)

Other initiatives to be developed include:

8.3.1 Continue with development of a local flood risk management portal for local authorities with the aim of being a one stop shop for information. Current development of the Portal is funded through the Defra/EA research budget. Support for the introduction of the LA LFRM Portal through a communication and maintenance strategy exploring options from other funding sources for the longer term est. cost (£100,000).

8.3.2 Tools may be generally useful to LAs. Defra and EA have already developed an asset register tool and guidance will be shortly forthcoming, some further development of this may be appropriate. It is proposed that funding is explored of cost effective licensing of data for LAs which is essential to the delivery of LFRM. Water company information is an example of a widely required data for LLFAs.

8.3.3 Regional networks could be established along the lines of the Learning Alliance in the north east. Further work would need to be carried out to establish what exists and what works well and whether there is appetite for a full regional network. RIEPs may be an ideal organisation to help establish these and some possible funding could be made available.

8.3.4 If changes to governance are agreed there may be scope for some funding to be made available to undertake additional initiatives by partner organisations but these would need to be considered on a value for money basis.

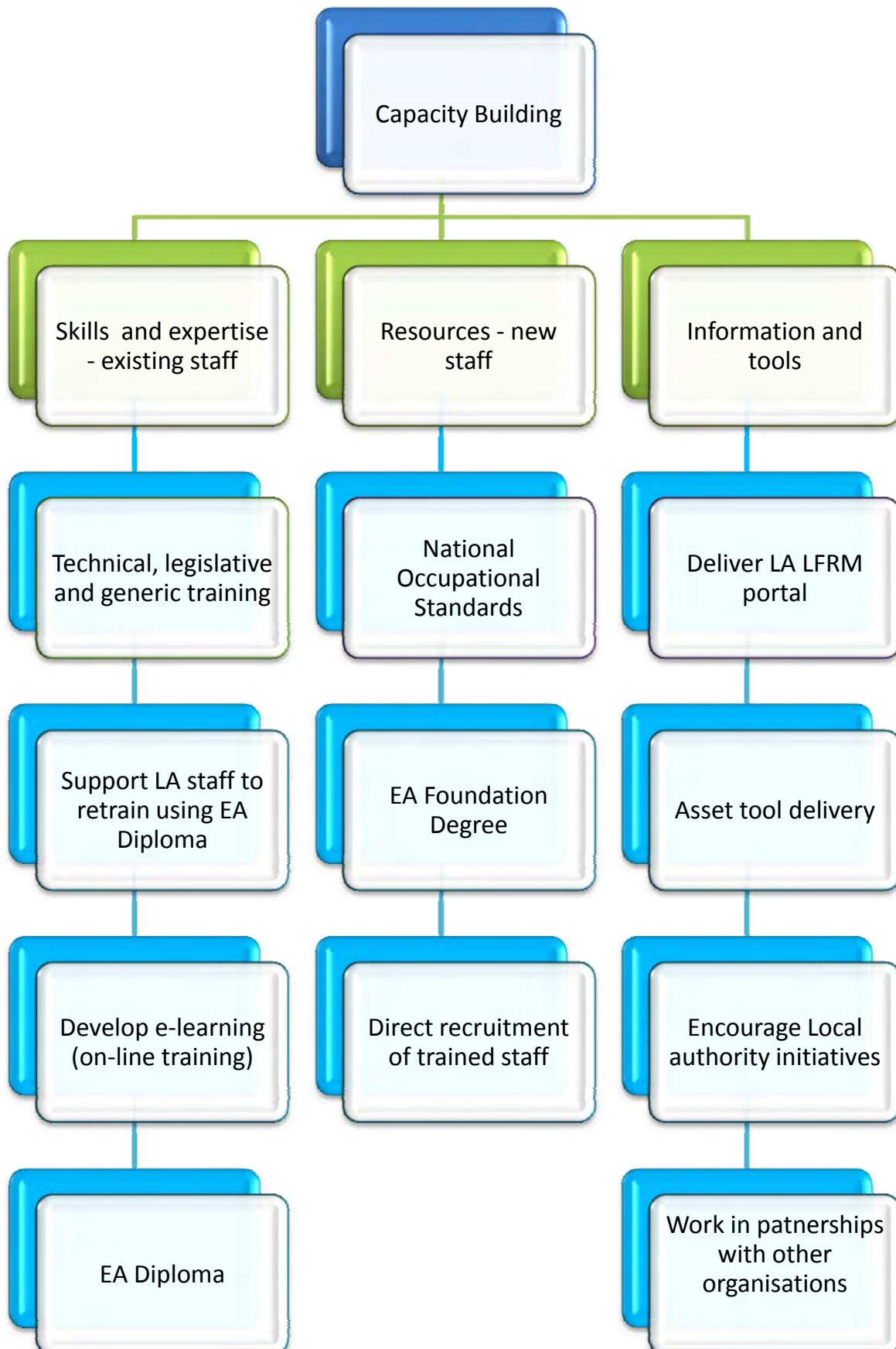
8.3.5 It is estimated that other tools and initiatives cost £200,000.

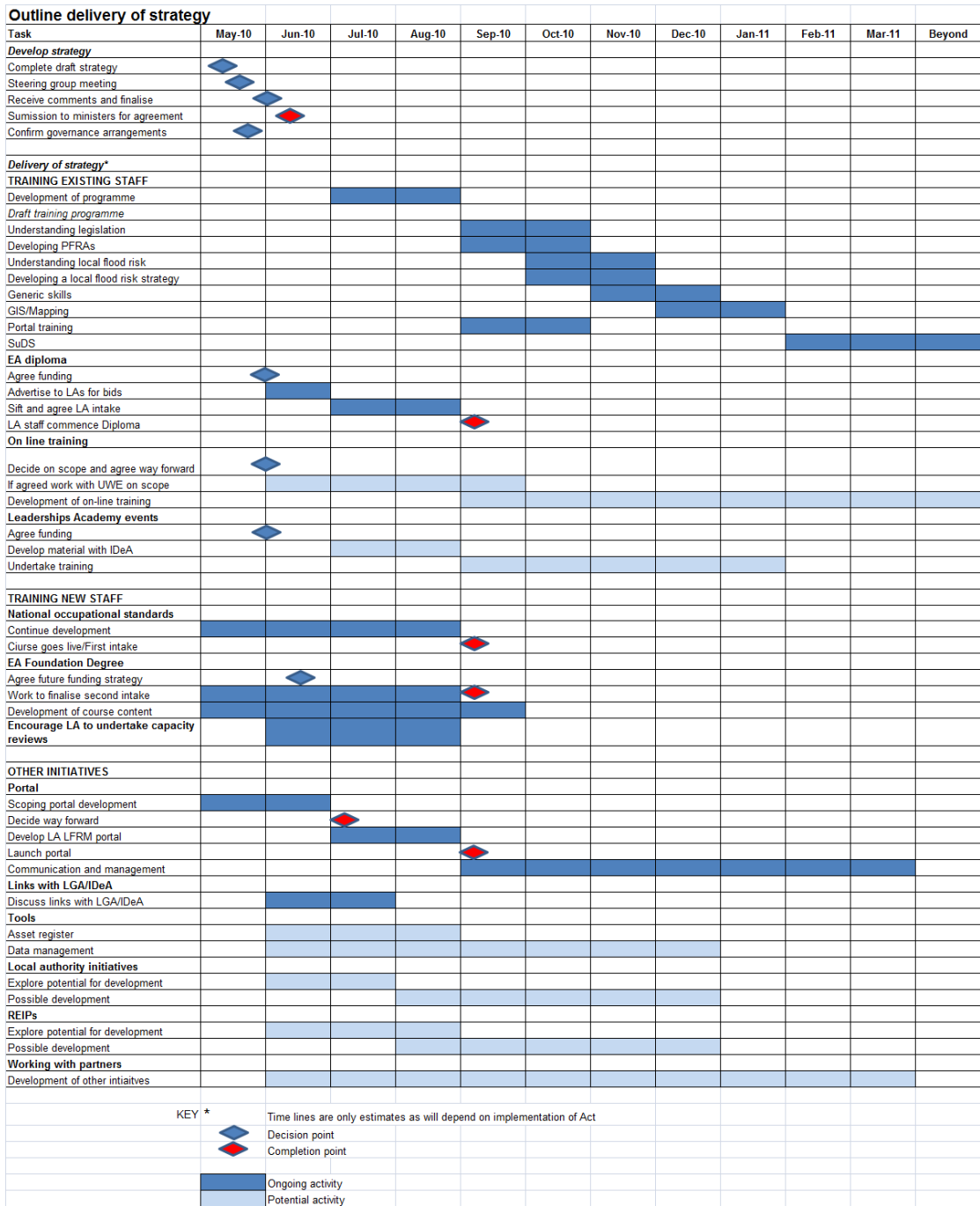
Below is a summary of the provisional budget, the key components of the strategy under the three themes and an outline delivery programme for the strategy.

Key area	Provisional budget
Direct training to local authorities, including working with partners such as EA, IDeA	£700,000
Development and delivery of local flood risk management portal	£100,000
Tools/databases/data provision and other developments	£200,000

NOTE: When the principles of the strategy are agreed a more detailed 12 month programme of training and funding will be developed.

Summary of capacity strategy options





Appendix A.

Defra Scoping study – options for increasing local authority capacity for flood risk management

Defra commissioned In House Policy Consultancy to undertake this work with the aim to find out what local authorities need to fill the skills shortage and help Defra to develop this strategy for delivery of better local flood risk management.

A total of 24 local and regional authorities were interviewed ranging from Government Offices to District Councils to obtain the full spectrum of authorities involved in flood risk management.

The full report is below

Scoping Study: Flood Risk Management

Options for increasing Local Authority capacity

Final Report

July 2009

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This report was commissioned by Defra and carried out by the In House Policy Consultancy (IHPC). Defra and IHPC would like to thank all those who took part in the interviews for their help and constructive comments.

Seven Unitary Authorities took part: Derby, West Berkshire, Bournemouth, North Somerset, Hartlepool, Wiltshire and Blackburn; four Metropolitan District Councils: Wakefield, Leeds, Bradford and Newcastle; seven County Councils took part: Leicestershire, Nottinghamshire, Worcestershire, Staffordshire, Oxfordshire, Hampshire and Dorset; four District Councils took part: West Dorset, North Norfolk, South Norfolk and Preston; and two London Boroughs: Kingston and Richmond. In addition, the author would like to thank the Local Government Association, CIRIA (Construction Industry Research and Information Association), Communities and Local Government, the Environment Agency, Drain London and Local Government Yorkshire & Humber for their help and comments. Grateful thanks also to all the Government Offices for their help in suggesting Local Authorities who might usefully take part in this project.

Executive Summary

1. This project was commissioned by the Flood Management Section in Defra to identify the capacity issues faced by Local Authorities in fulfilling their new duties and responsibilities under the draft Flood and Water Management Bill which incorporates the Pitt Review recommendations. (This project was specifically concerned with recommendations 14-20 - see Annex 3). The findings in this report will be used to inform Defra's approach to increasing Local Authority capacity, using recommended training programmes, best practise initiatives and guidance both ahead of the draft legislation coming into force and to enhance its smooth implementation when adopted. A selection of 24 Local Authorities across the country were interviewed for this project, at Unitary, Metropolitan, County and District level, together with representatives from Government Offices, the Environment Agency (EA), the Local Government Association (LGA), regional agencies and training consultancies. The key findings are listed below.

Key Findings

Capacity

2.1 All of the Local Authorities interviewed, whether Unitary, Metropolitan, County or District Authorities, were aware of the Pitt recommendations and the draft Flood and Water Management Bill (6);

2.2 Preparation for the new Flood Risk Management responsibilities under the draft legislation varied widely – with Yorkshire and Humber region authorities exceptionally well informed (led by Local Government Yorkshire & Humber). Understandably, those authorities that were less well informed tended to be the smaller authorities interviewed and those with little or no flood risk history (6, 6.1);

2.3 Most of the authorities were anxious about funding the new responsibilities and all of the Local Authorities interviewed questioned Defra's assumptions on the projected budget savings that Local Authorities would make from the transfer of the private sewer work. All claimed that any savings made would be negligible – at most a few hours a week of an Environmental Health Officer's time (6.2);

2.4 The majority of Local Authorities asked for clarification on the funding of Sustainable Urban Drainage Systems (SUDs), wanting to know if they could still claim discounted maintenance sums from developers for new sustainable drainage assets under Section 106 agreements of the Town and Country Planning Act 1990 (6.13);

2.5 Most Local Authorities interviewed, although not all, still had the vestiges of a drainage department. However, the majority of authorities had only one or two drainage engineers and foresaw the need to increase this expertise in order to implement the draft legislation and to manage future flood risk management issues (6.3);

2.6 None of the authorities interviewed had actively considered the succession/knowledge planning issue that was fast approaching (many of the local government engineering staff interviewed were in their 50s) (6.10, 9.3);

Skills and Information

2.7 All of the Drainage engineers/experts came from a general engineering or highways engineering background (7);

2.8 Most authorities would prefer, funds permitting, to recruit experienced engineers rather than train graduate engineers (7);

2.9 Many authorities were slightly sceptical about the usefulness of an NVQ-type qualification in Flood Risk Management or drainage areas. They would prefer to have fully-qualified engineering staff (7.1 – 7.3);

2.10 Most engineers in Local Government would welcome continuous professional training in the form of short update training courses, sponsored or endorsed by Defra to help them keep their skills up-to-date (7.4);

2.11 Authorities welcomed the idea of some sort of Defra/Environment Agency information portal with the proviso that guidance should be kept short and precise (7.5);

Partnership Working

2.12 All authorities welcomed partnership working (and most had begun to set up working groups with neighbouring authorities), with County Councils the most acutely aware that this would be essential for them as Lead Local Flood Authorities (LLFAs). Some were actively considering resource sharing and adaptive capacity initiatives (8, 8.1);

2.13 Relationships with the Environment Agency and water companies were generally good, subject to the common comments that the Environment Agency was sometimes viewed as lacking coherence due to the size and diversity of the organisation, and the privatised water companies often seemed reluctant to share information (8.2, 8.3);

Asset database capability

2.14 Asset database capability varied enormously, with some authorities quite confident that they had a useable database and others reliant on Ordnance Survey maps to indicate where water courses might be. Many of the authorities would welcome Environment Agency guidance and recommended software packages as a priority (9);

Examples of capacity building

2.15 A few authorities had already begun to devise their own adaptive capacity building initiatives – for example one unitary authority in the South West region, recognising their size and lack of resources, was negotiating with the local water company to share and develop the water company’s existing database for use as a joint asset; and a county council in the East Midlands region was considering the use of Service Level Agreements with district level drainage capability in order to harness their expertise (10);

General Comments

2.16 There was a perceived lack of meaningful communication with Defra – letters were often sent to Chief Executives and took several days or even weeks to filter through to the right person. It was suggested that Defra might copy letters to a Pitt/draft Bill Local Authority contact database (11);

2.17 Some of the Local Authorities interviewed claimed that Defra did not always appreciate the local political context: priorities were decided by local politicians and did not always accord with Defra priorities (11.1).

The Project

- 1.1.1. 3. Defra are all too well aware that the draft Flood and Water Management Bill places new responsibilities on Local Authorities in relation to Flood Risk Management (FRM) for which resources could be stretched - although there is little sound evidence with which to test this local authority assertion. The Pitt review identified a shortage in the range of skills which will be required within Local

Authorities to deliver better flood risk management. This project was designed to give Defra a head start in developing a strategy for delivering increased capacity and skills in Local Authorities to help them deliver better local flood risk management. It involved undertaking a sample assessment of 24 Local Authorities with a view to producing a report and recommendations on the further action which might be initiated to help them. This involved identifying the difficulties faced by the majority of Local Authorities and attempting to identify the main skills and knowledge gaps to ascertain the main obstacles faced by the majority of Local Authorities which might prevent them from fulfilling their new lead role in flood risk management, including sustainable drainage systems. This covered staff resources, training requirements, budgetary restraints, relationships with essential organisations (e.g. water companies) and the level of current Asset Database capability.

Methodology

4. The methodology devised (via background reading and discussions with the Government Office Network, Local Government Association and others) consisted of identifying a representative list of 24 Local Authority contacts as well as other useful contacts, who could be interviewed (by a series of phone interviews) in order to find out and assess the main difficulties faced in fulfilling their new roles and responsibilities, focusing in particular on staff and training issues and any other factors which might help the Local Authorities build capacity. Details of the Local Authorities interviewed are mentioned in the Acknowledgements section and set out in Annex B. They were chosen dependent on recommendations from Government Offices, from other Local Authorities and sometimes at random where no recommendation or contacts were available. District Councils were the most difficult to contact, often with impenetrable web sites that referred queries to County Council level. Consequently only four were successfully interviewed in the time available. Other relevant organisations that were canvassed included task groups set up to look at the issues such as that by Local Government Yorkshire & Humber (LGY&H) and Drain London; the Environment Agency (EA) and CIRIA (Construction Industry Research and Information Association).

1.1.2.

1.1.3. 4.1 The questions focused on the degree to which Local Authorities were aware of the Pitt recommendations and the draft legislation; what they thought it meant for their authority; how well equipped they thought they were to deal with the responsibilities;

how well they currently dealt with drainage issues and Flood Risk Management; how many drainage officers/relevant staff were already in post (if known); recruitment and retention policies, including training policy and succession planning; how well advanced they were with drainage asset databases; their relationships with essential organizations such as the Environment Agency and water companies and other Local Authorities; and examples of partnership working and/or any other capacity building initiatives. This project also briefly examined what is currently available to Local Authorities in terms of guidance, courses and expert body advice.

Background

5. The Floods and Water Bill incorporates the Pitt recommendations that Lead Local Flood Authorities (LLFAs) should assume a coordinating role in relation to the District Councils, Internal drainage Boards (IDBs) and the water and sewerage companies, plus any other relevant organisations necessary to manage the local flood risk in its area. In fulfilling the duty, the lead local flood authority will need to produce a Strategic Flood Risk Assessment (SFRA) and flood risk action plans relevant to flood risk when it needs to do so or when requested to do so by the Environment Agency. The mapping of areas of surface runoff and groundwater flooding and production of flood risk action plans would also fulfil the requirements of the Floods Directive. Local Authorities will also need to develop programmes of work or schemes in order to manage sustainably and mitigate the effects of flooding in its area and identify those bodies whose assets may contribute to flood risk, creating an asset register holding information on the ownership, location and condition of the assets.

5.1 The Local Government Association carried out a Survey of Local Flood Risk Management in November 2008 in order to try and establish the current and future capacity and expertise of Local Authorities to undertake the lead role on the management of local flood risk. This report provided some useful statistical information, having a 66.2% response rate. However, it is worth bearing in mind that, while this was a positive response rate, 32.8% of Local Authorities failed to respond. Defra has also carried out, in conjunction with the Local Government Association, a series of workshops with Local Authorities in order to help them understand the survey results, the resource issues and to help the Local Authorities understand more fully the duties that will be placed upon them. This project was set up to look specifically at the capacity issues.

Capacity Requirements

6. It is a positive fact that, regardless of size or location, all of the Local Authorities interviewed were aware of both the Pitt recommendations and the draft Flood and Water Management Bill. However, preparation for the new responsibilities – Flood Risk Management (FRM) Plans, Surface Water Management Plans (SWMPs), Sustainable Drainage Systems (SUDs) and drainage asset databases varied widely.

6.1 Yorkshire and Humber region were preparing their Local Authorities extremely impressively, largely due to the new Regional Development Agency, Local Government Yorkshire & Humber, and some very proactive authorities. The region had been seriously affected in 2007 and 2008 by flooding incidents which gave flooding issues a more serious impetus. The Government Office appeared to be very proactively involved with the issues. While other Government Offices were aware of the issues, with some very actively involved, others appeared to have a less active interest in the issues addressed in this report, concentrating instead on flooding emergencies. However, this may have been due to stretched staff resources or not finding the right contacts within the Government Office within the project time-frame.

6.2 The Yorkshire & Humber region authorities interviewed were all well informed - both at a local and regional level - and had a good appreciation of the national policy perspective. One authority was participating in one of the pilot SWMPs and another had sourced some European funding for two of their projects. All welcomed the draft bill but had not anticipated the seemingly complete lack of extra funding. All would be providing detailed input to Defra on the draft legislation and asking for clarification on the points they felt were unclear (for example, the methodology behind the assumptions made by Defra about the transfer of private sewer work, the costs of the SWMP work and the obligations on the water companies to provide information). It is worth noting that all authorities interviewed were adamant that no relevant budget savings would be made from the transfer of private sewer work – despite Defra's insistence. It would be advisable for Defra to revisit their assumptions and provide clarification. An explanation of the assumptions made would help to build confidence and trust.

6.3 The Yorkshire and Humber authorities interviewed all had functioning drainage departments, with one currently having 11 full time posts in their drainage section. In contrast, other larger authorities were not so well resourced. For example, a unitary authority in the South West Region, has one engineer (having returned to drainage

from another discipline because he “found the subject interesting”); an authority in the West Midlands Region has 3 engineers and 2 support staff; one authority in the North West has 3 engineers; and three unitary authorities interviewed have one engineer each. Some drainage departments had limited administrative support in addition to the engineering staff but this did not seem to be consistent across all authorities.

6.4 Authorities that had experienced flooding – especially those hit by the adverse weather in 2007 - were generally further advanced in planning their resources to incorporate the Pitt recommendations. The South East region (Oxfordshire, West Berkshire and Hampshire) were reasonably well prepared with one authority claiming that drainage was reasonably well integrated in the authority following the 2007 flooding (staff were communicated to well on flooding issues inter-departmentally). They were also taking part in the SWMP pilot scheme. Nonetheless they felt that they would need more resources and a scrutiny review carried out in 2007 identified the need for a specific drainage team which has yet to be established due to lack of resources. They were working very closely with a neighbouring authority (who also felt under-funded and under-resourced) and working groups were looking at the implications of the draft legislation. One county council felt there might be some scope to move staff around in-house to help overcome critical staffing shortages but that the district councils they were working with were not large enough for this to be a viable option.

6.5 Another County Council appeared to be extremely organised and had established a new organisational structure to work on FRM largely due to the fact that they had experienced major ground water flooding in 2000. They saw their leadership role as a strategic outward-facing duty which sought to consolidate knowledge. They currently had no bespoke specialist engineers and were keeping an open mind as to whether they would need to recruit one. However, they viewed the district level land drainage engineers (3 or 4 across the 11 district councils) as a resource that they would be looking to harness. They had also ring-fenced £100k for the development of their SWMP and asset database (they were the only authority interviewed who were specific on funding). Initial SWMP work would focus on high risk flooding areas. However, they did point out that this “set-up” money would have to include additional staffing (at the moment they were hoping to use temporary staff).

6.6 Another County Council had set up a “Strategic Flood Board” in an attempt to get the right people around a table (all relevant in-house staff as well as external stakeholders such as the local water company) and were currently hoping to recruit a

drainage engineer to concentrate on the new responsibilities. They also had a programme of engaging local groups, including neighbourhood wardens (see Examples of Capacity Building, below) throughout the District Councils.

6.7 A West Midlands region County Council were looking to manage the new responsibilities internally through existing roles and were looking at Gloucestershire for examples of good practise – and had joined two neighbouring Local Authorities to form a group to look at synergies across flooding risks. There was even some discussion of appointing a “Flood Tsar” across the three counties. They were also looking at resource levels in their six District Councils but no decisions had been taken (papers were being considered). They had set up a special projects team to concentrate on flood risk issues which met with district councils, the local water company, landowners and other stakeholders. However, it had currently generated 270 projects and was generating more questions than answers for them.

6.8 An East Midlands region County Council envisaged putting together a small team of people and had set up a “Strategic Flood Risk Management Board” incorporating seven District Councils. However, they pointed out that work had been delayed by local council elections (see General Points below). They were thinking about how they might solve the resource issues by pooling investment – linking in with the local water company. But they pointed out that the OFWAT targets for flooding seemed to differ from local authority targets which presented a weakness in the system. They believed that OFWAT may have to address this in future.

6.9 Some authorities said they had drafted some Defra consultation responses but hadn't really focused on the new responsibilities. However, one authority, as a council with coastal flood risks did have a nine-strong engineering team. Others were not fully engaged with the implications of Pitt and were struggling with resources. Awareness depended to some extent on geographical location and even soil types – for example, heavy clay soil prone to flooding. However, even authorities that were flood aware sometimes admitted that they had no drainage engineers. Often they relied on planners and environmental health officers to deal with issues – usually in a reactive way.

6.10 In the North West, two authorities claimed that they had lost most of their engineering expertise over the years and both specifically mentioned the issue of succession planning/information capture as they were likely to lose the few engineering staff they had left to retirement. One authority, as a District Council, thought that the county was beginning to grasp the issues but that it was early days.

Another welcomed the fact that flood management was being taken seriously but were concerned about staff resource levels – particularly as two of their three engineering staff were close to retirement.

6.11 The London Boroughs interviewed both claimed to be under resourced but had the advantage that Drain London was driving a climate change adaptation strategy for London which brought together all of the London Boroughs, agencies, Transport for London, Thames Water and the Environment Agency to look at flooding risks and available data. Drain London were prioritising the flooding “hotspots” for London and trying to get everyone to sign up to a web portal that would act as a single point of data capture with each stakeholder retaining responsibility for updating their records but able to share information. Resources were recognised to be tight but London Boroughs working individually was recognised to be a non-efficient use of resources.

6.12 It is worth noting that none of the authorities interviewed could give a definitive answer as to how many new or extra staff they might need in order to carry out FRM plans, SWMPs, prepare asset databases etc. Many were at the very initial planning stages – with, they believed, little or no prospect of extra funding in the current economic climate – and were proposing to adapt existing capacity by sharing out the new responsibilities among existing staff in the short term. Some pointed out that over the last few years they had shed capability due to a variety of reasons, including: staff redundancies, experienced staff – especially engineers – leaving to work in consultancy or for the water companies and higher private sector salaries. They now found it difficult to find the expertise they had lost – both in terms of funding and recruitment.

6.13 In terms of SUDs the majority of authorities interviewed stated that their planners already incorporated SUDs where possible. There was a distinct nervousness about the S106 funding under the new legislation (many authorities were unclear that the current S106 regime would still apply as is), many feeling that developers would be reluctant to sign up to S106 funding for SUDs measures in the current economic climate. Many authorities, who had housing targets to deliver, felt that the developers might start to play a very awkward game, and would therefore like clarification on funding and “more teeth” in the draft legislation in order to deal with builders who might provide sub-standard SUDs features. Some authorities would like to see a more prescriptive regime with SUDs backed up by compulsory rainwater/greywater harvesting measures – although some believed that this was simply a narrow interpretation of SUDs and that it does include rainwater harvesting. It may be that the interpretation needs clarification in the draft legislation/explanatory notes and guidance.

Skills and Information

7. All of the authorities interviewed anticipated that they would require extra staff resources in order to carry out their new responsibilities effectively. However, as noted above, few could give a satisfactory answer as to exactly what sort or size of resource they were likely to need. In an ideal world many authorities would prefer to recruit experienced engineers – most usually from a general or highways engineering background. There was a nervousness about training graduate engineers or others because the Local Authorities who had carried out training programmes in the past lost many of the staff they had paid to train to outside consultancies or the water companies. One authority cited the example that 31 years ago the authority had 40 engineers: it currently has three. On a positive note some felt that the tide was turning and that it was a good thing for Local Authorities to start regaining some of the expertise that they had lost – particularly in terms of cultivating local knowledge which it was felt was essential for effective local flood risk management planning. The economic downturn was seen as both a positive and negative influence: funding might get tighter but it was possible that recruitment would be easier – in particular the recruitment of experienced engineering staff.

7.1 While some authorities welcomed the idea of an NVQ qualification in Flood Risk Management (FRM) – or some aspect of it – many were sceptical, viewing the idea as a bit of a gimmick, and felt that given the importance that water management was going to have in future it was essential to start putting in place the engineering expertise now. They were particularly keen to have qualified staff who could act as the “intelligent client” – particularly as many could foresee the need to employ some consultancy expertise in FRM over the coming years.

7.2 Those that were more supportive of a second-tier qualification included one Yorkshire and Humber region authority who said they were “open-minded on training – if resources were made available”; one who stated that it could be useful given that they would require multi-disciplinary skills; another could see that it was a “sensible” progression; one county council appreciated that it could enhance capability; one thought it might be useful; and one thought it was “interesting”. The NVQ was perceived as a possible supporting qualification, possibly in sustainable drainage; asset database management or some aspect of preparation for SWMP or FRMP. It was not seen as a substitute for qualified engineers: the need for these was seen as growing in importance if flood risk forecasts were accurate.

7.3 However, all felt that the NVQ would need some sort of official endorsement by Defra and/or the Environment Agency in order to give it the necessary gravitas. The content also needed to be carefully devised so that it was pertinent to the requirements of the Local Authorities. Of those that were more sceptical, the responses fell into two main categories: those that did not want their engineering capability downgraded; and those who thought it was of little use if they did not have the staff to send on it – and for many resources were so stretched that they neither had suitable staff or the training budget to pay for it. Some authorities also pointed out that it was not easy to transfer staff between departments – so even if there were staff in other sections who might be suitable candidates the internal budget arrangements were not set up to allow this.

7.4 Some authorities said it would be just as helpful – if not more so - for Defra/Environment Agency to provide or endorse continual professional training in the form of short training courses so that existing engineering staff could update their skills generally. Many admitted that the newer, greener emphasis, such as the use of sustainable drainage, was not something they instinctively turned to as they were brought up in an era of main drainage and they would welcome the opportunity to bring their engineering experience up-to-date.

7.5 There was also universal support for some sort of Defra/Environment Agency portal (the “Pitt Portal”) which could be used at local authority level as **the** place for guidance and advice. Although much advice is already produced, there were pleas for any guidance to be kept concise – together with a request that where possible it should be as prescriptive as possible so that Local Authorities could learn exactly what it was they were meant to be doing – or as one authority put it “an idiot’s guide, please”. The portal was also seen as something that could cover drainage design standards.

7.6 The recent announcement by Defra that it would part-sponsor a certain number of places on the Environment Agency Flood Risk Management Foundation Degree was positively received by Local Authorities – all of whom thought it was a positive step (although this view was partly enhanced by the fact that Defra would be sponsoring the training). All pointed out that it would not be enough on its own but, nonetheless, appreciated the gesture and would be considering whether or not they could nominate a member of staff for the course.

7.7 In terms of available training, few educational establishments appear to offer any flood-specific courses. Bristol works with the Environment Agency to offer the

Foundation degree in Flood Risk Management (it also offers a post-graduate research degree in the same subject) but most other universities offer standard engineering degrees. Warwick University offers a four-year engineering course “Engineering with Fluid Dynamics”; and Bath offers environmental engineering which includes “the long term study of the retention of water within drought and water-damaged soils”. In a changing world it might be advisable to start influencing – via the Environment Agency, the Department for Business, Innovation and Skills, and the Quality Assurance Agency for Higher Education – the course content of some higher education qualifications and under-graduate courses so that drainage and flood risk are included as a core component.

7.8 Many training consultancies claim to provide skills training in, for example, FRM, but Local Authorities seem to be wary of training courses that are not “official”. Many have had dealings with CIRIA – in particular with the LANDFORM network – but otherwise rely on the Institute of Civil Engineers and County Surveyors Society for training, mentoring and information gathering. It may be possible to use ICE and CSS to disseminate information on training opportunities so that it gets to the engineers it is aimed at, rather than targeting the Local Authorities generally.

Partnership Working

8. All of the authorities interviewed were looking at ways of partnership working, recognising that flooding was a cross-boundary issue and one that required a shared interest. The County Councils were most acutely aware of the need for partnership working with their district authorities, given their lead role as Lead Local Flood Authority, but all were keen to share best practice and work with the Environment Agency and water companies and other stakeholders.

8.1 LGY&H, as mentioned previously, were extremely proactive in getting Local Authorities together on a regional basis to work out how best to approach FRM, setting up a “Learning Alliance”. The Environment Agency were also proactive in speaking to Local Authorities, for example, in the South West the Environment Agency had set up a “Flood Risk Operational Group” with some Local Authorities. Similar working groups had been set up county-wide.

8.2 Most authorities were extremely positive about the Environment Agency and the work they were doing, with some minor criticisms: several mentioned that the Environment Agency was a very large and diverse organisation and that sometimes

mixed messages were received, depending on who they spoke to; and that the Environment Agency has a huge focus on Pitt, with lots of information to assimilate, and does not always appreciate the difficulties encountered by the local authority at the other end of the process – or the fact that authorities do not always have the same level of knowledge as the Environment Agency. In a reverse take on this, one District Council pointed out that the Environment Agency sometimes took too much account of their own forecasts and not enough account of local knowledge. For example, one of the Environment Agency flooding forecasts proved to be completely wrong because they had failed to take account of local information on wave action, thereby underestimating the effect of the flooding. However, personal relationships seemed to be very strong.

8.3 The water companies probably came in for the most criticism. While personal relationships were good and getting better, there was still a perceived reluctance on the part of the water companies to share information. While there were exceptions to this, most authorities would like to see some clarification of the role of the water companies and their duties under the draft legislation to provide information to Local Authorities.

8.4 LANDFORM was mentioned by some Local Authorities as a good way of networking and finding out about what is going on. This is run by CIRIA (a “not-for-profit” consultancy) who also run training courses on SUDs and other aspects of FRM. However, it was clear that the interpretation of SUDs varied among Local Authorities which points to the fact that the sort of training courses run by consultancies like CIRIA are not permeating Local Authorities to the extent that they will need to. This may reflect a general Local Authority nervousness about consultants, partly because they recognise the need to fulfil the role of “intelligent client” which they acknowledge they are not always very good at (or as one authority put it “they write the brief for us”). There was a clear feeling that Local Authorities have cut back on in-house training opportunities in recent years.

8.5 Some authorities do use consultants for drainage work. For example, one Unitary Authority with one (very experienced) drainage engineer relies on a call-off contract with consultants to assist with extra work and proposes to keep using this arrangement. He has the advantage of a number of years of experience as the “intelligent client” which some authorities claimed to be lacking. This authority was also interesting in that it planned to try and set up an arrangement with its water company to share an asset database (see examples of capacity building below). Other authorities interviewed use consultants from time-to-time because they need the expertise. There was also a suggestion that Local Authorities might try to utilise

temporary staff in order to set up some of the systems necessary under the draft legislation. For example, temporary office staff might usefully be used to populate a drainage asset database.

Asset Database Capability

9. Asset database capability varied enormously from authority to authority. The size or type of authority seemed to have little bearing on capability. For example, one large Metropolitan District Authority had very little information and relied on Ordnance Survey and historic maps. Another viewed the asset database as a key priority and were well informed about what they wanted to achieve and were aware of the work the Environment Agency is currently carrying out to develop a prototype tool and guidance for Local Authorities to collate, record and maintain information on their surface water assets.

9.1 One South East region authority had set aside funds for their assets database and were well advanced in prioritising high flood risk locations (109 villages), mapping these first. Surface water drainage currently comprised the largest data set within the County Council but was not yet complete. Their main issue was sharing data with the water company. Although they felt they were working strongly in partnership with the company there were still issues with information.

9.2 One County Council had a partial database and were continuing to work on it. Their local water company had been helpful but operated over a larger geographical area which sometimes proved to be problematic. Another County Council was developing an asset database – building on their highways asset database system which had received funding from DfT. One or two other authorities had used the same approach – one referring to it as a “holistic approach” or killing two birds with one budget. Another County Council had a very incomplete asset database, hindered by a lack of historical information and a lack of staff resources. Two District Councils had no asset database at all.

9.3 A Unitary Authority pointed out that this was one of the areas where it was important to act quickly in order to capture the expertise and knowledge held by those engineers who were coming up to retirement. Many engineers had an extensive local knowledge and knew where things were even if it was not recorded.

Many authorities would appreciate guidance on software and examples of good practise. Many had heard that the Environment Agency might be producing something but the rumours were vague. Some were holding fire until they had a better idea of what might be required.

9.4 The danger with the more advanced Local Authorities is that their asset databases might not be compatible with neighbouring authorities' databases. National guidance would be a sensible way of proceeding, with guidance on what can be expected in terms of obligations and information from the water companies.

Examples of Capacity Building

10. Examples of capacity building were few and far between, most probably because Local Authorities are very much in the planning stages on the implementation of the Pitt recommendations. However, some innovative ideas and adaptive capacity initiatives are beginning to emerge. These include:

- A County Council in the South East region had taken a very proactive role in flood risk management and had taken the pragmatic approach of prioritising high flood risk areas. This meant that their asset database preparation was focused on the high risk areas, as well as their information initiatives. Accordingly their high risk area assets were largely mapped and they had published a series of self-help documents for residents, such as "Flooding in Parishes", which not only helps residents but encourages community action to help alleviate flooding incidents. Similarly, another County Council had recognised that staff resources were limited so was starting to engage local communities, introducing neighbourhood wardens to report minor flooding incidents (e.g. back garden flooding that might not normally be reported but might have a bearing on more serious future flooding incidents) and blocked drains. This was designed to operate on a similar basis to the local Neighbourhood Watch schemes – except it was looking for flood water rather than burglars;
- An East Midlands region County Council had set up a "Strategic Flood Board" with the District Councils and stakeholders and was looking to investigate the possibility of setting up service level agreements with those District Councils that had engineering expertise so that it might be utilised across the area. This was still very much in the discussion stages but was an idea that appealed to others – one of whom thought it might be developed further to include a drainage "SWAT" team. Communities and Local Government have also been encouraging this sort of collective working in a series of workshops

with Local Authorities on PPS25. However, this idea might be dependant on existing staff flexibility, possibly union agreements, salary considerations etc;

- A Unitary Authority in the South West region, is investigating the possibility of using the existing sewerage database owned by the local water company, adding their drainage asset information and then using it as a shared asset. They had unique geographical considerations – an urban conurbation on the cliffs surrounded by flood plains – which have led the authority to the conclusion that it would not be cost effective to start from scratch when a lot of the information is already held by the water company;
- Many Local Authorities are setting up working groups to disseminate information and share best practise. Three West Midlands region authorities have set up a group to look at common synergies. There is also a proposal to employ a group “Flood Tsar” to oversee the flood risk management work and discussions are currently taking place at Chief Executive level. Likewise a North East region council is chairing a Flood Risk Management group with four other local Unitary Authorities in order to look at sharing resources and economies of scale. It was early days but they expected the group to prove useful. It is also worth noting the wider initiatives such as Drain London which is working across the London Boroughs to look at common issues and economies of scale; and the Learning Alliance organised by Local Government Yorkshire & Humber (the Regional Development Agency) with Local Authorities throughout the region. This work has had a noticeable impact on the Yorkshire and Humber authorities in helping to disseminate information and look at the work and common themes involved in the Pitt Recommendations and draft legislation.

General Comments

11. General comments made included the comment that Defra was expecting a lot of extra work from Local Authorities with little or no extra funding (indeed many pointed out that budgets were likely to be reduced and they were looking at shedding staff rather than recruiting). Nonetheless they accepted that the Pitt recommendations were sensible and many authorities were looking at ways of tackling the new responsibilities within their existing staff resource. One criticism of Defra was that letters were always sent out at Chief Executive level and often took some time to filter down to the right department or person (some pointed out that the volume of correspondence received at Chief Executive level was huge, often 3000+ letters per day in the larger authorities). Many asked if letters could be copied to the FRM/Pitt official contact and if Defra could put together a database in order to do this.

11.1 Some authorities also pointed out that they were often hampered by the local political context within their local authority. Councillors decided the local priorities and if flooding was not one of them it was unlikely any extra resources would be devoted to the Pitt recommendations. They felt that Defra did not always appreciate this.

11.2 Sustainable drainage was an interesting issue. Most authorities claimed they already used SUDs where possible but none had really focused on the mechanics of the new SUDs regime. Some had focused only on the financial implications – see S106 point above – or had decided that it was not really suitable for them as they had, for example, heavy clay soil. Others were keen to use sustainable initiatives despite clay soil and were looking to incorporate other features such as “the green roof”. The interpretation of SUDs was generally narrow. One authority claimed that SUDs did not work for small infill development because housing density standards were so tight that there was usually no room for features such as soakaways. Those that were keen to use it complained that Defra should adopt the German or Scandinavian approach and include rainwater and greywater harvesting (although some thought that rainwater harvesting was part of SUDs). It is clear from this that the new regime requires further clarification – most authorities suggested a more prescriptive approach with more demands made of developers.

11.3 Communities and Local Government (CLG) was approached for feedback on their capacity building initiatives in relation to PPS25. They had held a series of workshops with Local Authorities. They were keen to continue working closely with Defra and suggested that there may perhaps be occasion to hold joint capacity building workshops on related issues.

Recommendations and Further Work

12, Staff resourcing – at an experienced engineering capability – is the greatest challenge facing Local Authorities. It is clear that even maintaining existing experienced staff levels within Local Authorities will prove to be difficult over the next few years. Steps must be taken to insure that an adequate succession planning/information capture plan is introduced into Local Authorities as soon as is practicable. It is therefore recommended that Defra:

1. Explore the idea of a Defra/Environment Agency portal for use by Local Authority engineers and planners, specifically for the work related to the Flood and Water Management Bill (the “Pitt Portal”). This could be secured relatively quickly and include clarification on funding issues; clearer interpretation of sustainable drainage systems; sustainable drainage approval guidance; guidance on asset database work etc;
2. Consider devising short update training courses – perhaps with an organisation such as CIRIA – for existing Local Authority staff in order to enhance continuous professional training (for example, producing FRMPs, SWMPs, database mapping and sustainable drainage systems);
3. Continue to explore with Local Authorities – perhaps through a short questionnaire – the level of interest in a new NVQ qualification and the most useful content for the course, but view this as a longer term option, favouring short up-date courses for existing staff and development of the “Pitt Portal”;
4. Take steps to highlight the succession planning/information capture issue to Local Authorities and introduce the idea that employing graduate engineers – or using the Defra/Environment Agency Foundation degree scheme - will assist them in the long term and help them to capture information and keep it;
5. Introduce the idea that training staff may be expensive but is a key component to building up local expertise;
6. Use existing forum and examples of best practise (for example, the LGY&H Learning Alliance) to assist Local Authorities in sharing information and interpretation of guidance notes;

7. Develop the Environment Agency Prototype Tool and Guidance For Local Authorities and others to collate, record and maintain information on their Surface Water Assets as a matter of priority;
8. Explore with Lead Local Flood Authorities' the idea of harnessing drainage expertise at district level, either through Service Level Agreements or staff secondments/swaps, in order to build a collective core of local expertise;
9. Use Local Authority best practise – perhaps sharing through the Portal – using examples such as prioritising flooding hotspots when preparing drainage asset databases or neighbourhood floodwatch wardens;
10. Clarify the role of the water companies and their obligations to Local Authorities under the draft legislation;
11. Clarify the data underlining the conclusion that the transfer of private sewer work from Local Authorities would provide extra funding;
12. Clarify the funding situation for the longer term maintenance of SUDs features to specify whether S106 agreements will still be valid;
13. Ensure that Defra continue to work closely with CLG on capacity building issues - possibly sharing some future seminars/workshops on local authority capacity building - as CLG have already held a series of workshops on building capacity in relation to PPS25.

Annex 1 – Project Specification

Scoping Study: Flood Risk Management: options for increasing Local Authority capacity.

1.2. Project Specification

- 1.2.1. **AIM:** To identify via the Government Office network and the Local Government Association (and possibly others, for example the Environment Agency) how well prepared Local Authorities are to take on the Pitt recommendations (14-20) to lead on the management of local flood risk. Having scoped the project via the Government Office network and the Environment Agency, to undertake a sample assessment (24 Local Authorities) of how well prepared Local Authorities are to take on the Pitt recommendations (14-20) to lead on the management of local flood risk – as incorporated in the draft Flood and Water Management Bill – in order to produce a report and recommendations on the further action which might be taken to assist them.
- 1.2.2. **OBJECTIVES:** To identify the main skills and knowledge gaps to ascertain the main obstacles faced by the majority of Local Authorities which might prevent them from fulfilling their new lead role in flood risk management, including sustainable drainage systems. This will cover staff resources, training requirements, budgetary restraints, relationships with essential organisations (e.g. privatised water companies), and the level of current Asset Database capability.
- 1.2.3. **METHODOLOGY:** To identify, via background reading and discussions with the Government Office Network, Local Government Association and others, a representative list of Local Authority contacts and other useful contacts, who can be interviewed (probably a series of phone interviews depending on available time) in order to find out and assess the main difficulties they face in fulfilling their new role – focusing in particular on staff and training issues and any other factors which might help the Local Authorities build capacity. Other relevant organisations that will need to be canvassed include, for example, any task groups that might have been set up such as that by Local Government

Yorkshire & Humber and Drain London; the Environment Agency and Communities and Local Government. Examine what is currently available to Local Authorities in terms of guidance, courses and expert body advice.

STAKEHOLDERS/INTERVIEWEES: Representatives from the Local Authorities, the Government Office Network, key Local Government Association contacts, the Environment Agency and relevant professional bodies.

1.2.4. TIMETABLE AND OUTPUT: A 28 day exercise with a view to producing a report and recommendations that can be used by Defra, first in a series of workshops with Local Authorities and, secondly, to initiate action (for example, pilot training courses).

1.2.5. SUCCESS CRITERIA FOR THE PROJECT: Full report by Tuesday 30 June.

Annex B: Contact List

Yorkshire & Humber

Government Office Yorkshire & Humber

Local Government Yorkshire & Humber

City of Wakefield Metropolitan District Council

City of Bradford Metropolitan District Council

Leeds City Council

Environment Agency (EA)

East Midlands

Government Office East Midlands

Environment Agency

Derby City Council

Leicestershire County Council

Nottinghamshire County Council

East

Government Office East

South Norfolk District Council

North Norfolk District Council

London

Government Office for London
London Borough of Richmond
London Borough of Kingston
Drain London

South East

Government Office South East
West Berkshire Council
Oxfordshire County Council
Hampshire County Council

North West

Government Office North West
Environment Agency
Blackburn Council
Preston City Council

West Midlands

Government Office West Midlands
Worcestershire County Council
Staffordshire County Council

South West

Government Office South West

Environment Agency

Bournemouth Council

Dorset County Council

North Somerset District

West Dorset District Council

Wiltshire Council

North East:

Government Office North East

Newcastle Council

Hartlepool Borough Council

Others

Local Government Association (LGA)

CIRIA (Construction Industry Research and Information Association)

Communities and Local Government (CLG)

Annex C: Pitt Recommendations 14-20

Sir Michael Pitt's report into the flooding of 2007 contained the following recommendations with which this project on capacity building was specifically concerned. They are:

RECOMMENDATION 14: Local Authorities should lead on the management of local flood risk, with the support of the relevant organisations.

RECOMMENDATION 15: Local Authorities should positively tackle local problems of flooding by working with all relevant parties, establishing ownership and legal responsibility.

RECOMMENDATION 16: Local Authorities should collate and map the main flood risk management and drainage assets (over and underground), including a record of their ownership and condition.

RECOMMENDATION 17: All relevant organisations should have a duty to share information and cooperate with Local Authorities and the Environment Agency to facilitate the management of flood risk.

RECOMMENDATION 18: Local Surface Water Management Plans, as set out under PPS25 and coordinated by Local Authorities, should provide the basis for managing all local flood risk.

RECOMMENDATION 19: Local Authorities should assess and, if appropriate, enhance their technical capabilities to deliver a wide range of responsibilities in relation to local flood risk management.

RECOMMENDATION 20: The Government should resolve the issue of which organisations should be responsible for the ownership and maintenance of sustainable drainage systems.

JOINT CSS/LGA/IDeA RESEARCH OF LOCAL
AUTHORITY CAPACITY & CAPABILITY TO
MEET THEIR OBLIGATIONS AS LAID OUT
BY THE DRAFT FLOOD AND WATER
MANAGEMENT BILL

Issue 2

20 July 2009

Produced for
CSS/LGA/IDeA

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Document Control Sheet

Report Title JOINT CSS/LGA/IDeA RESEARCH OF LOCAL AUTHORITY
CAPACITY & CAPABILITY TO MEET THEIR OBLIGATIONS AS
LAID OUT BY THE DRAFT FLOOD AND WATER
MANAGEMENT BILL

Issue 1 2

Status Final

Control Date 20 July 2009

Record of Issue

Issue	Status	Author	Date	Check	Date	Authoris ed	Date
1	Draft	C Jackson	13/07/09	J Wright	13/07/09	J Wright	13/07/09
2	Final	C Jackson	17/07/09	J Wright	17/07/09	J Wright	17/07/09

Distribution

Organisation	Contact	Copies
Lincolnshire CC	David Hickman	1 pdf

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We have used our reasonable endeavours to provide information that is correct and accurate and have discussed in this report the reasonable conclusions that can be reached on the basis of the information available

Executive Summary

The Draft Flood and Water Management Bill proposes that local authorities take a leadership role in local flood risk management (flooding from ordinary watercourses, groundwater and surface runoff). In two tier areas, the county council will take this leadership role as will unitary authorities. Responsibilities will include setting Local Strategy for local flood risk management; leadership and accountability for ensuring effective management of local flood risk from ordinary watercourses, surface run-off and groundwater; production of local flood risk assessments, maps and plans including an asset register; improved drainage and flood risk management expertise, co-ordination of Surface Water Management Plan production; drainage from non-Highways Agency roads; prioritising local investment; consenting and enforcement powers for certain works affecting ordinary watercourses; promoting partnerships with local planning authorities to produce Strategic Flood Risk Assessments.

This research project, commissioned by the CSS, LGA and IDeA, looks to establish at a national scale what additional resources, skills and hence training needs exist, to meet the Pitt Report Recommendations and the duties placed upon them of meeting their new obligations as set out in the new Draft Flood and Water Management Bill. The work excludes the capacity and capabilities associated with Emergency Planning.

Data was collected using a standard questionnaire from 14 Local Authorities through meetings, telephone conversations and a workshop. From the information collected, it appears that the Local Authorities questioned generally have good awareness of the new roles and responsibilities proposed in the Draft Bill although not all are clear as to the implications or how the new roles and responsibilities will be implemented. There was universal concern about the lack of flood risk management staff and where funding will come from to enable the duties to be undertaken.

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JOINT CSS/LGA/IDeA RESEARCH OF LOCAL AUTHORITY CAPACITY & CAPABILITY TO MEET THEIR
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Abbreviations

CSS	Known previously as County Surveyors' Society
Defra	Department for Environment Food and Rural Affairs
EA	Environment Agency
EU	European Union
FRM	Flood Risk Management
FTE	Full Time Equivalent
IDB	Internal Drainage Board
IDeA	Improvement and Development Agency for local government.
LA	Local Authority
LGA	Local Government Association
SFRA	Strategic Flood Risk Assessment
SUDS	Sustainable Drainage Systems
SWMP	Surface Water Management Plan
UID	Urban Flood Risk and Integrated Drainage

1 Introduction

This report is produced in response to recent draft legislation and industry reviews on flooding issues.

Following the widespread flooding in 2007, Sir Michael Pitt published the report 'Learning Lessons from the 2007 Floods'. This report outlined 92 recommendations to address flooding issues across the country. In April 2009, the Government published the Draft Flood and Water Management Bill (the Draft Bill). The Draft Bill was produced to address gaps identified by the Pitt Review in management of flood risk. Areas covered include:

- Update flood and coastal risk management and reservoir safety legislation.
- Address gaps identified by the Pitt Review in management of flood risk particularly surface runoff and the need for a risk based approach to reservoir safety.
- The need to adapt to climate change.
- The need to transpose new legal obligations such as those arising from the EU Floods Directive.
- Water policy statements.
- Need to enhance certain aspects of Ofwat's regulatory powers.

The Draft Bill addresses the issue of flooding from all sources, but with particular emphasis on ground water and surface water which it states are 'not adequately covered' in current flood and coastal legislation and that 'the responsibilities of different bodies [in relation to flood risk management (FRM)] are not currently clear'. The Draft Bill also highlights that no organisation currently has any responsibility for flooding from surface runoff or groundwater.

The Draft Bill proposes that the Environment Agency takes a strategic overview role of flood risk management and that local authorities take a leadership role in local flood risk management (flooding from ordinary watercourses, groundwater and surface runoff). In two tier areas, the county council will take this leadership role as will unitary authorities.

A summary of the proposed future roles and responsibilities for Flood and Coastal Erosion Risk Management in England as summarised in the Draft Bill are listed in Appendix 1.

The roles and responsibilities listed in Appendix 1 are new to local authorities and therefore have the potential to require new skills and more people to implement. In order to collect information on the structure, capacity and capability (skills, expertise and training needs) in relation to undertaking their existing role in management to alleviate local flood risk, and to assess authorities' capacity to assume the lead role

in this area, the CSS, LGA and IDeA have commissioned a research project to be undertaken during the consultation period for the Draft Bill.

The consultation package for the bill comprises a consultation paper, the Draft Bill, Explanatory notes and Summary Impact Assessment. More detailed Impact Assessments are available via the Defra website. The Impact Assessments referred to in this report are as follows:

- Impact Assessment for transposing and implementing the EC Floods Directive in England and Wales.
- Impact assessment of Designation of Third Party Flood and Coastal Erosion Risk Management Assets.
- Impact Assessment of Local Flood Risk Management.

2 Project description

2.1 Description of the proposed project

The research project seeks to establish at a national scale what additional resources, skills and hence training needs exist within local authorities, to meet the Pitt Report Recommendations and the duties placed upon them of meeting their new obligations as set out in the Draft Bill. The work excludes the capacity and capabilities associated with Emergency Planning.

The report focuses on the following key headlines:

- Current extent of Roles & Responsibilities
- Current Capacity and Capability (Staff Skills and funding)

- Future Changes to Roles & Responsibilities
- Gaps in Capacity and Capability to meet needs (Skills and funding)

- Barriers and constraints
- Innovative practice/solutions to meet current and future needs

The full brief is included in Appendix 2.

2.2 Approach

Due to the short timescale available to undertake the study (approximately 2 months), it was agreed at the outset with the client that a sample of councils would be contacted and interviewed. The sample list was compiled by the client and was based on councils known to have flooded in the past and/or those that have been active in flood risk management issues.

An introductory letter was issued to the councils, to either the Chief Executive or contacts provided by the client and then interviews were arranged. A questionnaire was produced, and agreed with the client, to collate the required information (included in Appendix 3). The questionnaire was sent to local authorities to look through ahead of the interviews. The majority of interviews were undertaken by telephone or in person; one local authority returned the questionnaire.

During the interviews, the questionnaires were filled in by Mouchel and then typed up afterwards. The typed versions were then returned to the local authorities to give them the chance to comment. Only three councils took up this opportunity. It has been assumed therefore that the numbers and statements recorded during the interview accurately represent their views.

A previous survey was undertaken in 2008 by Defra and the LGA and responses provided by the local authorities.

2.3 Project Response

It was agreed with Mouchel that initially 16 local authorities would be contacted. As not all the local authorities responded, were unable to participate within the timeframe or preferred to respond separately to the Draft Bill, a further 5 were identified by Mouchel (through existing links) to supplement the list. A summary is provided in Table 2.1.

Type	Number included on original list	Number from whom information collated
Unitary	3	1
County	12	9
District or Borough Council	5	3
London Borough	1	1
Total	21	14

Table 2.1 List of local authorities contacted

Only 4 of the councils out of the 14 from whom information was collected did not appear on the list of authorities who experienced flooding in 2007 (provided by the client). One of these is known to have suffered severe flooding in the last five years. Of the 14 councils, results from 12 were collected from interview, 1 by the council returning the questionnaire and one by attending a workshop.

A representative from Mouchel also attended the workshop run at the 2009 EA/Defra Flood & Coastal Risk Management conference (FCRM>09) by the Environment Agency which focussed on identifying issues for the industry going forward in terms of skills and recruiting.

3 Results

The quantity of results collected varied between the local authorities. Not all parties responded to every question due to a lack of time and in many cases, local authorities felt that they did not sufficiently understand the requirements of the Draft Bill to be able to estimate resources required to meet them.

3.1 Current extent of Roles & Responsibilities Current Capacity and Capability (Staff Skills and funding)

3.1.1 Question 1 Quantification/understanding of the number and types of flooding events experienced in the last 3 years which required action by the local authority

All of the 14 councils have experienced flooding over the last 3 years. Generally small numbers of staff (5 or less) are available to deal with smaller events but in large events, hundreds could be required/called upon. Of the councils that provided details of the numbers of events, there are approximately 20-30 events per year. Of the councils that ranked the severity of flood sources, there was a range of answers including as the main source of flooding: main river, localised blockages, highways drainage and surface runoff. One point raised was that main river fluvial flooding or tidal flooding would have the worst consequences but are much rarer than surface water flooding which has less severe consequences but happens more often.

Indicative staff costs: assuming 2 people (assumed to be Highways staff) per minor event for 2 days, 30 times per year

Cost = 2 people x 2 days x 7.5hr days x hourly rate of £15 x 30 times per year
= £13.5k per annum

Per major event – assuming 20 people per event for 5 days, 2 times per year

Staff Cost = 20 people x 5 days x 7.5hr days x hourly rate of £15 x 2 times per year
= £22.5k per annum

Total = £36.k per annum

3.1.2 Question 2 FRM Activities currently undertaken

FRM Activities currently undertaken	Y	N	DN	total
Investigation and recording of flooding incidents	11	3	0	14
Oversight and maintenance of ordinary watercourses under Land Drainage Act powers	5	8	1	14
Maintenance of culverts	9	4	1	14
Maintenance of gullies and drains	14	0	0	14
Surface run off	8	5	1	14
Groundwater	3	10	1	14
Emergency Planning	13	1	0	14
Development of FRM - related planning policy	12	2	0	14
Input into development control/planning applications	11	2	1	14
Sewerage Agency Function	0	12	1	13
Highways Agency Function	5	9	0	14
Member scrutiny of council FRM	6	6	2	14
Participation on IDB boards	3	9*	1	13
Have attempts if any have been made to increase community awareness/involvement in flood protection, clear up/mitigation? **	12	2	0	14
What local flood action groups have been created in your area?	12	1	1	14
Is liaison with these groups being undertaken by the local authority?	11	2	1	14

* 2 of these bodies reported good working links but no formal arrangement

** Methods of increasing awareness range from information on websites, public exhibitions and presentations, production of leaflets

Table 3.1 Summary of responses from Question 2

A key theme running through the responses to Questions 1 and 2 was the lack of recording or 'informality' of recording historical flood events. This was not a specific question in the survey but three local authorities highlighted that this was an issue when looking at flooding in their area and one particularly raised concerns that local authorities may not be sufficiently aware of the problems in their area as flooding information has not been centrally collated. A fourth local authority has started to migrate data onto a database at an estimated cost of £15k. One local authority has a database in place for recording and prioritising flooding of properties by non-main

river or surface water. Several of those consulted highlighted how critical local knowledge is to finding solutions to localised drainage issues.

3.1.3 Question 3 and 5 Types of FRM and drainage assets and extents mapped

Questions 3 and 5 related to the extent of assets logged, registered, assessed for condition and mapped and the resources that would be required to undertake this work.

The overwhelming response to these questions was that few assets have been mapped and that it is not possible to estimate a percentage as not all the assets are known about, particularly ordinary watercourses and underground assets. A particular concern raised by two local authorities is the cost of surveying underground assets – not only in terms of establishing location but in terms of cleaning to establish condition and establishing ownership. A question was raised as to what is classified as an asset e.g. drains on farmland. Two local authorities were of the opinion that the water companies have good knowledge of their assets but felt that riparian owners do not have good knowledge.

The Draft Bill states that *a lead local flood authority must establish and maintain a register of structures or features which may affect a flood risk in its area and a record of information about each of those structures or features.*

Estimates of resources/funds to undertake mapping and produce an asset register varied widely. Those local authorities that were prepared to estimate a figure are listed below:

Local authority	Estimate	Converted to £ (assuming £30k annual salary per FTE)
1	2 FTE plus a site investigation crew at £100k per annum	£160k pa
4		£200k pa for 5 years (LA assets)
9		£millions
10	One Local Authority stated that £15k was spent on consultancy services to undertake a map based assessment of assets but did not provide an estimate for producing a full asset register	
13		£250k to develop Asset Management System

Table 3.2 Estimates of resources for obtaining and recording asset information

Particular concerns regarding the implementation (other than cost) were as follows:

- Tying in with other parties' data.
- Copyright and data protection issues.
- Having a standard for data collection.

One party suggested a pilot scheme to assess the costs and implications of developing an asset register.

The Impact Assessment of Local Flood Risk Management (developed to show the cost benefit analysis associated with policies; published on the Defra website) states that *following the production of a SWMP, an 'upper-tier local authority could be expected to spend around £20k on desk research followed by £40k to investigate and map individual assets before spending around £20k uploading data into a register. £20k a year is then estimated to be required in the following years to update and maintain the register i.e. £80k one off cost and then a yearly cost of £20k.* This estimate is significantly below those quoted by local authorities.

3.1.4 *Question 4 What maintenance regimes are in place for assets owned by local authority*

All the local authorities undertake some form of maintenance but the amount varies. Often it is reactive. One local authority currently responsible for maintaining SUDS estimated that maintenance on the SUDS (which are relatively new) is grass cutting 3-4 times per year for a day each time. Assuming a FTE of £30k (£15/hr) for 4 days would equate to a cost of $15 \times 4 \times 7.5 = £450$ pa.

One local authority quoted a maintenance cost of approx £25k per year for revenue; three others quoted values of between £500k and £800k on annual maintenance; (the latter includes capital highway drainage improvement schemes).

The key point noted here relating to the Draft Bill was maintenance for SUDS could be expected to be relatively low for the first few years but after this costs might be expected to considerably increase when SUDS will need desilting. Costs will not only arise from the works themselves but in disposal of the material.

One local authority mentioned that it is a reservoir owner. There are proposed changes to reservoir legislation in the Draft Bill; however, the implications of the changes are not covered by this report.

3.1.5 *Question 6, Question 7 Flood Risk Plans and Surface Water Modelling*

Questions 6 and 7 relate to the preparation of SWMPs, SFRAs and other surface water modelling studies.

SFRAs

Although a couple of authorities stated they had not completed SFRAs, Internet research revealed that some of the Districts in their areas had so therefore it can be assumed that some form of SFRA has been undertaken for each of the authorities questioned.

Further discussions on developing the SFRAs are listed under Question 12.

SWMPs

One of the local authorities is involved in the 6 pilot SWMPs currently underway and 3 of the local authorities (or District Councils in their areas) were part of the 15 UID pilots run by Defra in 2007.

Approximately 50% of the local authorities questioned had undertaken some sort of analysis into surface water flooding although only the local authority undertaking the pilot has an SWMP.

Three local authorities (lead authorities) provided additional information and estimated that they would require 12-15, 34 and 3 SWMPs across their areas respectively. Assuming an average of 17 across each upper tier area, this would equate to over 2500 plans across England whereas 50 plans are currently costed in the Impact Assessments for the Draft Bill although it is recognised that these might change. The 50 SWMPs quoted in the Impact Assessment is a significant reduction from the Impact Assessment in the document '*Consultation to accompany proposals set out in the Government's Water Strategy, Future Water February 2008*' where it is estimated that that around 150 local authorities (over one-third of all authorities) have critical drainage problems i.e. 150 plans.

The consultation document for the Draft Bill invites comments on the assumption that *the average cost to develop a SWMP is £100k, with a further £100k annual investment in mitigation measures for surface run off and groundwater, will produce a real benefit for local flood risk.*

The response of those asked was that £100k for the development of SWMP is not unreasonable although it will depend on the scale/nature of the issues. One respondee highlighted that studies can escalate as problems are identified even for seemingly straightforward areas. The £100k annual investment was viewed with some scepticism. Whilst it was considered realistic for maintenance such as ditch clearance and minor works, no-one asked thought it would be realistic should capital works be required (the Impact Assessment states that the cost estimate excludes major capital works as these will be based on 'Benefit/Cost justification and prioritised programmes but does not quantify "major"'). This was supported by one local authority who quoted a figure of £500k for works recently undertaken on a culvert. The same local authority estimated a ratio of 10:1 between capital and maintenance works i.e. a more realistic figure might be £1m per year for works.

3.1.6 Question 8 Roles and Responsibilities

Roles and Responsibilities	Y	N	DN	Total*
Does Authority have policy stating its FRM roles and responsibilities	7	6	0	13
Are you aware of roles and responsibilities of key partners in area	12	1	0	13
Is there a lead member in LA for flood risk	9	3	1	13
Is there a single point of contact for flood risk?	8	5	0	13

* no answers from 1 local authority

Table 3.3 Question 8 Summary of knowledge of roles and responsibilities

Answers to this question revealed a good awareness of the local authorities of the roles and responsibilities of key partners in their area. The answers to the other questions revealed mixed views. One local authority assumed question 8d pertained to one contact across all local authorities for flood risk, and therefore gave a negative response. This local authority is however setting up a call centre system to tackle queries about flooding. One local authority would have preferred greater simplification of FRM in the Draft Bill, particularly to aid the public.

3.1.7 Question 9 Partnerships

Partnership with other bodies	Y	N	DN	Total*
Local resilience forum	12	0	1	13
Other local authorities	13	0	0	13
Environment Agency	12	1	0	13
Water company	9	4	0	13
IDB	6	5	2	13
British Waterways	2	10	1	13
Other	4	9	0	13

* no answers from 1 local authority

Table 3.4 Question 9 Summary of partnerships with other bodies

Generally there was good feedback regarding the partnerships with local resilience forums, the Environment Agency and other local authorities. A key element identified as being important to establishing a good relationship is the willingness of the parties involved to make it work.

Experiences with the water companies were mixed. In some cases, the experiences were very positive and good working relationships have been formed. In other cases the experience is not so positive. Key issues highlighted here were that it is difficult

to access the relevant person and that if an asset is not included on a water company register then it is very difficult to engage the water company in discussions to establish ownership.

Generally partnerships with IDBs were considered to be running satisfactorily. Only 2 of the local authorities identified working with British Waterways – key elements of this relationship were managing the operation of canals (where they potentially affect rivers) in flood events.

Four local authorities identified other partnerships that are in place: two with rail companies, one with British Ports and one with Association of Drainage Authorities.

3.1.8 *Question 19 a-c Number of staff*

Several of the local authorities reported have less than 1 FTE working on FRM issues. On average from the authorities that provided estimates, there is an average (excluding operation staff) of 2 FTE technical (engineers or technicians) staff, 2.2 FTE Planners and 0.9 FTE administration staff.

SUMMARY

Current extent of Roles & Responsibilities

Current Capacity and Capability (Staff Skills and funding)

Questions on current capacities showed varying results. Several authorities do not have any dedicated FRM staff whilst two of the authorities have teams of greater than five. A general impression was that the Draft Bill is high on the agenda of the authorities contacted because of flooding that has happened in recent years and many of the initiatives being undertaken such as leaflets to the public, working groups etc have evolved due to these events. As such, it was felt that authorities that have had little or no experience of flooding issues would face greater challenges in implementing the new Bill. Several local authorities commented that there is no system in place in their organisations to 'formally record' flooding events and information.

Under their responsibilities for Highways, the lead authorities carry out maintenance of gullies and drains and generally, the figures for Highways maintenance were supplied for budgetary figures.

Knowledge of assets outside Highways assets was low and the local authorities did not feel that private owners would have much knowledge of their individual assets although two authorities recognised that the water companies in their areas have asset registers.

Question 8 explored the knowledge of local authorities in terms of their FRM roles and responsibilities and how these are implemented across their organisations. Half of the authorities that responded to the question stated that they have a policy relating to FRM roles and responsibilities and there is a good awareness of the roles and responsibilities of key partners in the area with only one of the local authorities that responded not knowing. Nine out of the thirteen parties that responded to the question stated that there is a lead member in the Local Authority for flood risk and eight that there is a single point of contact for flood risk.

3.2 Future Changes to Roles & Responsibilities Gaps in Capacity and Capability to meet needs (Skills and funding)

3.2.1 Question 10 New leadership role and duty to cooperate and share information

	Are you aware of new duty			Will it require extra resources Y/N/DN			Will it require extra skills Y/N/DN		
	Y	N	DN	Y	N	DN	Y	N	DN
Local authorities (county and unitary) will have a leadership role for local flood risk management	14	0	0	13	1	0	11	2	0
Duty to cooperate and share information	13	0	0	8	3	1	9	3	0

Table 3.5 Question 10 Summary of awareness of new roles and responsibilities

All of the parties questioned were aware of the new duties under the Draft Bill regarding the local leadership role with the majority of the opinion that it will require extra resources and funding.

3.2.2 Question 11 Sustainable drainage systems

Question 11 relates to the inclusions in the Draft Bill relating to sustainable drainage systems (SUDS) and places a number of new responsibilities onto local authorities namely:

- Approving sustainable drainage systems in new development or redevelopment
- Responsibility for adopting and maintaining new build SUDS in England
- Possible inspection of constructions of SUDS and issue of a certificate of satisfactory construction when completed
- Liaison with the District Council to ensure that planning requirements enable an appropriate SUDS solution
- Be a statutory consultee in England for relevant planning applications.
- Insist on a financial bond before work can begin on the SUDS.

With the exception of one of the local authorities, all of those questioned were aware of the proposals for SUDS in the Draft Bill. It was felt that the majority, if not all, of the new responsibilities would require extra resources and skills.

Comments raised regarding skills and resources required were as follows:

- Greater knowledge of SUDS required, including legal implications, maintenance and drainage issues. In addition to technical staff, personnel will be needed to administer payments. Retraining will be required.
- Perceived to be much uncertainty regarding the design and maintenance of SUDS and therefore much risk involved. For example, often there may be several potential solutions and selecting the most appropriate may be difficult.
- Expertise is required at practitioner level in design and methods of maintenance. As methods of maintenance are not fully understood, it is not possible to accurately predict costs.
- Number of resources is dependent on the buoyancy of the construction market.
- Number of resources is dependent on whether the greater than one property rule is enforced.
- Number of resources will be affected by access issues – some SUDS in large open spaces will be easy to access, others running through private land may not be.
- Specifications will be required.
- Vital that finances sorted before any work begins – there should be a financial bond covering [the] first 10 years and potentially after this?
- Potential conflict between County Council and District Council if latter permit schemes that former not satisfied with
- SUDS will require a large range of skills including technical, legal, land drainage law, assessment of maintenance regime etc.
- Major concern about which assets are classified as SUDS as there is a risk of everything being classed as SUDS (e.g. online tanks).
- Concern – initial indications where that commuted sums would be paid to the SUDS approving body (SAB) but now not the case.
- Will need commuted sums for longer than 10 years as after 10 years, [there will be] capital and rebuild costs.
- Lack of clarity regarding retrospective adopting of SUDS
- There is no mention of commuted sums.
- Will SUDS previously adopted by District Council be adopted by county?
- Lack of clarity regarding retrospective adopting of SUDS, there is no mention of commuted sums. Will SUDS previously adopted by District Council be adopted by county?
- Legal issues with agreements - i.e SUDS in back garden, access agreed. Should be no costs for LA in gaining access

Costing

The consultation document states that:

As county and unitary local authorities in England will adopt newly built SUDS, it is important to identify how the maintenance of SUDS will be funded in the future. From April 2011, local authorities are expected to benefit substantially from savings arising from the transfer of private sewers to the sewerage companies. Local authority funds released by the transfer of private sewers, together with savings from better local flood risk management, are expected to more than cover the additional activities that local authorities will be required to perform in this and other areas covered by the Bill and the Government's response to Sir Michael Pitt's Review. It is estimated that this would include local authority costs for maintaining new SUDS for at least 10 years, after which the costs may begin to exceed the amount available from the savings.

The statement was unanimously rejected by those local authorities who commented. The main issue raised with the counties is that the counties do not have private sewers and therefore will not benefit from the release of funds by transfer of private sewers. A District Council mentioned that private sewers would be the responsibility of the environmental health department rather than the department where flood risk/drainage activities are undertaken and therefore should any savings arise; they would not necessarily be available to undertake flood risk management activities. Another local authority mentioned that such savings are not really there to be made. One local authority mentioned that it may take 10 years before it is possible to assess whether the councils will benefit from savings as referred to in the Draft Bill and another asked the question as to where funding will come from after the 10 year period mentioned above.

The following information is presented in the Impact Assessment of Local Flood Risk Management. In terms of adoption, it is stated that it will be cost neutral and explains that adoptions will be done through existing planning and building control processes.

Activity	Costs	Fall on
Capital Costs	Cost neutral compared to costs of conventional drainage systems.	Developers & house buyers.
Adoption	Cost neutral compared to existing situation with adoption by WaSCs.	Local authority
Maintenance	Additional costs over conventional drainage £6/prop/yr (i.e. £46/prop/yr). Total annual costs to a local authority will depend on the number of new houses built and the % uptake of SUDS installed to serve these.	Local Authority.

Table 3.6 Summary table from Impact Assessment of Local Flood Risk Management

Three local authorities stated that typically they might expect to receive the following applications for new developments:

- Applications for 1200-1500 houses per annum
- 1500 applications per annum for developments of at least 10 houses
- 4000 houses per annum

75% take up of SUDS for the above applications (assuming the applications are successful) would require SUDS maintenance of 1,125, 11,250 houses and 3000 houses (minimum) per annum which equates to costs of £52k, £518k and £138k per annum in maintenance costs for the local authorities respectively, although this is obviously partly dependent on the buoyancy of the housing market. 100% take up would require £69k, £690k and £184k respectively per annum which over a ten year period would equate to £0.69m, £6.9m and £1.84m.

Other additional costs identified by one local authority were consultancy costs for approving SUDS designs. The local authority assumed that 100 designs a year at a cost of £750 per design may be required, equating to £75k per annum.

3.2.3 Question 12 EU Floods Directive

With the exception of one local authority, everyone is aware of the new responsibility. Some assumed that any costs will be covered in the budget allocated to SWMPs whilst others thought that additional modelling, hydrology and mapping skills will be required. There was some confusion as to how this process will be implemented and thus exactly what will be required. The Impact Assessment for transposing and implementing the EC Floods Directive in England and Wales gives the following details re costs:

	Per LA	Total	Summary
PFRAs	£5k-£40k per SFRA	£860k-£6.88m	No additional costs under Bill for LAs
Flood Risk Maps and Hazards	£250k per modelling study area	£12.5m based on 50 areas	Covered in SWMP so no additional cost
Later cycles			Additional costs to LAs will be supported by funding from Government in the form of revenue support grant.

Table 3.7 Costs listed in Impact Assessment for transposing and implementing the EC Floods Directive in England and Wales

3.2.4 Question 13 Third party assets

Aware of new duties	Y	N
Powers to formally designate flood and coastal erosion risk management owned/maintained/operated by third parties and Issue of enforcement notices for unauthorised works on designated structures.	10	4

Table 3.8 Summary of responses to Question 13

There was a lack of clarity among the respondees as to what this new responsibility will entail and whether it will fall to upper tier or District Councils. There are concerns over liabilities if structures are designated as flood defence assets but have not been designed for this purpose. Seven local authorities thought this responsibility would need additional resources whilst others felt it could be absorbed within current resources or would be covered by additional resources identified for other responsibilities identified in the Draft Bill.

It was highlighted by one party that these responsibilities are not included in the Impact Assessment of Local Flood Risk Management. They are, however, included in the Impact Assessment of Designation of Third Party Flood and Coastal Erosion Risk Management Assets. Summaries of costs (as given in the Impact Assessment) are listed below.

Summary of Costs of registering the assets:

This [estimated Operating Authority costs of designation, based on typical EA costs] gives total one off undiscounted costs of designation of £7.9 million (with a range of between £2.6m to £16.6m). These costs largely fall to the operating authorities (just under £1.5m per year for the first 5 years in the best estimate). This assumes that local authorities do not charge for the process and additional administrative costs unlikely to be significant. Operating authorities will incur some costs associated with designation of additional assets through inspections / scheme development but likely to be met through normal business. Costs of hearing formal appeals.

Summary of Annual Consent Administration Costs:

This continuing annual cost [of annual consent administration costs based on £462 per consent] to operating authorities of approximately £0.7m is expected to be borne by the operating authorities with no charges to those responsible for third party assets.

3.2.5 Question 14 Consenting and enforcement

With respect to the following statement:

County and unitary local authorities will assume powers to enforce obligations to maintain ordinary watercourses, drainage works etc. (under section 21 of the Land

Drainage Act 1991), and their consent will be needed for construction of culverts, flow control structures and other works (under sections 23 and 24 of the Land Drainage Act 1991)

the local authorities responded as follows:

Consenting and enforcement	Y	N	DN	No response
Are you aware of new duty	13	1	0	0
Will it require extra resources (out of 13 that replied yes to being aware of duty)	11	0	0	2
Will it require extra skills (out of 13 that replied yes to being aware of duty)	6	1	0	6

Table 3.9 Summary of answers to Question 14

One local authority commented: *“The consultation document is not clear. Consultation document does not tend to extend powers of local authorities but says it will be responsible for enforcement. Not covered in Impact Assessment of Local Flood Risk Management.”*

3.2.6 Question 15 Innovation

Generally responses to this question referred back to responses given to the questions relating to partnerships and related to the setting up of working groups to involve various stakeholders.

3.2.7 Question 16 Additional Staffing requirements

The key areas where resources are considered to be needed are to undertake the leadership role and overseeing of SWMPs, to undertake work required in relation to SUDS, to produce the asset register and to undertake mapping.

Additional staff resources are highlighted in the following table. It should be strongly emphasised that these were only provided when respondents felt they understood the requirements sufficiently to estimate a figure and were estimates only so should be treated with caution.

Of the councils that estimated resources, an average of approximately 8 technical, planners and administration staff per authority would be required to implement the Draft Bill. These figures do not include operations staff and are not wholly representative as many councils felt unable to offer specific numbers. It is therefore likely that the number would be more. The number of operations staff is dependent on the number of SUDS schemes implemented.

Numbers of staff required	Average FTE
Total staff (technical, planners and admin)	8.3
Total staff (technical and planners only)	7.5
Total staff (technical only)	7.1

Table 3.10 Estimates of numbers of staff required

3.2.8 Question 17 Additional Technical capabilities

Do you feel additional resources are required in this area?	Y	N	DN	Total
Better GIS	7	5	2	14
Better Asset management systems	10	2	2	14
Better IT	5	7	2	14
Other	5	7	2	14

Table 3.11 Summary of responses to Question 17

Generally, asset management systems were highlighted as the key additional requirement.

3.2.9 Question 18 Budgets for FRM activities undertaken

In terms of budgets for 2008-2009, of the 10 local authorities that provided figures, the values ranged from £20k (at District level) to £6m. The average over the 10 local authorities was just under £2m. If the £6m upper figure was excluded, the average over the other nine would have been £1.5m.

Many of the local authorities responded that they are unclear as to the budgets already set or required over the next 5 years. However, 3 local authorities indicated that sums of £20m, £22 and £25m will be required to address flood risk management issues in their areas over the next 5 years. This equates to approx £5m per year per local authority.

The £22m estimate is based on costs required to complete the following FRM activities: investigation of flooding issues, maintenance of culverts and gullies, surface runoff issues, emergency planning and creating and liaising with flood groups.

The £20m is to implement the new measures in the Bill and includes staff costs, asset survey costs and £1m a year to carry out works.

The £25m is to improve flood resilience across the county.

3.2.10 Question 19 Staff retention

Reason for lack of retention	Y	N	DN	Blank*	Total
Pay	3	8	1	2	14
Redundancy	1	10	1	2	14
Retirement	1	10	1	2	14
Nature of work	0	11	1	2	14
Other	4	7	1	2	14
No issues	5	7	0	2	14
Reason for lack of recruitment					
Lack of suitably qualified staff	8	4	0	2	14
Lack of experience	7	4	1	2	14
Competition from Las	5	6	1	2	14
Competition from public sector	5	6	1	2	14
Competition from private sector	7	3	2	2	14
Inadequate pay	7	5	0	2	14
Nature of work	3	8	1	2	14
Recruitment Embargo/Lack of funding	5	5	2	2	14
Other	0	10	2	2	14
No issues	1	9	2	2	14
Recruitment					
Is recruitment plan in place?	2	4	1	7	14

*one local authority left blank as have no dedicated FRM staff, one did not answer

Table 3.12 Summary of responses to retention and recruitment issues

Other reasons for lack of retention identified:

- Redeployment of staff.
- Competition from Public Sector and Private Sector employers (three parties mentioned this).
- Not mentioned under this section but another issue identified was that of engineers being promoted to senior management roles and not being replaced.

Potential future threats:

- Other initiatives will cause drainage staff to move away from core FRM teams.
- Local authorities going through so much change will result in staff retention for local governments as a whole.

Other reasons for lack of recruitment identified:

- Rural location of council does not attract young people.
- District Council ticked “yes” to nature of work above in terms of not having the volume of work to sustain graduate engineers, cannot offer training agreements.

Potential future threats:

- All authorities listed in Draft Bill will be recruiting at the same time.
- Recruitment embargos may be an issue going forward.

SUMMARY

Future Changes to Roles & Responsibilities

Gaps in Capacity and Capability to meet needs (Skills and funding)

As a whole, most of the local authorities interviewed had good awareness of the new responsibilities included in the Draft Bill although not all understood the implications sufficiently to estimate the resources and funding that will be required to implement the responsibilities. There was unanimous concern that lack of funding will be a key issue in the implementation of the bill closely followed by a lack of skills and resources. No-one agreed with the statement in the consultation paper that the transfer of private sewers will free up savings to spend on FRM. All had concerns about the new responsibilities particularly for the maintenance and adoption of SUDS i.e. lack of expertise in this area, lack of funding, liabilities for any problems that may occur, the scale of the SUDS (any developments greater than 1 house) and access issues to SUDS on private land.

The key areas where resources are considered to be needed are to undertake the leadership role and overseeing of SWMPs, to undertake work required in relation to SUDS, to produce the asset register and to undertake mapping.

Of the councils that estimated resources, an average of 8.3 staff (technical, planners and administration) per authority would be required to implement the Bill which is higher than the average current resource per Local Authority. In terms of technical and engineering staff only, the current average is 2 FTE which compares to an average of 7.1 FTE required. Many of the local authorities were reluctant or unable to give figures as they were still scoping or stated they do not sufficiently understand the requirements of the Bill to be able to estimate resources required. However, from the comments received it is likely that the numbers above would not decrease. Due to the variance of current staff numbers and the estimates of the numbers of staff required amongst the local authorities questioned, it is unrealistic to extrapolate from the numbers above. The numbers quoted above do not include operations staff.

Key skills identified to successfully implement the Bill include technical skills, communication/partnership building skills, and legal skills. A key issue is that even if work is commissioned externally to consultants, local authorities need sufficient experience in house to act as an 'intelligent client'. Improved asset management systems were also highlighted as a requirement.

A key issue which became evident is that costs in the Impact Assessment assume that 50 SWMPs will be required. Estimates from just three of the local authorities of plans required in their areas exceeded this figure.

Reported in New Civil Engineer 25 June 2009 that the EA estimate an extra £150m a year will have to be spent on mitigating surface water flooding by 2035 and that overall flood defence will need to double from £570m allocated to asset maintenance and construction in 2010/11 by 2035.

3.3 Barriers and constraints

3.3.1 Question 20 Key issues involved in implementation of Bill

Local authorities were asked to comment on what they felt was the main barrier to successful implementation of the Bill. A list of 5 potential barriers was presented and additional ideas requested. All local authorities considered funding, lack of skills and lack of resources would be key issues. There was divided opinion on the issue of co-ordination with other local authorities.

Rank key issues involved in implementation of Bill	Y	N	DN	Total
Lack of funding	13	0	0	13
Lack of resources	13	0	0	13
Lack of skills	13	0	0	13
Lack of technical capability	12	1	0	13
Co-ordination among different local authorities	7	6	0	13
Other	4	9	0	13

* no answers from 1 local authority

Table 3.13 Summary of perceived key issues with implementation of Bill

Four additional issues were highlighted:

- Historical legacy - maintenance budgets in local authorities cut during the 1990s.
- Lack of information of problems could lead to issues not being addressed.
- An additional issue raised was that of timing and the implications of all the new duties being placed on local authorities at the same time. The EC Floods Directive must be transposed into English law by 26 November 2009 to avoid infraction penalties.
- A positive issue – high on agenda.

One local authority commented that *'an impact of the Bill may be to unrealistically raise public expectations'*.

Current issues raised with recruitment and retention problems identified in Question 19 may also create a barrier in the future and have therefore been included on the list of potential barriers below.

3.3.2 *Potential Barriers and Constraints*

Key issues in implementing the Bill either directly or indirectly through recruitment and retention issues are listed below along with a brief description. Information collated in the interviews has been supplemented with information gathered at the FCRM>09 conference:

- Reluctance to work together – a key element in the success of working groups already formed is the willingness of the parties involved to cooperate.
- Recruiting – potential difficulty in recruiting due to a number of organisations needing to recruit staff at the same time and due to a shortage of engineering skills. This is not a new situation and a number of reports have been produced in recent years (two of which are listed below):
 1. Action on Engineering Skills Shortages in Flood Risk Management – February 2005
 2. Engineering Skills for Flood Risk Management – A report by the ICE Task Team on Skills Shortages October 2004
- Government reorganisations – there is restructuring currently underway and planned for the future – which could potentially alienate staff and lead to them leaving.
- Different organisational structures – this makes it difficult for organisations to recruit for one post across several organisations.
- Lack of knowledge (historical events, flooding mechanisms etc) – this is seen in several ways – often much local knowledge is not written down and is lost when consultants are not reappointed or staff leave an organisation. Reasons behind why flooding occurred can be forgotten over time.
- Lack of experience as senior staff move to management roles or retire and people who are currently involved with FRM functions deployed to other parties. This issue not only contributes to the lack of knowledge barrier in the previous point but also leaves a gap in terms of training new staff and passing on expertise.
- Funding – a key issue being raised in the Draft Bill (and raised by one of the speakers at the FCRM>09 conference) is the need to do investigative studies into flooding problems and prioritise works. A message that came through from the respondees to this study is that monies allocated for flood defence are spent reactively on problems known to have occurred and councils favour this approach rather than spending the money investigating.
- Lack of ring fencing - a potential issue is that FRM is currently dealt with through money from other budgets rather than having a specific flood risk management budget – this could mean that the money is spent elsewhere.
- Funding – the Draft Bill refers to savings being used to fund some of the initiatives. However, there is concern that such savings do not exist or will not be realised.
- Developing people – mentors, training agreements.

- Not high on agenda – where authorities have not had recent flooding issues, it may not be recognised or understood as such an issue as by those that have experienced flooding.

3.4 Innovative practice/solutions to meet current and future needs

Several ideas are listed below which may address some of the barriers listed in Section 3.3. These ideas are partly derived from experiences of Mouchel and from points raised at the FCRM>09 conference.

3.4.1 Working together

Solution

Ideas suggested included: increase working together to share expertise and knowledge across organisations and administrative boundaries, share funding to promote schemes, avoid reinventing the wheel, increase awareness of the issues that other organisations face.

Several of the organisations interviewed have developed or participate in multi-agency groups and provided very positive feedback.

Some are developing more sophisticated formal partnership frameworks with key stakeholders.

Methods of implementation

Increased working together would apply at higher levels with steering groups and more locally with working groups to tackle local issues.

To develop links between organisations, staff could potentially work in co-located teams to develop a centre of excellence or be seconded between organisations. A more practical way however, would be for staff to work in another organisation's office one day a week to gain a greater understanding of workings of that organisation.

3.4.2 Training

Training of staff can happen via a variety of methods including mentoring staff, conferences, and seminars. An on line training system could be a potential option to communicate information to staff on new legislation. The plus points of an online training system are:

- there is no need to use a dedicated trainer with associated travel & time costs,
- staff can do them at a time that suits them,
- modules don't have to be done at one sitting,
- there is a simple test included to gauge understanding,
- there is no requirement to book rooms,
- easy to monitor & report on take-up rates,

- can use generic off the shelf or bespoke modules as required,
- Could be used across different organisations.

Drawbacks are:

- computer access is required,
- people with poor computer skills can take a long time to complete,
- no scope for face to face discussions as would be with a trainer,
- modules may be too generic and not address specific issues.

3.4.3 *Collating Information*

In the survey concerns were raised about retaining knowledge when consultants change. A similar issue was raised at the FCRM>09 workshop in relation to utilising knowledge by senior staff members.

One suggestion raised was to employ senior staff as consultants once they retire and use them as mentors to junior staff. This could be applicable in some cases but when staff leave through illness or to another organisation, may not be appropriate or possible. This highlights the value of both recording knowledge but doing it in such a way that it is in an easily accessible format. This links in with the issue of the asset register raised in the Draft Bill and also with the issue of recording flood events and flood mechanisms raised by the consultees. Different organisations may do this to greater or lesser extents already but to avoid “re-inventing the wheel”, the development of a system that can be used across organisations so that data is recorded in the same format and is easily transferable between parties would be useful.

3.4.4 *Training courses*

The Environment Agency (EA) provides various routes with formal training in FRM:

- Foundation Degree in River and Coastal Engineering
- BSc in River and Coastal Engineering
- Graduate Diploma in River and Coastal Engineering
- Graduate Scheme

To date, the EA have recruited over 100 technicians via the foundation degree, are due to deliver the first 8 graduates of the BSc in September 2009 and have approximately 35 students on the graduate diploma programme.

The EA has also recently developed a Skills Strategy Action Plan comprising 43 Actions defined in terms of Employee Life Cycle:

- Organisation Design
- Recruitment
- Training & Development
- Motivation & Reward

4 Summary

The local authorities questioned generally had good awareness of the new roles and responsibilities as included in the Draft Flood and Water Management Bill although not all were clear as to the implications or how the new roles and responsibilities will be implemented. There was universal concern about the lack of FRM staff and the lack of clarity of how the burden of the new roles and responsibilities will be funded. All unanimously discounted the Bill's claims of potential savings. Some of the local authorities do not currently have any staff dedicated to FRM on a full time basis and will be less well equipped than those that have been proactive in flooding issues in implementing the new Bill. Most of the local authorities questioned were of the opinion that the new roles and responsibilities will require extensive resources and funding but were reluctant to commit to figures at this stage.

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5 Appendices

- Appendix 1 Proposed Future Roles and Responsibilities for Flood and Coastal Erosion Risk Management in England
- Appendix 2 Brief
- Appendix 3 Questionnaire

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Appendix 1 Proposed Future Roles and Responsibilities for Flood and Coastal Erosion Risk Management in England

Local leadership role (county councils in two tier areas)

- Setting Local Strategy for local flood risk management.
- Leadership and accountability for ensuring effective management of local flood risk from ordinary watercourses, surface run-off and groundwater.
- Production of local flood risk assessments, maps and plans including an asset register.
- Improved drainage and flood risk management expertise.
- Co-ordinate Surface Water Management Plan production.
- Drainage from non-Highways Agency roads
- Prioritising local investment.
- Consenting and enforcement powers for certain works affecting ordinary watercourses.
- Promoting partnerships with local planning authorities to produce Strategic Flood Risk Assessments.

Delivery/executive role

- Powers to do works for surface run-off and groundwater flood risk.
- Duty to undertake Flood and Coastal Erosion Risk Management functions in accordance with local and national strategies.
- LFRM decision-making integrated into local asset management and investment programmes.
- Category 1 responder under the Civil Contingencies Act including local delivery of flood warnings.

Internal Drainage Boards, district authorities (in two-tier areas), highways bodies, water companies

Delivery/executive role

- Powers to do works for surface run-off and groundwater flood risk.
- Duty to undertake Flood and Coastal Erosion Risk Management functions in accordance with local and national strategies.
- LFRM decision-making integrated into local asset management and investment programmes.
- Category 1 responder under the Civil Contingencies Act including local delivery of flood warnings.

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Appendix 2 Brief

DRAFT

JOINT CSS/LGA/IDeA/ICE RESEARCH OF LOCAL AUTHORITY CAPACITY & CAPABILITY TO MEET THEIR OBLIGATIONS AS LAID OUT BY THE FLOODS AND WATER MANAGEMENT BILL

The County Surveyors Society (CSS), Local Government Association (LGA), Improvement and Development Agency for local government (IDeA) and the Institution of Civil Engineers (ICE) wish to undertake a research project on all local authorities in England to collect information on their structure, capacity and capability (skills, expertise and training needs) in relation to undertaking their existing role in management to alleviate local flood risk, and to assess authorities' capacity to assume the lead role in this area.

SCOPE

In particular the research project will look to establish at a national scale what additional resources, skills and hence training needs exist, to meet the Pitt Report Recommendations and the duties placed upon them of meeting their new obligations as set out in the new Water and Flood Management Bill. The work will exclude the capacity and capabilities associated with Emergency Planning.

The following data, information and areas of interest are to be researched in full and comprehensive report prepared for wide circulation. The report will focus on the following key headlines:

Current extent of Roles & Responsibilities
Current Capacity and Capability (Staff Skills and funding)

Future Changes to Roles & Responsibilities
Gaps in Capacity and Capability to meet needs (Skills and funding)

Barriers and constraints
Innovative practice/solutions to meet current and future needs

In so doing the research will amongst other information and data, look to as a minimum;

1. Indicate the main types of flood risk in local authority areas which have necessitated or could potentially necessitate work by the authority on (Please rank in order of significance.)

- 'Large' main rivers
- 'Small' main rivers (ex-critical ordinary watercourses)
- Ordinary watercourses

- Culverts
- Highway gullies and drains
- Public sewers
- Surface run-off (pluvial water)
- Groundwater
- Other (please specify)

2. Provide a comprehensive list of local flood risk management (FRM) functions in each authority currently undertaken. For example (but not limited to):

- Investigation and recording of all flooding incidents
- Oversight and maintenance of ordinary watercourses under Land Drainage Act powers
- Maintenance of culverts
- Maintenance of highway gullies and drains
- Surface run-off
- Groundwater
- Emergency planning
- Development of FRM-related planning policy
- Input into development control/planning applications
- Sewerage agency function
- Highways Agency function
- Member scrutiny of council FRM

3. Provide a clear understanding and quantification of the type and number of flooding incidents necessitating work by each authority that have been recorded in their local authority area over the past three years? (Exclude minor incidents such as individual blocked gullies.)

4. Show the extent to which local FRM and drainage assets been identified and logged in each local authority area, including a list of the nature and type of asset.

5. Show the extent to which local FRM and drainage assets have been mapped in each local authority area.

6. Show to what extent local FRM and drainage assets have been assessed in terms of condition and maintenance liability in each local authority area.

7. The extent to which Strategic Flood Risk Assessments have been prepared within each local authority area. Including the type of resource used to deliver them (E.g. in-house, consultant)

8. Show the extent to which each local authority has a policy stating the extent of its flood risk management roles and responsibilities, and the understanding of the same for its key partners in their area.

10. Provide the structure of governance in place for management of FRM with each authority (E.g. lead member and/or senior officer champion for flood risk

management, a single point of contact for information on local flood risk management, etc)

11. Provide details of partnership arrangements with other bodies which cover flood risk management. And the levels of responsibility held by local authorities within those partnerships.

12. Give a clear understanding of how successfully such partnerships have worked.

13. Show the level of funding each local authority allocates to undertaking its flood risk management functions in 2008/9 and what levels of budget growth is forecast (need) and planned (committed) for the next 5 years.

14. Establish how many staff are currently directly or indirectly employed by each authority in undertaking its flood risk management functions (committed) AND what level of staff is forecast (need) to meet the future demands from Pitt and the Bill. This work should detail the nature of the job descriptions, qualifications and experience of such staff.

15. Show the degree of success over the past three years each authority has had in recruitment and retention of the technical staff you need to fulfil its existing flood risk management role. (E.g. lack of suitably qualified applicants, applicants lacking relevant experience, competition from other local authorities, competition from other public sector employers, competition from private sector employers, inadequate pay etc)

16. Show the extent of the understanding from each authority of their new obligations from Pitt and the Bill. Including a clear understanding of the gaps in resources needs vis a vis their available skills and funding.

17. Show the extent of what additional resources or help each authority would need to undertake a more comprehensive role in flood risk management (including preparing and implementing surface water management plans) to meet its obligations as laid down by the new Bill.

18. Provide a comprehensive assessment of what additional resources or help each authority would need with respect to the following areas of skill:

- More engineering and technical staff
- More planners and enforcement officers
- More non-technical staff (e.g. admin and partnership secretariats)
- More staff training
- More commitment from authority's senior management
- Better GIS capabilities
- Better asset databases
- Better general IT
- Other (please specify)

19. List what recruitment plans each authority has in place or is planning to put in place to meet this need.

20. Collate a list of innovative practice to meet future demands (skills, staff and funding).

TIMING & REPORT

This work is proposed to be commissioned through Lincolnshire County Councils term strategic partnership with Mouchel (formerly Mouchel Parkman – a leading flood and water management consultancy) commencing with immediate effect.

A final report will be prepared by early July (at least before 24 July), in time for presenting to Defra as part of its consultation on the Flood and Water Management Bill.

Appendix 3 Questionnaire

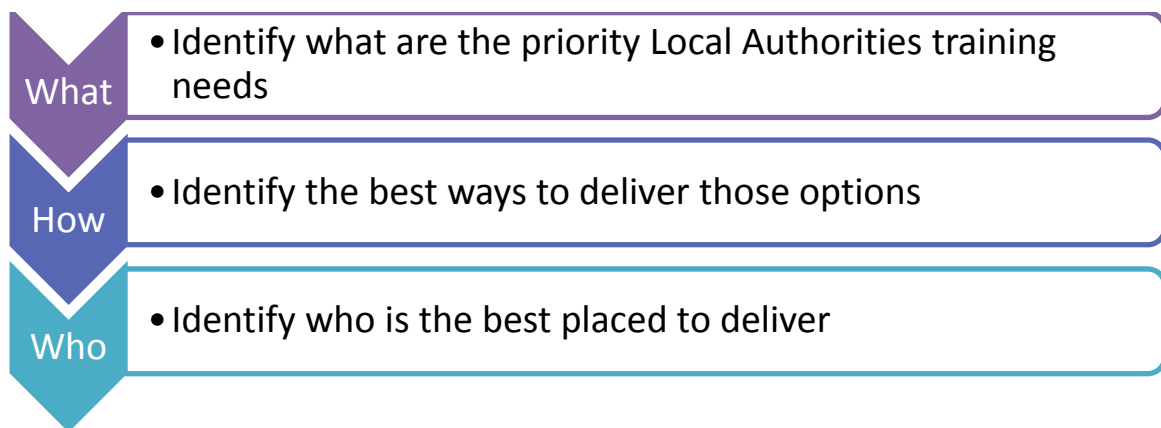
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Appendix C

Local authority capacity building workshop

In February 2010 Defra held a workshop with local authorities to help focus on their needs and information has been used directly to develop this strategy. Over 30 local authorities attended the workshop which had the aim of prioritising the key skills that local authorities need to fill the gaps that will be required if they are to meet the requirements of the legislation successfully.

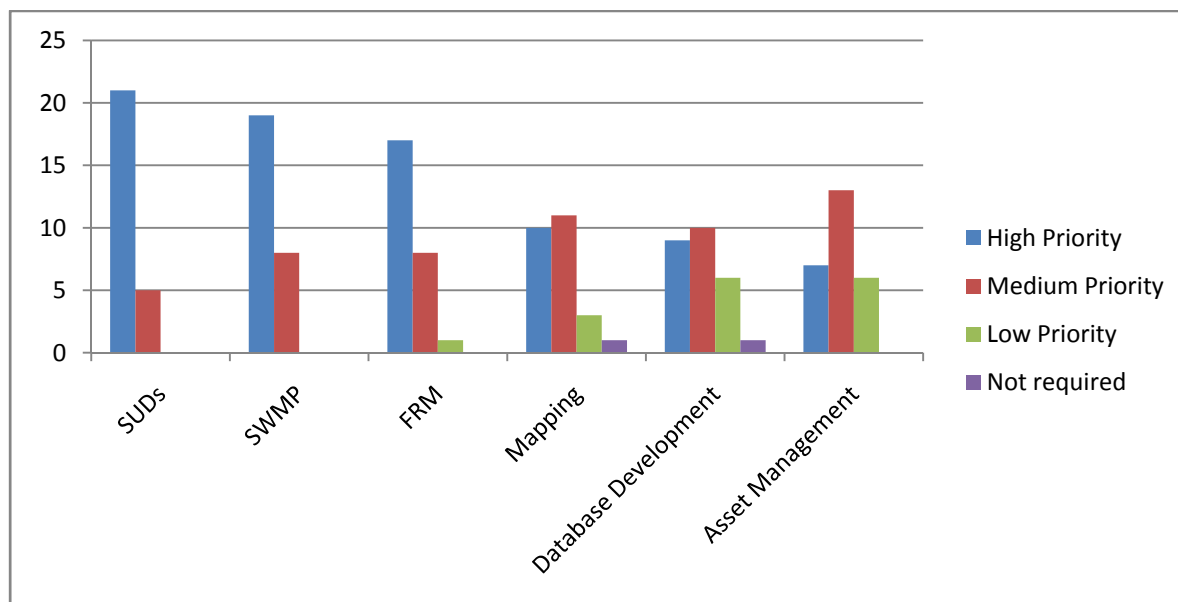
The workshop comprised updates of the ongoing initiatives by Defra, the Environment Agency, Lantra and the Local Government Association. Breakout sessions and a short questionnaire were then undertaken to determine what local authorities felt they needed. Specifically Defra wanted to answer the following questions.



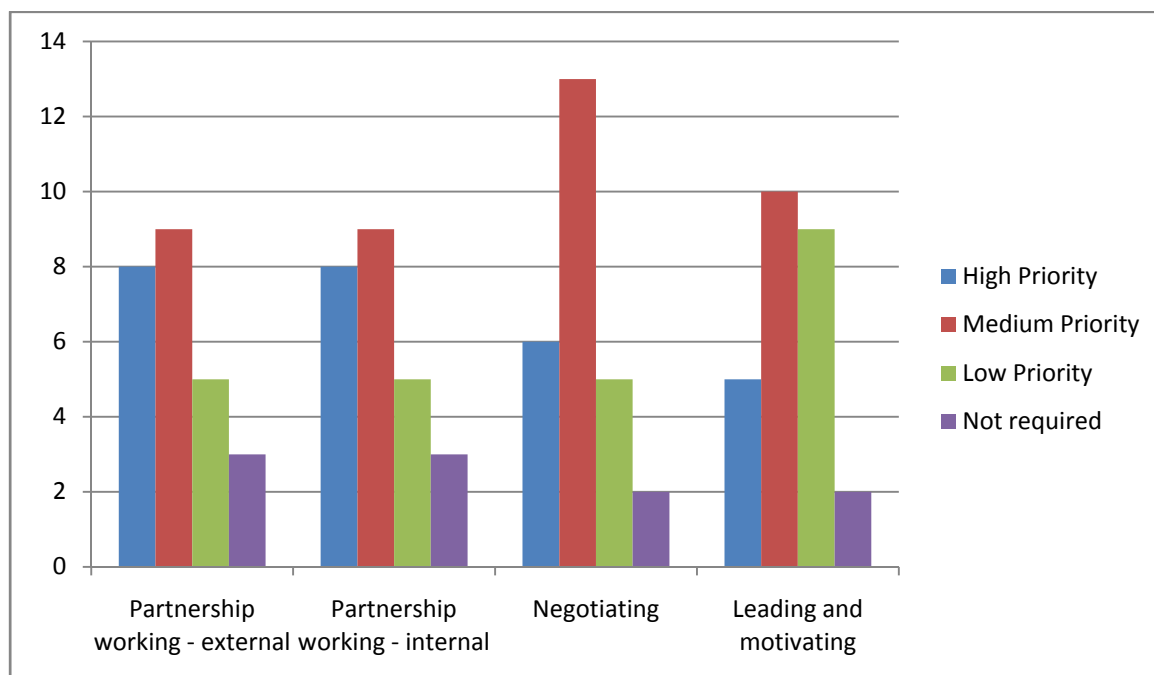
Identify what are the priorities for local authorities training needs

Local authorities were asked what their priority training needs were and the responses can be summarised in the following charts.

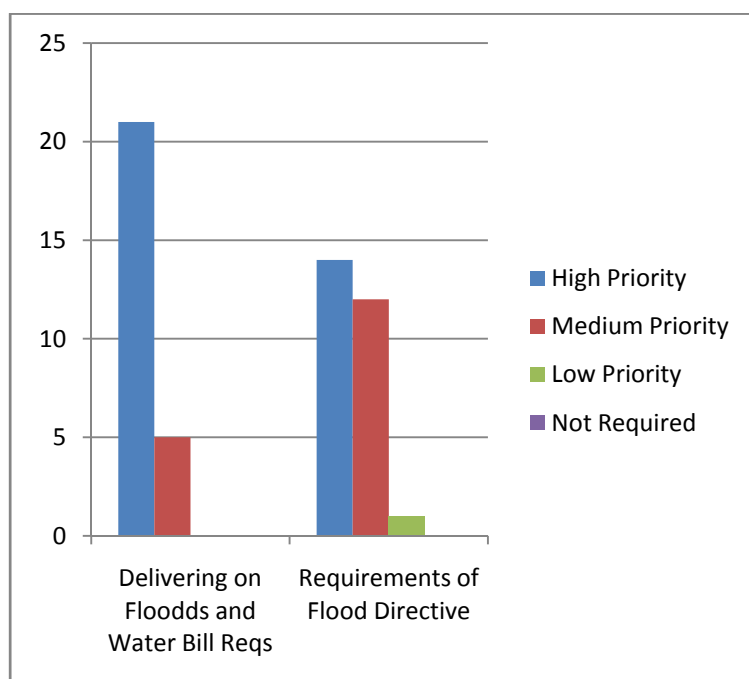
Technical skill training



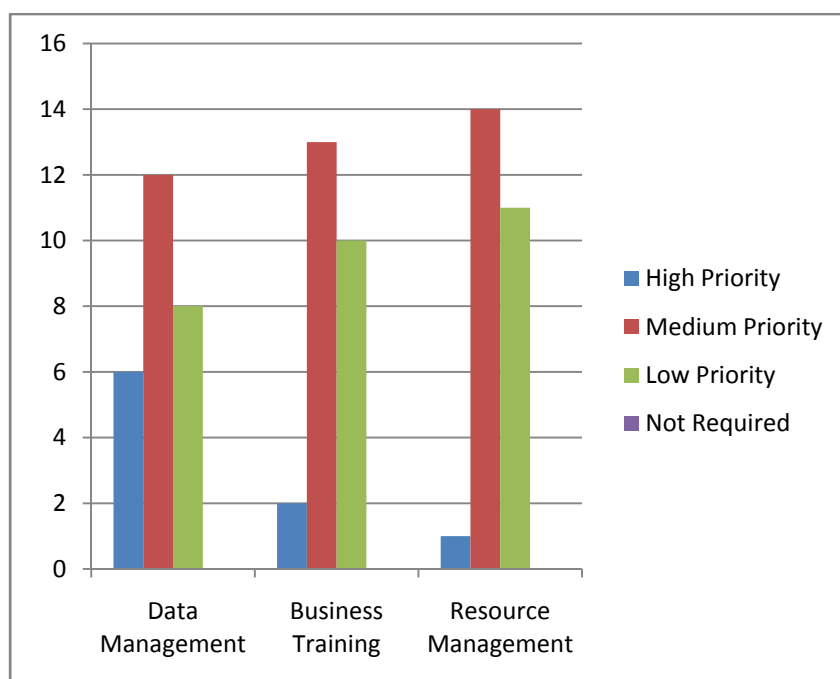
Communication skills training



Legislative awareness training



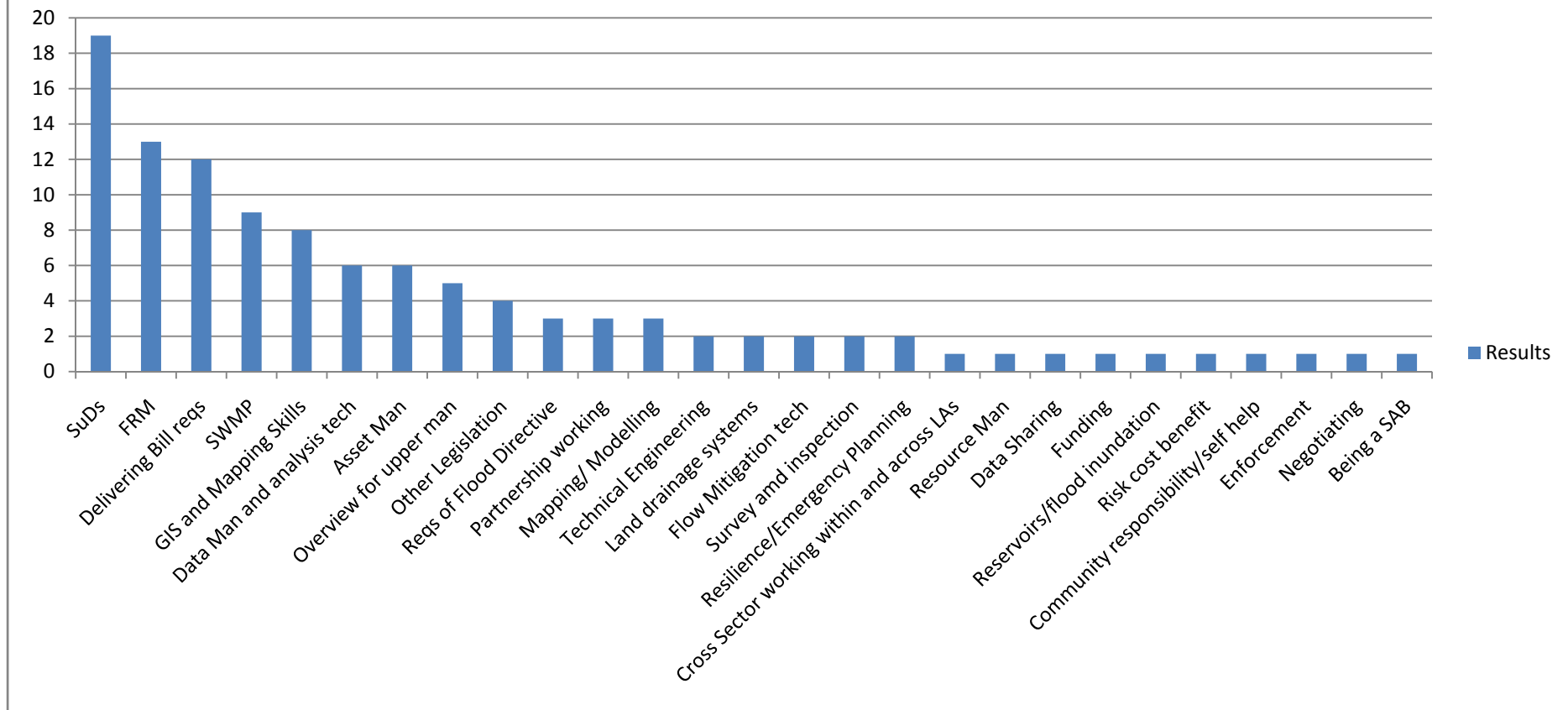
Other skills



Technical skills were seen as the highest priority for local authorities to fill with training required on SuDS, surface water management plans, and general flood risk management the highest priorities. Legislative understanding was also identified as a high priority, particularly for the forthcoming legislation. Communication and other relevant skills were also seen as necessary but were given less priority over the technical skills.

When local authorities were asked to provide their top five training priorities it reflected a similar pattern. The results show that technical skills were felt to be lacking and that the focus on training should be for these elements.

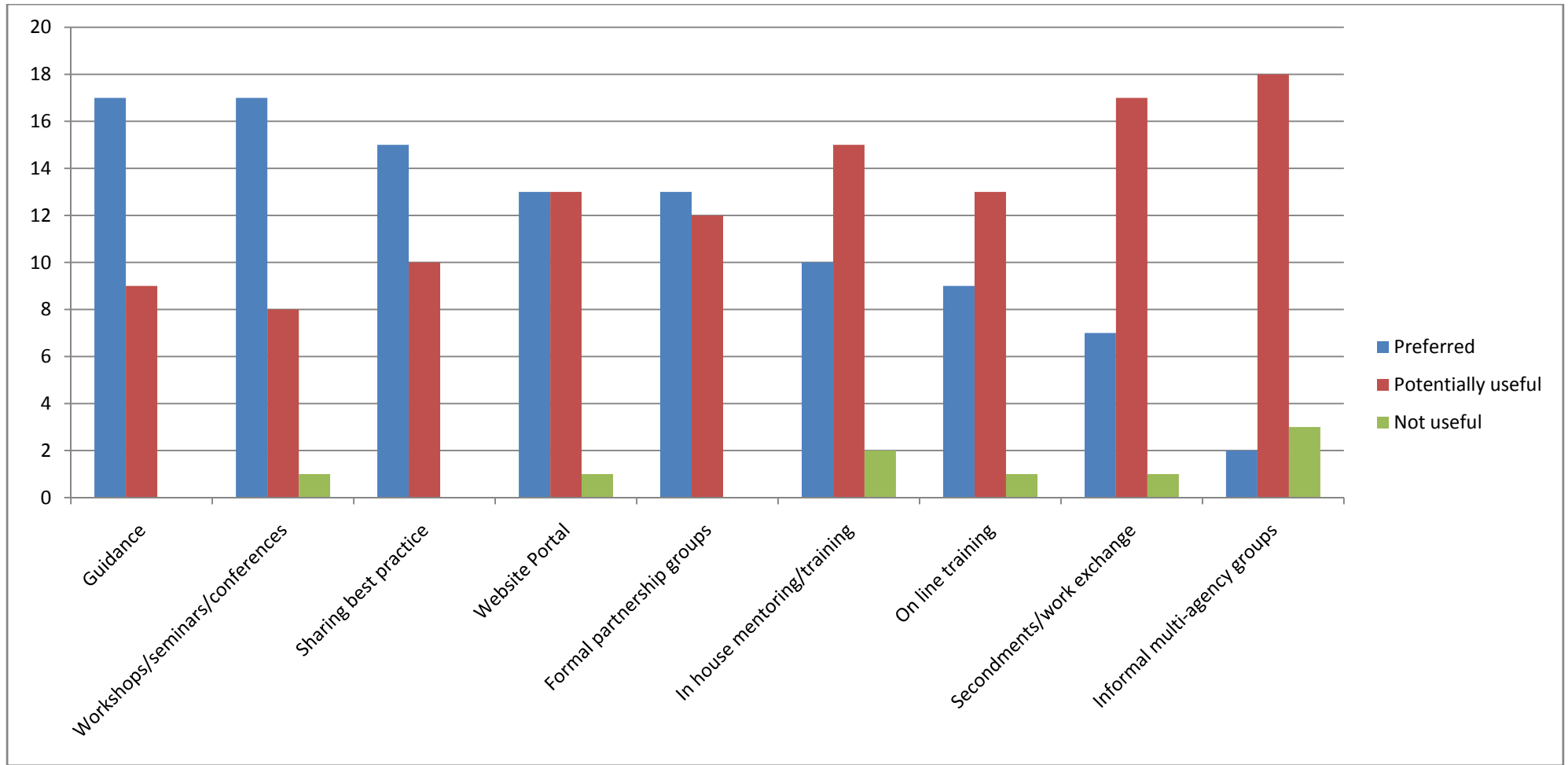
Results



What are the best delivery mechanisms for local authorities to receive training?

Local Authorities were asked which ways they would like to receive training. Guidance was the preferred choice along with workshops seminars and conferences. Sharing best practice with other local authorities was also felt to be a good way of improving knowledge and exchanging ideas. The proposed local authority local flood risk management portal was also perceived as a good idea. Formal partnership groups were also seen as a good way to increase understanding of local issues. This is one of the main ways that Sir Michael Pitt envisaged better local flood risk management being delivered.

Potentially useful mechanisms included in-house training and mentoring, e- learning and secondments and work exchanges.



Who is best placed to deliver?

Further questions were asked about who was best placed to deliver training needs for local authorities. There was a wide range of views as to who might be best placed to deliver training. CIRIA (through Landform) was the most commonly mentioned with Defra having an important coordinating role. Other organisations mentioned included the LGA, Institute of Civil Engineers, Chartered Institution of Water and Environmental Management, The Pennine Water Group, Abertay University, Open University and the Environment Agency. All had various types of training already available.

