To endorse actions to date on the Council’s flood recovery programme and future resilience work for Gloucestershire

<table>
<thead>
<tr>
<th>Cabinet Date</th>
<th>19&lt;sup&gt;th&lt;/sup&gt; November 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Environment and</td>
<td>Cllr Julie Girling</td>
</tr>
<tr>
<td>Community Safety</td>
<td></td>
</tr>
<tr>
<td>Key Decision</td>
<td>No</td>
</tr>
</tbody>
</table>
| Background Documents  | • Cabinet report 31<sup>st</sup> March 2008  
                          • Overview Scrutiny Management Committee (OSMC) reports: 31<sup>st</sup> March, 12<sup>th</sup> May, 28<sup>th</sup> July and 19<sup>th</sup> September 2008.  
                          • Pitt Review  
| Main Consultees       | See report                      |
| Planned Dates         | See report                      |
| Divisional Councillor | All                             |
| Officer               | Peter Jones, Deputy Chief Executive. Tel: 01452 426347 Email: peter.jones@gloucestershire.gov.uk |
| Purpose of Report     | To update Cabinet on the considerable further progress made since April 2008 on flood recovery and resilience work to future proof Gloucestershire against flooding.  
                          To endorse the action being taken to secure additional resources from the Government to carry out further essential resilience work. |
| Recommendations       | That Cabinet endorses  
                          a) the progress made on flood recovery work  
                          b) the transition to future resilience work and achievements to date  
                          c) the action taken to secure additional Government resources for further essential resilience work  
                          d) that the £1.5m Restoration fund money is used in 2009/10 for flood alleviation/resilience works. |
| Resource Implications | See report                      |
1. Background

This report updates the previous flood recovery report presented to Cabinet on 31.3.08. It provides information on progress to date and how the County Council is addressing the changes from forthcoming legislation, working in partnership with District Councils, the Environment Agency, Severn Trent Water Authority and other bodies.

As a consequence of the Council Tax levy (see Resources Section 3. below) the County Council has done everything it can as quickly as possible to carry out essential infrastructure recovery and future resilience work to protect Gloucestershire residents and businesses from the threat of future flooding. An important part of the Council’s response has also been to seek funding support from external sources, including the Government.

Headline achievements include:

• Improved flood resilience to something in the region of 1500 homes through Multi-Agency Schemes and also by the hard work of Gloucestershire Highways

• Appendix A gives details of the Gloucestershire Highways Flood Alleviation schemes being progressed this financial year

• Appendix B lists the schemes of the jointly funded flood resilience projects which will be completed by April 2009. Over £3.5m has been made available, made up of contributions from the County Council, six District Councils, the Environment Agency and other partners.

• This Council has created the Local Government Flood Forum (LGFF) which held its inaugural meeting on the 14th October, with over 140 representatives attending. Its overriding aim is to influence the proposed Floods and Water Bill and ensure a fairer deal for local authorities and the public they represent.

• The Council’s Flood Guide has won two awards: Best Publication in the Chartered Institute of Public Relations (CIPR) Excellence Awards, beating off tough competition from national and international organisations and the CIPR Local Government Group’s Excellence in Communications Awards. Gloucestershire County Council has produced this guide in association with the district councils, Gloucestershire Highways, Police and Health Authorities. It describes the summer emergency of 2007 and offers practical advice about potential emergency situations we could face in the future.

• Gloucestershire Highways received the Highways Magazine award for Consultant of the Year at the Excellence Awards held in London on 30th October. The award was made in recognition of the work that Gloucestershire Highways carried out in helping the County respond to the immediate emergency following the summer 2007 floods and the subsequent ongoing flood alleviation project.
• Flood information pages on the GCC website: 
  www.gloucestershire.gov.uk/flooding have been updated and revamped. These 
  contain information and advice on a variety or topics, including flood resilience, 
  insurance and advice and business continuity planning as well as links to a 
  variety of other sources of help and information. To provide reassurance to local 
  communities Gloucestershire Highways has also published its annual 
  programme of gully cleaning on the GCC website.

• A Flood Information Pack has been produced to raise awareness of flood 
  alleviation measures at a community level. Aimed at parish councillors, the Pack 
  contains area-specific details of Gloucestershire Highways work, multi-agency 
  projects, agency responsibilities, general information and frequently asked 
  questions.

• The publication “Waterside Living in Gloucestershire” has been produced to 
  raise awareness of riparian ownership and to inform the public of their 
  responsibilities and rights as riparian owners. The leaflet is a joint publication 
  between GCC, the Environment Agency, the Internal Drainage Board and all the 
  District and Borough councils.

• The County Council has also been commended for its work in warning 
  vulnerable residents to be aware of rogue traders

• Practical help and advice has been offered wherever needed, for example in the 
  September 2008 flooding experienced in Northumberland.


It should be noted that Gloucestershire County Council has only limited legal 
responsibilities in the area of drainage and flood risk management. 
Responsibilities are highly complex and spread over a range of agencies with 
different authorities being responsible for different aspects. For the first time 
ever the County Council has contributed over £1m of its own resources as well 
as practical help and leadership to areas outside its own area of responsibility. 
In taking this proactive role as community leader and advocate for 
Gloucestershire residents, the Council is trying to make sure that critical work is 
being carried out quickly and that wherever possible solutions are found 
promptly.

To further complicate matters there are thousands of riparian owners, many of 
whom are unaware of their legal responsibilities. Equally there is a pressing 
need for home and business owners affected by flooding to take appropriate 
resilience steps, a point that needs actively promoting by all relevant public and 
private authorities.

To give some idea of the complexities involved the following bodies/agencies 
have accountability of flood management in Gloucestershire:

• River flooding - Environment Agency (3 regions)
• Foul water drainage - 4 Water Authorities
• Highways drainage - Gloucestershire County Council
• Land drainage - 6 District Councils
• Land drainage in parts of the Severn Vale - Lower Severn Internal Drainage Board

The County Council recognises that because of the magnitude of the work, not everyone’s wants and needs in every part of the county can be satisfied at the same time and the Council continues to press the relevant agencies to stimulate early work in bringing action forward. To be candid, if it were not for the funding and the leadership provided by this Council, many joint projects that now have been funded or planned/implemented would not have happened. The overarching aim has been to think strategically and act locally and make sure relevant bodies accept their responsibilities.

The County Council is also working hard to address the financial gap between what is affordable and the expectations of Gloucestershire residents, whilst managing the transition from recovery to resilience.

3. Resources

Following public consultation, a levy was placed on Council Tax for 2008-09 to raise additional £2.3m revenue for flood recovery and prevention work. Of this levy, £200k was used to secure capital funding of £4m for flood alleviation and drainage works in 2008/09, giving a total of £6.1m, allocated as follows:

a) £2.1m to Gloucestershire Highways for enhanced drainage maintenance, additional reactive jetting, grip cleaning and gully emptying and the establishment of a core drainage and flood risk management team

b) £3m of the capital funding used by Gloucestershire Highways for highway drainage improvement schemes

c) £1m of the capital funding for a programme of multi-agency flood alleviation schemes being co-ordinated by the Flood Risk Management Team

In respect of the £1m allocated for these schemes, each of the district councils have submitted bids for support funding for prioritised schemes which could be delivered this financial year. In response the Future Resilience Programme Board has now allocated in excess of £1m to a wide variety of schemes across the county. This generated a list of over 50 flood resilience projects totalling £3.6m, allowing for contributions from district councils, the Environment Agency, Severn Trent Water Authority and others with the potential of protecting up to several hundred homes and strengthening local resilience. This money has been awarded on the basis that the bulk of this work is completed this financial year and a shared communication plan is developed to ensure local communities understand the joint funding/partnership arrangements.

District Council awards are as follows:
<table>
<thead>
<tr>
<th>District</th>
<th>Total Award</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td>£200k</td>
</tr>
<tr>
<td>Cotswold</td>
<td>£206k</td>
</tr>
<tr>
<td>Forest</td>
<td>£193k</td>
</tr>
<tr>
<td>Gloucester</td>
<td>£212k</td>
</tr>
<tr>
<td>Stroud</td>
<td>£92k</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>£140k</td>
</tr>
</tbody>
</table>

d) An additional £2m of capital has been agreed in principle for allocation to Gloucestershire Highways:

  o £1m to be spent on further highway drainage improvement schemes during 2008/9

  o £1m on four major flood alleviation drainage schemes in 2009/10. These include 1. Tredington Bridge 2. Castle Street, Winchcombe 3. Nailsworth Town Centre and 4. Watery Lane, Newent.

e) Funding for Schools - following a successful appeal to the Department for Children, Schools and Families (DCSF) the County Council’s bid for £1.6m has been approved. This money will provide essential resources to protect the county’s most extensively damaged and vulnerable schools.

f) The Environment Agency. This Council has made a commitment of up to £0.5m to the Agency for specific projects in the county, for flood alleviation, investigation and improvement schemes. Currently the County Council is in discussion with them on how to increase the likelihood that they are prioritised within the region. Working relationships with the Agency are very positive.

g) Severn Trent Water Authority has funded two hovercrafts for the Fire and Rescue Service. (During the July floods last year the Fire & Rescue Service used hovercrafts from colleagues in Italy to rescue people in inaccessible, flood-hit parts of the county. These proved incredibly successful during operations and will be a significant tool to aid water and mud flat rescues all year round). This is just some of the new equipment being purchased for which the service is currently training to combat adverse weather conditions.

h) Of the many multi-agency partnership schemes being undertaken, three of the larger flood alleviation schemes are worthy of mention:

  Bourton on the Water: This is an Environment Agency led scheme, costing in the region of £233k, with funding provided by the Environment Agency, Gloucestershire County Council, Cotswold District Council and Bourton Parish Council, and a resource commitment from Gloucestershire Highways. The scheme is fairly complex and involves the creation of field drains, attenuation ponds, heightened roadside banking, etc. The first phase of the scheme is due to commence on 17 November.

  Saintbridge: Work on the de-silting of the Saintbridge balancing pond at Gloucester is well under way. Gloucestershire County Council have contributed to
this scheme, which is costing in excess of £300k. Gloucester City Council are
leading the scheme and funding the large majority of the work.

River Chelt: Work to desilt the culverted section of the river that runs under the
town (of 200 tonnes of deposited material) is almost complete. Gloucestershire
City Council and Cheltenham Borough Council have supported the Environment
Agency with the funding of this scheme.

Together these schemes will provide added security from flooding for as many as
200 properties.

i) Restoration fund – earlier this year Cabinet agreed that the £1.5m refunded back
to the Council to compensate for some of the costs incurred during the response
phase of the July 2007 floods should be used for flooding resilience in our
council. Specific projects have not yet been determined. As can be seen from
above, considerable momentum has been gained and given the fact that bodies
such as Gloucestershire Highways and other partner bodies are working at
almost full capacity, it is appropriate that the Restoration Fund money be
dedicated to flood resilience activity in 2009/2010. This approach not only
delivers the best value for money option but will also help to maintain the
momentum created so far.

j) Funding for the future

As can be seen, considerable effort has been undertaken by the County Council
to ensure that the most effective use of public money is applied, at the same
time trying to ensure the security from flooding that the community expects. We
have invested into schemes for which we have no absolute legal duty but feel
that without doing so many homes will remain unprotected in the years to come.

Although we do not underestimate what has been achieved we also have to
accept that in coming years there will be more demand/need than we have funds
available. Clearly, it is unrealistic to seek a further levy on local council tax
payers and we acknowledge that most of our partners are also under similar
financial pressure.

In the short term, working differently and more effectively with our partners will
provide more efficiency and generate more resilience works, however we still
believe that this will leave a significant shortfall. To ensure the entire county has
adequate flood resilience we estimate that at least £25m needs to be spent over
a five-year period to get the bulk of the work done. The only realistic way this
essential work can be delivered is from specific Government funding. To
achieve this we shall continue to lobby both through the LGFF and also
independently. This lobbying will require the universal support of all aspects of
local authorities within the County together with its MPs.
4. **Legislation and other factors**

The Government intends to publish a draft Floods and Water Bill for consultation in 2009 with the intention of updating and simplifying flood and drainage legislation. This follows both

- the Pitt Review into the 2007 floods and
- the Government’s Water Strategy: Future Water, which launched a review of competition and innovation in the water industry and water charging and metering.

- These will have a considerable impact on local government responsibilities and there is a need to ensure that sufficient funding is provided to implement the changes.

- Comprehensive Area Assessment (CAA) on governance and Leadership and the Sustainable Communities Act, published February 2008.

5. **Further Achievements**

a) **Drainage Maintenance Regime**

Gloucestershire Highways have developed a programme of schemes which have been prioritised on the benefits to be gained and deliverability. They have implemented a massive annual programme of emptying and cleansing the 135,000 gullies across Gloucestershire. This Programme is published on the Glos Highways website showing the parishes and dates well ahead of target:

- 70,000 gullies having been completed as at 1st October 2008.
- Under this programme areas of the highways at higher risk of flooding have also been identified (just over 500 locations). These gullies are emptied and cleansed a second and third time during the year and their efficiency measured to provide reduced probability of flooding

b) **Highways Drainage Capital Improvement Work**

- Gloucestershire Highways are actively working on a significant number of locations across the county to improve highway drainage. This should reduce the probability of flooding for an estimated 500 properties.
- It is estimated that approximately 1000 households will benefit from the Multi Agency schemes – across Gloucestershire

6. **Further Strategic Achievements**

In order to ensure properly planned strategic outcomes and best use of resources in a joined up ‘one council’ approach, the Council has raised the
debate on flood resilience and funding on behalf of Gloucestershire’s through its own initiatives and put in place the following arrangements to secure delivery:

a) **Future Resilience Programme Board**

This strategic Programme Board was set up in June 2008, supported by an officer group. The Board comprises lead Cabinet Members and senior officers and meets every six weeks. The Board is Chaired by Cllr Julie Girling. Its objectives are to set the direction, agree short and long term strategic outcomes, oversee the effective delivery of a one council approach and ensure Scrutiny input. The Board is responsible for overseeing the programme of works against the Council Tax levy to ensure delivery and effective spending. All activity is being monitored through the Council’s Performance Management system.

b) **A Head of Flood Alleviation and Drainage Management** has been appointed to lead the co-ordination of work with partnership agencies and oversee all aspects of the county’s response and future resilience to flooding. A senior drainage engineer to oversee the technical aspects of drainage management has also been appointed. The Core Flood/Drainage team is also facilitating a range of flood alleviation activity as well as acting as a customer advocate to help overcome the complicated delivery regime.

c) **The Local Government Flood Forum (LGFF)** was launched by Cllr Barry Dare at a Gloucestershire Symposium held on 14th July 2008 at Gloucester Rugby Club. This event was facilitated through the LGIU (Local Government Information Unit) and Gloucestershire County Council. It brought together councils affected by flooding to discuss future resilience, aiming to highlight examples of excellence, share best practice and provide an opportunity to pose questions to senior politicians and representatives of key organisations.

This Forum provides a national lobby group for raising further funding. It is working to share best practice and raise awareness of the need to take flooding seriously both locally and nationally, taking determined steps to stop it happening again. This new body will also have a prime opportunity to influence the Water and Floods Bill and the Pitt Review implications and will be trying to influence the refocusing of Government priorities.

The LGIU have been arranging ministerial introductions to lobby the Government to secure resilience funding and the inaugural meeting for those local authorities who have signed up to the Forum was held on 14th October in London, attended by senior DEFRA officials.

In July 2008, GCC was invited to a Government All Party Parliamentary Water Group. This provided an opportunity both to alert Ministers and MPs of the establishment of the LGFF and to represent Gloucestershire interests.

d) **Partnership working with District Councils**

Over the past months, the County Council has been working very closely with the six district councils and other agencies, including the Environment Agency,
Severn Trent Water Authority and Thames Water to improve the county’s resilience.

During July 2008, Cllr Julie Girling and Peter Jones, Deputy Chief Executive held a series of Flooding & Future Resilience discussions, meeting with the nominated officer leading on flood issues in each District Council. Meetings with these key officers are ensuring that work across Gloucestershire is properly co-ordinated and prioritised with all relevant agencies and partners. Relationships with District Councils on this matter are very strong.

e) **Multi-Agency Flood Alleviation Working Group** (See also Section 3. above)

Work with the Multi agency group has continued. This Group was formed with the help and co-operation of a wide range of partners, and is focussing on infrastructure maintenance and improvements across the entire Gloucestershire area. The group includes officer representation from the following: Environment Agency, Severn Trent Water Authority, District Councils, the Internal Drainage Board, Glos Association of Town and Parish Councils, the National Farmers Union, the Government Office South-West and GCC. Representatives are strongly committed to working together in close partnership to reduce the probability of flooding and to enhance future resilience. In addition equivalent groups have been set up at each of the District Councils.

f) **Flood Resilience work with schools**

On immediate recovery, GCC worked with schools, insurance assessors and construction firms to ensure that the most seriously damaged schools were up and running for the beginning of the Autumn Term 2007/08. The County Council has also undertaken resilience work with schools, working with a small schools’ group on updating emergency guidance. The County Council is also improving the resilience of emergency support – mapping information, developing a web-based alert system and attending to the business continuity of Children’s Services ICT systems. A review is being undertaken of sites which are subject to regular, smaller scale flood/storm damage in order that opportunities to introduce resilience and resistance measures can be assessed and prioritised.

g) **The Built Environment – The Prince’s Trust**

Initiated by Cllr Mavis, Lady Dunrossil, the Prince’s Trust is investigating the possibility of help around the future design of buildings, looking at lessons learned from historical architecture and building design to inform future housing provision. A scoping meeting with the Chief Executive and representatives of some District Council planning departments, including a GCC presentation and site visit to Tewkesbury has been held. The Trust will inform the County Council in due course if it is able to assist and what role it can play.

h) **Spatial Planning**

A Strategic Flood Risk Assessment (SFRA) level 1, involving district councils and a number of relevant agencies has now been completed. This assesses
flood risk across the county and the information is used for forward planning with the objective of preventing development in areas at risk of flooding. It is due to be published and made available to the public shortly.

7. Getting our own house in order (OHIO)

a) Scrutiny The Overview and Scrutiny Management Committee continues to scrutinise regular reports on the Flood Recovery programme, the recommendations arising from the Scrutiny Inquiry into the July 2007 floods as well as the work of the Future Resilience Programme Board. Gloucestershire’s Flood Scrutiny work was also shortlisted by the Centre for Public Scrutiny for the Good Scrutiny Awards 2008.

b) Community Safety/Emergency Management improvements

£150k has been allocated for necessary works – including:

- securing viable accommodation for the provision of an Emergency Management bunker. Work has now started on moving this function to a new location
- an Intranet emergency email system is also being set up through the Gloucestershire Fire and Rescue Service as a necessary fallback system for members and key officers
- funding for a seconded District Council post to increase capacity in Emergency Management
- work on neighbourhood plans

c) County Property Services

Work has included:

- Relocation of Shire Hall Emergency Centre from Block 1 basement to Block 2
- Shire Hall flood protection
- Advice and notification to County Farms tenants

d) Corporate Building Services

In the immediate aftermath of the 2007 floods Corporate Building Services staff were relocated to the Malthouse when Shire Hall was closed in order to continue to provide a response service to assist with the property issues arising. The CBS emergency response service was co-ordinated initially from home then Shire Hall.

The Service made contact with 99% of property representatives to check whether they needed any assistance with their buildings. A few were not contactable so we therefore checked their individual premises from the outside to make sure that there weren't any signs of flooding.
54 schools and 21 non school buildings required some help with storm water or floodwater remedial work. This was done by teams of surveyors and engineers working closely with the Council’s approved contractors. Close touch with our Insurance and risk teams was maintained to ensure that insurance and funding issues were dealt with as things became apparent. Corporate Building Services has also been instrumental in securing Government flood resilience funding for a number of schools affected by last year’s floods. (See 3e above).

8. Community Engagement

a) Community Voice

Last year a number of ‘After the July floods’ drop-in sessions were held from October to December. Over 300 people visited the drop-ins and were offered practical, emotional or financial support.

These highly successful sessions were organised under the banner of ‘Community Voice’, the people element of the Strategic Flood Recovery Group’s work. The drop-ins covered three areas within Tewkesbury Borough, Moreton-in-Marsh and Fairford, Cheltenham and Gloucester City.

Members helped plan the location of meetings, the coverage of meetings (which parishes) and gave suggestions about the officers who should be invited to support the drop-ins. Local residents received flyers through their doors either through Village Agents or County Council staff where there was no Village Agent coverage. We also did leaflet drops in doctors’ surgeries in some cases.

b) Parish/Community Plan meetings

The County Council continues to provide additional support for Community Plans from its Emergency Planning Service and work is being undertaken to support different communities. Meetings have been held in the Cotswolds, Forest of Dean, Gloucester City, Stroud and Tewkesbury for all parishes generally or at the specific request of particular parishes. Cheltenham Borough Council has also discussed community resilience plans through their ‘CS’ Group. A Seminar to consult District and Parish Councils has also been held to ensure issues of concern are taken forward.

c) Improved access to information

The Flooding information website has been revamped to include advice for residents and businesses and give details of who is responsible for flood alleviation across the county. Go to www.gloucestershire.gov.uk/flooding

d) A Communications Action Plan has been developed to make sure that members of the public are kept informed about flood related activities and progress. This includes a Members’ monthly briefing sheet on flood related information.
9. Planning Future Resilience Work

The County Council and its partners have been concerned as to how to develop flood resilience work over the next three to four years:

- In addition the council is working through the Local Government Flood Forum – a lobby group launched by the GCC Leader, Barry Dare, to ensure fair funding is given to Gloucestershire.

- Proposals are also being prepared to bid for a pilot scheme which uses a pathfinder approach to look at new ways of delivering joint working. Hopefully, the Cabinet will receive further information on this in due course.

The County Council is not complacent about its achievements to date and will continue to pursue all avenues of funding so that this vital work can continue.

Risk Assessment:

Failure to press for more funding for medium term investment for flood alleviation and drainage management will leave Gloucestershire at risk for future resilience work. We have achieved a lot, but much more remains to be done.

Officer Advice

- To endorse and commend the actions to date on the Council’s flood recovery programme and future resilience work for Gloucestershire

- To support the continuing lobby for resources from the Government and other agencies to seek out the further funding which will enable this essential flood resilience work to continue.

- To endorse the use of £1.5m Restoration Fund money for flood alleviation / resilience works in 2009/10.

Consultation Feedback:

Not appropriate

Performance Management/Follow-up:

- Actions in Business Plans are monitored under the usual performance monitoring arrangements.

- Specific performance monitoring of flood-levy spending is in place.
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<thead>
<tr>
<th>Report Title</th>
<th>To endorse actions to date on the Council’s flood recovery programme and future resilience work for Gloucestershire.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Statutory Authority</td>
<td>Various</td>
</tr>
<tr>
<td>Resource Implications</td>
<td>As detailed in the report</td>
</tr>
<tr>
<td>Sustainability checklist:</td>
<td></td>
</tr>
<tr>
<td>Partnerships</td>
<td>Multi-agency working is a key feature on many aspects of flooding response and recovery</td>
</tr>
<tr>
<td>Decision Making and Involvement</td>
<td>Cabinet and Scrutiny involvement</td>
</tr>
<tr>
<td>Economy and Employment</td>
<td>Gloucestershire First involvement on business impact</td>
</tr>
<tr>
<td>Caring for people</td>
<td>Community and Adult Care, Children and Young People and Community Safety roles in supporting displaced households</td>
</tr>
<tr>
<td>Built Environment</td>
<td>N/A</td>
</tr>
<tr>
<td>Landscape</td>
<td>N/A</td>
</tr>
<tr>
<td>Education and Information</td>
<td>GCC key role in information provision – e.g. Flooding Guide, Rogue Traders</td>
</tr>
<tr>
<td>Equal Opportunities in Service Delivery</td>
<td>Vulnerable people a key consideration</td>
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<td>Human rights Implications</td>
<td>N/A</td>
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<tr>
<td>Consultation Arrangements</td>
<td>Partnership working</td>
</tr>
</tbody>
</table>
## Gloucestershire Highways Flood Alleviation Work

The table below provides details of the highway flood alleviation schemes that are being progressed during this financial year (2008/09). Completion of the schemes before the end of the financial year is subject to the receipt of appropriate drainage consents, the finalisation of consultations with appropriate organisations and the completion of detailed design work.

<table>
<thead>
<tr>
<th>Location</th>
<th>Summary Of Work</th>
</tr>
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<tbody>
<tr>
<td><strong>Cheltenham</strong></td>
<td></td>
</tr>
<tr>
<td>Mill Lane &amp; Ham Lane</td>
<td>Replacement of 2 culverts and repairs to one other, ditching clearance, 4 new gullies and associated kerbing, 2 new catch pits and new headwall.</td>
</tr>
<tr>
<td>Cirencester Road</td>
<td>Storm drain cleansing.</td>
</tr>
<tr>
<td>Old Bath Road (by Pilley Bridge)</td>
<td>Installation of new gully.</td>
</tr>
<tr>
<td>Mead Road</td>
<td>Carrier drain extension and upgrade and 6 additional gullies.</td>
</tr>
<tr>
<td>Leckhampton Road / Hall Road</td>
<td>Short length of new carrier drain and 3 new gullies, supported by some footway re profiling.</td>
</tr>
<tr>
<td>Shurdington Road</td>
<td>Grill removed from entrance to culvert.</td>
</tr>
<tr>
<td>Sissinghurst Grove</td>
<td>Water course clearance.</td>
</tr>
<tr>
<td>Sunnyfield Lane</td>
<td>New carrier drain and additional 5 gullies and 100m of new pipe to outfall.</td>
</tr>
<tr>
<td><strong>The Reddings (by Leyson Road)</strong></td>
<td>400m of new carrier drain, 20 new gullies, 200m of highway ditch clearance.</td>
</tr>
<tr>
<td>Elm Close</td>
<td>Re grading of water course and ditch to facilitate outfall from New Barn Lane/Close.</td>
</tr>
<tr>
<td>Shaw Green Lane</td>
<td>520m of new carrier drain, 32 new gullies, 9 new catch pits, new culvert and 150m of drop kerbing.</td>
</tr>
<tr>
<td>Picadilly Way</td>
<td>Ditching clearance.</td>
</tr>
<tr>
<td>Glebe Road</td>
<td>Extensive new soak away drainage system along with 6 new gullies and partial highway resurfacing.</td>
</tr>
<tr>
<td>Whaddon Road (by Cleeveview Road)</td>
<td>6 additional gullies and 50m of new carrier drain.</td>
</tr>
<tr>
<td><strong>Cromwell Road &amp; Prestbury Rd</strong></td>
<td>3 new gullies.</td>
</tr>
<tr>
<td><strong>Priors Road</strong></td>
<td>5 new footway gullies and re profiling of footway. To be done in conjunction with the programmed footway resurfacing scheme</td>
</tr>
<tr>
<td>Location</td>
<td>Work Description</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Albert Road (by Wymans Brook)</td>
<td>Repairs to carrier drains and footway re profiling.</td>
</tr>
<tr>
<td>Bayshill Road / St Georges Road</td>
<td>Repairs to carrier drains, gully connections and general cleaning on road drain system.</td>
</tr>
<tr>
<td>Newcourt Road</td>
<td>Carrier drain &amp; gully cleaning</td>
</tr>
<tr>
<td>The Park</td>
<td>Gully replacement.</td>
</tr>
<tr>
<td>Wymans Lane</td>
<td>55m of new carrier drain and 6 new gullies. Extensive storm drain cleansing previously carried out during investigation works.</td>
</tr>
<tr>
<td>Hyde Lane</td>
<td>Extensive cleansing of storm drain required, along with multiple repairs to carrier drains and gully connections.</td>
</tr>
<tr>
<td>New Barn Lane - Phase 1</td>
<td>30m of replacement culvert and repairs to culvert at 3 locations.</td>
</tr>
<tr>
<td>New Barn Lane - Phase 2</td>
<td>55m of new kerb drainage, 2 new gullies and 120m of footway re profiling and resurfacing.</td>
</tr>
<tr>
<td>New Barn Lane - Phase 3 ditch clearing</td>
<td>Re grading of watercourse and ditch to facilitate outfall from New Barn Lane/Close.</td>
</tr>
<tr>
<td>New Barn Lane - Phase 4 new culvert</td>
<td>280m of new 450mm diameter relief culvert, 4 new catch pits and new headwall.</td>
</tr>
<tr>
<td>Kidnappers Lane</td>
<td>Clearing of a watercourse, upstream and downstream of Kidnapper Lane.</td>
</tr>
<tr>
<td><strong>Cotswold</strong></td>
<td></td>
</tr>
<tr>
<td>Granbrook Lane, Mickleton, near Granbrook Garage</td>
<td>New gullies and footway/kerb re-profiling</td>
</tr>
<tr>
<td>Barnsley Village Part 1</td>
<td>Removal of trash screen, jetting of existing carrier drain, some re-grading of highway and associated new gullies</td>
</tr>
<tr>
<td>Barnsley Village Part 2</td>
<td>Design works in progress</td>
</tr>
<tr>
<td>Barnsley Village Part 3</td>
<td>Design works in progress</td>
</tr>
<tr>
<td>Bourton on the Water Part 1</td>
<td>Earth bund and footpath re-profiling, upstream of Birdland Car Park</td>
</tr>
<tr>
<td>Bourton on the Water Part 2</td>
<td>Marshmouth Lane ditch clearing and pier removal over the swell gate</td>
</tr>
<tr>
<td>Springfield Rd, Cirencester</td>
<td>Design works in progress</td>
</tr>
<tr>
<td>Poulton Village</td>
<td>Design works in progress</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Fossebridge</td>
<td>New carrier drain outfall to watercourse and possibility of additional gullies</td>
</tr>
<tr>
<td>All Alone and Mill End Northleach</td>
<td>Balancing pond to attenuate flows</td>
</tr>
<tr>
<td>Guiting Power (by Hollow Bottom Pub)</td>
<td>New carrier drain and gullies, in conjunction with new kerbing</td>
</tr>
<tr>
<td>Rosedale, High St, Blockley</td>
<td>New kerbing and footway re-profiling, along with some carriageway resurfacing</td>
</tr>
<tr>
<td>High St/ Broadway Rd, Mickleton (Pike Cottage)</td>
<td>Repairs to existing drainage and installation of a new gully</td>
</tr>
<tr>
<td>Driffield Village</td>
<td>Replacement of existing culvert</td>
</tr>
<tr>
<td>Preston village</td>
<td>Repair to highway drain and the provision of a new intake to the ditch and associated ditch clearing</td>
</tr>
<tr>
<td>Pye Mill Bridge</td>
<td>Hydraulic Assessment of watercourse and effects on the bridge.</td>
</tr>
<tr>
<td>War Memorial Lower Swell</td>
<td>Additional Gullies, new headwall and ditch clearing</td>
</tr>
<tr>
<td>A417 West of Lechlade (Claydon Pike) - Phase 1</td>
<td>New kerb drainage</td>
</tr>
<tr>
<td>Oaksey Road Culvert</td>
<td>Hydraulic Assessment of catchments area</td>
</tr>
<tr>
<td>A429 HSBC Bank Moreton In Marsh</td>
<td>Design in progress</td>
</tr>
<tr>
<td>Lower Park Road, Sheep Street, Calf Lane and Dyers Lane</td>
<td>New carrier drain and gullies</td>
</tr>
<tr>
<td>Naunton, Main road in village</td>
<td>New carrier drain and gullies</td>
</tr>
<tr>
<td>Ampney Crucis</td>
<td>Design in progress</td>
</tr>
<tr>
<td>Forest of Dean</td>
<td>Patch repairs undertaken, followed by raising the road level and gully replacements.</td>
</tr>
<tr>
<td>Tewkesbury Road, Newent</td>
<td>Ditch and culvert cleaning.</td>
</tr>
<tr>
<td>A48 Junction Elton Corner Phase 1</td>
<td>Design in progress</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Coleford Town Centre - Phase 1</td>
<td>Extension of an existing culvert to link into existing system. This will be complimented by additional kerb raising/gulleys.</td>
</tr>
<tr>
<td>A48 Junction Elton Corner - Phase 2</td>
<td>Highway drain cleansing and possible pipework replacement/access cover raising in private land.</td>
</tr>
<tr>
<td>Longhope</td>
<td>Additional highway carrier drain and associated gullies to be installed.</td>
</tr>
<tr>
<td>Yorkley woods</td>
<td>Additional drainage and gulley installations</td>
</tr>
<tr>
<td>Nibley Farm House, Blakeney</td>
<td>Reinstate existing watercourse and incorporate high-level relief channel.</td>
</tr>
<tr>
<td>Upleadon, Mill Forge Lane</td>
<td>Hydraulic study of catchment, in conjunction with the installation of drainage gullies and a ditch.</td>
</tr>
<tr>
<td>B4215 Rudford (Salcombe Farm)</td>
<td>Replace the old drainage with new 600mm culvert.</td>
</tr>
<tr>
<td>Redmarley at A417 Phase 1</td>
<td>Kerb replacement and ditch clearing</td>
</tr>
<tr>
<td><strong>Gloucester City</strong></td>
<td></td>
</tr>
<tr>
<td>Westend Parade &amp; Alney Terrace</td>
<td>Ditch clearing.</td>
</tr>
<tr>
<td>Priory Road and Mount Street</td>
<td>Closure of existing entrance off St Oswalds Road, and opening up road into Priors Road. Works include installation of 2 new gullies, kerbing and turning head.</td>
</tr>
<tr>
<td>Baneberry Road</td>
<td>New channel drain across entrance to pub car park.</td>
</tr>
<tr>
<td>The Rea</td>
<td>Ditch and culvert clearing, followed by 1 additional gully and carrier drain.</td>
</tr>
<tr>
<td>Harwell Close</td>
<td>Earth bund constructed along the roadside verge to prevent run off from adjacent land. New catch pit and positive storm drain connection.</td>
</tr>
<tr>
<td>Cheltenham Road / Escourt Road junction</td>
<td>Improved gulley connection and new grating completed. Watercourse cleaning to be done.</td>
</tr>
<tr>
<td><strong>Stroud</strong></td>
<td></td>
</tr>
<tr>
<td>Wallbridge, Stroud</td>
<td>New carrier drain and gullies.</td>
</tr>
<tr>
<td>A419 London Road (Old Neighbourhood)</td>
<td>Design work in progress.</td>
</tr>
<tr>
<td>Middle Hill, Chalford</td>
<td>Improvements to local drainage.</td>
</tr>
<tr>
<td>Stratford Road,</td>
<td>Improvements to local drainage.</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Stroud</td>
<td>New carrier drain and gullies, to connect into the local watercourse.</td>
</tr>
<tr>
<td>Oakridge, Farm Lane</td>
<td>New outfall pipe, associated gullies and chambers.</td>
</tr>
<tr>
<td>Cranham by Woodside Farm</td>
<td>New highway culvert to increase capacity, clearing of watercourses on private land and various highway gulley/drain improvements.</td>
</tr>
<tr>
<td>Harescombe - Church Lane &amp; Gruntas Lane</td>
<td>Various highway gullies and drain improvements as part of the carriageway resurfacing.</td>
</tr>
<tr>
<td>Nut Hill, Upton St Leonards</td>
<td>Design work in progress</td>
</tr>
<tr>
<td>Tinkley Lane</td>
<td>Design work in progress</td>
</tr>
<tr>
<td>B4066 Taits Hill</td>
<td>Improve upstream flow characteristics and outfall to canal. Hydraulic assessment of catchment to also be undertaken to review benefit of additional culvert.</td>
</tr>
<tr>
<td>Pound Lane and Church Lane</td>
<td>New carrier drain, gullies and some kerb replacement</td>
</tr>
<tr>
<td>Blackquarries Hill</td>
<td>Design in progress</td>
</tr>
<tr>
<td>The Street, North Nibley by the Primary School</td>
<td>Design work in progress</td>
</tr>
<tr>
<td>Canalside Upper Framlinode</td>
<td>Design in progress</td>
</tr>
<tr>
<td>B4058 New Road</td>
<td>Design in progress</td>
</tr>
<tr>
<td>Tewkesbury</td>
<td>Culvert Clearing</td>
</tr>
<tr>
<td>Castle Street Winchcombe Phase 1</td>
<td>Re construct weir and re-profile upstream watercourse</td>
</tr>
<tr>
<td>Castle Street Winchcombe Phase 2</td>
<td>Jetting works to clear silt within the system</td>
</tr>
<tr>
<td>B4632 near the Hospital Winchcombe</td>
<td>New Carrier Drain and system enhancements</td>
</tr>
<tr>
<td>Swan Lane Stoke Orchard</td>
<td>Root cutting and jetting of existing drainage network</td>
</tr>
<tr>
<td>B4632 Winchcombe – Withytrees Farm Phase 1</td>
<td>New carrier drain works</td>
</tr>
<tr>
<td>Location</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Ermin Street – Phase 1</td>
<td>Various drainage cleaning/jetting.</td>
</tr>
<tr>
<td>Rookery Road, Innsworth</td>
<td>Regraded watercourse from Sewage Treatment Works and desilted Innsworth Road culvert.</td>
</tr>
<tr>
<td>Old Little Witcombe Road – Phase 1</td>
<td>Reconstructed manhole to improve flow characteristics and grill fitted on upstream side.</td>
</tr>
<tr>
<td>A46 Shurdington (by Garden Centre)</td>
<td>Design work in progress</td>
</tr>
<tr>
<td>Ashleworth School Road</td>
<td>New connector drain</td>
</tr>
<tr>
<td>Innsworth Brook</td>
<td>Culvert cleaning.</td>
</tr>
<tr>
<td>Bypass and Evesham Road, Bishops Cleeve</td>
<td>New gulley grating, and potential for relief culvert</td>
</tr>
<tr>
<td>Shutter Lane, Gotherington</td>
<td>Design in progress</td>
</tr>
<tr>
<td>Stoke Orchard – Stoke Road</td>
<td>Design in progress - Discussions ongoing with Environment Agency</td>
</tr>
<tr>
<td>B4632 Winchcombe, Withytrees farm – Phase 2,</td>
<td>Ditch Cleansing and replacement culvert</td>
</tr>
</tbody>
</table>

The table below provides details of the highway flood alleviation schemes that are being investigated and designed during this financial year (2008/09). It is intended that these schemes are completed in 2009/10 subject to the receipt of appropriate drainage consents and the finalisation of consultations with appropriate organisations.

<table>
<thead>
<tr>
<th>Location</th>
<th>Construction in 2009/10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castle Street – Winchcombe Phase 3</td>
<td>Construction in 2009/10</td>
</tr>
<tr>
<td>Tredington Bridge</td>
<td>Construction in 2009/10</td>
</tr>
<tr>
<td>Bridge Street – Nailsworth</td>
<td>Construction in 2009/10</td>
</tr>
<tr>
<td>George Street – Nailsworth</td>
<td>Construction in 2009/10</td>
</tr>
</tbody>
</table>
Multi-Agency Projects

Gloucestershire County Council chairs a county-wide multi-agency group which brings together all the different organisations involved in flood risk management and provides an opportunity to consider flooding issues across the area. This unique partnership has resulted in a series of jointly funded flood alleviation projects which will be completed by April 2009. Over £3.5 million has been made available. It is made up of contributions from the county council, six district councils, the Environment Agency and other partners. The money will be spent on a wide range of projects including land drainage work, culvert work and desilting. The schemes were assessed on various criteria including the number of properties in danger of flooding and the deliverability of the work in this financial year (2008/9).

<table>
<thead>
<tr>
<th>Location</th>
<th>Summary Of Work</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cheltenham</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prestbury Flood Risk Management Scheme</td>
<td>Drainage work and development of second channel and construction of attenuation ponds</td>
<td>£620,000</td>
</tr>
<tr>
<td>New Barn Close</td>
<td>Culvert replacement</td>
<td>£150,000</td>
</tr>
<tr>
<td>Hyde Lane</td>
<td>Culvert entry improvements</td>
<td>£10,000</td>
</tr>
<tr>
<td>Charlton Court Road/St Edwards School</td>
<td>De-silting and culvert work.</td>
<td>£20,000</td>
</tr>
<tr>
<td>Apple Orchard</td>
<td>Raise bank adjacent to Mill Stream</td>
<td>£10,000</td>
</tr>
<tr>
<td>River Chelt</td>
<td>De-silting of culvert under town</td>
<td>£299,000</td>
</tr>
<tr>
<td>Sandy Lane/Southfield Brook</td>
<td>Culvert replacement</td>
<td>£50,000</td>
</tr>
</tbody>
</table>

continued....
<table>
<thead>
<tr>
<th>Location</th>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cotswold</td>
<td>CCTV survey of culverts, clearance of road drains, replacement of trash screens, modelling</td>
<td>£70,000</td>
</tr>
<tr>
<td>Moreton-in-Marsh</td>
<td>Removal of sluice gate, building banks on ditch, open bricked wall by Birdland, raise verge bank on Rissington Road, ditch maintenance</td>
<td>£233,000</td>
</tr>
<tr>
<td>Chipping Campden</td>
<td>Hydrological and hydraulic modelling</td>
<td>£30,000</td>
</tr>
<tr>
<td>Lechlade</td>
<td>Survey work and raising banks</td>
<td>£60,000</td>
</tr>
<tr>
<td>Ford</td>
<td>Bank raising</td>
<td>£60,000</td>
</tr>
<tr>
<td>Willersey</td>
<td>Hydrological and hydraulic modelling</td>
<td>£16,000</td>
</tr>
<tr>
<td>Naunton</td>
<td>Hydrological and hydraulic modelling and survey</td>
<td>£25,000</td>
</tr>
<tr>
<td>Andoversford</td>
<td>Modelling</td>
<td>£16,000</td>
</tr>
<tr>
<td>Weston-sub-edge</td>
<td>Modelling</td>
<td>£25,000</td>
</tr>
<tr>
<td>Gloucester</td>
<td>Completion of all modelling in Gloucester City to facilitate further bids from DEFRA for major capital funding</td>
<td>£37,000</td>
</tr>
<tr>
<td>Bristol Road, Quedgeley</td>
<td>Culvert</td>
<td>£40,000</td>
</tr>
<tr>
<td>Didmore Brook, Oatfield</td>
<td>De-silting of bank improvements</td>
<td>£22,000</td>
</tr>
<tr>
<td>Brookfield Road</td>
<td>Works to prevent flooding from run-off from King George V playing field</td>
<td>£10,000</td>
</tr>
<tr>
<td>Quay wall</td>
<td>Demountable flood boards</td>
<td>£10,000</td>
</tr>
<tr>
<td>Randwick Park</td>
<td>Works to prevent flooding from surface water run-off</td>
<td>£5,000</td>
</tr>
<tr>
<td>Sudbrook and various locations in Abbeydale</td>
<td>Bank repair work</td>
<td>£60,000</td>
</tr>
<tr>
<td>Horsebere Brook</td>
<td>Bank works at little Elmbridge and Greyhound Gardens</td>
<td>£50,000</td>
</tr>
<tr>
<td>Saddlers Road, Quedgeley</td>
<td>French drain</td>
<td>£8,000</td>
</tr>
<tr>
<td>Sudbrook</td>
<td>De-silting of Saintbridge balancing pond to increase capacity</td>
<td>£260,000</td>
</tr>
<tr>
<td>Quay parapet wall</td>
<td>Repointing to prevent water seepage and maintain integrity of wall.</td>
<td>£20,000</td>
</tr>
<tr>
<td>Quay side</td>
<td>Rebuild of wall adjacent to Countrywide Stores</td>
<td>£20,000</td>
</tr>
<tr>
<td>Dimore Tributary</td>
<td>Increase efficiency of siphon under canal and improve flow along Dimore Tributary</td>
<td>£60,000</td>
</tr>
</tbody>
</table>
## Forest of Dean

- **Newland Street car park, Coleford**
  - Drainage chamber, regarding, new piped run
  - £60,000
- **Longhope Village**
  - Survey
  - £14,000
- **Lakeside Avenue, Lydney**
  - New piped run section, non return valve, chamber
  - £45,000
- **Watery Lane, Newent Town Centre**
  - Survey, modelling, CCTV
  - £30,000
- **Ledbury Road Crescent, Corse**
  - Clearance of Glyn Brook
  - £15,000
- **Moat Lane, Corse/Staunton**
  - New ditch, new culvert
  - £50,000
- **Steam Mills, Cinderford**
  - Phase 2 improvements to Cinderford Brook
  - £10,000
- **Lakeside Avenue, Lydney**
  - Survey and modelling
  - £20,000
- **Grant aid for volunteer groups**
  - Equipment for volunteers who clear and maintain watercourses in their areas
  - £7,500
- **Steam Mills, Cinderford**
  - Survey and modelling
  - £20,000

## Stroud

- **Little Australia Stonehouse**
  - Culvert improvement, removal of vegetation and realignment of retaining wall
  - £20,000
- **Painswick Valley**
  - Watercourse survey and hydraulic study
  - £45,000
- **Painswick Valley**
  - Removal of debris
  - £25,000
- **Toadsmoor Valley, Chalford**
  - Replacement of watercourse crossing
  - £30,000
- **Pound Villas, Wandswell**
  - Installation of spur to discharge surface water into field ditch
  - £20,000
- **Bridgend, Stonehouse**
  - Extension of flood defence wall
  - £10,000
- **Acre Place, Pagan Hill, Stroud**
  - Flood alleviation for access road
  - £10,000

## Tewkesbury

- **Carrant/Swilgate/Avon**
  - Flood Risk Assessment
  - £50,000
- **River Isbourne and Beesmoor Brook, Winchcombe**
  - Hydraulic study, clearing and reconstruction of culvert at Castle Street
  - £90,000
- **Oxenton Village**
  - Flood bypass culvert
  - £30,000
- **Ripple**
  - Culvert works
  - £20,000
- **Stanton Village**
  - Provide flood route through village
  - £40,000
- **Teddington**
  - Work on various culverts under old A46
  - £55,000