

For General Release

REPORT TO:	CABINET 20 October 14
AGENDA ITEM:	6
SUBJECT:	FLOOD PREVENTION & WINTER PREPARATIONS
LEAD OFFICER:	Tony Brooks, Director of Environment
CABINET MEMBER:	Cllr Kathy Bee, Transport and Environment
WARDS:	All
CORPORATE PRIORITY/POLICY CONTEXT/OUTCOMES FOR RESIDENTS OF THE BOROUGH: Corporate Plan 2013/15 <i>Compete as a place</i> ; a place that meets physical and social infrastructure needs. A highway network that is fit for purpose is essential. <i>Build the Council for the future</i> ; delivers accessible and responsive services. Maintaining and investing in highway infrastructure to meet the needs of the communities Community Strategy 2013/18 <i>A better borough</i> ; a better borough to make it a great place to invest. A highway network that is accessible to business and residents supporting and Enterprising City. Local implementation Plan A statutory plan setting out how Croydon will implement the London Mayor's Transport Strategy. This links to Croydon's Community Strategy and Corporate Plan but also sets targets for highway asset condition. Highway Asset Management Plan Strategic plans linking the corporate aims to the cost effective, long term, management of the highway asset.	
FINANCIAL IMPACT The decision of the cabinet will result with the need for £841K additional funding to introduce short to medium term flood alleviation measures as described in the report.	
KEY DECISION REFERENCE NO.: Not a key executive decision.	

The Leader of the Council has delegated to the Cabinet the power to make the decisions set out in the recommendations below

1. RECOMMENDATIONS

Cabinet is recommended to:

- 1.1 Approve the funding of £841K to support the short/ medium term flood resilience work in the Kenley/ Purley area and note the associated flood prevention and mitigation plans;
- 1.2 Note the flood prevention measures in relation to the borough as a whole and the Councils' Winter Preparation plans for 2014/15 as described in the main report and

2. EXECUTIVE SUMMARY

- 2.1 This report has been prepared to highlight our Winter Preparation plans for 2014/15 and the Flood Prevention plans being proposed to alleviate the recent flooding experiences across Croydon and in particular in the Purley / Kenley areas as a result of the Caterham Bourne rising.
- 2.2 Our 2014/15 Winter Maintenance Operational Plan is attached with the appendices to this report. A summary of the main points set out in this plan is highlighted within the body of the report in section 3.

3. DETAIL

WINTER PREPARATION

- 3.1 Under Section 41 of the Highways Act 1980 highway authorities are under a statutory duty to maintain the highway to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice. It is in the context of what is reasonably practicable that Croydon's winter service plan attempts to ensure the safe movement of all highway users as well as enabling everyday life to continue. The Winter Service Plan sets out the Council's arrangements for taking preventative measures in anticipation of ice and snow and for the removal of ice and snow and allows for pre-defined routes of carriageways to be treated in accordance with their priority on the highway network and prevailing weather conditions. However, the plan and the policy within it recognises that given the scale of financial and other resources involved in delivering the Winter Service, it is not practically possible to provide the service on all parts of the highway network, neither is it possible to satisfy the requirements of all those wishing to use the highway.
- 3.2 Croydon as a highway authority and its Highways Contractor, EM Highway Services Limited (EM) are responsible for providing the winter maintenance service for road users within the borough including: -
- Setting Standards
 - Day to day operations
 - Monitoring performance
 - Liaising with adjoining Councils, Emergency services and other highway users.
- 3.3 Prior to the start of any winter service activities, a pre-season operational meeting and readiness exercise is held between Council officers and EM Highways Services. This meeting was held on 9th October 2014 and was to ensure that any action plans from the previous season had been put in place, and that lessons learned and best practices identified were being implemented. Throughout the season the winter service is discussed at the weekly operational meetings.
- 3.4 As part of Croydon's planning for the 2014/15 Winter Service Operations, our salt barn has been restocked and currently holds 3039 tonnes of salt.

Arrangements are in place with our salt supplier for restocking our salt supplies during the season. Our salt contract is a tri-borough arrangement with Bromley & Bexley, the contract also stipulates that the suppliers holds a stock of 10,000 tonnes ready for deployment to the boroughs during the season.

- 3.5 There are 570 grit bins strategically placed around the Borough for use by the public on the footways and carriageways. These bins are continually checked, repaired and refilled with salt throughout the winter season.
- 3.6 Copies of Croydon's Winter Maintenance Operational plan for 2014/15 together with our contractors Winter Service Plans for 2014/15 have already been prepared. EM Highways Ltd are expecting delivery of their winter service fleet within the next few weeks in time for a 1st November 2014 start of our winter service operations. The gritting vehicles are equipped with real-time tracking devices so we are able to robustly monitor gritting operations and vehicle movements. This is particularly useful when we receive third party claims and enquiries from road users about our gritting operations.
- 3.7 Longer term plans are currently progressing to construct a new Salt Barn with a capacity of 10,000 tonnes at the Factory Lane Highways Depot site. The new barn will replace the existing salt barn and will help the authority to become more resilient to the difficult winter seasons we now encounter, as well as allow for some of the recommendations in the new guidance for winter maintenance operations, to be fulfilled.

FLOOD PREVENTION

- 3.8 Following the extensive flooding across the UK in 2007, the government commissioned Sir Michael Pitt to conduct a review into the causes of the flooding and responses to it. The Pitt Review concluded that the majority of the properties which flooded were from local sources, that no one organisation had responsibility for local flood risk management and that there was no obligation on local authorities to co-operate and share information. The Review made 92 recommendations and these were taken forward in the Flood and Water Management Act 2010 ("FWMA 2010").
- 3.9 The FWMA 2010 sets new statutory responsibilities for managing flood risk and gives local authorities the lead role for managing local flood risk through the creation of Lead Local Flood Authorities (LLFAs) while the Environment Agency (EA) has been given a strategic overview role. A number of the requirements of the FWMA have already been met and were reported to the Scrutiny and Strategic Overview Committee on 5 November 2013. A further report to the Streets and Environment Sub-Committee is planned for March 2015. Some of the requirements are listed in the body of this report.
- 3.10 Last winter experienced the highest level of rainfall on record, this combined with high groundwater levels resulted in the flooding at various locations

across the borough. Notably, the Caterham Bourne overflowed which in turn led to flooding in the Purley and Kenley areas.

3.11 The scale of the Caterham Bourne flood was such that it was declared an emergency on 6 February 2014 and measures were implemented by the Council, London Fire Brigade (LFB), Environment Agency (EA), Thames Water, Sutton & East Surrey Water (SESW) and other risk management authorities, to minimise the effect of the flooding. The long established London Emergency Services Liaison Panel (LESLP) Major Incident Procedure outlines each responder agency's role during a major incident. Local authorities, generally, are the agency which will declare a major incident in response to flooding. Partner category 1 and 2 responders (as per the Civil Contingencies Act) then come together under the command structure (Gold, Silver, Bronze) to effectively respond. The Croydon Gold group, led by Nathan Elvery, was well supported with multi-agency working proving successful at all levels within the command structure. Consistent representation at Gold meeting from emergency services, health partners, utility companies and the voluntary sector ensured inclusivity and a breadth of response.

3.12 **Current flood prevention action and proposals**

- An Internal Flood Group which comprises of officers from Highways, Green Space, Development Management, Spatial Planning, Building Control, ICT, Emergency Planning & Resilience and Adult Services Health & Housing has been established. The aim of the group is to encourage a partnership approach to flood risk management and to help improve communication between the different departments responsible for managing flood risk. The group is currently chaired by Rowland Gordon – Service Manager Network Maintenance and meets quarterly. Representatives from other stakeholders (i.e. EA, Thames Water & Transport for London) are invited to the group meetings for their contribution.
- Under Section 21 of FWMA, a Lead Local Flood Authority must establish and maintain a register of structures and features which, in the opinion of the authority, are likely to have a significant effect on a flood risk in its area, a record of information about each of those structures and features, including information about ownership and repair. A register has been set up listing some of the Council's known assets such as culverts, pumps, gullies and ponds and their condition, where known. The internal flood group has also been collaborating to identify records held by different teams on asset maintenance, which may be relevant. Ultimately the register should look to encompass any asset in Croydon regardless of who owns or maintains it to help identify more quickly responsibilities for resolving flood problems and this is being continuously developed with partner stakeholders.
- As part of the FWMA requirements, work has been on-going through the year to collate records of flood incidents of all kinds in the borough. The database is currently in Excel format and covers recorded incidents back to the 1950s. The flood group are in discussions on the best way to share and use the resource in different work streams in a more consistent manner across teams in collaboration with the contact centre, to help channel flood management & asset maintenance appropriately but also to inform responsible development decisions.

- Website & Communications – A number of useful guides about flooding and what to do in the event of flooding have been successfully uploaded on to the council’s website. The informative pages about responsibilities, the causes of flooding and work done by the council will help free up officer time dealing directly with residents, developers and consultants seeking the information.

Gully Cleaning Programme - The council has a cyclical gully cleaning programme in place where all the gullies in the borough are cleaned once a year or four times a year in the critical drainage areas (areas prone to flooding). The objective of the programme is to maintain this part of the highway drainage system in an effective and working condition so as to prevent the accumulation of surface water and minimise local flooding.

In the period October 2013 to August 2014, 23,426 gullies have been attended and 20,218 (86.3%) of them cleaned. Parked vehicles obstructing gullies continues to be a major impediment to gully cleansing but the gully cleansing contractor continues to look for ways of improving access to these gullies and recently we have implemented the ‘Streetscene’ project which sees roads with parking issues closed off to enable various highway maintenance tasks (i.e. gully cleansing, carriageway marking, carriageway/footway cleansing, minor carriageway/footway repairs etc) to be carried out at the same time.

- With respect to our experiences with the Caterham Bourne Flooding, a section 19 flood investigation (under the FWMA) has been completed for the Caterham Bourne catchment area. The investigation report, when complete, will identify the cause of the flooding, who and what was affected, who the flood risk management authorities were and whether those authorities carried out, or have plans to carry out their flood management functions. The draft report is currently being reviewed by the risk management authorities and should be available on our website in December 2014.
- Croydon is also working jointly with Surrey County Council/Tandridge and the Environment Agency to investigate and implement long term measures which would alleviate or help minimise the impact of future flooding along the Caterham catchment. A Consultant was appointed on 26 September 2014 to carry out the investigation works and they are expected to commence their work in October 2014. A Project Appraisal Report is expected to be completed by 31st May 2015 which would be used to bid for further funding from the Environment Agency.
- Croydon together with Bexley, Bromley, Greenwich , Sutton, Surrey County Council, Environment Agency and Thames Water have put together a series of trigger points to monitor during and outside severe weather forecasts. These trigger points include monitoring ground water boreholes, river flow speeds, weather patterns, etc . Croydon will also carry out regular checks on its trash screens and will increase the checks and monitoring should the weather start to deteriorate.
- A separate study part-funded by Drain London is already investigating options for improved surface water management in the A23 / Brighton Road corridor (from south of Purley north towards central Croydon).
- Funding has also been provisionally approved for a Department for Environment, Food & Rural Affairs (DEFRA) funded project to alleviate the problem of surface water flooding in the area of Welcomes Road and Kenley Lane. It is anticipated

that the first stage investigation into feasibility and costs of measures will be commissioned within this financial year 2014/15 pending confirmation of the grant application number from the Environment Agency. Managing surface water in Kenley should help to alleviate water entering the Caterham Bourne catchment during heavy rainfall events

- We have received approval from the Environment Agency for £45k to develop a detailed investigation and business case for surface water alleviation in Welcomes Road area of Kenley with remaining sum of around £300k to be held until the first stage is complete and can demonstrate cost benefit from construction of new management measures.
- Businesses and residents affected by the flooding across the borough are being encouraged to apply for the government's repair & renew grant scheme, which offers up to £5000, to install flood resilience measures within their properties.

3.13 What we need to deliver these proposals

- Support for our 'Streetscene' project which sees roads closed off to allow essential road maintenance including the cleaning of gullies in heavily parked areas, which otherwise we would struggle to clean.
- Additional support by Directors and Heads of Services to the Internal flood group as we work collaboratively across to council to address the various flood incidents each section may otherwise individually have to have dealt with.
- During the flooding, Croydon and Surrey County Council made a joint bid of £1M funding to the Environment Agency to investigate and implement long term measures to alleviate or minimise the impact of flooding as a result of the Bourne rising. However, due to the high profile and strategic importance of flood risk management in the Caterham Bourne catchment, funding of £100K has been provided by the Thames Regional Flood and Coastal Committee to carry out the investigation works.
- Croydon would require between £700K - £800K to deliver the proposed medium term maintenance measures listed in the table in 3.16.2.
- Costs for delivering different levels of surface water management in the A23 corridor are being proposed in the current Drain London investigation. Where cost-benefit analysis stacks up, these findings can provide basis for funding application to implement these measures in the next financial year
- The first stage of the Kenley surface water alleviation project includes £45,000 for a detailed investigation and development of a business case to justify funding of physical measures. If stage 1 shows the cost-benefit is justified the overall funding requested is approximately £300,000 to construct improved drainage measures. Release of this funding will depend on the outcomes of stage 1.

3.14 What the Council have asked central government for

- Funding of £1M to deliver the long term flood alleviation measures. In the Caterham Bourne catchment
- Funding of approximately £300,000 to deliver a surface water alleviation scheme in the Welcomes road area of Kenley (this was submitted prior to the floods of 2014)

3.15 What the Council have and haven't received from central government

- The Government have made available £5000 to businesses and residents affected by the flooding across the borough under the repair & renew grant scheme, to enable them to install flood resilience measures within their properties. To date 32 properties have applied for the grant
- The Council have received funding of £100K to carry out an appraisal for the Caterham Bourne Flood Alleviation Scheme and prepare a Project Appraisal Report.
- The remaining bid amount of approximately £1M will not be available until 2016/17.
- The Council have received approval for £45k to develop a detailed investigation and business case for surface water alleviation in Welcomes Road area of Kenley with a remaining sum of around £300k to be held until the first stage is complete and can demonstrate cost benefit from construction of new management measures.

3.16 SHORT/ MEDIUM TERM MEASURES (Purley and Kenley Catchment)

3.16.1 As most of the funding to implement long term measures would not be available until the financial year 2016/17, it is important that the Council put in place immediate measures which would alleviate any flooding or minimise its impact during the winter periods of 2014, 2015, 2016 and 2017.

3.16.2 The areas identified in the below table were badly affected during the recent flooding events and have been identified as areas where medium term measures would be of most benefit to help mitigate risk and create greater capacity to deal with the kind of floods experienced earlier in the year. The table below shows the locations, in order of priority, the measures and the estimated costs of implementing the proposals.

LOCATION	PROPOSED MEASURE	ESTIMATED COST	
		Revenue	Capital
Dale Road	<ul style="list-style-type: none"> • Carry out CCTV survey of the culvert to check for any structural damages – works commenced in August 2014 and is on-going • Implement options to increase the culvert size (currently 450mm) 	£1K	£350K
Bourne View	<ul style="list-style-type: none"> • Re-profile the existing bund in order to increase its holding capacity and carry out associated works i.e. raising existing manhole covers etc – works to cut back vegetation, clear the 	£70K	

	trash screen and ditch of debris commenced in September 2014 and is on-going		
Purley Oaks Depot Balancing Pond	<ul style="list-style-type: none"> Renew / upgrade the existing pumps and electrical wirings Clean out the pond (approx. 4500m³), assess all pipe works and repair/replace any that are damaged, cut back vegetation – works to cut back vegetation and clear the pond commenced in September 2014 and is on-going 	£200K	£50K
Bourne Park	<ul style="list-style-type: none"> Create temporary banks / landscaped areas along the railway line and other areas to form a dam which could be used to hold water 		£50K
Bourne Park Close	<ul style="list-style-type: none"> Review options to prevent groundwater causing flooding to properties (i.e. constructing a retaining wall), re-profile the open ditch, cut back vegetation 		£50K
Harris Academy & Kenley Cricket Club	<ul style="list-style-type: none"> Re-profile the open ditch either by increasing the width or raising the level of the banks, cut back vegetation restricting flow – works to cut back vegetation, clear the trash screen and ditch commenced in September 2014 and is nearing completion 	£30K	
Godstone Road (next to Tesco Car Park)	<ul style="list-style-type: none"> Review options to reinforce the open ditch so it is able to handle high volumes of water being pumped into it 	£40K	
	Subtotal: estimated costs =	£341K	£500k
	Total estimated cost =	£841k	

3.17 LONG TERM MEASURES

- 3.17.1 A five Borough Groundwater Flooding Solution Cell has also been set up to investigate and develop medium to long term measures for managing groundwater flooding. The solution cell consists of Croydon, Sutton, Bromley, Bexley and Greenwich, supported by LFB, EA and Thames Water. The topography and movement of groundwater throughout the catchment and historical trends suggested that the issues faced in Croydon were likely to be present in the northward boroughs as groundwater moved towards the Thames River.
- 3.17.2 Following the recent flooding events, Croydon Council have been working with colleagues at Surrey County Council (SCC) and EA and made a joint bid for £1M funding from the EA to investigate and implement long term measures for the Caterham catchment. If successful, this funding will not be available until the financial year 2016/17. In the meantime, the EA in recognition of the impact caused by the recent flooding events has made an initial funding of £100K available in the 2014/15 financial year so that investigation works can commence earlier. The £100K funding is in addition to the £20K contributions already agreed by the Council and SCC, thereby making a total of £120K available for investigation works to be carried out to help inform of the long term measures required to prevent future flooding.
- 3.17.3 A Caterham Bourne Project Group which consists of officers from LBC, SCC, Tandridge, EA, Thames Water, Sutton and East Surrey Water (SESW) and Network Rail has been established. The group has been tasked with identifying long term measures that could be implemented in order to prevent future flooding as a result of the Bourne rising.

4. CONSULTATION

- 4.1 There is no requirement to consult on the Flood Prevention and Winter Preparedness report as it is for information and simply informs on the preparation of Croydon for future floods and winter occurrences.

5 FINANCIAL AND RISK ASSESSMENT CONSIDERATIONS

Croydon's eligible expenditure for the flood emergency works during the 2013/14 winter season was recovered under the Bellwin scheme and was £2.586m.

The total costs for the new works are £341k revenue and £500k capital (as per the table above). There is currently slippage within the 2014/15 capital programme and therefore the £500k of capital can be funded within the 2014/15 agreed budget. Formally this will be funded by reducing the ICT programme by £500k. The council has been allocated £112k in grant as lead flood authority for the last 2 years. This has been held in earmarked reserves, this will be used alongside the 2015/16 allocation to fund this work.

The new administration is keen to take a responsible approach to deal with the flooding problems by funding the measures necessary to protect homes and

businesses.

1 Revenue and Capital consequences of report recommendations

	Current year	Medium Term Financial Strategy – 3 year forecast		
	2014/15 £'000	2015/16 £'000	2016/17 £'000	2017/18 £'000
Revenue Budget available				
Expenditure				
Income				
Effect of decision from report				
Expenditure	341			
Income				
Remaining budget	<u>(341)</u>	<u>0</u>	<u>0</u>	<u>0</u>
Capital Budget available				
Expenditure				
Effect of decision from report				
Expenditure	500			
Remaining budget	<u>(500)</u>	<u>0</u>	<u>0</u>	<u>0</u>

2 The effect of the decision

If the recommendations of this report are accepted then approval for spend on the schemes outlined will be approved along with the sources of funding for this expenditure.

The report informs and supports the necessity for continued work on Flood Prevention and Winter Preparedness to support Croydon's statutory duties. It also supports the Council's ability to ensure services, businesses and residents to a large extent are able to continue their various activities despite severe weather conditions.

3 Risks

The Council, as a Lead Local Flood Authority (LLFA) could fail in its statutory duty under the FWMA to manage the risk of flooding from surface water run-off, groundwater and ordinary watercourses.

There is also the risk of failing in its statutory duty under Section 41 of the Highways Act 1980 to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice.

4 **Options**

The Council has a statutory duty under Section 41 of the Highways Act 1980 to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice, and as a Lead Local Flood Authority (LLFA) has a statutory duty under the FWMA to manage the risk of flooding from surface water run-off, groundwater and ordinary watercourses.

5 **Future savings/efficiencies**

Sound flood water management plans and winter service plans will contribute indirect financial savings by providing resilience and continued functionality of business services and operations, movement of people and goods and other essential functions to borough during instances of severe and prolonged bad weather.

Approved by Richard Simpson, Director of Finance and Assets

6. **COMMENTS OF THE COUNCIL SOLICITOR AND MONITORING OFFICER**

6.1 The Solicitor to the Council comments that the Council, as a Lead Local Flood Authority (LLFA) has a statutory duty under the FWMA to manage the risk of flooding from surface water run-off, groundwater and ordinary watercourses.

6.2 In addition, under Section 41 of the Highways Act 1980 highway authorities are under a statutory duty to maintain the highway to ensure, so far as is reasonably practicable, that safe passage along a highway is not endangered by snow or ice.

Approved by: Gabriel Macgregor, Head of Corporate Law for and on behalf of the Council Solicitor & Director of Democratic & Legal Services

7. **HUMAN RESOURCES IMPACT**

7.1 There are no direct Human Resources implications to consider at this stage

Approved by Adrian Prescod, HR Business Partner, for and on behalf of Director of Human Resources, Chief Executive Department.

8. **EQUALITIES IMPACT**

- 8.1 An Equality Analysis was undertaken in relation to flood prevention and winter preparedness for the Borough.
- 8.2 The report does not mention any impact on protected such as age – young and older people, pregnant and maternity persons and disability – in particular those with a mobility impairment. The Equality Analysis is quite comprehensive; it would be useful to incorporate any relevant equality and inclusion issues it identifies
- 8.3 The equality analysis will enable the Council to ensure that it meets the statutory obligation in the exercise of its functions to address the Public Sector equality duty (PSED). This requires public bodies to ensure due regard to the need to advance equality of opportunity; foster good relations between people who share a “protected characteristic” and those who do not and take action to eliminate the potential of discrimination in the provision of services.”

9. ENVIRONMENTAL IMPACT

- 9.1 The proposals are and will be undertaken with due regard to their short, medium and long term environmental impact as detailed within the body of the report

10. CRIME AND DISORDER REDUCTION IMPACT

- 10.1 There are no crime and disorder reduction impacts arising from the recommendations of this report.

11. REASONS FOR RECOMMENDATIONS/PROPOSED DECISION

- 11.1 The recommendations will support the work being undertaken by the Highways team in delivering the aspirations of its residents and complying with the Council’s statutory duties as Highways Authority and Lead Local Flood Authority.

12. OPTIONS CONSIDERED AND REJECTED

- 12.1 No alternative options considered as part of this report.

CONTACT OFFICERS: Tony Brooks, Steve Iles, Rowland Gordon

BACKGROUND PAPERS – None

12