



County Offices
Newland
Lincoln
LN1 1YL

18 May 2018

Flood and Water Management Scrutiny Committee

A meeting of the Flood and Water Management Scrutiny Committee will be held on **Tuesday, 29 May 2018 at 10.00 am in Committee Room One, County Offices, Newland, Lincoln LN1 1YL** for the transaction of the business set out on the attached Agenda.

Yours sincerely

A handwritten signature in blue ink that reads 'Richard Wills'. The signature is written in a cursive style and is underlined with a single horizontal stroke.

Richard Wills
Head of Paid Service

Membership of the Flood and Water Management Scrutiny Committee
(11 Members of the Council and 7 Other Voting Members)

Councillors B Adams (Chairman), P A Skinner (Vice-Chairman), W J Aron, T R Ashton, Mrs A M Austin, Mrs W Bowkett, B M Dobson, Mrs C J Lawton, C R Oxby, C E Reid and R A Renshaw

Other Voting Members

District Councillors R Austin (Boston Borough Council), Mrs F M Martin MBE (East Lindsey District Council), P Vaughan (City of Lincoln Council), I Carrington (North Kesteven District Council), M D Seymour (South Holland District Council), B Russell (South Kesteven District Council) and I G Fleetwood (West Lindsey District Council)

**FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE AGENDA
TUESDAY, 29 MAY 2018**

Item	Title	Pages
1	Apologies for Absence/Replacement Members	
2	Declarations of Councillors' Interests	
3	Minutes of the Meeting of the Flood and Water Management Scrutiny Committee held on 26 February 2018	5 - 12
4	Announcements by the Chairman, Executive Councillors and Lead Officers	Verbal Report
5	Anglian Water's Consultation Draft Water Resources Management Plan <i>(To receive a report by David Hickman (Growth and Environment Commissioner) which outlines the key points proposed for LCC and its partners' response to the Water Resources Management Plan (WRMP) consultation)</i>	13 - 24
6	Environment Agency Update <i>(To receive a report by Deborah Campbell (Environment Agency) which invites the Committee to consider and comment on the activities of the Environment Agency including progress of key capital schemes)</i>	25 - 32
7	Review of the Lincolnshire Flood Risk and Water Management Partnership <i>(To receive a report by David Hickman (Growth and Environment Commissioner) relating to the review of the Lincolnshire Flood Risk and Water Management Partnership)</i>	To Follow
8	To report progress on the investigations made in the County under Section 19 of the Flood and Water Management Act 2010 (FWMA) <i>(To receive a report from Paul Brookes (County Flood Risk Manager) which provides the latest position of all current investigations in the County under Section 19 of the Flood and Water Management Act 2010)</i> <i>(Members are asked to view the current Section 19 spreadsheets online (also contained in Appendix A) and inform Democratic Services in advance if they wish to highlight any particular sites at the forthcoming Scrutiny Committee meeting)</i>	33 - 46
9	Flood and Water Management Scrutiny Committee Work Programme <i>(To receive a report from Daniel Steel (Scrutiny Officer) which presents the Terms of Reference of the Flood and Water Management Scrutiny Committee and invites the Committee to consider its Work Programme for the coming year)</i>	47 - 54

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Please note: for more information about any of the following please contact the Democratic Services Officer responsible for servicing this meeting

- Business of the meeting
- Any special arrangements
- Copies of reports

Contact details set out above.

All papers for council meetings are available on:
www.lincolnshire.gov.uk/committeerecords



**FLOOD AND WATER MANAGEMENT
SCRUTINY COMMITTEE
26 FEBRUARY 2018**

PRESENT: COUNCILLOR D MCNALLY (CHAIRMAN)

Councillors P A Skinner (Vice-Chairman), W J Aron, T R Ashton, Mrs A M Austin, Mrs W Bowkett, B M Dobson, Mrs C J Lawton, C R Oxby, C E Reid and R A Renshaw.

District Councillors R Austin (Boston Borough Council), Mrs F M Martin MBE (East Lindsey District Council), P Vaughan (City of Lincoln Council), I Carrington (North Kesteven District Council) and I G Fleetwood (West Lindsey District Council).

Officers in attendance:-

Paul Brookes (County Flood Risk Manager), John Cook (Acting Assistant Chief Fire Officer), Katrina Cope (Senior Democratic Services Officer), David Hickman (Growth & Environment Commissioner), Warren Peppard (Flood Risk & Development Manager), Mark Robinson (Senior Coastal Adviser, Environment Agency, Lincolnshire and Northamptonshire area) Claire Rose (Team Leader, Environment Agency), Michelle Scott (Flood Resilience Officer, Environment Agency) and Daniel Steel (Scrutiny Officer).

17 APOLOGIES FOR ABSENCE/REPLACEMENT MEMBERS

No apologies for absence were received.

18 DECLARATIONS OF MEMBERS' INTERESTS

There were no declarations of Members' interests made at this point in the proceedings.

19 MINUTES OF THE MEETING OF THE FLOOD AND WATER
MANAGEMENT SCRUTINY COMMITTEE HELD ON 23 OCTOBER 2017

RESOLVED

That the minutes of the Flood and Drainage Management Scrutiny Committee held on 23 October 2017, be agreed and signed by the Chairman as a correct record subject to the fourth bullet point from the bottom of page 9 having the word 'East' inserting to read 'South East Lincolnshire Local Plan'.

20 ANNOUNCEMENTS BY THE CHAIRMAN, EXECUTIVE COUNCILLOR
FOR ECONOMY AND PLACE AND THE COUNTY COMMISSIONER FOR
ECONOMY AND PLACE

No announcements were received.

21 LINCOLNSHIRE PARTNERSHIP RESPONSE TO LOCALISED FLOODING

The Committee received a joint presentation from Paul Brookes, Flood Risk Manager and John Cook, Assistant Chief Fire Officer, Lincolnshire Fire and Rescue, which provided information on the emergency response arrangements for localised flooding.

The presentation advised the Committee that the County Council was a Lead Local Flood Authority (LLFA) and as such was responsible for localised flooding where a localised response was required. The response would be made in partnership with Lincolnshire County Council Highways, Lincolnshire Fire and Rescue, District Councils, Water Companies, Internal Drainage Board and the Environment Agency.

It was highlighted that Fire and Rescue were the County Council's emergency service, who were being increasingly called upon to protect lives, communities and property from dangers other than fire. It was highlighted further that as LLFA the Council wanted to support Fire and Rescue and one the way to enhance the service's capability was to increase pumping capacity.

The Committee was advised that two pumps (located on appropriate trailers) and vehicles had been delivered to Lincolnshire Fire and Rescue in November 2017. Pictures of the said pumps and vehicles had been circulated as part of the agenda for the Committee to view.

During discussion, the Committee raised the following points:-

- Security of pumps – The Committee was advised that the trailers did not have a tracker fitted; however, the trailers did have lockable hitches to prevent them being towed away. Officers agreed to look into the option of a tracker;
- Location of the Pumps – Officers advised that the pumps were based at Gainsborough and Wragby. The two locations had been selected as they were secure locations;
- One member highlighted that when the pumps were deployed some consideration needed to be taken concerning the pumps security. The Committee was advised that when the pumps were deployed they would normally be in a local area within a local community;
- One member of the Committee suggested that a proposal should be made to the Executive Councillor for Economy and Place for the two water pumps to be added to the National Register of Assets. Reassurance was given by officers that if this suggestion was put forward the equipment would only be put forward for use in other areas, if Lincolnshire felt it was safe to do so.

RESOLVED

1. That the presentation concerning Lincolnshire's Partnership to Localised Flooding be received.

2. That the Executive Councillor for Economy and Place be requested to make arrangement for the two water pumps to be added to the National Register of Assets.

22 ANGLIAN WATER DRAFT WATER RESOURCES MANAGEMENT PLAN

The Committee received a short update from David Hickman, Growth and Environment Commissioner, which advised that the Anglian Water Draft Water Resources Management Plan was expected to be out for consultation from 9 March 2018; and therefore it was more appropriate for the Committee to consider this item at the 29 May 2018 meeting.

RESOLVED

That the update be received.

23 ENVIRONMENT AGENCY UPDATE

The Committee gave consideration to a report from the Environment Agency, which provided the Committee with an update on Environment activities, which included progress on capital schemes.

The Chairman welcomed to the meeting Mark Robinson, Senior Advisor, Environment Agency, Michelle Scott, Flood Resilience Officer, Environment Agency and Claire Rose, Team Leader, Environment Agency.

Officers from the Environment Agency guided the Committee through the report presented and responded to questions raised, which included:-

- Wainfleet Relief Channel – Concern was expressed that work still needed to be completed in order for the fishing to commence. Environment Agency Officers agreed to look into this matter;
- Boston Haven Banks – One member felt that in the first sentence of paragraph 1.2 the word 'centre' needed removing. Officers were happy to remove the word;
- Black Sluice Pumping Station – One member enquired as to what would happen if the Black Sluice IDB were unable to come up with the funding for the new electric pumps. Officers confirmed that the Environment Agency had agreed to continue to maintain the pumping station until June 2018. Some members advised that the importance of agricultural land could not be underestimated. It was highlighted that the IDB was currently trying to secure funding for the pumping station, from the Flood & Coastal Erosion Risk Management Local Levy. The Committee was advised that this was a pot of money held by the Regional Flood and Coastal Committee. It was felt that some lobbying needed to be made to MPs to look into DEFRA funding rules;
- Rationalising the Main River Network Project – Officers confirmed that this was dependent on the outcome of the consultation; and that the Environment

**FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE
26 FEBRUARY 2018**

Agency and Black Sluice IDB were in discussion regarding future maintenance requirements;

Councillor R Austin (Boston Borough Council) wished it to be noted that he was a member of the Black Sluice Internal Drainage Board.

- The application of Special Levies issued on District Councils;
- The percentage of disputed claims arising from the Horncastle Improvements. Officers advised that this was an improving picture. It was highlighted that compensation had started to be paid to landowners who had agreed to flood easements, and that other landowners would be compensated in a different manner. The member from East Lindsey advised the Committee that the last update from the Project Board was that all claims were virtually complete except for one who was not engaging; and
- Lincoln Defences – It was noted that work to develop the business case was ongoing, with support from the new Programme Delivery Unit. One member highlighted that the project needed around a further £1.36m; and that to influence others with regard to this scheme, further information needed to be included in the report.

RESOLVED

1. That a representative from the Black Sluice Internal Drainage Board be invited to attend the next meeting to provide the Committee with an update relating to the Black Sluice Pumping Station.
2. That for future reports, where a shortfall in funding had been identified, more detailed information should be provided in the report to assist in local lobbying.
3. That local MPs be requested to lobby concerning the Environment Agency criteria relating to assessing the value of land for flood protection.

**24 SALTFLEET TO GIBRALTAR POINT STRATEGY REVIEW
CONSULTATION**

The Committee received a joint presentation from Mark Robinson, Senior Advisor, Environment Agency, Michelle Scott, Flood Resilience Officer, Environment Agency and Claire Rose, Team Leader, Environment Agency concerning the Saltfleet to Gibraltar Point Strategy.

It was reported that the Lincshire project had started in 1994 and had provided flood risk management to homes and businesses in the area since then. The Environment Agency was now reviewing the coastal strategy to cover a larger area between Saltfleet and Gibraltar Point. The public consultation regarding the strategy had commenced on 5 February 2018 and was due to close on 22 March 2018.

It was highlighted that the sea defences between Saltfleet and Gibraltar Point helped to manage the risk of coastal flood to around 20,000 residential homes; 1,700

businesses; 24,500 static caravans; 35,000 hectares of farmland and a bustling tourist industry.

In 1991 the county's first coastal management plan was approved with a sand re-nourishment programme launched in 1994, known as Lincshore. And as a result the beaches had been annually maintained at a healthy level. It was highlighted that Lincshore was reviewed every five years to ensure that it remained a cost-effective and sustainable way of managing coast flood risk in the area.

The Committee was advised that the latest climate change guidance indicated that the present management approach might not be sufficient in the future to reduce coastal flood risk effectively. As a result it was predicted that beach levels would need to be higher, which would involve the need for more sand. It was highlighted that a large area of land behind the defenced was at or below mean sea level; and that major investments had continued to improve sea defences between Mablethorpe and Skegness.

Because of the need to maintain higher beach levels, the Environment Agency was exploring beach nourishment alongside a range of viable alternative options/approaches to ensure that a sustainable and affordable long-term flood risk management solution was maintained along the Lincolnshire coast line.

The Committee was asked to review the six shortlisted strategy options, by completing a copy of the Public Consultation Questionnaire on Strategy Options. The six options are detailed below; and the comments raised were as follows:-

Option 1 Sand on the beach

The Committee was advised that this was what was done currently between Mablethorpe and Skegness to help manage coastal flood risk. It was reported that sand was taken from licensed sites, to replace sand lost through natural erosion and storms. It was highlighted that there were costs attached to this and work was ongoing to try and drive the cost down. One member enquired as to how much the sand costed. The Committee was advised that dependent on variance of sea levels, the cost could be up to £7m a year. The Committee was advised that the sand was obtained from licensed sites owned by a dredging company. Due to increased costs of sand, a suggestion was made as to whether sand should be sourced outside of the 12 mile limit (Crown Estate). Officers advised that the Environment Agency was unable to lobby its sponsor DEFRA. The Committee further suggested that local MP's should be approached to lobby the mechanism for obtaining sand.

Option 2 - Coarser sand, shingle or pebbles

The Committee was advised that at the moment a fine grade of sand was put onto the beaches. This sand offered good protection, but the only disadvantage was that fine sand was easily moved around by wind or wave action. In moving to coarser sand some of the following issues would need to be taken into consideration, such as the beach profile; the cost could be higher if the material was located further away and to the fact that a donor site would have to be sourced, however, it might not need to be replenished as often as it would be less likely to move. It was highlighted that

from an ecological perspective which ever choice was made all would have an impact.

Option 3 - Rock groynes plus sand on the beach

The Senior Advisor Environment Agency advised that rock groynes helped keep sand on the beach by limiting the movement of sand. The Committee was advised that a rock groyne was a line of large rocks stacked on top of each other that generally stretched from the seawall to the shoreline. It was noted that the angle heading out to sea and the spacing between the structures varied depending on the location. It was noted that the initial costs were much higher, but over a ten year period would be cheaper in the long run. Less sand would be required; but natural movement of sand along the coast would change. It was noted further that there was opportunities for additional funding with the formation of marinas and lookout points. One member highlighted a potential health and safety issue with the size and height of the rocks.

Option 4 - Rock groynes and fishtails plus sand on the beach

This option involved the combination of rock groynes and fishtails. The Committee was advised that fishtails were large structures which were used to segment a section of coast, to form large crescent bays along the coastline. It was highlighted that they were very efficient in reducing sand movement and coastal erosion. Again less sand would be required; there would however be a change of landscape/seascape especially with larger fishtails; and the natural movement along the coast would change. It was highlighted that some structures were adapted to make walk ways

Option 5 - Rock groynes, fishtails with different volumes of sand

The Committee was advised that this option was a variance on Option 4 in that it still combined rock groynes, fishtails and sand. But this option provided for placing different volumes of sand to provide varied standards of protection depending on location and funding. Some of the considerations reported were that less sand would be required, and that a localised approach could mean better use of funding and that there were extra opportunities with additional funding for marinas and lookouts.

Option 6 - Rock groynes, fishtails with different frequencies of sand.

Again, this Option was a variance of Option 4 as it sill combined rock groynes, fishtails and sand. The only change would be that consideration would be given to placing sand on the beach at different frequencies/intervals, which would provide varied standards of protection depending on location and funding.

Some concern was raised with regard to the drop in protection in certain locations. Officer advised that major communities would be kept with standard protection. If less sand was used then steps would need to be taken regarding re-alignment. Some members express concern that it was difficult for a lay person to determine different density of sand and grade of gravel etc. A question was asked as to whether gravel would retain more water. Officers advised that gravel had more stability than sand; and was more likely to shift less. The Committee was advised that frequencies were currently annually, but could change to say every 2/4 years; in

doing this there was an acceptance of the natural movement of sand along the coast and as a result the coast line might change.

Note: Councillor T Ashton wished it to be noted that he was the Portfolio Member Holder for Planning at East Lindsey District Council.

The Flood Resilience Officer invited members of the Committee to encourage family and friends to complete the questionnaire on-line.

In conclusion, the Committee completed their questionnaire individually and agreed that the Executive Councillor for Economy and Place should lobby MP's concerning the cost of sand and the criteria for funding.

RESOLVED

That the Executive Councillor for Economy and Place be requested to contact local MP's regarding the provision of sand for beach nourishment.

25 TO REPORT PROGRESS ON THE INVESTIGATIONS MADE IN THE COUNTY UNDER SECTION 19 OF THE FLOOD & WATER MANAGEMENT ACT 2010 (FWMA)

Consideration was given to a report from Paul Brookes, County Flood Risk Manager, which invited the Committee to consider and comment on the investigations undertaken in the County under Section 19 of the Flood and Water Management Act 2010 (FWMA).

It was reported that in Quarter 3 (October to December 2017), only one new Section 19 investigation had commenced, which affected a single commercial property in Spalding. It was also highlighted that for the same period in 2016, no flood events had been reported. It was noted that the incident in Spalding had occurred just after Christmas, when there had been a period of persistent rain over a few days.

Appendix A to the report presented provided the Committee with a record of current flood investigations in the County, that were being carried out in accordance with Section 19 of the FWMA 2010.

During consideration of Appendix A, the Committee made reference to the following:-

The cleaning of gullies – due to the problems caused by private cars parking over gullies on the cleansing programme, a suggestion was made for a period of notice to be given to residents/district council's that gully cleaning was planned.

RESOLVED

That progress made on investigations undertaken within the County under Section 19 of the Flood and Water Management Act 2010 be noted.

26 FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE WORK

**FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE
26 FEBRUARY 2018**

PROGRAMME

The Committee gave consideration to a report from Daniel Steel, Scrutiny Officer, which enabled the members to consider and comment on the content of its work programme for the coming year to ensure that scrutiny activity was focussed on areas of greatest benefit.

The Committee was advised that the next meeting was scheduled to take place on 29 May 2018.

Members of the Committee were invited to put forward items for inclusion in the work programme. One member requested that an item relating to the Black Sluice Pumping Station should be included on the 29 May 2018 agenda and that an invitation should be sent to the Chief Executive of the Black Sluice Drainage Board to attend the May Meeting.

Two further suggestions put forward for the Committee to discuss were: the Internal Drainage Board Levies and the impact on District Councils; and the Environment Agency Flood Risk Maps – Updated.

RESOLVED

That the Flood and Water Management Scrutiny Committee Work Programme, as presented, be agreed subject to the inclusion of the items mentioned above.

The meeting closed at 12.00 pm

**Open Report on behalf of Richard Wills,
Executive Director for Environment and Economy**

Report to:	Flood and Water Management Scrutiny Committee
Date:	29 May 2018
Subject:	Anglian Water's Consultation Draft Water Resources Management Plan

Summary:

Further to the introductory report presented to the Committee in April, this paper outlines the key points proposed for LCC and its partners' response to the Water Resources Management Plan (WRMP) consultation, and invites further discussion to ensure that members continue to shape and guide the emerging response prior to submission on 1st June.

Actions Required:

Members of the Flood and Water Management Scrutiny Committee are invited to consider and comment on the key elements proposed for the formal response to the Water Resources Management Plan consultation.

1. Background

The Committee considered an introductory report on 10 April 2018 outlining the consultation draft Water Resources Management Plan. The present report focuses on the key messages that LCC and its partners may wish to convey in their final response to the consultation, and seeks members' comments on these prior to composition of the final response for the 1st June deadline.

LCC & Partners' Response to WRMP: proposed main lines of response

In developing a formal response to the WRMP consultation, it is intended that it should be a joint response between partners as far as possible, including aligning closely with the Greater Lincolnshire LEP. The following key elements have been identified to date.

- LCC and its partners will respond positively to the WRMP consultation
- LCC and its partners recognise the need to plan proactively and strategically for water management
- Effective water management is essential to economic and housing growth, and therefore for sustaining and growing Lincolnshire's economy

- Supporting agri-food & the visitor economy should be key considerations for future water management in Lincolnshire
- It is essential that Local Authorities and all key stakeholders are fully engaged in all stages of decision-making about the nature, scale, scope and location of long solutions and any interim steps that may be required in preparation
- Local Authorities may wish to outline key requirements for determining locations of future infrastructure in the final WRMP response
- Any infrastructure located within Lincolnshire must have clearly identified and costed additional benefits for Lincolnshire in terms of flood risk, economic uplift, development opportunities and water management
- LCC should engage proactively in leading the development of WRE proposals located in Lincolnshire
- WRE related initiatives should be capable of linking with and supporting existing programmes, such as the waterways strategy, the Joint Lincs Flood Risk Strategy & the LEP Strategic Economic Plan / Local Industrial Strategy

Existing programmes under the Joint Lincs Flood Risk and Water Management Strategy and the GLLEP's Water Management Plan are most easily accessed for comparison through the links provided below.

2. Conclusion

At the time of writing the response to the WRMP consultation is in development. Members' views are therefore important in continuing to shape the final response to the consultation, which will conclude on 1 June 2018.

3. Consultation

a) Have Risks and Impact Analysis been carried out?

No

b) Risks and Impact Analysis

N/A

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Executive Summary of WRMP

5. Background Papers

Document title	Where the document can be viewed
Consulation Draft Water Resources Management Plan	http://www.anglianwater.co.uk/about-us/draft-water-resources-management-plan/2019.aspx

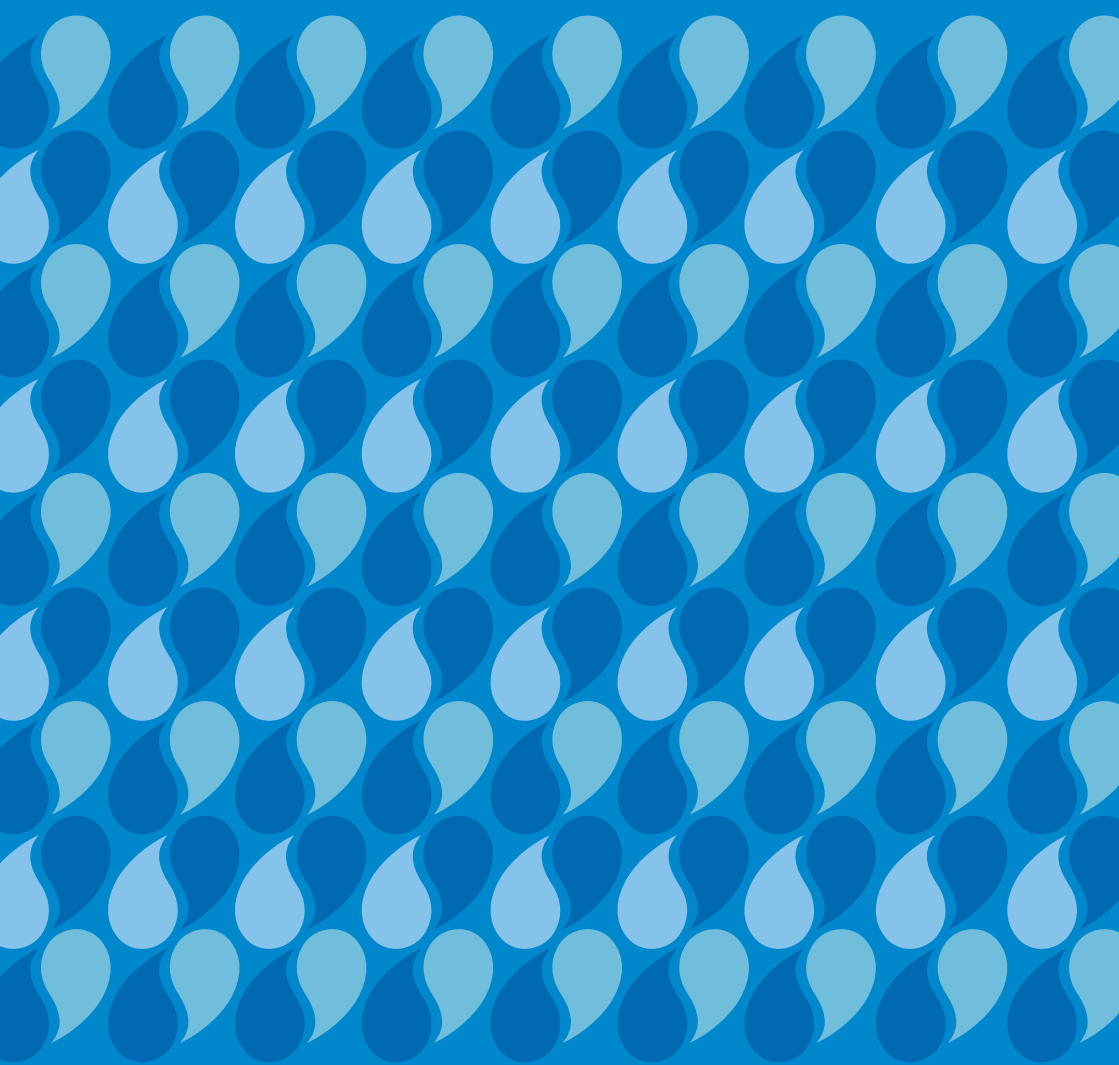
Current flood risk priorities - Common Works Programme for Lincolnshire	https://www.lincolnshire.gov.uk/residents/environment-and-planning/flood-risk-management/implementing-management-strategy/103045.article
Current water management / economic priorities - GLLEP Water Management Plan	https://greaterlincolnshirelep.co.uk/assets/downloads/Water_Management_Plan.pdf

This report was written by David Hickman, who can be contacted on (01522) 554809 or david.hickman@lincolnshire.gov.uk

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WATER: FUEL FOR GROWTH

Customer and Stakeholder Summary



WELCOME

Water resources in the East of England are under increasing pressure from a rapidly growing population, climate change and environmental needs. As a result, we know we need to work to maintain an appropriate supply demand balance and increase our region's resilience to severe drought.

In addition to these challenges, there remains a significant level of uncertainty over the scale of sustainability reductions required of water companies in 2025 to protect the amount of water available for the environment.

As such, we need to ensure that our proposed Water Resource Management Plan (WRMP) is flexible enough to be adapted to meet unknown future needs, including possible future exports to support neighboring water companies.

To do this, we have created two planning scenarios: the 'Principal Planning Scenario' and the 'Adaptive Planning Scenario'. The Principal Planning Scenario includes confirmed impacts of sustainability reductions as well as the forecast impacts of growth, climate change and severe droughts. The Adaptive Planning Scenario builds on this, and includes the additional uncertain impacts of future (2025) sustainability reductions and possible exports.

Both of these scenarios present us with a significant challenge that we have to address. The Principal Planning Scenario highlights an impact of 307million litres a day, nearly 30% of the amount we supplied each day in 2017. The additional impact in the Adaptive Planning Scenario is 165million litres, taking the total to 472million litres a day – around 43% of our daily supply in 2017.

To meet this challenge, we will continue to focus on significant demand management across our region. We are proud of our track record in this area, putting less water into supply today than in 1989, despite a 34% increase in properties served. This has been achieved through water efficiency and behaviour change campaigns, metering, and industry leading leakage reduction.

Our proposed ambitious, cost beneficial demand management strategy will allow us to meet customer and Government expectations for leakage reduction, save water that would otherwise be abstracted from the environment, mitigating deterioration risk, and ensure the reliability, sustainability and affordability of water resources over the long-term.

Nevertheless, the scale of the challenge we face is so significant that we need a twin-track approach; we need to invest in building new water supply capacity. Our WRMP includes strategies for trading water with neighbouring companies (Affinity Water and Severn Trent Water), increasing connectivity and extending our current network of large capacity mains to create a strategic grid, and the development of new resources.

We have also set out solutions to allow for the treatment and transfer of surplus water in North Lincolnshire to deal with deficits in other parts of our system. These solutions include new treatment processes, transfer mains and pumping stations, and new storage reservoirs.

Our WRMP makes the best use of available water before developing new resources and significantly increases our resilience to severe drought. In practical terms, this means that, by 2025, in a 1:200 year drought event no customers in the Anglian Water region will be at risk of severe restrictions.

This summary document sets out the key strategies in our draft WRMP and enables you to have your say on the future of this region's water supplies. We have choices in some areas about the pace at which we meet the challenges facing our region and we welcome your views in response to the consultation questions at the back of this summary.

Jean Spencer

Jean Spencer, Executive Director, Strategic Growth and Resilience



OUR PLAN IS AFFORDABLE...

Our customers told us...

- That whilst they are prepared to accept bill increases for service improvements that they value, many of our customers are feeling under financial pressure

Government expects companies to...

- Ensure that water supplies are affordable.
- Take a strategic approach to water resources planning that represents 'best value' over the long-term.
- Consider every option, including those outside of company boundaries, collaborating with other sectors, inter-company transfers, and trading.

Our Plan...

- Identifies the 'best value' solution through a combination of:
 - Cost-benefit assessment to help determine the preferred demand management strategy
 - Least-cost optimisation to determine the preferred programme of supply-side investments
 - Including limited investment for 'pre-planning' options that may be required in the future, and
 - Minimising potential for stranded assets, by determining our preferred programme of supply-side investments in the Principal Planning Scenario, and then testing it in the Adaptive Planning Scenario.
- Ensures that investment not driven by statutory requirements is kept within a range affordable for all customers:
 - Additional revenue from new properties offsets the cost of demand management
 - Investment to increase resilience is modest, and equates to approximately £2.20 p.a. on the average household bill by 2025.
 - In total, our Plan will add £12.30 p.a. to the average household bill by 2025.

OUR PLAN IS RELIABLE...

Our customers told us...

- We should be planning for the long-term and taking preventative action to address foreseeable future challenges, including drought.
- They support investment to increase resilience.

Government expects companies to...

- Take a long-term, strategic approach to the development of the WRMP.
- Enhance the resilience of public water supplies.
- Identify an appropriate level of service based on meaningful engagement with customers.

Our Plan...

- Is resilient against the median climate change scenario and severe drought (approximately 1 in 200 year return period), meaning that we will be able to maintain supplies to customers without the need for rota-cuts and standpipes.
- Increases our resilience to unforeseen events by reducing demand and increasing system connectivity to fully integrate our northern, eastern and western systems, creating a strategic grid.

OUR PLAN IS SUSTAINABLE...

Our customers told us...

- They generally prefer options that make best use of existing resource and infrastructure.
- Leakage reduction continues to be a priority.

Government expects companies to...

- Protect and enhance the environment, acting collaboratively.
- Promote the efficient and effective use of available resources, including reducing levels of leakage.
- Value nature in decision-making..

Our Plan...

- Makes best use of existing water resources before developing new ones. It does this through:
 - An ambitious demand management strategy, that will more than offset growth in demand
 - Fully integrating our northern, eastern and western water supply systems, allowing us to move water to where it is needed, and, Trading with Affinity Water and Severn Trent
 - Provides sufficient water to support housing targets in the South and East of England.
- Protects and enhances the environment by meeting all statutory environmental obligations, including sustainability reductions
- Mitigating unacceptable environmental impacts and identifying opportunities for enhancement through the Strategic Environmental Assessment and Habitats Regulation Assessment processes
- Our demand management strategy and the creation of a strategic grid meet our short-term needs, whilst giving us the capacity to meet uncertain future needs.
- By undertaking pre-planning work we will be able to meet any additional statutory deadlines associated with sustainability reductions required by 2030.

GETTING THE BALANCE RIGHT

MANAGING DEMAND

We put less water into supply today than in 1989, despite an increase in properties in our region of more than 34%. Our leakage performance is the best in the industry. What's more, by 2020 we aim to have 93% of households metered and 86% paying measured charges.

We are proud of this record but know that we need to continue to build on these past successes to meet the challenges of the future. Our draft WRMP focusses on collaboration and engagement with our customers, as well as utilising the latest technology and innovation to deliver water savings of 123million litres a day by 2045.

We agree with Government, and our customers, that demand management has to be our priority and we will always look to make better use of what we have before exploring new supplies.

“We have been greatly successful at offsetting the impacts of growth in our region. Our draft WRMP goes further than ever before and sets out a truly ambitious approach to continued reductions in demand.”

Our leakage performance is the best in the industry, with a further **23% reduction** planned by 2025



OUR STRATEGIES TO REDUCE DEMAND

Smart Meters

Between 2020-2025 we will invest **£180million** installing **smart meters** across our region, saving **23 million litres** a day by 2045.

Studies show that customers with smart meters save more water than those using conventional meters. This technology also allows us to use data like never before to work with customers to help them reduce their use.

Smart meters are also a vital tool in helping to identify leaks.

Engaged Customers and Water Efficient Homes

Water efficiency campaigns and initiatives have a huge role to play and our **£21million** investment in this area between 2020 - 2025 will see **30 million litres a day saved** by 2045.

Our strategy will see the continuation of our leading efficiency campaigns, Bits and Bobs and The Potting Shed. These free campaigns provide retrofit devices for use in customers' homes and gardens to help save water.

We will also be using pioneering behavioural economics to look at reward mechanisms for water efficient customers and financial incentives for customers who want to replace larger fixtures and fittings in their homes - like toilets - with more efficient ones.

Going further still, we will be working with developers to ensure new houses are as water efficient as possible, using new technology like greywater reuse and rainwater harvesting to save 80 litres per person a day in new developments.

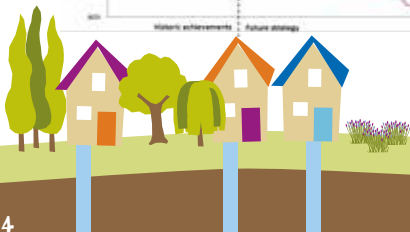
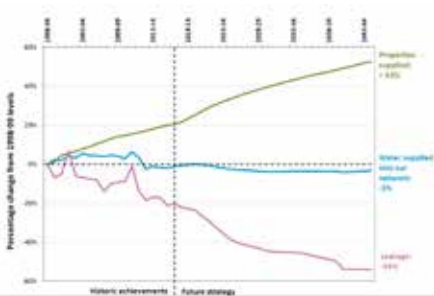
Driving Down Leakage

In our 2020-25 business plan, a further **£50million** will be spent to **drive leakage down a further 23%** by 2025.

Using the very latest technology and innovation, we will transform the way we manage our water networks.

We will be further developing our award winning Integrated Leakage and Pressure Management System, bringing together more data to make it easier to find and fix leaks. We will also use cutting edge pressure management to prevent burst from occurring through our network.

As well as new technology, we will continue to invest heavily in our intensive Leakage Detection Teams, who scour the region to find difficult-to-detect leaks and target areas with ageing infrastructure.



EXPLORING NEW SOURCES OF SUPPLY

Despite our ambitious demand management strategy, the scale of the challenge our region faces is so large that we still need carefully targeted investment to increase supply-side capacity.

Our supply-demand balance methodology shows that, even with our investment in further demand reduction, as many as 15 of our 28 Water Resource Zones could be in water deficit by 2045.

Our preferred programme of supply-side solutions looks to address this, ensuring there is enough water available across our region to meet the needs of communities, the environment and the economy. We have also 'future proofed' our draft plan against potential impacts of future environmental regulations (like sustainability reductions) by increasing option capacity.

As well as looking at new supplies, a key strategy in our draft WRMP is to increase the connectivity of our current resources, fully integrating our northern, eastern and western systems to creating a strategic water grid. This will allow us to transfer water from areas of surplus to need, without having to secure new supplies.

Working with our neighbours

Before looking at new sources of supply, our draft WRMP has identified options to work with our nearest neighbours to better utilise resources and explore opportunities to trade water.

By working with Affinity Water and Severn Trent Water, we can significantly increase the amount of water available for our customers - with one trade with Affinity Water freeing up 18million litres a day at our Grafham Water Reservoir.

As well as increasing water availability, these trading options avoid the need for significant capital investment in new supply assets.

By trading with neighbouring companies in our WRMP, we are saving over **£124million** that would otherwise have to be spent on new supply options.

OUR STRATEGIES TO SECURE NEW SUPPLIES

Water Reuse for Non-Potable Use

This innovative scheme will see us invest £75million to install enhanced treatment at our Pyewipe Water Recycling Centre. This advanced treatment will allow treated water from Pyewipe to be sent through a new pipeline to the South Humber Bank, where it will be used to support vital industry.

From non-potable to potable

We currently have a water treatment works at Elsham that supplies non-potable water to industrial customers on the South Humber Bank. In the future, part of this industrial need can be met by our water reuse strategy (above).

We will be investing £160million to install and upgrade our Elsham Water Treatment Works to treat this water to potable standards and develop a new transfer from the works to South Lincolnshire. This will allow millions of litres of clean, safe drinking water to be supplied to customers in Greater Lincolnshire, and further south if needed.

PLANNING FOR THE FUTURE

There is still a great level of uncertainty about the future, and what demands this will bring. To ensure we are prepared for this, our draft WRMP sets out plans to carry out pre-planning activity for new supply options that may be needed in our 2024 WRMP. These options include:

- New storage reservoirs in South Lincolnshire and Fenland
- Desalination plants in Felixstowe and the South Humber bank
- Further water reuse at Ipswich Water Recycling Centre



WE'VE BUILT THIS PLAN TOGETHER

CUSTOMER ENGAGEMENT

Ensuring all of our plans represent our customers' priorities is so important to us and we've done all we can to embed customer engagement into every aspect of our business.

Since 2017, we've carried out a range of extensive, robust and innovative engagement activities, involving over 45,000 customers so far. What's more, to ensure that our approach to engagement is meaningful, we involved customers at the very outset to help us to co-create our engagement strategy – making sure we would be speaking to people about the things that mattered and using a medium they connected with.

We have also actively sought to explore differences of opinion, experience and behaviours between different groups of customers. This is particularly important when considering the potentially different needs and preferences of customers in vulnerable circumstances.

Views on water resource management have been gathered from our Love Every Drop Online Community, the Anglian Water Summer Tour Bus, the H2OMG Water Festival, targeted research across customer segments and societal valuation surveys.

FORMAL PRE-CONSULTATION

At the end of last year (2017) we undertook a formal pre-consultation process on our draft WRMP, engaging with regulators, other water companies, local authorities, environmental and conservation groups and catchment partnerships. Our pre-consultation reached over 150 key stakeholders and outlined the challenges we are addressing in our WRMP, as

well as information about how to get involved in the consultation of our Draft WRMP 2019, once published.

We have worked closely with all of our regulators in the development of this plan, holding over 20 meetings with the Environment Agency, Ofwat and Natural England.

REGIONAL AND NATIONAL STAKEHOLDER ENGAGEMENT

The challenges we have outlined in our draft WRMP (drought, climate change, growth, environmental needs) are shared amongst a broad range of stakeholders, not just us as a water company.

We have worked closely with our neighbouring water companies and other major water abstractors and users in the region to ensure that we will all have access to reliable, sustainable and affordable supplies in the future.

We are leading a number of pioneering, collaborative water resource planning programmes at a regional and national level. The Water UK National Long Term Planning Framework, chaired by Anglian Water, explores

national water supply resilience and sets out a strategy for water companies to work together to build resilience throughout public water supply in England and Wales.

Water Resources East (WRE) and the Trent and Ouse Working Groups consider multi-sector needs (water, energy, agriculture and environment), developing a common understanding of water resource planning issues and identifying cost-effective options for sharing available resources, including transfers and trading.

These regional and national partnerships have informed our thinking and helped to shape the strategies in our draft WRMP.

YOUR CHANCE TO HAVE YOUR SAY

Resilient, secure water resources are vital to communities, businesses and the environment alike. We believe our Water Resources Management Plan is ambitious, sustainable and affordable – providing the right blend of supply and demand management strategies and remaining flexible to any uncertainties of the future.

But do you think we have got the balance right? We want to know your thoughts, especially on the below areas:

1 Growth is a key challenge our WRMP sets out to meet. We have used the latest local authority growth targets to develop our strategy, ensuring there will be enough water to meeting these targets. We have taken this approach because housing growth is regularly cited as a top priority for national and local Government. Of course, targets do not always turn into achieved growth and, currently, local growth targets are not quite being met.

Given this, do you agree with our approach of planning to meet local authority growth targets, or should we switch to an approach of using trend-based projections?

2 We are proud of the ambitious, cost beneficial demand management strategy that we have developed in the WRMP and are confident that this will more than offset the effects of growth in the region. Using the very latest technology and innovation, our strategy will unlock estimated water savings of around 43million litres a day by 2025, and 123million litres a day 2045. This strategy relies on more than just technology though – it requires collaboration with our customers, stakeholders and businesses to help bring down water demand.

Do you agree with this approach? Are we right to prioritise demand management?

3 Studies show that the public are more in favour of the introduction of compulsory water meters than ever before. We believe that this higher level of support reflects the fact that we now have a much larger proportion of customers paying using a meter compared to those who do not. We know there is still little support from customers who still pay unmeasured charges and so we have decided against the inclusion of compulsory metering in our WRMP.

Do you agree with this approach or think that we should consider compulsory metering in our upcoming business plan (2020-25)?

4 We have used Adaptive Planning to identify opportunities to 'future proof' our Plan against potential environmental regulations by increasing option capacity. The cost of this future proofing is £88 million, which equates to a cost increase of around £1.70 per year on average customer bills by 2025.

Should we include this additional investment to future proof our plans?

5 Our Plan is designed to increase our resilience to drought, so that no customers are exposed to the risks of rota-cuts and standpipes in a severe drought event. The investment required to increase resilience to drought is, we believe, relatively modest and equates to approximately £2.20 per year on the average household bill by 2025 (assuming the other factors that influence bills remain unchanged).

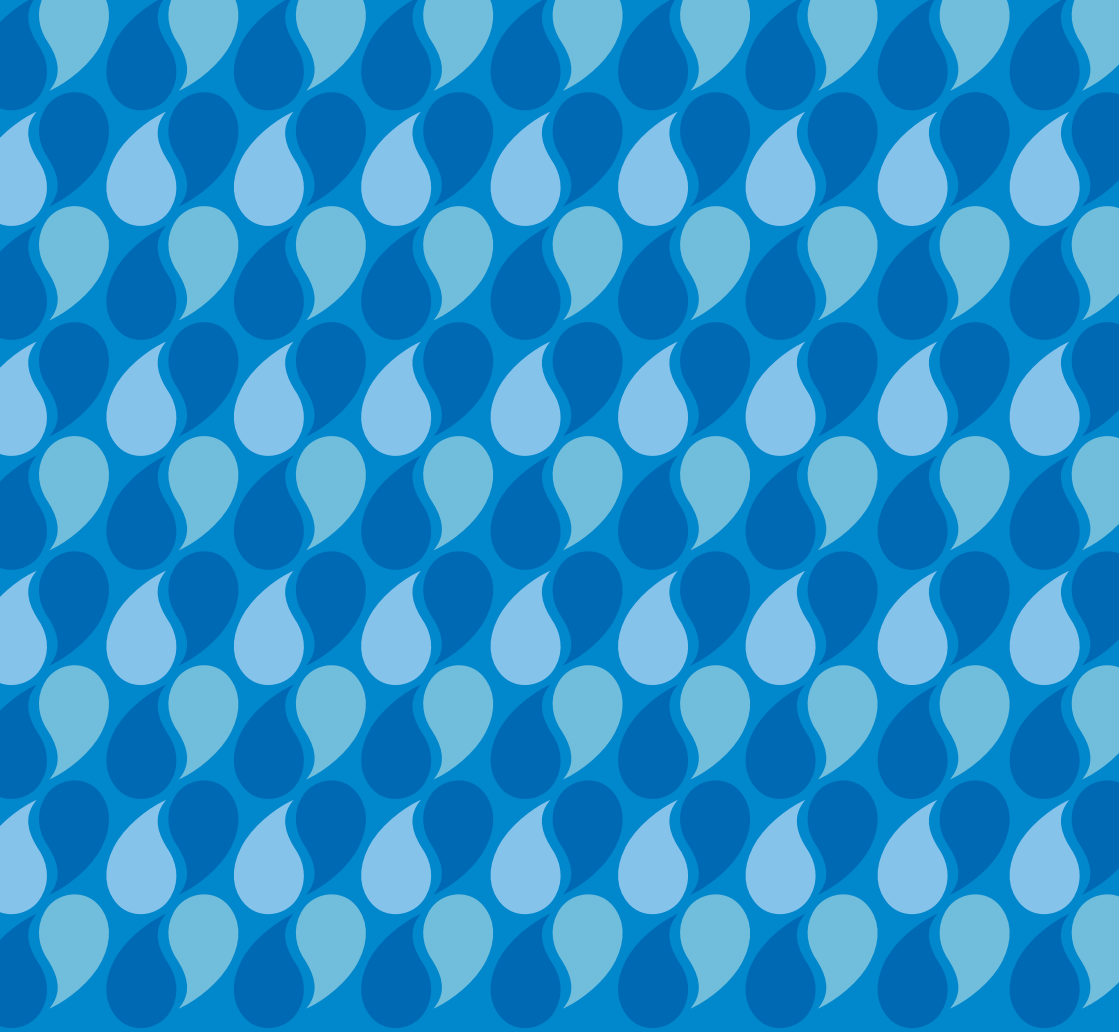
Do you support this approach?

6 Climate change is one of the key strategic risks our business faces. As a result, we have decided to adopt the Environment Agency's 2017 method for calculating climate change impacts, which results in a large impact in 2024-25.

It would, however, be possible to defer these impacts, and the associated investments, until 2029-30. Doing so would remove approximately £300million from the investment programme between 2020-25, a bill impact of around £6.10 per year on average customer bills by 2025.

Should we defer this investment until 2029-30?

All responses should be sent to:
water.resources@defra.gsi.gov.uk
or Secretary of State for
Environment:
WRMP, c/o Water Resources
Policy, Area 3D Nobel House, 17
Smith Square, London SW1P 3JR



Any comments on our Draft Water Resources Management Plan should be sent to:

water.resources@defra.gsi.gov.uk

or

Secretary of State for Environment
WRMP

c/o Water Resources Policy
Area 3D Nobel House
17 Smith Square
London
SW1P 3JR

Open Report on behalf of Environment Agency

Report to:	Flood and Drainage Management Scrutiny Committee
Date:	29 May 2018
Subject:	Environment Agency Update

Summary:

To update scrutiny committee on Environment Agency activities, including progress on key capital schemes.

Actions Required:

Members of the Flood and Water Management Scrutiny Committee are invited to consider and comment on the update provided and highlight any future actions for consideration.

1. Key Capital Schemes

This paper provides an update on the key schemes within the current 2015-21 consented programme for the Northern Regional Flood & Coastal Committee (RFCC) area. The overall programme consists of 107 schemes with the key ones being the **34** highest priority schemes based on the following criteria:

- **Outcome measures** – Schemes delivering >200 households
- **Significant expenditure** – Schemes with consented total spend >£1m
- **Contributions** – Schemes with public, private and further contributions required collectively >£300k
- **Other** projects deemed important in the Area including for reasons associated with reputational risk

Of the 34 key schemes **16** are located within Lincolnshire:

Scheme Name	Promoter
• Boston Barrier	Environment Agency
• Boston Haven Banks	Environment Agency
• Saltfleet to Gibraltar Point Strategy	Environment Agency
• Lincshore	Environment Agency
• Horncastle Flood Alleviation Scheme	Environment Agency
• Louth Flood Alleviation Scheme	Environment Agency
• Wainfleet Relief Channel	Environment Agency

- Black Sluice Catchment Works Environment Agency
- Work arising from Upper Witham Strategy Review (Lincoln Defences) Environment Agency
- Swaton Flood Resilience Scheme Environment Agency
- Welland Flood Banks Refurbishment Environment Agency
- Saltfleet Pumping Station Lindsey Marsh IDB
- Boygrift Pumping Station Lindsey Marsh IDB
- Wrangle Sea Banks Witham Fourth IDB
- Hobhole Pumping Station Witham Fourth IDB
- Westmere Pumping Station South Holland IDB

Of the 107 schemes in the Northern RFCC programme 17 are being promoted by Lincolnshire County Council.

This paper provides a short summary of the 11 Environment Agency key schemes on the Northern RFCC programme with Lincolnshire. More comprehensive report being provided to the Lincolnshire Flood Risk & Drainage Partnership Strategy Group and the Northern RFCC, both of which have representatives from the County Council.

1.1 Boston Barrier

A tidal barrier across the Witham Haven which, in conjunction with associated works to the Haven Banks, reduce the chance of tidal flooding to the centre of Boston to a 1 in 300 annual chance over the next 100 years.

The Barrier scheme remains on programme:

Start date:	May 2014
End date:	December 2019
Total Project Cost:	£90,339,950

Update since last meeting

Following a ground breaking ceremony in January work has commenced on the barrier has now commenced, with dredging and piling works ongoing.

1.2 Boston Haven Banks

Works to raise a number of low spots along the Haven banks which, in conjunction with the barrier, reduce the chance of tidal flooding to the centre of Boston to a 1 in 300 annual chance. This phase of works is the first in a series of bank raising phases to keep pace with climate change over the next 100 years.

Start Date:	October 2016
End Date:	December 2019
Total Project Cost:	£2,000,000

Update since last meeting

The economics for delivering a 6.50m crest height option is still being processed to avoid double counting of benefits across Boston. We are also

reviewing residual uncertainty allowance for sea level rise, which the business case needs to consider.

The overall programme still is for completing the scheme by December 2019

1.3 Saltfleet to Gibraltar Point Strategy Review (SGPSR)

Beach nourishment remains the most cost effective solution in the short-term as we keep pace with climate change. However, this option alone will not be technically viable in the longer term. The SGPSR will indicate when an alternative approach for significant capital investment is required and the need for partnership contributions is likely.

Start Date:	February 2018
End Date:	April 2021
Total Project Cost:	£1,210,866

Update since last meeting

The SGP consultation on the options ran from 5th February until 22nd March with over engaged with over 600 people at the drop-in events.

We have evaluated all the feedback and are preparing the SGP Strategy with the SEA for formal consultation later this year.

1.4 Lincshore (Interim Beach Management Lincolnshire Coast)

Beach nourishment scheme protecting approximately 20,000 houses, 35,000ha prime agricultural land and 30,000 static caravans as well as major tourism developments between Mablethorpe and Skegness.

Start Date	January 2015
End Date:	March 2021
Total Project Cost:	£65,792,126 (inc. previous years)

Update since last meeting

The contract for the Lincolnshire Beach Management Interim Works (formerly Lincshore) contract has been awarded to Team Van Ord for annual nourishment through to 2020.

The 2018 campaign started at the beginning of May. The initial target volume was set at 400,000m³ though it is likely that this figure will increase given large losses of sand over the high tides of the last few months (due to the “beast from the east” and Storm Emma).

1.5 Horncastle Improvements

A flood storage reservoir on the River Bain built with the help of £8.2million of contributions from a range of partners. Also individual property protection for 15 properties along the River Waring.

Start Date:	July 2014
End Date:	July 2017
Total Project Cost:	£7,253,000

Update since last meeting

The works are now complete, the reservoir operational and an official opening ceremony held on 28th July 2017.

The reservoir was first used 'in anger' when heavy rainfall over the Easter weekend resulted in it partially filling.

Settlement of the final account is delayed due to disputed claims. The land transfer for the reservoir footprint has been completed and flood easements signed by four of the seven landowners whose land will be affected by the scheme. The other three landowners do not want a flood easement.

1.6 Louth Improvements

Two flood storage reservoirs on the River Lud built with the help of £6.5million of contributions from a range of partners.

Start Date:	May 2014
End Date:	July 2017
Total Project Cost:	£5,118,100

Update since last meeting

The works are now complete, the reservoir operational and an official opening ceremony held on 28th July 2017.

The reservoirs were first used 'in anger' when heavy rainfall over the Easter weekend resulted in them partially filling.

Land transfer documents are complete awaiting sign off. Once signed these documents will be sent to Land Registry and will enable the flood easements to be signed for two out of the three landowners affected by the scheme. One landowner does not want a flood easement.

1.7 Wainfleet Relief Channel

The main flood risk issue along the Wainfleet Relief Channel is the condition of the flood embankments, though justification of the required works is likely to be difficult using current funding rules. Therefore an alternative approach is required.

The Steeping Catchment will be the key pilot for a “Partnership Approach to Catchment Management” (PACM) being promoted through the Lincolnshire Flood Risk Management Partnership, which will involve the development of a long term strategic approach to managing flood risk in the Steeping Catchment, working across a range of partners including Lincolnshire Flood Risk Management Partnership, landowners, and other key groups such as local councils and the National Farmers Union (NFU).

Start Date:	April 2017
End Date:	March 2022
Total Project Cost	£2,833,600

Update since last meeting

The PACM pilot has completed its initial assessment of the catchment and identified future flood risk options for the catchment as a whole.

The current preferred flood risk management option is to ensure the maintenance and condition of the raised defences which includes toe protection works on the Wainfleet Relief Channel and the Steeping River together with exploring upstream options to reduce flood risk and siltation.

The requirement for future improvement works will be monitored and reassessed in the future.

1.8 Black Sluice Catchment Works

A catchment wide review of flood risk across the Black Sluice catchment has concluded with the following key projects resulting:

- Transfer of Black Sluice Pumping Station to the local IDB
- Rationalisation of the Main River network
- Armouring to selected embankments to reduce the risk of catastrophic failure.

Start Date:	October 2016
End Date:	March 2020
Total Project Cost:	£2,163,650

Updates since last meeting

➤ Black Sluice Pumping Station

The Environment Agency has been working closely with Black Sluice IDB to transfer the pumping station to them (NOT the sluice and navigation lock).

Officers from both organisations are continuing to try and resolve outstanding funding issues. The Environment Agency have agreed to continue to maintain (though not operate) the pumping station until June 2018 whilst the IDB do this.

The next step is to engage with key external stakeholders on understanding options for the structure, including what decommission would look like if asset transfer were not possible.

➤ **Rationalising the Main River Network (RMRN) Project**

The RMRN de-maining pilot project has completed the formal consultation phase for the South Forty Foot Catchment. Responses returned were lower than expected, though for the local pilot mostly positive.

Officers are now writing a formal response document, and are following up on any questions raised by respondents. If there are no significant objections across the national project, the next step will be to publish the formal notice for designation change.

The project is on schedule to be completed in summer 2018.

➤ **Bank Armouring**

Bank armouring has been carried out on part of the fenland section of the Swaton Eau.

Modelling is being reviewed to confirm to any further sites requiring armouring in the next two years.

1.10 Lincoln Defences (previously- Work arising from Upper Witham Strategy Review)

A catchment wide review of flood risk across the Upper Witham catchment has concluded with the following key projects resulting:

- Replacement of a section of floodwall along Fosdyke Canal, alongside Foss Bank.
- Refurbishment of sections of flood wall along the River Witham alongside St Catherines.
- Refurbishment of sections of flood wall along the River Witham between Dixon Street and Boultham Avenue.
- Mechanical & Electrical refurbishment to the three sluices in the city, at Stamp End, Great Gowts and Bartgate.

Start Date:	June 2017
End Date:	September 2021
Total Project Cost:	£6,048,000

Update since last meeting

The Strategic Outline Business case has been submitted

The initial assessment of costs and benefits have highlighted a likely need for around £2.3million of additional partnership funding. This will be refined / confirmed as the detailed business case is worked on.

1.11 Swaton Resilience Scheme

A flood alleviation scheme for the village of Swaton. Traditional flood risk solutions are unlikely to be justifiable hence a Natural Flood Management solution is being considered, ideally reducing flood risk across the wider catchment including the villages of Threkingham and Spanby.

Start Date:	October 2016
End Date:	February 2022
Total Project Cost:	£1,237,000

Update since last meeting

The Strategic Outline Case for the Swaton Natural Flood Management (NFM) Project was approved in January 2018.

Work to commission the PDU to commence work on the business case preparation is ongoing. The commission is likely to be in two phases, the first will focus on the engagement of farmers and land owners to identify suitable sites for NFM measures to be implemented.

The second phase will include the economic appraisal of the NFM options, outline designs and completion of the business case which will be submitted to the Large Projects Review Group. To allow time for this all to happen, it is likely that the business case will be submitted at the end of the summer, with the first works on site taking place during the winter of 2018/19.

2. Updates on Other Items

2.1 Comprehensive Review of the Humber Flood Risk Management Strategy

The Humber Flood Risk Management Strategy (HFRMS) sets out how the Environment Agency and its partners will seek to manage flood risk around the estuary over the next 100 years,

Published in 2008 the HFRMS pre-dates many of the current guidelines (such as Partnership Funding) and evidence datasets (such as the December 2013 tidal surge) and therefore a comprehensive review was commenced in 2014 with a view to being signed off in 2020.

Update

The review boundary has been extended to include all tidal flood risk below the seven metre contour line.

A long-list of 12 options has been agreed with local authority partners. The long-list options feature a Humber Barrage, barriers on the tidal rivers, engineered changes to the estuary bed, and combinations of defence raising, flood storage and managing tidal flood risk through natural processes.

These options are now being taken through an appraisal process to produce a short-list of options which will then progress through a detailed appraisal to

analyse the benefits and impacts of each option. The aim is to finalise the short-list by the end of this summer.

Officers from the Environment Agency met with North Lincolnshire Council and Lincolnshire County Council, including relevant elected members, to talk through the Review process and the involvement of elected members in the Review. The Memorandum of Understanding was discussed and is progressing through local authority sign off, demonstrating the on-going commitment to partnership working.

2.2 Donna Nook Managed Realignment Site

The Environment Agency has applied to the Department of Transport to secure the diversion of the footpath on to the realigned path. The consultation on the application has now been completed, and there were a number of objections. As the parish council is one of the objectors, the next step will be a public inquiry. The Environment Agency has written to all the objectors.

3. Consultation

a) Have Risks and Impact Analysis been carried out?

No

b) Risks and Impact Analysis

N/A

4. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written on behalf of Deborah Campbell, who can be contacted via 03708 506 506 or deborah.campbell@environment-agency.gov.uk

**Open Report on behalf of Richard Wills,
Executive Director for Environment & Economy**

Report to:	Flood & Water Management Scrutiny
Date:	29 May 2018
Subject:	To report progress on the investigations made in the County under Section 19 of the Flood & Water Management Act 2010 (FWMA)

Summary:

This is a standing item to inform the Committee of the position of all current S.19 flood investigations in the County.

Actions Required:

Members of the Flood and Water Management Scrutiny Committee are invited to consider and comment on the investigations undertaken in the County under Section 19 of the Flood and Water Management Act 2010 (FWMA).

Members are asked to view the current S.19 spreadsheets online (also included at Appendix A) and inform Democratic Services in advance if they wish to highlight any particular sites at the forthcoming Scrutiny Committee meeting.

Link - <https://www.lincolnshire.gov.uk/residents/environment-and-planning/floodrisk-management/flood-investigations/117780.article>

1. Background

This is a standing item to inform the Committee on the position of all current Section 19 investigations in the County.

Despite higher than average precipitation in March (in the form of rain and significant snowfall), in Quarter 4 (January to March 2018) there was only one new Section 19 investigation started. This investigation relates to chronic groundwater flooding of a single residence in Sibsey, in which over a period of time the local conditions led to groundwater ingress into the underfloor cavity of the residence. In the same period last year no flood events were reported.

The inclusion of an investigation in Appendix A does not necessarily mean the investigation itself is incomplete. It will be noted that in some cases the investigation is marked as being completed, but the flood incident will remain on

Appendix A as there may be outstanding works arising from the investigation which have not yet been completed by the relevant Risk Management Authority.

2. Conclusion

Members of the Flood and Water Management Scrutiny Committee are invited to review the investigations undertaken in the County under Section 19 of the Flood and Water Management Act 2010 (FWMA).

3. Consultation

a) Have Risks and Impact Analysis been carried out?

No

b) Risks and Impact Analysis

N/A

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Record of current flood investigations in the County carried out in accordance with S.19 FWMA.

5. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Paul Brookes, County Flood Risk Manager, who can be contacted on (01522) 782070 or paul.brookes@lincolnshire.gov.uk .

Appendix A												
Duty to Investigate												
Section 19 Investigations												
Lincolnshire County Council Section 19 Investigations - East Lindsey District Council Network Area - Area Highways Manager Andrew Ratcliffe (East)												
Date of Incident	Town / Locality	Description of Flooding	No of Properties Flooded	Investigation Status	S19 Report Recommendations / Conclusions	Risk Management Authorities with Responsibilities and whether they are exercising functions	Proposed Action/Works	Consideration for inclusion in future Common Works Programme	Promoter	Works Status	Estimated Timescales Recommendation / Scheme Completion	S19 Report File Reference
28 June 2012	Horncastle South Street	Extreme rainfall (estimated to be a 1 in 50 year event) caused overland and highway surface water flows to collect at the low area of the Bull Ring and South Street overwhelming the Anglian Water sewer systems; which were also suffering from surcharged outfalls due to high river levels. 3 Property	3	Completed	Whilst the flooding was caused by extreme rainfall and overland flows, LCC has undertaken a CCTV survey of the underground surface water systems. This has revealed a number of condition concerns in relation to a brick culvert system owned by Anglian Water. The report has been passed to Anglian Water in order that they consider future action and repairs. LCC has in addition carried out repairs to gullies and connections in South Street. LCC has also undertaken initial modelling work to help understand and assess surface water flood risk in Horncastle. A bid for an overall surface water study for Horncastle is being submitted by LCC. Anglian Water works to clear blockages have been completed. Planned Environment Agency works regarding outfall issues and river levels may reduce flood risk.	Anglian Water - Yes LCC - Yes	LCC gullies and system checked and repaired. Anglian Water checking surface water systems and may consider improvement works in future asset management plans. Feasibility and design programmed for 2014/15 and if approved; works to progress in 2015/16/17. Additional minor works to be included in the future works programme.	Yes	LCC	On-going	2018/19	S19-003
28 June 2012	Horncastle Langton Hill	Extreme rainfall (estimated to be a 1 in 50 year event) caused significant overland flows from the adjacent hillside and agricultural land, which was not contained by the interceptor ditch. Combined overland and highway surface water overwhelmed both the highway and surface water sewer drainage systems on Langton Hill and West Street, and caused flooding at the bottom of the hill. 3 Property	3	Completed	A full drainage survey has been carried out and significant blockages have been removed from both the highway drains and Anglian Water's surface water sewers. The survey has identified a number of areas of damage to both systems. LCC has repaired the highway drainage system, and the survey has been forwarded to Anglian Water for assessment of their surface water sewers. The Witham 3rd Internal Drainage Board is ensuring that ditches are cleared by respective riparian land owners.	LCC - Yes Anglian Water - Yes Witham 3rd IDB - Yes	Highway drainage system repaired and functioning. Anglian Water checked the surface water system and it is working acceptably. Initial works delivered. A bid for an overall surface water study for Horncastle has been submitted with feasibility and design programmed for 2014/15 if approved; works to be programmed 2017/18.	Yes	LCC	On-going	2017/18	S19-004
28 June 2012	Horncastle Mark Avenue, Accommodation Road, Prospect Street	Extreme rainfall (estimated to be a 1 in 50 year event) caused significant overland flows from the adjacent hillside and agricultural land. This was exacerbated by the interceptor ditch being restricted at its entrance to the culvert system, which caused flooding to properties in Mark Avenue, Accommodation Road and Prospect Street. 14 Properties	14	Completed	Whilst the flooding was caused by extreme rainfall and flows from adjacent land, investigations revealed an intercepting ditch which flows into a culverted watercourse which is shown on Anglian Waters records. East Lindsey District Council has cleared the culvert and trash screen. LCC has also undertaken initial modelling work to help understand and assess surface water flood risk in Horncastle. Ditches cleaned out and discussions are ongoing between Anglian Water and Witham 3rd Internal Drainage Board regarding ownership. A bid for an overall surface water study for Horncastle is being submitted by LCC.	Anglian Water - Yes Witham 3rd IDB - Yes ELDC - Yes	Ditches cleaned out. Discussions ongoing between Anglian Water and Witham 3rd IDB regarding ownership. A capital scheme is included in the Medium Term Plan for works in 2018/19	Yes	LCC AW Witham 3rd IDB	On-going	2018/19	S19-005
28 June 2012	Toynton St Peter Ings Lane	Extreme rainfall caused overland flows to surcharge a number of watercourses in the area resulting in flooding to a low lying property in Ings Lane. 1 Property	1	Completed	It is recommended that a new watercourse be cut to the south to divert flows from Toynton St Peter away from the flooded property. Witham 4th Internal Drainage Board is considering a scheme. However, this is likely to be a low priority due to the cost, legal issues and minimal benefits.	Witham 4th IDB - Yes LCC - Yes	Witham 4th IDB considering a capital scheme submission with possible upgrading/realigning of drains in the area. Investigation works programmed for 2016/17/18. Possible works 2018/20.	Yes	Witham 4th IDB	On-going	Investigation 2016/17/18 Possible works 2018/19/20	S19-010
9 June 2014	Skegness North Parade	Intense summer rainfall caused internal flooding to the hotel. Surface water entered the building via the ladies toilets. 1 Property	1	Completed	AW to investigate the capacity of the surface water system. The property owners should investigate whether they have sufficient drainage within their land to accommodate the normal flows expected.	LCC - Yes Anglian Water - Yes	After further investigations carried out by AW additional works are planned. Recommendations advised to property owners.	No	AW	On-going	1 March 2020	S19-101
24 June 2014	Skegness Sunningdale Close	Following torrential rain, the highway drains were unable to cope with the amount of surface water on the carriageway. The flood water entered the property. 2 Properties	2	Completed	AW to investigate the capacity of the surface water system. The property owners should consider installing cut off drains to collect water before it enters the property and ensure discharge to an appropriate location, or consider other property level protection measures.	LCC - Yes Anglian Water - Yes	Further investigations to be carried out by AW, IDB & EA to establish outfall.	No	AW IDB EA	On-going	Spring 2015	S19-098
24 June 2014	Skegness Sunningdale Drive	Following torrential rain, the highway drains were unable to cope with the amount of surface water on the carriageway. The flood water entered the property, whilst the owners were away on holiday. The property also flooded on 13 July 2014. 1 Property	1	Completed	Following investigations carried out by AW in 2012, third party obstructions were identified at several locations within the system. Three of these were resolved in 2013 and a further drainage survey was carried out. AW to carry out further investigations.	LCC - Yes	Further investigations to be carried out by AW, IDB & EA to establish outfall.	No	AW IDB EA	On-going	Spring 2015	S19-099
24 June 2014	Skegness Grand Parade	Following torrential rain, the highway drains were unable to cope with the amount of surface water on the carriageway and a property was flooded. 1 Commercial Property	1	Completed	AW to investigate the capacity of the surface water system. ELDC should consider investigating whether it has sufficient drainage within its land to accommodate the normal flows expected.	LCC - Yes	Further investigations to be carried out by AW & ELDC	No	AW ELDC	On-going	Spring 2015	S19-100

Duty to Investigate

Section 19 Investigations

Lincolnshire County Council Section 19 Investigations - East Lindsey District Council Network Area - Area Highways Manager Andrew Ratcliffe (East)

Date of Incident	Town / Locality	Description of Flooding	No of Properties Flooded	Investigation Status	S19 Report Recommendations / Conclusions	Risk Management Authorities with Responsibilities and whether they are exercising functions	Proposed Action/Works	Consideration for inclusion in future Common Works Programme	Promoter	Works Status	Estimated Timescales Recommendation / Scheme Completion	S19 Report File Reference
10 August 2014	Chapel St. Leonards South Road	Highway surface water entered the property through the vehicular access and flooded the driveway and then entered the living area of the dwelling. Property flooded again on 27/8/2016 - (REPORT AND WORKS STILL ON-GOING) 1 Property	1	Completed	Due to capacity issues the gully cleansing and jetting is unlikely to resolve the problem during extreme rainfall, as the quantity of surface water would overwhelm any standard drainage system. However this will hopefully ease the extent of flooding and be effective during heavy / average rainfall, together with the solutions installed by the residents. LCC Highways to arrange a CCTV drainage survey to identify any blockages or defects within the system. Assuming the drainage system is in good working order, the most likely solution to ease the problems of flooding will be to increase the upstand of the dropped kerb to +25mm and install an additional gully at the lowest point (determined by level survey), and connect to the existing surface water drainage system. This will be carried out as a small highways maintenance scheme.	LCC - Yes	CCTV drainage investigation to be carried out in due course. Along with the installation of an additional gully and increasing the upstand of the vehicular access to +25mm. Order in system programmed for 2018/19.	No	LCC	On-going	March 2019	S19-125
10 June 2016	Binbrook Orford Road	An issue of flooding where surface water run-off is travelling down the slope of the road at such a velocity that it is bypassing the drains/gullies and flooding internally. 1 Property	1	Completed	The primary source of the flooding was that the highway drainage was exceeded but the condition of the receiving watercourse and culvert system may have been a contributory factor.	EA - Yes AW - Yes LMIDB - Yes LCC - Yes Binbrook Parish Council - Yes ELDC - Yes	Further investigation required.		TBC	On-going		S19-177
27 August 2016	Chapel St Leonards The Esplanade	LPP used to remove large amount of water. 2 Properties	2	On-going			TBC			On-going		S19-195
27 August 2016	Chapel St Leonards St Leonards Drive	Main pump used 1 Property	1	On-going			TBC			On-going		S19-196
09 January 2018	Sibsey Main Road	Groundwater is coming above the surface including under house. 1 Property	1	On-going		TBC	TBC			On-going		S19-198
02 April 2018	Louth Grimsby Road	Fire & Rescue attended and pumped out 3 properties and put preventative measures in place to prevent further flooding. 3 Properties	3	On-going	TBC		TBC			On-going		S19-199

Appendix A												
Duty to Investigate												
Section 19 Investigations												
Lincolnshire County Council Section 19 Investigations - West Lindsey District Council & City of Lincoln Council Network Area - Area Highways Manager Steve Wiles (North)												
Date of Incident	Town / Locality	Description of Flooding	No of Properties Flooded	Investigation Status	S19 Report Recommendations / Conclusions	Risk Management Authorities with Responsibilities and whether they are exercising functions	Proposed Action/Works	Consideration for inclusion in future Common Works Programme	Promoter	Works Status	Estimated Timescales Recommendation / Scheme Completion	S19 Report File Reference
28 June 2012	Keelby Maple Avenue, Pelham Crescent, Riby Road	Flooding was caused by surcharging surface water sewers combined with overland flows. 4 Properties Maple Avenue - 2 Properties Pelham Crescent - 1 Property Riby Road - 1 Property	4	Completed	Further detailed study required into the ownership, condition and capacity of the surface water sewer system with a view to providing a new pipe system to intercept flows from the A18 Barton Street; to reduce flows entering the village, and to upgrade the pipe between Riby Road and Caddle Beck. Further LCC investigation and design required. Scheme bid submitted for feasibility and works.	LCC - Yes Anglian Water - Yes	Surface water drainage scheme under consideration. Further LCC investigation and design required. Feasibility 2016/17 Work 2018/19. Some A18 cut-off remedial work has been identified to have some mitigation benefit.	Yes (may also require Anglian Water investment)	LCC AW	On-going	Investigation & Feasibility 2016/17 Possible works 2018/19. Potential Grant In Aid scheme.	S19-032
28 June 2012	Keelby Eastfield Road	Surface water sewer overwhelmed due to its connection to a blocked riparian drain. 3 Properties	3	Completed	North East Lincolnshire Internal Drainage Board to clear riparian drain. Anglian Water to investigate cross contamination of foul and surface water systems. LCC to investigate the provision of a new chamber on the culverted section of watercourse in order to facilitate further investigations. Riparian owners to be advised of their responsibilities.	Anglian Water - Yes North East Lincs IDB - Yes LCC - Yes	All risk management partners have completed their actions and responsibilities.	No	AW NELIDB LCC	On-going	Investigation & Feasibility 2016/17 Possible works 2018/19. Potential Grant In Aid scheme.	S19-033
9 June 2014	Gainsborough Caldicott Drive Darwin Street Elsham Walk Hill Crescent Limber Close Marshalls Yard Priory Close Rectory Avenue Silver Street Spring Gardens Tower Street Trinity Street Long Wood Road	Over a period of 60 minutes during the afternoon 43.4mm of rain fell in Gainsborough, of which 35.6mm fell in 30 minutes (a return period of 227 years). The surface water drains and combined sewer systems were unable to cope with the intense rainfall, the various systems consequently surcharging and the resulting surface water runoff entering properties. In all around 53 properties were flooded internally. 53 Properties Caldicott Drive - 1 Property Darwin Street - 1 Property Elsham Walk - 16 Properties Hill Crescent - 1 Property Limber Close - 13 Properties Marshalls Yard - 9 Properties Priory Close - 1 Property Rectory Avenue - 1 Property Silver Street - 1 Property Spring Gardens - 1 Property Tower Street - 2 Properties Trinity Street - 3 Properties Longwood Road - 2 Properties	53	Completed	1. That all RMA's inspect their respective infrastructure and take any necessary steps to ensure it is working as well as possible. 2. Advice be made available to victims of flooding with regard to resistance measures which might be appropriate, for example air brick covers and flood gates. 3. LCC consider improvements to the highway surface water drainage where this will offer resistance to flooding from surface runoff. 4. That the LLFA investigate the feasibility of overland flood routes to manage the risk of flooding from surface water	LCC - Yes WLDC - Yes Severn Trent Water - Yes	Consider for inclusion in Medium Term Plan. Feasibility study 2019/20.	No	On-going	S19-115		
14 September 2015	Lincoln Percy Street	Customer rang to report that during Monday evenings heavy rainfall their house was flooded due to blocked drains at the bottom of the road. Customer has had to have all the carpets ripped up and the back garden was under approx 2 feet of water. 1 Property	1	Completed	To clean and jet through all sewer connections and ensure the drainage system is running clear	LCC - Yes AW - Yes	LCC to clean and jet gullies and connections	No	LCC AW	On-going	End 2015	S19-132
15 June 2016	Cherry Willingham Ancaster Close	Flooding into the property due to drainage, water in customers house. 1 Property	1	On-going	Awaiting report		Awaiting report			On-going		S19-164
9th August 2017	Scotter Eminson Close	Caller reported this before and extra drainage was added BUT the house is flooded at present. Fire brigade were pumping out garage and hallway after midnight this morning. Caller is very concerned about further flooding and asks that someone call her back today please as the drainage improvements are not enough. Caller refers to new properties being built taking surface drainage potential away. 1 Property	1	On-going	Awaiting report		Awaiting report			On-going		
02 April 2018	Blyton High Street	Surface water run-off from higher ground to the rear of the property following a period of heavy rain caused the property to flood. The drainage system was unable to cope with the volume of water which caused the dyke to the side of the property to overflow.	1	Complete	TBC		TBC			On-going		S19-089

Appendix A												
Duty to Investigate												
Section 19 Investigations												
Lincolnshire County Council Section 19 Investigations - North Kesteven District Council & South Kesteven District Council Network Area - Area Highways Rowan Smith (West)												
Date of Incident	Town / Locality	Description of Flooding	No of Properties Flooded	Investigation Status	S19 Report Recommendations / Conclusions	Risk Management Authorities with Responsibilities and whether they are exercising functions	Proposed Action/Works	Consideration for inclusion in future Common Works Programme	Promoter	Works Status	Estimated Timescales Recommendation / Scheme Completion	S19 Report File Reference
28 June 2012	Belton A607	Surface water from public highway and adjacent private land flowing onto properties. 2 Properties	2	Completed	Upper Witham Internal Drainage Board has carried out enforcement on riparian owner for watercourse improvements. LCC Highways is designing improvements to the drainage system.	LCC - Yes Upper Witham IDB - Yes Environment Agency - Yes SKDC - Yes	New drainage system/dyke renewal (seeking funding). Improvement work designed and due to be built summer 2014. Initial works have started within the private grounds, however, highway work has been delayed due to listed building status of a drystone wall. Original solution could not be built - new solution being considered. Trash screen has been installed.	No	LCC	On-going	Works have commenced; estimated completion Summer 2015.	S19-042
28 June 2012	Carlton Scroop Main Street	Surface water run-off from private land running onto highway and entering front of cottage. 1 Property	1	Completed	IDB undertaking enforcement, further LCC investigation to be carried out.	LCC - Yes Upper Witham IDB - Yes	IDB undertaking enforcement. Further LCC investigation to be carried out. System jetted, and requires new manhole but will not be placed until other issues have been resolved.	No	LCC	On-going	Outstanding works due to be completed Summer 2015.	S19-043
28 June 2012	Digby North Street	Overland flow from field into private properties, also blocked culvert/watercourse on school playing field.	Unconfirmed	Completed	LCC, Witham First IDB and the Environment Agency are to undertake local maintenance and are considering improvement works following consultation with the Parish Council. A bid for an overall flood risk study for Digby has been submitted for feasibility, design and works.	LCC - Yes Witham 1st IDB - Yes	Local maintenance work carried out by LCC, IDB & Landowner and residents on Green Dykes and North Street. Wider improvement scheme under consideration. Feasibility and Design 2016/17. Possible works 2017/18.	Yes	LCC Witham 1st IDB EA	On-going	Feasibility and Design 2016/17 Possible works 2017/18	S19-048
28 June 2012	Digby Beck Street	Overtopping of Digby Beck (Main River) and capacity issues on the foul sewer.	Unconfirmed	Completed	LCC, Witham First IDB and the Environment Agency are to undertake local maintenance and are considering improvement works following consultation with the Parish Council. A bid for an overall flood risk study for Digby has been submitted for feasibility, design and works.	Environment Agency - Yes Anglian Water - Yes LCC - Yes	Local maintenance work carried out by LCC, IDB & Landowner and residents on Green Dykes and North Street. Wider improvement scheme under consideration. Feasibility and Design 2016/17. Possible works 2017/18.	Yes	LCC Witham 1st IDB EA	On-going	Feasibility and Design 2016/17 Possible works 2017/18	S19-049
28 June 2012	Digby The Hum	Overtopping of IDB drain (Digby Beck North Branch) and riparian watercourse. Suspected failure of Anglian Water foul pumping station.	Unconfirmed	Completed	LCC, Witham First IDB and the Environment Agency are to undertake local maintenance and are considering improvement works following consultation with the Parish Council. A bid for an overall flood risk study for Digby has been submitted for feasibility, design and works.	Witham 1st IDB - Yes Anglian Water - Yes	Local maintenance work carried out by LCC, IDB & Landowner and residents on Green Dykes and North Street. Wider improvement scheme under consideration. Feasibility and Design 2016/17. Possible works 2017/18.	Yes	LCC Witham 1st IDB EA	On-going	Feasibility and Design 2016/17 Possible works 2017/18	S19-050
28 June 2012	Sleaford Southgate	Surface water from public highway and private land flowing into properties through front and rear entrances. 2 Properties	2	Completed	LCC to advise properties on self help measures relating to flood resilience. Anglian Water to investigate capacity of combined system.	LCC - Yes Anglian Water - Yes	LCC have cleaned all ACCO drains and all working OK. Awaiting AW investigation to check capacity issues.	No	LCC AW	On-going	Summer 2017	S19-053
28 June 2012	Thorpe Tilney Village Sleaford Road	Surcharging of open watercourses and assumed restrictions within culverted sections. Surcharge of public surface and foul water systems. 1 Property	1	Completed	Improvement works on watercourse undertaken November 2012. Ongoing LCC investigations, further excavations to commence to provide access for CCTV survey, also minor kerbing improvements and works issued. A meeting has been held with the Parish Council/Flood Group/National Flood Forum. A bid for an overall study for Timberland has been submitted for feasibility, design and works.	Witham 1st IDB - Yes LCC - Yes Anglian Water - Yes	Wider scheme Feasibility and Design 2017/18. Possible works 2019/20. LCC to carryout regular monitoring.	Yes	LCC	On-going	Feasibility 2017/18 Possible works 2019/20	S19-054
6 July 2012	Swaton West End	Overland surface water flowing through private land. Separate case of overtopping of Swaton Eau flooding carriageway and property basement. 2 Properties	2	Completed	The Environment Agency has completed its hydraulic modelling works. Black Sluice Internal Drainage Board has previously bid for an improvement scheme. Environment Agency / LCC have been asked to assist with scheme promotion.	Environment Agency - Yes Black Sluice IDB - Yes LCC - Yes	EA progressing a Natural Flood Management R&D project to reduce frequency of flooding to Swaton, and possibly Threkingham and Spanby	Yes	LCC EA Black Sluice IDB	On-going	EA Feasibility Study 2017/18 Possible works 2018/19	S19-056
6 July 2012	Harlaxton High Street	Current drainage system has insufficient capacity and backed up causing flooding to the carriageway and 2 properties. 1 Property	1	Completed	Following detailed investigation, joint work between LCC and Upper Witham IDB has been completed. Investigation to Mow Beck required to understand overall flood risk.	Upper Witham IDB - Yes Anglian Water - Yes	LCC surface water scheme completed and EA to investigate Mow Beck watercourse downstream.	Yes	LCC EA	On-going	Summer 2015	S19-060
6 July 2012	Burton Pedwardine White Cross Lane	Surface water surcharge from private open watercourse to the east. 2 Properties	2	Completed	Black Sluice IDB to carry out enforcement. Resident met and awaiting proposals which may be subject to a highway contribution. Awaiting confirmation.	Black Sluice IDB - Yes	Discussions still ongoing between LLFA, IDB and residents. LCC have found and cleaned 2 pipes under road.	No	LCC Black Sluice IDB	On-going	Summer 2015	S19-062

6 August 2012	Caythorpe Gorse Hill Lane	Following an intense period of rain, excess surface water did not drain away fast enough from the gully at the boundary with Kings Hill. This caused surface water to flow across the carriageway and breach the verge and enter the property's driveway, subsequently overtopping the threshold causing internal flooding. 1 Property	1	Completed	The profile of the carriageway may cause excess surface water to miss gullies at the boundary of Kings Hill. The installation of a vehicular access built to the correct specification may also prevent further occurrences of flooding by increasing the kerb height between the carriageway and the property.	LCC - Yes	Further investigations of the surface water system required, possibly aided by development plans for Kings Hill. Level survey and wet weather inspection to be carried out to establish validity of highway drains. Inspections & cleansing carried out and further investigations required.	No	LCC	On-going	Summer 2016	S19-068
21 November 2012	Corby Glen Irnham Road	Overland flow from adjacent farm land. 1 Property	1	Completed	Resilience measures the property owner has taken will reduce the risk of surcharge from the private drain (non-return valve added). Works that have been undertaken by LCC Highways including jetting & CCTV of the system have identified possible improvement works, this would include additional inspection chambers and updating the system. Application for additional funding has been submitted for the installation of inspection chambers and upgrade of the sewer system.	LCC - Yes	Application submitted for funding to add inspection chambers and upgrade sewer system along a short section of Irnham Road.	No	LCC	On-going	End 2015	S19-069
22 May 2014	Bourne Beadhouse Bank	Due to heavy rainfall surface water built up on the unmade road outside the property to an extent where it flowed into the garden to the front door, at which point it entered the property. 1 Property	1	Completed	LCC highways are undertaking a resurfacing scheme of Beadhouse Bank, this will level the road with a cross fall towards the existing tarmac section, water will flow away from the properties towards the existing highway gully. The resident has been recommended to install a kerb line to act as a barrier between the highway and the private property. However, LCC to carry out footway improvements works in the area in 2015.	LCC - Yes	Resurfacing scheme to be undertaken including the construction of a kerb line between the private property and highway to act as a barrier.	No	LCC	On-going	End 2015	S19-080
22 May 2014	Dorrington Main Street	During a period of heavy rainfall this property suffered internal flooding from the lateral sewer beneath the property where water came up through the living room floor. The second event was caused by overland flow where flood water from the garden came in through the rear patio doors. 1 Property	1	Completed	Following investigations it is assumed that saturated land and heavy rainfall caused overland water to flow down the gradient to the property. The lateral sewer located beneath the property was blocked by foreign objects which caused the sewer to burst and push water up through the floor. Anglian Water investigated as to where the excess water came from and suggested that it may have gained access from the foul system through the kitchens open gully's at the rear of the property. LCC highways are considering installing additional gullies near the property and undertake a survey of the dyke to the rear of the property to determine the outfall on the southern side of the village. Anglian Water to carry out further investigations into ensuring where possible, the excess surface water does not enter the foul water system. The Internal Drainage Board has been requested to continue monitoring of the dykes, and take enforcement as necessary.	LCC - Yes Anglian Water - Yes	LCC have installed new gullies near the property. no other updates required. AW to carryout investigations into the foul sewer system. IDB to continue the monitoring of the dykes and enforce as required. Riparian owner to maintain the dykes and ensure they do not restrict their flow.	No	LCC AW IDB	On-going	Summer 2017	S19-084
22 May 2014	Market Deeping Stamford Road	Following heavy rainfall that fell in a short space of time; causing numerous roads and properties in the area to flood. The amount of rain that fell was excessive for the system at optimum capacity. 1 Property	1	Completed	LCC to continue to maintain the surface water system; and consider raising the footway kerbs at the front of the property. However, works to the footway may prove difficult due to conflict with a slope to the footpath away from the building and the existing height of the door threshold and damp proof course levels. Anglian Water to maintain the surface water drainage system. The property owner to maintain the rainwater systems and consider further drainage to allow the escape of water from the rear 'bund' area which is a natural water collection area.	LCC - Yes Anglian Water - Yes	Consideration by LCC have been made to lift the footpath and Kerb outside the properties to full height, to prevent water overtopping the kerb onto the footway. However there may be issues in doing this. Awaiting report from AW.	No	LCC AW	On-going	End 2015	S19-112
22 May 2014	Deeping St James Horsegate	Following torrential rain, excess water on the carriageway forced water to overtop the footway and enter the properties causing internal flooding to the residential properties. 3 Properties	3	Completed	LCC to repair blockages in highway surface water system. AW to maintain the surface water drainage systems with recommendation that its system diverts into the watercourse on the High Street instead of linking with the WDIDB watercourse. Welland & Deepings IDB to clear the identified blockages /diversion in their system and ensure the entry feed in the High Street is closed during weather warnings or during periods of heavy rain to ensure there is capacity for surface water two drain away.	LCC - Yes Anglian Water - Yes WDIDB - Yes	Maintenance work to be carried out by LCC. Property owner advised on preventative measures to protect the property. AW to clean & jet its system and divert the current system into the watercourse on the high street. its their entry feed on the High Street is closed during periods of heavy rain.	No	LCC AW WDIDB	On-going	End 2015	S19-106
22 May 2014	Market Deeping Market Place	Following torrential rain, there was excess water on the carriageway. The surface water drains were overwhelmed and when vehicles passed through the standing surface water, bow waves forced water to overtop the footway and enter the properties causing internal flooding. 1 Property	1	Completed	LCC to carry out maintenance work on the surface water drainage system. AW to maintain utility surface drainage systems. Property owner to maintain the rainwater drainage systems and consider further drainage to allow the escape of water from the low front area.	LCC - Yes Anglian Water - Yes WDIDB - Yes	Maintenance work to be carried out by LCC. Property owner advised on preventative measures to protect the property. AW to continue with regular inspections & maintenance.	No	LCC AW	On-going	Summer 2015	S19-107
22 May 2014	Market Deeping Market Place	Following torrential rain that fell in a short period, excess surface water on the carriageway, forced water to overtop the footway by passing vehicles and enter the property causing internal flooding. 1 Property	1	Completed	LCC to carry out maintenance work on the surface water drainage system. Aw to maintain utility surface drainage systems. Property owner to maintain the rainwater drainage systems and consider further drainage to allow the escape of water from the low front area.	LCC - Yes Anglian Water - Yes	Maintenance work to be carried out by LCC. Property owner advised on preventative measures to protect the property. AW to continue with regular inspections & maintenance.	No	LCC AW	On-going	End 2015	S19-108

20 July 2014	Stamford Water Street	Following a short period of heavy intense rain, surface water from the highway entered the ground floor of the property. 1 Property	1	Completed	LCC to undertake a drainage survey of the system this work has been programmed for 2015	LCC - Yes	carry out a survey of the drainage system Works are programmed during 2015.	No	Due to complete Summer 2015	On-going	End 2015	S19-116
10 August 2014	Stamford Northumberland Avenue	Due to heavy rainfall, and a waterlogged public open space in front of the property; excess groundwater encroached the threshold and entered the property damaging the hallway carpets and flooring. 1 Property	1	Completed	All highway surface water gullies had been cleaned out and jetted prior to the flooding incident, although we have recommended that the system have further investigations carried out in due course. It is believed the Highway surface water system was not the cause of flooding to the property other than the public open space. AW are to survey the site to ascertain whether the combined drainage system is sufficient to accommodate all the downpipe connections from the properties. SKDC to survey the Public Open Space and identify the manhole cover and determine which drainage system it is connected to and if the manhole/catchpit is clear.	LCC - Yes SKDC - Yes Anglian Water - Yes	LCC to carry out CCTV investigations of the highway drainage system. SKDC to carry out investigations of the drainage system within the public open space. AW to ascertain whether the combined drainage system is adequate to serve the properties.	No	LCC SKDC AW	On-going	End 2015	S19-111
24 August 2015	Grantham Coxmoor Close, Cavendish Way	Reports received stated that on 24th August and 14th September 2015 water entered 4 properties, 2 on Cavendish Way and 2 on Coxmoor Close. The incidents were caused by excessive rainfall which lead to the levels of the adjacent Witham Brook to rise substantially with the resultant flood water escaping the banks of the stream and entering several of the nearby properties. The rise in the level of this stream also meant that the surface water sewer that services the roads in the area had nowhere to discharge to and this exacerbated the problems experienced by the residents. 4 Properties Coxmoor Close - 2 Properties Cavendish Way - 2 Properties	4	Completed	The Witham Brook requires major maintenance works, which will need to be carried out by the EA. A trash screen will also need to be installed by the EA. They also need to investigate the possible construction of a storage lagoon in association with SKDC & LCC.	LCC - Yes Anglian Water - Yes Environment Agency - Yes	EA recently commissioned works to reprofile the channel of the Witham Brook in this area and these works have now been completed. The scheme also included the creation of a berm to increase water storage in the area. LCC investigating the feasibility of a scheme to reduce frequency of surface water flooding from Witham Brook, which would also reduce flooding to the small number of properties at risk of flooding from the main river.		EA	On-going		S19-136
24 August 2015	Westborough Town Street	Water entered rear of property during severe rain fall. 1 Property	1	Completed	Upper Witham IDB is aware of the flood risk issues within the village and have designed a scheme. Currently awaiting funding.	Upper Witham IDB - Yes	Await implementation of IDB drainage scheme.		Upper Witham IDB	On-going		S19-144
24 August 2015	Grantham Bridge End Road	Date of Incident – all on the evening of 24/8/15 (all retrospective enquiries) Source of Report – Lincolnshire Fire & Rescue (F&R) Enquiry code – FL06 Flood Invest Risk to Life/Prop Detail of each report – site was attended by F&R reacting to flooding - 1 Property	1	Completed	Initial investigations M Thornhill letter sent out to resident 14/09/2015. Awaiting confirmation of internal flooding.	LCC - Yes Anglian Water - Yes	Awaiting report	No		On-going		S19-147
4 July 2015	Tallington Bainton Road	The customer informed me that the main cause of flooding is water backing up coming out of the four gullies in front of property. These gullies are LCC, but the LCC system here feeds into a AW surface sewer about 10-15m downstream. Water backs up and comes out of the LCC gullies, I assume from the AW surface sewer and then floods the property. AW have been doing a lot of investigation into this system over the past few months. 1 Property	1	Completed	The gullies are programmed to be cleaned and jetted out to ensure the system is flowing well. Due to the proximity to the level crossing a risk assessment is required to be signed off by Network Rail prior to any works commencing. AW to investigate the sewer system and inspect and service the flood gates at the property to ensure they are fit for purpose.	LCC - Yes Anglian Water - Yes	A program of gully cleaning to be carried out shortly, also AW to inspect and service the flood gates at the property that they installed. Additionally the sewer system requires further investigations to be carried out by AW.	No	LCC AW	On-going	Spring 2016	S19-129
15 June 2016	Welbourn Cliff Road	Water is not flowing now but this morning just before caller got up he says there was a heavy downpour. The surface water has entered callers kitchen and living room on the ground floor. The road was surface dressed recently and caller thinks this is possibly the reason why it has entered the property 1 Property	1	On-going	Due to no previous flooding prior to surface dressing it is recommended to lift all the centre kerbs to re-establish a 25mm upstand. In agreement with resident, it is recommended to raise the existing kerbs directly outside footpath to a full 110mm upstand. Dyke also to be unblocked to allow gully to catch surface water and outfall into dyke.	LCC - Yes	Due to no previous flooding prior to surface dressing it is recommended to lift all the centre kerbs to re-establish a 25mm upstand. In agreement with resident, it is recommended to raise the existing kerbs directly outside footpath to a full 110mm upstand. Dyke also to be unblocked to allow gully to catch surface water and outfall into dyke.		LCC	On-going		S19-167
16 June 2016	Potterhanworth Under Railway Bridge on Station Road	Police are requesting a road closure at this location. Carriageway Flooded	0	Completed	Repeat of previous flooding. Refer to S19-131.		Repeat of previous flooding. Refer to S19-131.			On-going		S19-131

6 July 2012	Billingham West Road,	The village of Billingham suffered surface water flooding on West Road and Station Road on the 5 th July 2012 and 22 nd May 2014. Billingham Parish Council made Lincolnshire County Council aware of this fact in August 2014, however, Lincolnshire County Council had not received any other reports that two residential properties were internally flooded during the event on 22 May 2014. These internal flood events were not reported to Lincolnshire County Council at the time of the incident. 2 Properties	2	Completed	A part CCTV survey was conducted by Anglian Water in March/April 2015. This had identified bricks missing from the soffit of the brick culvert and mass root ingression into the culvert in a section in Station Road. At the time of writing this report Anglian Water were preparing to carry out excavations in the affect area to repair the culvert and once this was carried out, full jetting of the sytem was to take place and CCTV survey to continue. Local Lead Flood Authority, Anglian Water and Lincolnshire County Council as Highway Authority to contune liaison and monitoring of the area. Upon publication of the Enviornment Agencies catchment study all risk Management Authorites to consider where appropriate any conclusions or recommendations derived from this study. LCC have carried out the level survey works to protect the properties and will be completed by 31/03/2017.	LCC - Yes Anglian Water - Yes	Anglian Water were preparing to carry out excavations in the affect area to repair the culvert and once this was carried out, full jetting of the sytem was to take place and Local Lead Flood Authority, Anglian Water and Lincolnshire County Council as Highway Authority to contune liaison and monitoring of the area. CCTV survey to continue. County Council as the Highway Authority to carry out a full level survey of the road levels to see if any accomadation/adjustment works could take place to reduce the possibility of highway surface water reaching the properties. AWS are still investigating and are proposed to have completed their surveys and any works required by summer 2017. <i>Minor works have been carried out by</i>	No	LCC Anglian Water	On-going	Summer 2017	S19-162
22 May 2014	Billingham West Road, Station Road	The village of Billingham suffered surface water flooding on West Road and Station Road on the 5 th July 2012 and 22 nd May 2014. Billingham Parish Council made Lincolnshire County Council aware of this fact in August 2014, however, Lincolnshire County Council had not received any other reports that two residential properties were internally flooded during the event on 22 May 2014. These internal flood events were not reported to Lincolnshire County Council at the time of the incident. 2 Properties	2	Completed	A part CCTV survey was conducted by Anglian Water in March/April 2015. This had identified bricks missing from the soffit of the brick culvert and mass root ingression into the culvert in a section in Station Road. At the time of writing this report Anglian Water were preparing to carry out excavations in the affect area to repair the culvert and once this was carried out, full jetting of the sytem was to take place and CCTV survey to continue. Local Lead Flood Authority, Anglian Water and Lincolnshire County Council as Highway Authority to contune liaison and monitoring of the area. Upon publication of the Enviornment Agencies catchment study all risk Management Authorites to consider where appropriate any conclusions or recommendations derived from this study. LCC have carried out the level survey works to protect the properties and will be completed by 31/03/2017.	LCC - Yes Anglian Water - Yes	Anglian Water were preparing to carry out excavations in the affect area to repair the culvert and once this was carried out, full jetting of the sytem was to take place and Local Lead Flood Authority, Anglian Water and Lincolnshire County Council as Highway Authority to contune liaison and monitoring of the area. CCTV survey to continue. County Council as the Highway Authority to carry out a full level survey of the road levels to see if any accomadation/adjustment works could take place to reduce the possibility of highway surface water reaching the properties. AWS are still investigating and are proposed to have completed their surveys and any works required by summer 2017. <i>Minor works have been carried out by</i>	No	LCC Anglian Water	On-going	Summer 2017	S19-162
24 August 2015	Long Bennington Main Road Vicarage Lane Welbournes Lane Acklands Lane Church Street Orchards Park	The incident appears to be simply one where heavy rain overwhelmed the piped sewer and watercourse systems. The rain could not enter the various systems, found overland routes and settled in the low points. These overland routes were channelled by the fall of the natural ground level, augmented by the new developments and/or householders - increasing hard standing - using soakaways and permeable pavements - undertaking topographical realignment. Some of the village is served by a combined public sewer and this was likewise overwhelmed and caused flooding. 25 Properties Main Road - 13 Properties Vicarage Lane - 2 Properties Welbournes Lane - 3 Properties Acklands Lane - 1 Property Church Street - 5 Properties Orchard Park - 1 Property	25	Completed	Investigations into conditions of drainage assets have already been carried out by LCC, AW/STW and IDBs, with remedial action taken as appropriate, mainly to do with cleansing. It is recommended that - there is further investigation undertaken to determine possible overland flow paths and storage areas, - the RMAs continue to repair deficiencies, - watercourses are cleansed and desilted, including those culverted lengths - the planning authority or appropriate authority apply relevant policies when considering how proposals affect groundwater, current exceedance flow routes and potential loss of safe flood storage.	LCC - Yes LLFA - Yes Anglian Water - Yes STW - Yes SKDC - Yes UWIDB - Yes TVIDB - Yes	There is a further investigation undertaken to determine possible overland flow. Paths and storage areas. The RMAs continue to repair deficiencies. Watercourses are cleansed and desilted, including those culverted lengths. Include potential flood alleviation scheme in the Medium Term Plan.	Yes	LCC	On-going	2019/20	S19-137
14 June 2016	Woolsthorpe by Belvoir Sedgebrook Road, Hillside Road	Internal flooding - fire and rescue in attendance with pumps and sandbags distributed by SKDC 6 Properties	6	On-going	Report and investigation being undertaken. Report expected July 2017.					On-going		S19-178
15 June 2016	South Witham Great Close	Caller reports that water entered the property last night at each of the addresses. SKDC supplied sandbags to all of them. 1 Property	1	On-going	Written twice and no reply or evidence apart from the report which was second hand.		Awaiting report.			On-going		S19-173
14 June 2016	Bourne Beech Avenue	Fire & Rescue called, 4 fire engines attended – pump used to remove flood water inside. 1 Property	1	Completed	The culverted watercourse does not have an adequate hydraulic capacity to accept the up stream run off. The route of the downstream public sewer system, with sahrp changes of direction, could be a contributing facor to the flooding issues. Maintenance of existing system and further investigations into mitigation including improvements and other flood risk management options.	LCC W&DIB (on behalf of LCC) Black Sluice (on behalf of SKDC) AW	Maintenance of existing system and further investigations into mitigation including improvements and other flood risk management options.			On-going		S19-170

10 March 2016	Welby Main Street	Pooling water in the wider part of the road close to the pedestrian pathway that is in poor condition and sitting lower than the main section of the road. The rainwater simply runs from the camber into this area and misses the gulleys each side of the front of my property. It tends to sit there for a few days once it has stopped raining. As each winter passes the small section of road further deteriorates. I paid for a pothole to be filled in when having some private tarmac work done in the summer as we were unable to avoid running through it and making it worse. 1 Property	1	Completed	Water did not enter the property and we have since found that this was a AW issue that they have now resolved. Additional info: Just to point out that the problem is across the full width of the property starting at the bus stop gully and stretching across to the gully adjacent to Cottage. Between the 2 roadside verges.	AW - Yes	No further action required		AW	On-going		S19-157
10 June 2016	Bourne North Road	Internal flooding following heavy rainfall. Entered property through air bricks and door threshold. 2 Properties	2	Completed	LCC and AW to consider future works for example check the condition of the public sewer and highway drainage.	LCC - Yes AW - Yes	LCC and AW to consider future works			On-going		S19-152
28 June 2017	Grantham Dudley Road	Water entered into the basement of the property via the building structure. It appears that surface water gathers in a low point in the highway outside the property during heavy rainfall events, possibly exacerbated by inefficient surface water drainage. 1 Property	1	Completed	It is the homeowners responsibility to maintain the coal hole and structure of the building to reduce the risk of water ingress. Further investigation into the condition of the highways drainage system is required.	LCC AW - Yes	CCTV completed at Dudley Road Surface Water Sewer which had some silt present but it has now been thoroughly cleaned.		LCC	On-going		S19-190
14 June 2016	Bourne Edenham Road	The home owner reported to have surface water run-off coming from the highway, internally flooding the property via the dining room patio doors and under the floor. The highway is drained by an open ditch and a surface water pipe which runs under the highway. The open ditch located parallel to the A151 opposite the property is allegedly often blocked with debris and it is unknown who owns the surface water pipe. Due to insufficient drainage on the highway the water is gathering at a low point opposite the property, passing vehicles are then causing the surface water to flow over the verge and into the property as it is located on a slope. 1 Property	1	Completed	The cause of flooding is due to capacity issues with the whole system, this is exacerbated by wash from vehicles passing through the flooded carriageway during significant storm events onto adjacent land. The riparian owners to be made aware of their riparian responsibilities.		TBC			On-going		S19-194
10 April 2018	Potterhanworth Station Road	Road closed due to flooding caused by surface water run off.		On-going	A job is planned for the 30.04.18 for a tanker and gang to attend site and clean the system.	LCC	A job is planned for a tanker and gang to attend site on the 30.04.18 to clean the system.		LCC	On-going		S19-131

Appendix A												
Duty to Investigate												
Section 19 Investigations												
Lincolnshire County Council Section 19 Investigations - Boston Borough Council & South Holland District Council Network Area - Area Highways Andy Wharff (South)												
Date of Incident	Town / Locality	Description of Flooding	No of Properties Flooded	Investigation Status	S19 Report Recommendations / Conclusions	Risk Management Authorities with Responsibilities and whether they are exercising functions	Proposed Action/Works	Consideration for inclusion in future Common Works Programme	Promoter	Works Status	Estimated Timescales Recommendation / Scheme Completion	S19 Report File Reference
28 June 2012	New Bollingbrooke Station Row	Extreme rainfall (estimated to be a 1 in 40 year event) caused highway surface water flows to collect in the low area of Main Road/Station Row overwhelming the highway drainage system in the footway. 7 Properties	7	Completed	LCC has investigated the drainage and found blockages/damage due to buildings and tree roots. A solution to rectify the damage is being designed and costed.	LCC - Yes	Dropped kerbs outside the post office replaced with full height kerbs. Drainage system found to be damaged by buildings/trees and a new outfall is required. Solution being designed and costed.	No	LCC	On-going	2014 - 2016	S19-007
6 July 2012	Donington Quadring Road	The footway along the front of the property is lower than the carriageway and has its own series of gullies. The carriageway is served by gullies and drained separately. The Highway Authority (LCC) has no records of the carriageway or footway drainage piped system in this area. 1 Property	1	Completed		LCC - Yes			LCC	On-going		S19-039
20 July 2014	Swineshead Market Place	Flooding to the business occurred following a heavy downpour. The business suffered internal flooding due to surface water runoff from the carriageway entering the car park and subsequently entering the property. 1 Commercial Property	1	Completed	The entire drainage system has been jetted and cleaned; a new connection from both of the alleys is programmed. The drainage system requires a new chamber and new connections to the highway drainage system in the carriageway. The adjacent property owner has an irregular outfall into the alley way; he has been notified to find an alternative way to discharge surface water from the property. Additionally, the low spots in the alley way that allows surface water to flow from the highway around the back of the public house will require modifying to provide a water check to prevent this re-occurring. All works required will be programmed for 2015.	LCC - Yes	New connections, chamber pots and minor highway alterations are currently in the works programme for next financial year.	No	LCC	On-going	Summer 2015	S19-103
20 July 2014	Crowland Chapel Street	The road gully outside the property was unable to cope with the excessive amount of rainfall which resulted in surface water entering into the property, causing damage to the dining room and lounge. 1 Property	1	Completed	The drainage system has been jetted; and indicated a possible blockage within the system. Excavations have been carried out and no blockage was detected within the drainage system. Since the reported incident there has been further heavy prolonged downpours within the area with no repeat of the previous flooding incident in July. It has been concluded that the current system is slow running and the surface water was exasperated due to the excessive amount of roof water flowing onto the highway from the property opposite. Further investigations will be carried out in due course.	LCC - Yes	Further Drainage Investigations to be carried out in due course. An enforcement letter has been sent to the property opposite which is discharging water onto the highway. Meeting with owner of property opposite to identify any amendments which may be required to their roof water dispersal system. Preliminary designs, undertaken for proposed alterations to LCC Surface Water drainage. Scheme in programme for 2017/18. Bid submitted for assistance from Floods and Water as this is not maintenance.	No	LCC	On-going	8 July 1905	S19-113
17 June 2016	Spalding Stonegate	Customer states that this is the 5th time the properties have flooded since November 2011. The customer states that the drainage system is too old and cannot take the rain in exceptional rain. They say the drains are not man enough and the fire brigade has also said this. Customer states that the properties were flooded yesterday 16/06 in the evening and the fire brigade attended. Customer states that if it rains again the properties will once again get flooded. The customer states that the current drains need cleaning out and the whole system needs replacing with a better more modern system. 4 Properties	4	Completed	The highway drainage system has been jetted and there are no blockages. It may be a capacity issue?		CCTV survey required.			On-going		S19-171
10 June 2016	Spalding Little London	Flooding incident on 10/06/16. Third such incident in 3 years. Flood water was up to 5" deep within the property. AWA have attended and state it is a result of surface water. They previously accepted responsibility when their own main drain was blocked. Other properties known to be effected but could be whole strip of houses. 1 Property	1	Completed	The drainage investigation revealed multiple deficiencies in the drainage network which mainly involve riparian and highway authority responsibilities. It is recommended that the highway drainage network is maintained in good condition to achieve optimum hydraulic performance. Riparian owners to be reminded of their riparian responsibilities, and Welland and Deeping IDB are made aware of this flooding issue.	LCC	TBC			On-going		S19-174
16 June 2016	Kirton Penny Gardens	Water has started to enter properties after persistent rain for most of the afternoon. Customer believes that this is due to a blocked gully. 1 Property	1	Completed	There are issues with the surface water disposal system. The gullies on Penny Gardens are cleansed by the highway authority but there appears to be no record of any authority accepting maintenance responsibility for the connecting pipework. The culvert on the line of historical watercourses appears to have been damaged by utilities where it crosses the Willington Road. Water appears to have problems in discharging to the watercourse due to the outfall condition and the system being silted.	BBC AW BSIDB LCC	Awaiting report CCTV required			On-going		S19-169

16 June 2016	Kirton Station Road	Flooding from rainfall and blocked drain. 3 Property	3	Completed	There appears to be a system in The Green, outside the Codfather, Curry King and the War Memorial but the gully system has been crushed, it contains a high level of siltation, and is filled with congealed fat. The culvert is full of silt and appears not to discharge anywhere. The brick arch pipework appears to be a culverted watercourse but its route is unknown. There are no surface water sewer systems in the area, some of the properties may discharge surface water into the foul public sewer system, which is believed to be a combining system. A bung was located in the pipe upstream south of the manhole in front of the Codfather however it is unlikely this had a major effect on the system.	BBC AW BSIDB LCC	Awaiting report CCTV required			On-going		S19-169
16 June 2016	Kirton Green Lane	It is likely that the property may have been inundated as a consequence of the extreme nature of the event but the severity of the flooding may not have been so severe, and a lower degree of ponding noted, if the system in the Hardwick Estate surface water system was operating efficiently, but the intensity of the rainfall and the property's location were probably major factors. 1 Property	1	On-going	Only one property was internally flooded on the Hardwick Estate, but there were reports of excessive standing water in locations where those piped sewerage systems that were constructed to serve the development do not appear to have been adopted or maintained by any public authority, nor by the housing authority. The watercourse into which the system appears to discharge appears to be heavily silted	TBC	TBC			On-going		S19-169
27 June 2016	Freiston Oak House Lane	Customer states that the rain flows down the road and into the shop. The customer has requested the fire brigade attend last year and they had to pump the shop out. The shop flooded again yesterday 26/06/16 and they managed to clear it themselves with a lot of work and help. The customer states there was a new drain put in, but this is doing nothing to alleviate the situation. 1 Property	1	On-going	Awaiting report		Awaiting report			On-going		S19-181
23 to 27 June 2016 25 to 28 August 2016	Spalding Cathedral Drive	Customer states that water from the road floods his front and then back garden and has entered his property in the hall. He said that it also happened 2 months ago and that both his neighbours have the same issue. 1 Property	1	Complete	The capacity of the highway drainage network is exceeded during extreme events. This is exacerbated by the condition of the riparian system in to which the highway drainage discharges. Advise riparian owners of there riparian responsibility	LCC	Consider upgrading the current highway system. Further investigation is required into the provision of an overflow system.			On-going		S19-184
25 June 2016	Spalding Woolram Wygate	Contacted by a building consultant who is investigating an insurance claim regarding surface water flooding at this property. The lounge of the property flooded on two occasions 25th June and 28th August 2016 during intense rainfall and water drains quickly once rainfall stops. 1 Property	1	Completed	To be raised at the local Flood and Drainage Risk Management Group.	Inconclusive as the owner of the drainage assets is unknown at this stage.	To be raised at the local Flood and Drainage Risk Management Group			On-going		S19-182
16 June 2016	Low Fulney, Spalding Mallard Road Weston Hills Road	After the recent heavy rainfall, surface water ran off the road & possibly surrounding land and flooded these properties. This is a private road and there is very little positive drainage. 3 of these properties (No 9, 11 & 13 Mallard Road) flooded again on 27 August 2016. 7 Residential Properties 1 Commercial Property Mallard Road - 7 Properties Weston Hills Road - 1 Property	8	Completed	Drainage recommendations: the drainage relies on riparian watercourses, steps need to be taken to ensure that the watercourses are returned to a serviceable standard.					On-going	1 May 2017	S19-185
27 August 2016	Frampton Middlegate Road	Water entered dining room. 1 Property	1	On-going	Division asked TSP to investigate.		Awaiting report CCTV investigation required.			On-going		S19-183
28 June 2017	Kirton London Road	Water came off the highway into neighbours drive and garden which then travelled to customers property. Water is getting into the air bricks and damaging the wallpaper and flooring. 1 Property	1	Completed	The property reportedly flooded on 16 June 2016 also. The report concluded that - the property was flooded by a less than extreme rainfall event. - The soakaways serving the properties were unable to deal with the flow. - The highway drainage system is unable to fully serve the highway and there is no single discharge system. - There is a culverted watercourse on both sides of London Road, which along with other riparian controlled watercourses do not appear to benefit from maintenance.	TBC				On-going		S19-189
20 July 2017	Tydd St Mary Church Way	Water entered the kitchen of the property through the brickwork. The customer believed there was 2-3 inches of water which was caused by heavy rainfall/porous brickwork. The customer states that the footway cambers away from the road where the drains are and instead cambers towards the property. 1 Property	1	Completed						On-going		S19-191

TBC (Could be 10/6/2016)	Spalding Coronation Avenue	<p>Reported to LCC on 8 June 2017</p> <p>1st Property: The water came up through the floor between my house and next door that are joined together. It flooded in the customers kitchen where the cooker is and cupboards, all underneath the cupboards was wet, the water came in both sides of my fireplace and flooded each side and because the drains could not hack the amount of water that poured down it started to come through my back door as well as my front, we could not step outside without getting wet through.</p> <p>2nd Property: Parts of the property flooded - living room, kitchen, hall, all down stairs</p> <p>3rd Property: Area flooded - living room and front door leading to stairway. Customer believes the reason for flooding is it rained hard for 2 hours on June 10th. The sewerage pump couldn't take the water off the homes roofs. Pushed inspection cover off. The drains in the avenue are all blocked. The avenue is 18 inches higher at the top than the bottom. With the drains being blocked all the water runs.</p> <p>Flooding outside the property resulted in water entering the property and causing wet carpets. Water entered the property again on the 29th December 2017.</p>	3	On-going	Awaiting report		Awaiting report			On-going	S19-138
27 December 2017	Spalding Little London	<p>1 Property</p>	1	On-going		LCC	Raise Kerbs, Cleanse the system, Consider additional carriageway drainage	No	LCC	On-going	S19-197

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**Open Report on behalf of Richard Wills,
Executive Director Responsible for Democratic Services**

Report to:	Flood and Water Management Scrutiny Committee
Date:	29 May 2018
Subject:	Flood and Water Management Scrutiny Committee Work Programme

Summary:

This item enables the Committee to consider and comment on the content of its work programme for the coming year to ensure that scrutiny activity is focused where it can be of greatest benefit. Members are encouraged to highlight items that could be included for consideration in the work programme (Appendix A).

The work programme will be reviewed at each meeting of the Committee to ensure that its contents are still relevant and will add value to the work of the Council and its partners.

Following the review of overview and scrutiny and decisions of the County Council, the Committee's the terms of reference are set out in Appendix B.

Actions Required:

The Committee is invited to:

- (1) review, consider and comment on the work programme as set out in Appendix A to this report;
- (2) highlight for discussion any additional scrutiny activity which could be included for consideration in the work programme; and note the terms of reference of the Flood and Water Management Scrutiny Committee, as agreed by the County Council.

1. Background

Overview and Scrutiny should be positive, constructive, independent, fair and open. The scrutiny process should be challenging, as its aim is to identify areas for improvement. Scrutiny activity should be targeted, focused and timely and include issues of corporate and local importance, where scrutiny activity can influence and add value.

Overview and scrutiny committees should not, as a general rule, involve themselves in relatively minor matters or individual cases, particularly where there are other processes, which can handle these issues more effectively.

All members of overview and scrutiny committees are encouraged to bring forward important items of community interest to the committee whilst recognising that not all items will be taken up depending on available resource.

Purpose of Scrutiny Activity

Set out below are the definitions used to describe the types of scrutiny, relating to the items on the Committee Work Programme:

Policy Development - The Committee is involved in the development of policy, usually at an early stage, where a range of options are being considered.

Policy Review - The Committee is reviewing the implementation of policy, to consider the success, impact, outcomes and performance.

Performance Scrutiny - The Committee is scrutinising periodic performance, issue specific performance or external inspection reports.

Consultation - The Committee is responding to (or making arrangements to) respond to a consultation, either formally or informally. This includes pre-consultation engagement.

Requests for specific items for information should be dealt with by other means, for instance briefing papers to members.

Identifying Topics

Selecting the right topics where scrutiny can add value is essential in order for scrutiny to be a positive influence on the work of the Council. Members may wish to consider the following questions when highlighting potential topics for discussion to the committee:-

- Will Scrutiny input add value?
Is there a clear objective for scrutinising the topic, what are the identifiable benefits and what is the likelihood of achieving a desired outcome?
- Is the topic a concern to local residents?
Does the topic have a potential impact for one or more section(s) of the local population?
- Is the topic a Council or partner priority area?
Does the topic relate to council corporate priority areas and is there a high level of budgetary commitment to the service/policy area?

- Are there relevant external factors relating to the issue?
Is the topic a central government priority area or is it a result of new government guidance or legislation?

Scrutiny Review Activity

Where a topic requires more in-depth consideration, the Committee may commission a Scrutiny Panel to undertake a Scrutiny Review, subject to the availability of resources and approval of the Overview and Scrutiny Management Board. The Committee may also establish a maximum of two working groups at any one time, comprising a group of members from the committee.

Work Programme items on scrutiny review activity can include discussion on possible scrutiny review items; finalising the scoping for the review; consideration and approval of the final report; the response to the report; and monitoring outcomes of previous reviews.

Terms of Reference

The terms of reference of the Flood and Water Management Scrutiny Committee were considered as part of the review of overview and scrutiny undertaken by the County Council during 2016.

Membership

The County Council will determine the number of members of the Council who will serve on the Flood and Water Management Scrutiny Committee along with seven co-opted non-executive district councillors, one to be nominated by each of Lincolnshire's seven district councils.

The seven co-opted district councillors will have full voting rights on the Committee and replacement members will be permitted, as set out in the scheme adopted by the County Council in accordance with paragraphs 11-13 of Schedule A1 of the Local Government Act 2000.

The Flood and Water Management Scrutiny Committee will meet as frequently as is required to perform its role.

Terms of Reference

The Flood and Water Management Committee will be authorised to consider the following:

- The development and delivery of the Local Flood Risk Management Strategy; including the delivery of the Lincolnshire Common Works Programme.
- The effectiveness of the Lincolnshire Flood Risk and Drainage Management Partnership and related partnership developments.

- Lincolnshire County Council's delivery of its local leadership role in relation to flood and water management.
- The work of all flood risk management authorities operating within Lincolnshire.
- The local implementation of the Environment Agency-led National Strategy for Flood Risk and Coastal Erosion.
- Action plans relating to all relevant plans and strategies, such as (but not exclusively) Shoreline Management Plans and Catchment Flood Management Plans (main rivers).
- All major strategic initiatives relating to water management.
- The Greater Lincolnshire Local Enterprise Partnership's Water Management Board, including the development and implementation of its Water Management Plan.
- Any other matter with particular relevance to flood risk and water management within Lincolnshire or likely to affect Lincolnshire.

2. Conclusion

The Committee's work programme for the coming year is attached at Appendix A to this report.

Members of the Committee are invited to review, consider and comment on the work programme as set out in Appendix A and highlight for discussion any additional scrutiny activity which could be included for consideration in the work programme.

Consideration should be given to the items included in the work programme as well as any 'items to be programmed' listed.

3. Consultation

a) Have Risks and Impact Analysis been carried out?

Not Applicable

b) Risks and Impact Analysis

Not Applicable

4. Appendices

These are listed below and attached at the back of the report	
Appendix A	Flood and Water Management Scrutiny Committee – Work Programme

5. Background Papers

No background papers within Section 100D of the Local Government Act 1972 were used in the preparation of this report.

This report was written by Daniel Steel, Scrutiny Officer, who can be contacted on 01522 552102 or via email Daniel.steel@lincolnshire.gov.uk ,

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Flood and Water Management Scrutiny Committee

29 MAY 2018 – 10:00am		
Item	Contributor	Purpose
Environment Agency Update	Environment Agency	Updates to Committee on Environmental Agency Activities, including progress on key schemes.
Review of the Lincolnshire Flood Risk and Water Management Partnership and preparing a new flood risk and water management strategy	David Hickman, Growth & Environment Commissioner	Report on the partnership review and workshop session to begin the development of an updated partnership strategy.
Investigations undertaken under Section 19 of the Flood and Water Management Act 2010	Paul Brookes, Flood Risk Manager	This item provides the latest position of all the current investigations in the County under Section 19 of the Flood and Water Management Act 2010
Anglian Water Draft Water Resources Management Plan	David Hickman, Growth & Environment Commissioner	Further consideration of the Anglian Water Draft Water Resources Management Plan.

17 SEPTEMBER 2018 – 10:00am		
Item	Contributor	Purpose
Investigations undertaken under Section 19 of the Flood and Water Management Act 2010	Paul Brookes, Flood Risk Manager	This item provides the latest position of all the current investigations in the County under Section 19 of the Flood and Water Management Act 2010
Humber Estuary Strategy Review Consultation	Environment Agency	Potential consultation into the review of the management of flood risk impact to Lincolnshire from the Humber Estuary.

26 NOVEMBER 2018 – 10:00am		
Item	Contributor	Purpose
Investigations undertaken under Section 19 of the Flood and Water Management Act 2010	Paul Brookes, Flood Risk Manager	This item provides the latest position of all the current investigations in the County under Section 19 of the Flood and Water Management Act 2010

11 FEBRUARY 2019 – 10:00am

Item	Contributor	Purpose
Investigations undertaken under Section 19 of the Flood and Water Management Act 2010	Paul Brookes, Flood Risk Manager	This item provides the latest position of all the current investigations in the County under Section 19 of the Flood and Water Management Act 2010

Items to be programmed

- River Maintenance Transfer (De-maining) pilots - Black Sluice IDB
- Environment Agency visit to the Boston Barrier Site Works

For more information about the work of the Flood and Water Management Scrutiny Committee please contact Daniel Steel, Scrutiny Officer on 01522 552102 or by e-mail at daniel.steel@lincolnshire.gov.uk