



County Offices
Newland
Lincoln
LN1 1YL

16 November 2018

Flood and Water Management Scrutiny Committee

A meeting of the Flood and Water Management Scrutiny Committee will be held on **Monday, 26 November 2018 at 10.00 am in Committee Room One - County Offices, Newland, Lincoln Lincs LN1 1YL** for the transaction of the business set out on the attached Agenda.

Yours sincerely

A handwritten signature in black ink that reads 'Keith Ireland'.

Keith Ireland
Chief Executive

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), P Vaughan (City of Lincoln Council), Mrs F M Martin MBE (East Lindsey District 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
MONDAY, 26 NOVEMBER 2018**

Item	Title	Pages
1	Apologies for Absence/Replacement Members	
2	Declarations of Councillors Interest	
3	Minutes of the Flood and Water Management Scrutiny Committee held on 17 September 2018	5 - 12
4	Announcements by the Chairman, Executive Councillors and Lead Officers	Verbal Report
5	Environment Agency Update <i>(To receive a report from 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>	13 - 20
6	Sustainable Drainage Design & Evaluation Guide <i>(To receive a report from Warren Peppard (Flood Risk & Development Manager), which provides the Committee with an update on the Sustainable Drainage Design & Evaluation Guide)</i>	21 - 22
7	Bulldog Bank <i>(To receive a report from the Environment Agency, which provides the Committee with an update on Bulldog Bank)</i>	23 - 32
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 (Flood Risk Manager), on 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 - 44
9	Flood and Water Management Scrutiny Committee Work Programme <i>(To receive a report from Daniel Steel (Scrutiny Officer), which invites the Committee to consider its Work Programme for the coming year)</i>	45 - 50

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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.

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www.lincolnshire.gov.uk/committeerecords



FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE 17 SEPTEMBER 2018

Councillors P A Skinner (Vice-Chairman), W J Aron, T R Ashton, Mrs A M Austin, Mrs W Bowkett, B M Dobson, R A Renshaw and L Wootten.

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

Councillors C J Davie (Executive Councillor for Economy and Place), D McNally (Executive Support Councillor Commercial & Environmental Management) and David Sisson (Lindsey Marsh Internal Drainage Board), attended the meeting as observers.

Officers in attendance:-

Deborah Campbell (Environment Agency), Katrina Cope (Senior Democratic Services Officer), David Hickman (Growth & Environment Commissioner), Daniel Steel (Scrutiny Officer), Warren Peppard (Flood Risk & Development Manager), Matthew Harrison (Senior Commissioning Officer - Flood Risk, Environment Agency), Lucy Marshall (Humber Planning Specialist), Helen Todd (Environment Agency) and Steve Cox (Management Advisor, Environment Agency).

36 APOLOGIES FOR ABSENCE/REPLACEMENT MEMBERS

Apologies for Absence were received from Councillors B Adams, Mrs C J Lawton, C R Oxby, C E Reid and B Russell (South Kesteven District Council).

It was noted that the Chief Executive, having received notice under Regulation 13 of the Local Government (Committee and Political Groups) Regulations 1990, had appointed Councillor L Wootten to replace Councillor B Adams for this meeting only.

37 DECLARATIONS OF COUNCILLORS INTERESTS

Councillor P Vaughan (City of Lincoln Council) wished it to be noted that he was a member of a Drainage Board.

**FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE
17 SEPTEMBER 2018**38 MINUTES OF THE FLOOD AND WATER MANAGEMENT SCRUTINY
COMMITTEE HELD ON 29 MAY 2018

RESOLVED

That the minutes of the Flood and Drainage Management Scrutiny Committee meeting held on 29 May 2018, be agreed and signed by the Chairman as a correct record.

39 ANNOUNCEMENTS BY THE CHAIRMAN, EXECUTIVE COUNCILLORS
AND LEAD OFFICERS

The Chairman invited Executive Councillors and Lead Officers to provide the Committee with any announcements.

Councillor C J Davie, Executive Councillor for Economy and Place advised the Committee of the following:-

- The Environment Agency Board meeting was due to be held on 26 and 27 September 2018;
- That construction of the Boston barrier would help grow the coastal economy; and
- That the Flood & Coastal Risk Strategy was a key opportunity to have input into national priorities.

40 ENVIRONMENT AGENCY UPDATE

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

Particular reference was made to the recent incident at the Boston Barrier, which had seen seepage through the bank in the vicinity of the Boston Barrier works. The Committee was advised that the incident had occurred during piling works carried out to increase the strength and stability of the bank. It was noted that some of the work had been completed prior to the high tide, however, the clay material that had been removed from the bank had not been reinstated at that time, which had led to localised seepage. The Committee was advised further that the Environment Agency had been working with the Contractors to identify the lessons learnt from the incident.

Some members who had attended the scene expressed their concerns relating to the matter, and particular reference was made to the attitude of the contractors who had been unaware of the high tide; and to the lack of Environment Agency personnel available on site to reassure residents. Local members felt that the whole incident had been 'played down and dismissed as being one of things that could happen'.

The Committee was advised flood alerts had not been issued, as a tidal surge or abnormal tides had not been predicted. It was highlighted that local residents had

been 'terrified' by the incident, particularly those living in close proximity, as they had been scared that the bank was going to collapse.

One of the local members highlighted the following points:-

- The need for better communication between all parties;
- A question was asked as to whether residents who had goods damaged by the water would receive compensation from the contractors;
- A request was made for every household along the section of Wyberton Low Road to be visited to give them an opportunity to raise their concerns;
- Concern was expressed that most of the properties under the cover of the bank were rented and occupied by residents with a poor knowledge of the English language. A request was made for an interpreter to accompany those making the above requested visits;
- A request was also made for the operators on the Floodline number to be made fully aware of the correct procedure in such circumstances.

The Environment Agency reassured the Committee that the risks had been low; and that the structural integrity of the bank had not been compromised. Confirmation was given that in this instance, the reason for the seepage had been because the clay had not been reinstated. It was confirmed that lessons had been learnt; and that actions had already been put in to place to prevent them happening again.

Other points raised by the Committee in relation to the report were as follows:-

- The need to consider and include Economic Development and Resilience in future projects; some members welcomed an update from the Environment Agency Board. The Committee was advised that issues were known to the Environment Agency, particular issues quoted included all year round occupancy in caravans to help retain skilled workers. It was noted that the Environment Agency would have to assess the level of risk; spatial planning; development along the coast; and restrictions on properties in flood risk areas; and
- Horncastle and Louth Improvements – One member enquired as to whether the project had come in on budget and whether issues with the landowners had been resolved. The Committee was advised that both improvement projects had come in well within budget. Confirmation was given that there was no rebate. It was reported there was still one outstanding land remediation issue at Louth.

RESOLVED

That the Environment Agency update be received.

41 SALTFLEET TO GIBRALTAR POINT STRATEGY UPDATE

The Committee received a short presentation from Steven Coe, Flood and Coastal Risk Management Advisor, which provided the Committee with an overview of the Flood & Coastal Risk Management Funding and Benefit Apportionment.

**FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE
17 SEPTEMBER 2018**

The Committee was advised that every project or strategy needed to identify the sources of funding as part of its business case. And that the amount of GiA funding related to the benefits the project would bring. It was noted that the GiA was calculated through the use of the partnership funding calculator, which considered: homes better protected; homes in deprived areas; economic benefits; and wildlife benefits. It was highlighted that houses protected was very important, as the payment rates were higher than for economic benefits.

It was reported that some houses were at risk from more than one source of flooding for example tidal, fluvial and surface water. It was noted that houses and benefits could not be double counted between separate projects to address these risks; and that the Environment Agency (EA) worked closely with other management authorities to accommodate their investment needs. It was noted further that to address the double counting issue, there were options available for example benefits apportionment.

The Committee was advised that any approach to apportioning benefits of Flood Coastal Risk Management Projects the EA worked very closely with all the Risk Management Authorities (RMAs) involved to understand the flood risk in their area; their objectives for managing; and their future programme of works. Where it was not possible to readily separate areas affected by different sources of responsibilities for flood risk, separate economic assessments could be carried out. This would be done with the benefits and outcomes of proposed works being apportioned to the different sources or Risk Management Authorities using the ratio of annual average avoided damage from one source, to the rest. It was noted that this approach was useful in areas of widespread multi-source flooding.

An example of the Environment Agency's approach was provided at the meeting, which split the sources of flooding into coastal and rainfall.

In conclusion, the Committee was advised that next steps included further development of the Benefits Apportionment Plan; sign-off from each of the Risk Management Authorities; submission alongside the strategy in early 2019 for approval.

The Committee was advised further that the advantages of taking a strategic approach were that there was agreement with all the RMAs; the assessment of risk was apportioned to ensure fairness; double counting was avoided; the RMAs had clarity when developing projects; and that high level testing had shown that the proposed apportionment was compatible with RMA projects.

During a short discussion reference was made for the need to include the importance of arable land. Confirmation was given that this was built in to the economic set of criteria for Lincolnshire. It was highlighted that the scrutiny committee had already written to the government regarding partnership funding arrangements. It was noted that criteria was being reviewed and that previously weighting had been given to land, which was now given to people and property. The Committee was advised that the rules of apportionment were Treasury Rules and not Environment Agency rules.

RESOLVED

That the presentation concerning the Flood & Coastal Risk Management Funding and Benefits Apportionment be received.

42 REVIEWING THE JOINT LINCOLNSHIRE FLOOD RISK AND DRAINAGE MANAGEMENT STRATEGY

The Committee received a short presentation from David Hickman, Growth and Environment Commissioner, which summarised the progress being made with the development of the National Flood and Coastal Erosion Strategy.

It was highlighted that the enablers for this to happen included: government legislation and support; partnership within the flood and water management family, finance, infrastructure, developers etc; access to finance and clarity of roles; better provision and use of evidence, innovation, technology science and data; behaviour and societal changes.

Reference was made to the guiding principles involved in working together to manage flooding and coastal change; and to the timelines for the development of the National Flood and Coastal Erosion Risk Management Strategy. It was expected that the final version of the Strategy would be laid before Parliament in November 2019.

Matthew Harrison, Senior Commissioning Officer Flood Risk provided the Committee with an update on the review of the Lincolnshire Flood Risk and Water Management Strategy.

The presentation made reference to:

- The Lincolnshire Flood Risk and Water Management Partnership, which comprised of the Lincolnshire County Council; Environment Agency; 14 Internal Drainage Boards; seven District Councils; two Water Companies; the Regional Flood and Coastal Committee and Emergency Planning and Response;
- The role of all the partners;
- The Joint Partnership Strategy and Action Plan;
- Capital Works, reference was made to Stamp End in 2007; Partnership working to deliver the Horncastle and Louth Flood Alleviation Schemes;
- Capital Investment Programme 2015 to 2021;
- Better co-ordinated use of resources;
- The Opportunity of the GLLEP;
- Water Management Plan;
- The development of a strategic approach; and
- Moving forward to achieve benefits locally to provide an area resilient to flood risk and water issues with a long term strategic vision – with local benefits.

During a short discussion, the Committee members raised the following issues:-

**FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE
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- Members welcomed the more strategic approach to economic development and the need for its integration in to the strategy;
- The importance of Internal Drainage Boards and District Councils in the Partnership;
- The need for more detailed feedback regarding the risk of flooding in to Development Control Planning Committees. Officers advised that in 2012 a multi-agency framework had been developed, (which was still in operation) which provided the planning authorities with an opportunity to assemble a group of all relevant risk management authorities to consider flood risk as a result of major developments.

The Chairman on behalf of the Committee extended his thanks to both presentations.

RESOLVED

1. That the presentation concerning the Development of the National Flood and Coastal Erosion Risk Management Strategy be noted.
- 2 That the presentation relating to the review of the Lincolnshire Flood Risk and Water Management Strategy be noted.

43 HUMBER STRATEGY COMPREHENSIVE REVIEW

The Committee received a joint presentation from Helen Todd and Lucy Marshall from the Environment Agency, which provided an update on the current status of the Humber Strategy Comprehensive Review.

The Committee was advised that the purpose of the comprehensive review was to redefine the strategic approach to managing tidal flood risk in the Humber over the next 100 years; and to achieve collective agreement from 12 local authority partners and the Humber Local Enterprise Partnership.

It was reported that it was hoped that the Strategy would be finalised in early 2021.

The presentation made reference to the start-up and objectives; the long list of options; the short list to preferred option; the strategy and the implementation. The Committee was advised that a draft set of strategic approaches had been presented to the Officer Group in July. From this, there had been agreement for an overall pathway approach; and to three strategic approaches in principle. It was noted that further work was to be done on the definitions and wording for each strategic approach. Agreement would then be sought to the strategic approaches which would be considered further by all 12 local authorities.

The Committee was advised that the Living with the Tide – proposed strategic approaches were: containing the tide; keeping out the tide; and accommodating the tide.

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The next steps highlighted to the Committee were that there would have to be agreement to the strategic approach; and that social, economic, technical, environmental appraisals would be informed by local needs and priorities; that the preferred approach would be identified in the Autumn of 2019. The Committee noted that funding and investment would be developed around the preferred approach; the engagement would be extended; and that schemes would continue to be delivered within the six year programme.

Questions raised by members of the Committee included the use of tidal energy (Which was one of the long list of options) and the option of a barrage in the outer estuary. Officers confirmed that they had been looking at the Thames Barrier and other barriers in Europe. It was highlighted that cost had not been used as a limiter; and to the fact that cost might not allow this option to happen in the future.

The Chairman extended thanks on behalf of the Committee to the two presenters.

RESOLVED

That the presentation relating to the Humber Strategy Comprehensive Review be received.

44 TO REPORT PROGRESS ON THE INVESTIGATIONS MADE IN THE COUNTY UNDER SECTION 19 OF THE FLOOD AND WATER MANAGEMENT ACT 2010

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.

Warren Peppard, Flood Risk and Development Manager advised the Committee that during the period 1 April 2018 to 31 August 2018 there had been three flood investigations in April; five investigations affecting 11 properties in June due to isolated showers; three investigations affecting eight properties in July; and a further six investigations in to the flooding of eight residences in August. In total there were 17 investigations during the period, affecting 31 properties and the highways network. It was noted that all the investigations were in connection with surface water.

Officers agreed to respond after the meeting to queries raised by two members of the Committee.

Appendix A to the report provided the Committee with a record of current investigations in the County that were being carried out in accordance with Section 19 of the Flood and Water Management Act 2010.

RESOLVED

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

45 FLOOD AND WATER MANAGEMENT SCRUTINY COMMITTEE WORK
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, to ensure that scrutiny activity was focussed on areas of greatest benefit.

Pages 58 and 59 of the report provided the Committee with a copy of the work programme for the Flood and Water Management Scrutiny Committee up to 28 May 2019.

During a short discussion, members of the Committee put forward the following items for consideration on a future agenda:-

- Leakage Programme – Anglian Water.
- Water Resources East Project – Update

Some members of the Committee felt that a letter should be sent to Anglian Water inviting them to attend the next meeting; as their presence at meetings was valued.

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 12.17 pm

Open Report on behalf of Environment Agency

Report to:	Flood and Water Management Scrutiny Committee
Date:	26 November 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:	£105,109,685

Update since last meeting

Legal work is ongoing to finalise the local Boston District Fishing Association (BDFA) agreement. The BDFA should be relocating to the completed facility downstream of the barrier location once the legal agreement is signed.

Foundations for the barrier control building have commenced and the barrier cofferdam works have started from the Jack-Up Barge. Fish refuges are in place during works.

Barrier High Voltage substation is in progress and anchor piles on the right bank are being installed.

Design works are progressing and discussions continue with the Port of Boston over various matters.

June – December 2018

- Relocate fishing fleet to quayside
- Demolition of existing “oil” jetty structure on right-bank
- Construct right bank embankments
- Commence Frontier quayside works
- Construct barrier control room
- Construct quayside
- Fabrication of barrier gate offsite
- Manufacture hydraulic rams
- Construction of the barrier
- Design of wet dock entrance
- Secondary dredging starts October 2018

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

Through partnership working with Lincolnshire County Council, this project has secured £1M of European funding. A legal agreement between LCC and the EA is now signed. The programme of works will tender over the winter period with a contract start date expected June 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

Following the success of the 2018 flood risk management options consultation, we are now finalising the two preferred flood management

options alongside the Strategic Environmental Assessment and HRA for full Strategy consultation early next year.

As part of the Strategy we are working with the support of RMA partners to ensure that we can appropriately apportion the Outcome Measure benefits within the Strategy area to prevent future double counting in line with government guidance.

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

This year's campaign was completed 23rd June. Total sand placed on beach 397,636 m³.

The contractor is pricing repair works to the promenade as requested by local team, for possible delivery October '18 outside the main holiday period. Planning commenced for next year's campaign with possible inclusion of an area of beach south of Skegness and subject to monitoring results.

1.5 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 first phase of a two year programme of toe erosion protection has been completed, consisting of a 950m length of the Wainfleet Relief Channel and a 250m length on the Steeping.

1.6 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

As recently announced at the Anglian Northern RFCC meeting, we are moving to decommission Black Sluice Pumping Station in Boston.

This has been agreed with all key partners: LCC, Boston Borough Council, Black Sluice IDB, RFCC, the NFU, and Association of Drainage Authorities.

The pumps do not protect people and property from flooding, which means we the EA cannot continue to fund the asset.

Due to the significant refurbishment costs, Black Sluice IDB are unable to take on the asset through a transfer.

We are now working with Heritage Lincolnshire to understand possible other uses for the building itself.

We will continue to use the gravity sluices as the primary means to reduce high flows in the South Forty Foot Drain.

The partnership is taking a strategic approach to managing flood risk and water resources in the wider area.

Due to continued partner engagement activity, there have been very few enquiries from the general public. The public drop in sessions will continue weekly at the Boston Hub.

➤ **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. A formal response document has been written and is available on gov.uk

The formal public notices have now been issued and are live on .gov.uk. If there are no formal objections by the close of consultation on 19th Nov then the watercourses will be transferred to Black Sluice IDB.

➤ **Bank Armouring**

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

Modelling will be reviewed to confirm to any further sites requiring armouring in the next two years.

1.7 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 works have gone out to tender for the Sluices, and costing is being undertaken by the consultant for the wall elements of the project. The deadline to submit quotes for the works is the 10th October.

Environmental surveys and discussions are continuing so that everything is in place. This includes discussion about eels and otter surveys.

1.8 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.

Mott McDonald have been commissioned, through the Programme Delivery Unit, to prepare the full business case preparation is ongoing.

The commission is 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.

It is likely the first works on site will take place during the winter of 2018/19.

2. Updates on Other Items

2.1 Donna Nook Managed Realignment Site

The Environment Agency has applied to the Department of Transport to secure the diversion and stopping up of the footpath on to the realigned path. The draft Order was heard at a public inquiry in June 2018.

The Inspector, appointed by the Planning Inspectorate, will make his recommendation to the Secretary of State for Transport who make the final decision.

The Environment Agency will ensure all preparatory work is complete ahead of the final decision so that works can commence at the earliest opportunity, allowing for considerations such as six weeks of High Court challenge and overwintering bird restrictions if permissions are granted.

3. 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

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Open Report on behalf of Keith Ireland, Chief Executive

Report to:	Flood and Water Management Scrutiny Committee
Date:	26 November 2018
Subject:	Sustainable Drainage Design & Evaluation Guide

Summary:

To provide an update on the document titled 'Sustainable Drainage Design & Evaluation Guide'.

Actions Required:

No action required.

1. Background

The Ministerial Statement dated December 2014 placed the responsibility with the local planning authority, to ensure that Sustainable Urban Drainage Systems (SuDS), for the management of run-off, are put in place.

As a consequence paragraph (ze) was added to schedule 4 of The Town and Country Planning (Development Management Procedure) (England) Order 2015, to ensure that the Lead Local Flood Authority (LLFA) is consulted for major development with surface water drainage.

Also, paragraph 165 of the National Planning Policy Framework requires that major developments should incorporate SuDS, and that the systems used should take account of advice from the LLFA.

At the time of the Ministerial Statement a new edition of 'CIRIA's SuDS Manual' (the Manual) was being developed, which would provide national technical guidance for those involved in the development process. Lincolnshire County Council was a member of the project steering group for the new edition of the Manual, and although we recognise the importance and value that the Manual provides on a national scale, it was recognised that local documents were also required (to complement the Manual) that reflected both the geology, and local issues that Lincolnshire presents.

To reflect the LLFA's new role as both a consultee for surface water drainage, and as an advisor for SuDS, Lincolnshire County Council (LCC) has, over the past few years, been developing a number of local guidance documents.

LCC has developed the following three local guidance documents:

1. Lincolnshire Development Roads and Sustainable Drainage Design Approach - This document is live on LCC website, and provides technical advice for the layout and design of both highways and SuDS (pre/during planning application).
2. Development Road and Sustainable Drainage Specification and Construction – This document is live on LCC website, and details the constructional elements of both highways and SuDS (post planning application) when a developer has offered such to LCC for adoption.
3. Sustainable Drainage Design & Evaluation Guide – This document is **NOT** currently live on LCC website. This guide has been developed with the support of a number of technical experts and 16 local authorities across England (LCC being a Project Partner), which links the design of SuDS with the evaluation requirements of planning. The guide promotes the integration of SuDS into the fabric of development, and is intended to facilitate consultation in order to achieve the best possible SuDS designs.

I am currently promoting document 3 around the planning authorities in Lincolnshire. It is being promoted as a local guidance document, which provides the development industry and all key stakeholders with a concise guide to SuDS best practice in Lincolnshire.

2. Conclusion

LCC will continue to promote the Sustainable Drainage Design & Evaluation Guide with the local planning authorities. This should enable all involved within the development industry to access a single document, to obtain best practice advice relating to the delivery of SuDS through the planning process in Lincolnshire.

3. Consultation

a) Have Risks and Impact Analysis been carried out?

No

b) Risks and Impact Analysis

N/A

4. Background Papers

This report was written by Warren Peppard - Flood Risk & Development Manager, who can be contacted on (01522) 782070 or warren.peppard@lincolnshire.gov.uk.

Open Report on behalf of Environment Agency

Report to:	Flood and Water Management Scrutiny Committee
Date:	26 November 2018
Subject:	Bulldog Bank

Summary:

In order to adapt to changing circumstances Shoreline Management Plans (SMPs) must be kept valid by updating them as necessary. There are various reasons which justify a change to an SMP, which includes 'a severe event has made an element of the existing SMP policy or action plan untenable'. This business justification is made in accordance with 'Strategic planning for flood and coastal risk management: Shoreline management plans-monitoring, change and reporting' Operational Instruction D12_34, and the change process chart from this Operational Instruction, is replicated in Appendix A.

Actions Required:

Members of the Flood and Water Management Scrutiny Committee are invited to consider and comment on the report and endorse the promoted approach outlined.

1. Background

In the tidal surge of December 2013, Bulldog bank, a 400m cross bank within a wide dune system, breached in five locations. The tidal surge was in excess of the 0.5% design tide and no residential or commercial buildings were flooded at this location as a result of these breaches. Bulldog Bank is shown within the Humber Estuary Coastal Authorities Group (HECAG) SMP in Policy Unit P Map.

Current situation

In early 2014 repairs to uplift known low spots within the dune system were completed, under the recovery package, to ensure continuity of design tidal defence standard to the wider flood cell, while the future justification of Bulldog Bank was explored. This work was undertaken within the designated site, under licence from Natural England.

As part of the evidence for the proposed works in 2017/18 Lincs Wildlife Trust were the client for the Gibraltar Point Coastal Wetland Adaptation Study, which was

conducted by HR Wallingford. This was produced with data from the EA and open source elevation data.

On receipt of the Study, it was reviewed by both NE and the EA, which enabled all parties to highlight any problem areas. This highlighted that more investigation was required to ensure a true reflection of any possible inundation was provided.

Meetings between the interested partners (LWT, NE, EA, LCC) were conducted to discuss the way forward and any additional works required. There was an agreement to delay the works and the change process for the SMP until further investigation was carried out on the extent of inundation and to provide evidence that no properties would be effected.

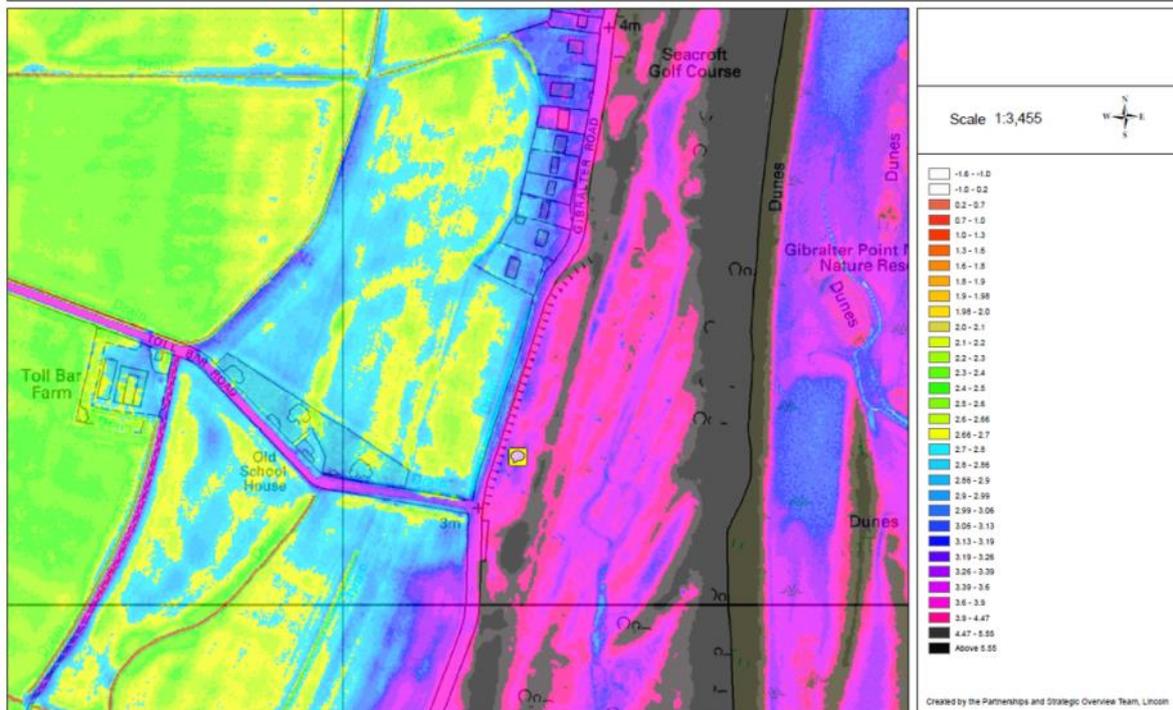
After further investigation was carried out, the following was concluded.

Hydraulic modelling outputs for the current day design tide, that has a 0.5% chance of occurring in any one year, show that the Bulldog Bank dune does not benefit residential properties. Water is shown to be migrating across the tidal floodplain, to a greater extent when compared to the scenario prior to Bulldog Banks failure.

The topography shows that for the short duration of overtopping, the existing residential properties will not be impacted, as shown in Fig 1. It is anticipated that the local watercourses and arable land can accommodate these limited overland flows that are generated and it would be reasonable to have a proactive engagement plan in place for dissemination of information.

If further reassurances are required, then minor adjustments within the dunal system inside the golf course could be made to further limit the volumes of overtopping entering the tidal floodplain for this design tide scenario, which could be discussed with the golf club.

Bulldog Bank Elevation Mapping - created April 2018



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Contact Us: National Customer Contact Centre, PO Box 544, Rotherham, S60 1BY. Tel: 03708 506 506 (Mon-Fri 8-6). Email: enquiries@environment-agency.gov.uk

Case for Change

The policy direction for this area is to ensure continued protection against coastal flooding to the same standard as today. This amendment to Policy Unit P does not seek to amend this principle of continuation of protecting people and property.

The aspirations within the epochs for Policy Unit P remain valid, although it is the last epoch of 2055-2105 where realignment is mentioned to sustain other defences and compensate for potential deterioration of designated sites. The SMP could not foresee that Bulldog Bank would incur multiple failures during a large surge tide. This case for change seeks approval to duplicate the Managed Realignment option into Epoch 1 – present day to 2025, whilst retaining the principle to sustain flood risk to people and properties at current levels.

Business needs

The justification to repair Bulldog Bank has been examined. The economic and benefits assessment do not support the case for Flood Risk Grant in Aid, as there are no residential properties (Outcome Measure 2) at risk and a small area of golf course.

Initial costings suggest that the repair or replacement cost associated with Bulldog Bank would be between £70k and £350k, depending on the material source; extent of repair or replacement; and any constraints associated with working within a designated site of National and International importance.

Bulldog Bank is located within Gibraltar Point Site of Special Scientific Interest, Saltfleetby - Theddlethorpe Dunes & Gibraltar Point Special Areas of Conservation,

Gibraltar Point Ramsar (Wetland of International Importance under the Convention on Wetlands of International Importance, especially as waterfowl habitat) and Gibraltar Point Special Protection Area; in addition to being within these designations, it is also directly adjacent to The Greater Wash Potential Special Protection Area and The Wash & North Norfolk Coast Special Areas of Conservation. The freshwater habitat behind Bulldog Bank is already adapting to the saline intrusion. The designations of the wider site are focused on various dune types, coastal geomorphology and associated coastal flora and fauna.

Benefits

There are benefits to this approach to the restoration of brackish habitat within the dune slack, behind the line of Bulldog Bank, this occurs within a designated site and Natural England are a partner in making this case for change. This early adaptation may also reduce, to some small degree, the future SMP risks of coastal squeeze associated with the current Policy 'Hold the Line' in this designated site.

Mitigation of Risk

The low spots in the existing dune system were raised in 2014 to ensure continuity of flood risk reduction to the properties on Aylmer Avenue. Land at the end of the golf course was flooded in 2013 and did benefit from Bulldog Bank. The golf course is in discussion with Natural England about the construction of a new bank, which would fall within the designated site but on land owned by the golf course, where the golf course would be the sole beneficiary.

Hydraulic modelling has shown that a cross bank may be required in this area as sea levels rise; the SMP Policy Plan, as proposed, would support this future requirement as a further action to sustain current levels of flood risk into the future.

2. Options Considered

It was considered at the time:

a) Repair Bulldog Bank:

Cost Est. £70,000. Reconstruct bank to make repair to fill breach gaps. This option would utilise existing material 'on-site' from the redundant bank around the south of the borrow pits, provided Natural England were satisfied that this material was accessible and classified as suitable. Access to the site is difficult and new roadways to provide adequate egress for plant and machinery may have to be formed at additional cost, with required Natural England licences.

The bank would only be reinstated back to its original condition – i.e. it is likely to fail again due to the inadequacy of materials and width during a similar high tide event. There is also the possibility that failure would occur at other points along the bank adjacent to the repair locations.

This does not provide an 'engineered solution' and only utilises silt/sand material for reinstatement. Additionally the bank will be denuded for a period until suitable growth has taken hold leaving sections vulnerable to erosion.

This option is very unlikely to obtain funding as it appears that this does not protect any properties during the current day 0.5% design tide.

b) Replace Bulldog Bank:

Cost circa £300,000 Replace entire 450m of Bulldog bank with an engineered bank utilising an engineered core and re-profiled to a greater width for wave erosion protection.

This option would require the importation of materials onto site to form the bank. Natural England would need to be consulted and approve any scheme. It is unlikely that as the site is a SSSI that material from off site would conform to site requirements.

Difficulties with access and transportation as in option a. Replacement would provide an improved level of protection to part of the golf course. This option is very unlikely to obtain approval as it appears that this bank does not protect any properties and may be considered 'state aid'.

c) Move primary defence line to a strengthened Western dune

Recovery funded works are complete to fill low spots in existing dune system, with valley gap at Aylmer Avenue being raised to a minimum 5.6m OADN by utilising spare on site material. Access to carry out these works was easier as transportation was available along Gibraltar Road and Aylmer Avenue.

Future maintenance of the bank has been improved as it is easier to access for future repairs if this section were to be adopted in place of Bulldog Bank as primary sea bank protection.

This natural dune system is sheltered and has reasonable grass and vegetation cover. The northern end of this bank now forms a continuous line of defence. This option leaves the golf course to construct a new flood defence along the southern boundary of their land or increase the height of the existing dunes within the golf course.

d) Move primary tidal defence to the western sandbank and instigate revised flood warning thresholds

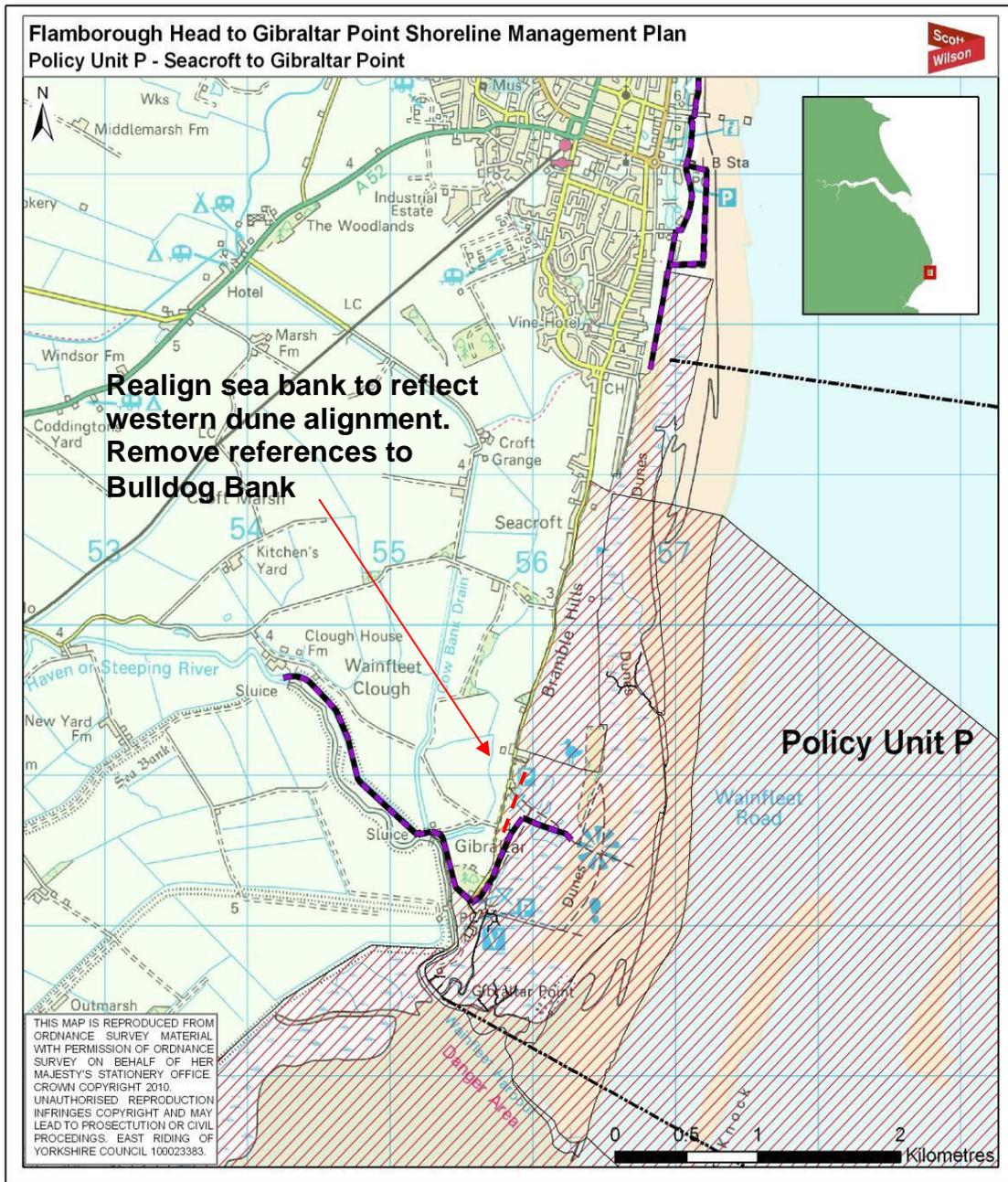
Cost £Minimal, primarily administration. As no properties thresholds are compromised by the 0.5% tide, with initial observations suggesting that property thresholds were some 500mm above the extreme tide on 5 December 2013. A Temporary Management/Warning Plan was put in place for the specific properties to ensure evacuation procedures robust during extreme high tide events.

Promoted approach

On the basis of the above:

- Option D was instigated on a short term basis until option C is agreed through this change process.
- Options A and B were neither economically viable nor environmentally acceptable.
- Recovery grant was optimised to undertake the filling of low spots along the wide Western dune as the most immediate and cost beneficial option to accord with Recovery Grant principles.
- The promoted approach does not impact on delivery of SMP Actions P1 and P2.
- It is **recommended that option C** be used to update the HECAG SMP Policy Unit

Future look of Policy Unit P: Seacroft to Gibraltar Point



Key: Policy (for full details see relevant policy statement)

Short Term (present day to 2025)	Medium Term (2025 to 2055)	Long Term (2055 to 2105)
Hold the Line (P4)	Hold the Line (P4)	Hold the Line or Managed Realignment (P4)

The policies for the long term are conditional. They depend on the results of monitoring and research into climate change, shoreline response and the role of defences.

Legend

- Current defences(EA maintained)
- Policy Unit boundaries
- Scheduled Monuments
- Environment Agency Tidal Flood Zone 3
- Internationally Designated Sites

3. Appendices

These are listed below and attached at the back of the report	
Appendix A	Change Process Chart

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

Coastal Group receives change proposal. Change Managers discuss and agree change category (minor, moderate or major)

Major changes:
Changes to a policy, or epoch in which a policy is to be implemented, or changes to the action plan that are likely to result in this;
Changes to the action plan that are likely to significantly impact on SMP implementation, such as significant new schemes and studies, or significant changes to existing ones;
Mapping corrections that affect the number of properties protected from flooding or erosion;
Changes impacting an internationally designated site, e.g. SAC, SPA, Ramsar.

Moderate changes:
Textual or mapping corrections where the context of the SMP is affected;
Changes, additions or deletions in the action plan that may impact on SMP implementation but do not change an SMP policy option. These might include changes to the timescale or priority of an action, a new study or study/scheme already proposed.
Changes potentially impacting a nationally designated site, e.g. SSSI, NNR, AONB, SAM.

Minor changes:
Textual and mapping corrections with no effect on context or outcomes of the SMP;
Changes within organisations that may have a bearing on SMP implementation.

Change Manager group considers who will be interested in this change and informs relevant stakeholders. Consultation process invites stakeholders to comment on change – i.e. to support, reject or amend. Further work to investigate the change proposal is done if required**. RFCC and relevant local authority officers/members informed.

Change Managers organise changes.

Unless otherwise agreed with Natural England, SEA and HRA are reviewed where international designation is potentially affected. Appropriate AA and IROPI procedures are followed as required by Natural England and WFD requirements are satisfied**.

** This process may have been carried out as part of the Strategy or scheme that instigated the change to the SMP.

Change Managers collate stakeholder feedback and the results of any supporting work, and agree change proposal. Environment Agency Area FCRM Manager / Coastal Manager will moderate disputes.

Change Managers submit agreed proposal to Coastal Group for agreement. Coastal Group agrees, rejects or agrees with amendments (these may require further work or consultation). Local authority officer/member approvals obtained as appropriate.

Coastal Group submits change proposal to RFCC for approval.

Environment Agency approves at the appropriate level. Change recorded on Change Monitor spreadsheet, GIS and NCERM. Change published on SMP website no longer than 1 month after agreement. Change implemented.

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Open Report on behalf of Keith Ireland, Chief Executive

Report to:	Flood & Water Management Scrutiny
Date:	26 November 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.

This report covers the period from 1st September 2018.

There were no new S.19 investigations started in the current period, which is a reflection of the average or below average rainfall in the county. This is in contrast to the previous quarter when 21 new investigations were started, and work continues to complete these investigations.

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 or programmed 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 properties	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. 4 properties	4	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	Riparian ditches cleaned out. Anglian Water has fitted a new grill on its sewer and access points to deal with safety concerns related to cleaning debris from watercourse. An LCC capital scheme is included in the Medium Term Plan for works in 2020/21	Yes	LCC AW Witham 3rd IDB	On-going	2018/19	S19-005
28 June 2012	New Bolingbrooke 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
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, including running of a new model. 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 and IDB to establish outfall. Anglian water removed gas service pipes intruding in the surface water system in 2015.	No	AW IDB	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 and IDB to establish outfall.	No	AW IDB	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. AW to check new model.	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	Surface water bypassed the highways drainage system and flowed over the vehicular access causing internal flooding to the property. 1 property	1	Completed	The inability of the drainage assets to cope with the flow of surface water contributed to the property internally flooding. Consideration to be given to better managing the surface water flow paths including points of discharge.	EA - Yes AW - Yes LMIDB - Yes LCC - Yes Binbrook Parish Council - Yes ELDC - Yes	LMDB have worked in conjunction with the riparian owners with regards to maintenance.		LCC	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			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
02 June 2018	Woodhall Spa Witham Road Tor-O-Moor Road	Surface water flooding. 3 properties	3	On-going	TBC		TBC			On-going		S19-203
02 June 2018	Burgh on Bain Main Road	Surface water flooding. 1 property	1	On-going	TBC		TBC			On-going		S19-204
TBC	Partney Chapel Lane	Surface water flooding. 1 property	1	On-going	TBC		TBC			On-going		S19-206
27 July 2018	Skegness Sunningdale Drive	Surface water caused property to internally flood. 6 properties	6	On-going	Awaiting report		TBC		TBC	On-going		S19-210
TBC	Horncastle Churchill Avenue	Surface water flooding. 2 properties	2	On-going	Awaiting report		TBC		TBC	On-going		S19-211
TBC	Skegness Roman Bank	TBC 1 property	1	On-going	Awaiting report		TBC		TBC	On-going		S19-212
27 July 2018	Horncastle West Street	Surface water flooding which entered the property through the back door and flooded the kitchen and dining room. 1 property	1	On-going	Awaiting report		TBC		TBC	On-going		S19-220
16 August 2018	Ingoldmells Sea Lane	Surface water flooding into shops. 7-8 stores	7-8 stores	On-going	Awaiting report		TBC		TBC	On-going		S19-221

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 Mike Reed (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 2020/21. 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	LCC	On-going	Possible works 2020/21	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	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 Sewern 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		S19-154
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 property	1	Complete	TBC		TBC			On-going		S19-089
TBC	Cherry Willingham Lime Grove	Surface water flooding. 1 property	1	On-going	TBC		TBC			On-going		S19-201
10 August 2018	Lincoln Percy Street	Surface water running up the footway, off the road, into the garden and through the rear door of the property. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-213
10 August 2018	Lincoln Allenby Close	Surface water flooding came straight through the front door of the property. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-214

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 have undertaken enforcement 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 2019/20.	Yes	LCC Witham 1st IDB EA	On-going	Feasibility and Design 2016/17. Possible works 2019/20.	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 2019/20.	Yes	LCC Witham 1st IDB EA	On-going	Feasibility and Design 2016/17 Possible works 2017/18	S19-048
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 2019/20.	Yes	LCC Witham 1st IDB EA	On-going	Feasibility and Design 2016/17 Possible works 2017/18	S19-048
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. AW have investigated to check capacity issues - new model has been checked..	No	LCC AW	On-going	Summer 2017	S19-053
28 June 2012	Thorpe Tilney Village Sleaford Road, Hallams Lane, Church Lane	Surcharging of open watercourses and assumed restrictions within culverted sections. Surcharge of public surface and foul water systems.	Unconfirmed - pre feasibility report mentions 8 properties.	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 Threkeingham 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	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
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	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.		LCC 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. Funding awarded.		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 Invst 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. Following further investigation the classification of the AW sewer is currently under review.	No	LCC AW	On-going	Summer 2019	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	Billingsborough West Road,	The village of Billingsborough suffered surface water flooding on West Road and Station Road on the 5 th July 2012 and 22 nd May 2014. Billingsborough 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 contiue. 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 complited 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 contiue. 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 have completed their surveys and any works required by summer 2017. Minor works have been carried out by LCC Highways to provide a water check	No	LCC Anglian Water	On-going	Summer 2017	S19-162
22 May 2014	Billingsborough West Road, Station Road	The village of Billingsborough suffered surface water flooding on West Road and Station Road on the 5 th July 2012 and 22 nd May 2014. Billingsborough 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 contiue. 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 complited by 31/03/2017.	LCC - Yes Anglian Water - Yes	Anglian Water repaired the culvert and jettted the system, the area continues to be monitored. CCTV survey to contiue. 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 have completed their surveys and any works required by summer 2017. Minor works have been carried out by LCC Highways to provide a water check across the frontage.	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. AW have cleansed their SW sewers.	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 sharp changes of direction, could be a contributing factor to the flooding issues. Maintenance of existing system and further investigations into mitigation including improvements and other flood risk management options.	LCC W&DIDB (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
14 June 2016	Bourne Edenham Road	Surface water gathers at a low point on the carriageway opposite the property, which overflows into the property causing the property to internally flood. The situation is exacerbated by passing vehicles washing water over the verge and onto the adjacent land. 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.	LCC	Further investigations into ownership of the existing drainage system to enable future maintenance. Inform resident of their riparian responsibilities.		LCC	On-going		S19-194
10 April 2018	Potterhanworth Station Road Leadenham	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
02 June 2018	Leadenham Main Road High Street	Surface water flooding. 5 properties	5	On-going	TBC		TBC			On-going		S19-202
02 June 2018	Brant Broughton High Street	Surface water flooding. 1 property	1	On-going	TBC	TBC	TBC			On-going		S19-205
TBC	Billinghay Tattershall Road	Surface water flooding. The landlord reports that the cottage has been internally flooded on more than one occasion, the most recent being in the last week or so sometime in the w.c 9 June 2018. This is a repeat occurrence see S19-051. 1 property	1	On-going	TBC	TBC	TBC			On-going		S19-207
TBC	Brandon Church Lane	Surface water flooding. The property internally flooded sometime in the w.c. after 2 June 2018. 1 property	1	On-going	TBC	TBC	TBC			On-going		S19-208
02 June 2018	Stragglethorpe Church Lane	Surface water flooding. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-215
14 August 2018	Brant Broughton High Street	Surface water caused flooding to the front of the shop. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-218

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
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 2005	S19-113
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
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
TBC	Swineshead Coles Lane	Surface water flooding. 1 property	1	On-going	TBC		TBC			On-going		S19-200
27 July 2018	Surfleet Gosberton Road	Surface water flooding caused property to internally flood. Customer states that the gully and drains were blocked and compounded the problem. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-209
13 August 2018	Spalding Pennygate	Surface water flowed from the road, over the path and into the shop. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-216
13 August 2018	Kirton Station Road	Surface water flooding. 3 properties	3	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-217

13 August 2018	Gosberton Wargate Way	Surface water flowed over the pavement and into the property which is two meters from the highway. 1 property	1	On-going	Awaiting report	TBC	TBC		TBC	On-going		S19-219
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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:	26 November 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?

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 ,

Flood and Water Management Scrutiny Committee

26 NOVEMBER 2018 – 10:00am		
Item	Contributor	Purpose
Sustainable Drainage Design & Evaluation Guide	Warren Peppard, Flood Risk & Development Manager	Sustainable Drainage Design & Evaluation Guide
Flood Defence Grant In Aid Funding 2019/20 & 2020/21	Environment Agency	Consideration of the deferment of Flood Defence Grant in Aid and the possible consequences.
Environment Agency Update	Environment Agency	Updates to Committee on Environmental Agency Activities, including progress on key schemes.
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
Bulldog Bank Item		

11 FEBRUARY 2019 – 10:00am		
Item	Contributor	Purpose
Environment Agency Update	Environment Agency	Updates to Committee on Environmental Agency Activities, including progress on key schemes.
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

28 MAY 2019 – 10:00am		
Item	Contributor	Purpose
Environment Agency Update	Environment Agency	Updates to Committee on Environmental Agency Activities, including progress on key schemes.
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

28 MAY 2019 – 10:00am		
Item	Contributor	Purpose
Management Act 2010		under Section 19 of the Flood and Water Management Act 2010

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