

Open Report on behalf of Environment Agency

Report to:	Flood and Drainage Management Scrutiny Committee
Date:	11 February 2019
Subject:	Lincolnshire Operations Revenue Maintenance Programme

Summary:

To outline the approach of the EA to asset management and explain the Annual revenue maintenance programme for FCRM assets in Lincolnshire

Actions Required:

To consider and comment on progress and approach to recurring maintenance to FCRM asset in Lincolnshire

1. Lincolnshire and Northamptonshire FCRM Asset Maintenance

1.1 Our asset revenue maintenance budget allocation for 2018/19 was £12,934k. This is made up of £9,476k FDGiA, £2,167k IDBP, and £1,291k GDC. This covers both frequent and intermittent revenue funded work across Lincolnshire. Revenue maintenance is essential in keeping our assets at their target condition and greatly contributes to achieving our Key Performance Indicators measuring how we maintain our own and third party assets at the required condition and meeting our targets to protect households at risk. Our revenue programme is published each year and can be viewed at: <https://www.gov.uk/government/publications/river-and-coastal-maintenance-programme>.

Our asset maintenance activities cover:

- Channels – some plants and animal species are not native to the UK and spread quickly, grow rapidly and completely take over a whole area in a short space of time blocking watercourses. We may need to increase the ability of a river to convey water where the risk to property demands it. We can use a number of different approaches and activities – making the river bed and sides smooth, changing the channel size to make it wider or deeper.
- Flood defences along a water course provide increased capacity to convey flood waters. We inspect and maintain them to ensure that they perform how they were designed and that the flood channel capacity is maintained.
- Flood defence structures include walls made from stone, brick, concrete, glass, and timber. We inspect and maintain them to ensure that they perform how they were designed.

- In some high flood risk areas, working with local communities we erect temporary barriers at pre-determined locations to provide protection to property and key infrastructure.
- Inspecting and testing – we keep a record of the condition of all flood defences. This may be through routine inspections or in response to a call from a member of the public or professional partners.
- Keeping the river clear of blockages – removal of man-made obstructions such as shopping trolleys, or natural obstructions such as fallen trees or overhanging branches and weed. We assess the flood risk before we consider removal of any blockage.
- In managing flood risk, we maintain and operate many complex assets, including pumping stations, barrier structures and control structures to manage water flow and water storage capacity.
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The programme of works is split between 2 distinct areas of delivery, Frequent (Annual) maintenance, and intermittent work, targeted on improvement and repairs works to assets.

2 Frequent Maintenance

2.1 The 2018/19 frequent maintenance programme is fully funded across the Lincolnshire. The maintenance will be carried out using a variety of delivery routes. Our internal Field teams, national Water and Environment Management (WEM) framework, FCRM Operational framework, and Public Sector Co-operation Agreements (PSCA).

2.2 Figure 1 below shows a breakdown of how funding is allocated to different types of programmed work for 2018/19. .

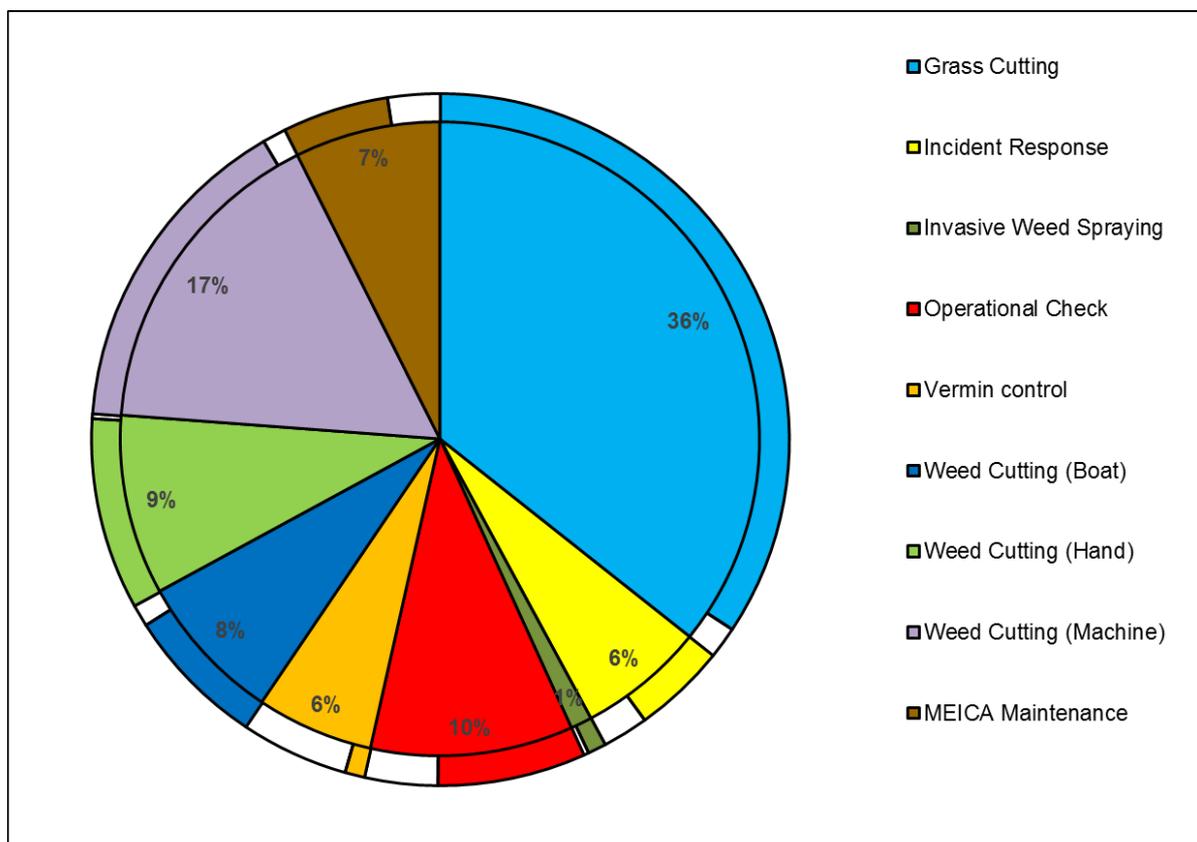


Figure 1: 2018/19 Frequent Maintenance - percentage split by work type.

3. Intermittent maintenance

- 3.1 The intermittent programme comprises of projects across the area which repair or improve the condition of our flood risk assets. The projects will be carried out using a variety of delivery routes. Our Internal Field Teams, WEM and Minor Frameworks, and Public Sector Co-operation Agreements. The intermittent programme is periodically re-assessed to ensure that we are making the best use of our available budget, focussing on those areas of work that are the highest priority and taking into account recently identified items of work.
- 3.2 Our revised intermittent programme for 2018/19 comprises of 80 active projects across the area. Our total forecast for Intermittent Projects this financial year is £7.22m. Figure 2 below shows a high level breakdown of the proportion of funding allocated to different types of work.

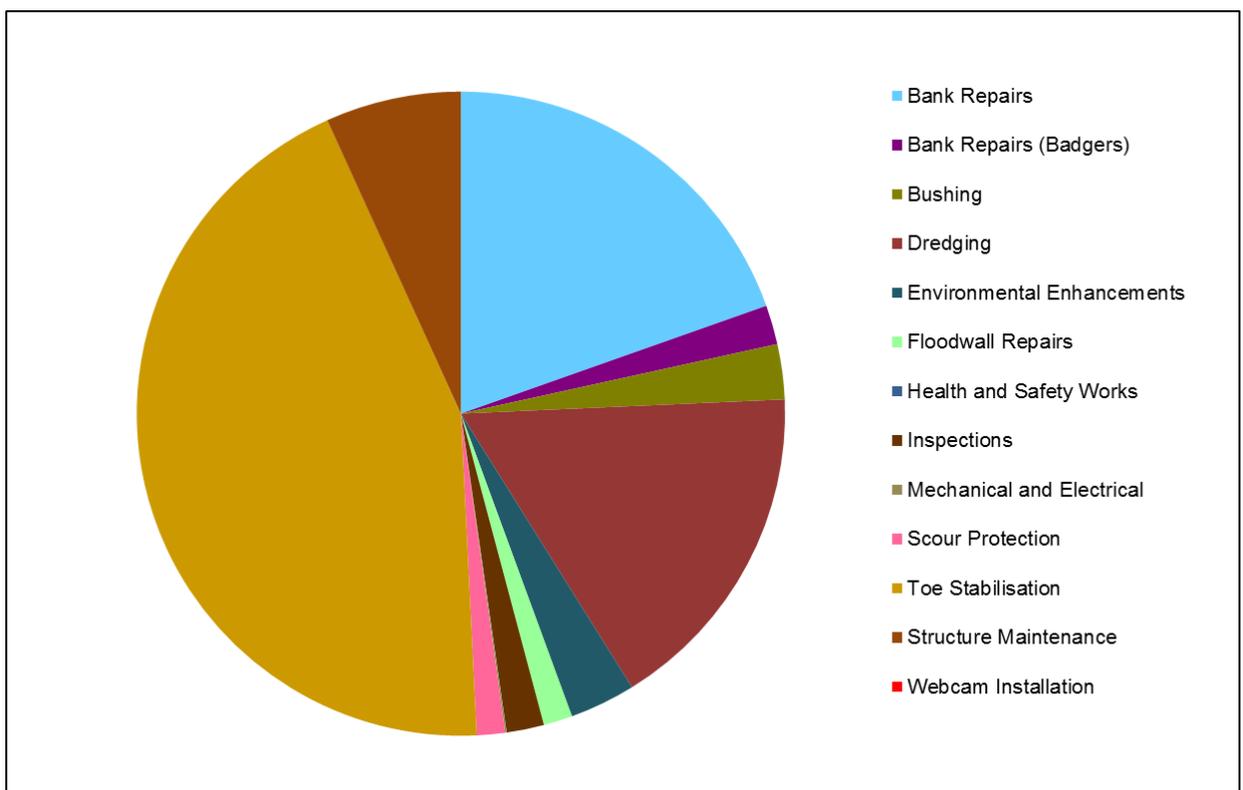


Figure 2: 2018/19 Intermittent Projects - percentage split by work type.

4 Examples of projects undertaken in Lincolnshire

- 4.1 We have completed desilting works immediately upstream of the River Rase South Branch Reservoir control structure.

The width of the river channel immediately upstream of the control structure had been reduced by approximately 50% due to siltation which was affecting the operation of the structure. Approximately 18m³ of silt was removed from the structure and the channel immediately upstream. The removed material was spread on Environment Agency land adjacent to the watercourse.

The works were completed in August 2018 by one of our FCRM Operational Framework Lot 1 suppliers, Kingcombe Stonbury Ltd, at a cost of £8.8k.. See Figure 53below.



Figure 3: River Rase South Branch Reservoir, upstream of Market Rasen, Lincolnshire. Showing siltation of control structure before (left) and after works (right).

- 4.2 Repair works have been completed to severe erosion of the South Humber Bank at Oldfleet, Lincolnshire, which are believed to have occurred during the 'Beast from the East' in February/March 2018.

The problem was identified by our asset inspector whilst undertaking routine T98 inspections. Erosion to the existing tar and stone revetment had occurred, creating a void under the defence of approximately 2.3m x 8m x1m.

An initial repair to the revetment, using concrete, was completed by our local field team to ensure there wasn't further degradation of the flood defence, however, due to the geometry of the wall the initial repair couldn't fill the void that extended under the defence.

Specialist contractors were then employed. Over a 2 day period, holes were drilled into the existing reinforced concrete track over the void, which were then injected with an expanded polymer.

The specialist works were completed in October 2018 through the FCRM Operations Framework Lot 1 suppliers, Kingcombe Stonbury Ltd and managed by the area Asset Performance team. The works cost £30k.

See Figure 4 below.



Figure 4: South Humber Bank, Oldfleet, Lincolnshire. Showing erosion damage to revetment (left), void under concrete track and floodwall (top right). Specialist contractors injecting expanded polymer through concrete track to fill void (bottom right).

5. De commissioning and river rationalisation approaches to Asset management.

- 5.1 As part of our whole life approach to asset management, we also look to actively engage with partners and stakeholders, when assets no longer have significant FCRM benefit, and we may want to withdraw maintenance. As an area we have been part of a pilot, looking at the best way to approach such decommissioning, and will look to explore this approach in the future.

EXAMPLES

Rationalising the Main River Network (RMRN) - South Forty Foot Pilot Project

- 6.1 The RMRN South Forty Foot Pilot Project has now been completed. Following a formal public notice phase on gov.uk to de-main the 5 pilot watercourses there were no objections. The watercourses were formally de-mained, a total of 16.8km, and maintenance responsibility (and associated Environment Agency assets) have transferred to Black Sluice IDB.
- 6.2 The success of this pilot project has been down to the strong partnership approach with Black Sluice IDB, and the support of key partners in the area including Lincolnshire County Council, Natural England and Anglian Northern RFCC. This is the first of the national pilot to reach this stage, with work continuing on the Isle of Axholme, Norfolk & Suffolk, and Stour Marshes pilot projects. They will also soon be moving to the formal public notice phase over winter, with the aim to complete the pilot project by the end of March.

Black Sluice Pumping Station

- 6.3 As announced at the ANRFCC meeting, we are formally moving to decommission Black Sluice Pumping Station (BSPS). This has been agreed in partnership with Black Sluice Internal Drainage Board (IDB), Lincolnshire County Council (LCC), Boston Borough Council (BBC), Anglian Northern Regional Flood and Coastal Committee (ANRFCC), the Association of Drainage Authorities (ADA) and the National Farmers Union (NFU). This is following thorough investigations by Black Sluice IDB to take on the asset through a formal transfer which, due to the significant costs involved, is not possible. The ongoing process ensures that we inform all stakeholders, district and parish councils and consultees from of the move to decommission. We will continue to pro-actively engage as the project progresses.

We are also working with Heritage Lincolnshire too understand the feasibility of re-purposing the building to provide a new amenity to Boston and the area. This is being taken forward with partners, as are discussions around how to manage flood risk in the wider catchment. We will continue to keep members up to date as the project progresses, and welcome any feedback or suggestions for the future use.

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