



Scrutiny Panel

Item
16

13 February 2024

Report of	Head of Sustainability	Author	Fiona Shipp ☎ 589250
Title	Middle Mill Weir Collapse - Briefing		
Wards affected	Castle		

1. Executive Summary

- 1.1 This briefing sets out the position at Middle Mill following the recent collapse of the weir in December 2023.
- 1.2 Middle Mill Weir is a structure that is owned by Colchester City Council (CCC), located on the River Colne next to Castle Park and consists of three flow channels. The northern and southern channels have flow control sluice gates, and the central channel is uncontrolled over the weir. The northern and middle flows, pass under a footbridge and the southern end passes under two brick arch culverts with a replica water mill wheel between the culvert sections.
- 1.3 A collapse of a section of the weir in Dec also led to the closing of the adjoining bridge over the River Colne. This bridge is owned and managed by Essex County Council. The bridge itself had shown cracking in its abutments and also is potentially at risk of being hit by any further collapse of the weir structures.

2. Action Required

- 2.1 For the Scrutiny Panel to be informed of the incident and to note the work being undertaken to remedy this situation in the short term and investigate options for a solution for the longer term.

3. Reason for Scrutiny

- 3.1 It is intended that when the options have been fully researched on how to remedy the situation longer term, they will be presented to cabinet for a decision.
- 3.2 The situation has gained a lot of media and local interest and the Scrutiny Panel has requested an update.

4. Background Information

- 4.1 The Environment Agency (E.A.) used to operate the sluice, but this operation was handed back in approx. 2015. This was the case with many Environment Agency operated sluices around this time. Since then, the Castle Park Rangers have taken over operation of the sluices to reduce flood risk upstream at times of high rainfall/high water levels.
- 4.2 Regarding the bridge at Middle Mill, we believe the ownership, responsibility and maintenance sit with Essex Highways from when they became the Highway Authority. Bridge Asset number 2007.

4.3 Timeline

July to Nov 2023 – leaks had been noted by the sluice and Officers believed that maybe some debris had got caught in the sluice gate causing a visible bubbling of the water next to the sluice, which needed a clear out. It's common for this to happen at this time of year when the sluice is being operated often.

30th October 2023 – email from Colchester Canoe Club concerned about cracks in abutments of Essex County Council owned bridge next to Middle Mill Weir. Reported to Essex County Council for inspection. They felt there had been no change since 2017 and did not take any further action.

Week beginning 4th December 2023 – Park Ranger noted on inspection that part of the weir had been undermined by water erosion causing a significant sudden drop in water levels in the river. The Environment Agency were informed. Cracks noted in brickwork.

10th December 2023 – Park Ranger reported collapse of part of the weir structure. Bridge was then closed, initially by CCC staff as a temporary measure, then Essex County Council did this more formally later the same day. See appendix A.

20th December 2023 – 30 x Tonne bags of ballast installed in river around part of the collapsed structure to try and prevent further erosion of the remains of the structure. See Appendix A.

8th January 2024 – Middle Mill Weir Working Group set up and held first meeting. Meeting now held fortnightly.

4.4 Summary of Steps Taken to Date

- Bridge closed by Essex County Council
- 30 x Tonne bags of ballast installed.
- Contractor asked for high level costs for 3 initial options.
- Working Group set up.
- Structural Survey undertaken 17th January 2024 (report received 22nd Jan)
- Formal bodies contacted for professional opinion on impacts of weir loss and potential options going forward.

4.5 Options

Currently three options are being investigated:

- i. Removal of the damaged and washed-out sections of the weir including the last pillar that remains. This is likely to need to happen sooner rather than later. The structural

report confirms that some sections should be removed but also that further investigation is required on others. Some sections may be salvageable.

- ii. Potential replacement of the weir with a smaller weir structure to hold water levels slightly higher upstream. EA confirmed this would also need to include a fish pass structure.
- iii. Replacement of the structure meeting current laws/guidelines and Environment Agency requirements. Would need to include a fish pass.

For all of the above options planning permission and Environment Agency permitting will be required. (planning 12 weeks from submission and EA permitting 8 weeks)

A potential add-on option if the weir is not replaced, is to enhance the riverbed for wildlife by installing gravel bars and adding meanders. However much of this process will happen naturally within the first few years. This would be positive work considering the current climate change emergency.

4.6 Key Areas of Further Work (identified so far)

- Look at structural report and commission further investigation work.
- Continue to consult with key bodies and local community groups.
- Apply for retrospective Environment Agency permit for emergency works that were already undertaken.
- Liaise with Essex County Council representatives regarding the bridge and opportunities/requirements for joint works.
- Confirm approval process and provide options paper for formal approval.
- Apply for planning permission (depending on option chosen)
- Apply for Environment Agency permit for works (depending on option chosen).
- Tender any works required.
- Time works to avoid mid-summer and mid-winter due to river conditions.
- Ongoing management of Media and Councillor enquiries.

5. Equality, Diversity and Human Rights implications

5.1 At this time the diversion that is in place is causing concern with residents who are having to take a long detour which is not a smooth surface for its full length. This is physically disadvantaging elderly residents, wheelchair users, parents with children and prams and for cyclists. We have highlighted these issues and concerns to ECC.

5.2 The diversion is the responsibility of the bridge owner Essex County Council and the route of the diversion is partly owned and managed by Essex County Council and partly a path on unregistered land.

5.3 The route is not lit for its full route and potentially raises issues around community safety, although there is no obligation to provide a lit route.

6. Standard References

Shown below in paragraphs 7-13.

7. Strategic Plan References

7.1 Moving forward this project will highlight a choice of options which are currently being researched. Consideration will then need to be given to their links to the Strategic Plan regarding the heritage nature of the structure and also regarding the opportunities for environmental enhancement of the river. In particular:

Celebrating our Heritage and Culture

- Enhance and promote our heritage by better revealing our assets by supporting projects and initiatives to increase public awareness and access to their heritage in daily life.

Tackling the climate challenge and leading sustainability

- Minimise the environmental impact of our activities.
- Enhance environments to create more space for nature to grow and thrive through natural seeding and greening.

8. Consultation

Relevant local groups have been contacted for their opinion regarding the broad options that are currently being looked into. Their responses will be collated and used to help put together the pros and cons of each of the options. This will then form part of the paper to cabinet for decision.

9. Publicity Considerations

9.1 Contact has already been made with formal bodies who have an interest in the weir. They have been asked for their formal opinion on the 3 broad options we are currently looking at. They are; The Environment Agency, Natural England, Anglian Water, Essex and Suffolk Rivers Trust, Essex Wildlife Trust, and English Heritage.

9.2 We will also be consulting formally with local community-based groups who are potentially affected by or who have local interest in the weir. These include Colchester Canoe Club, The Civic Society, Colchester Natural History Society, CO1 North Residents Association and Friends of Castle Park.

10. Financial implications

Initial high levels costs for removal of the structure and installation of the new weir structure have been received. The company were not able to quote for the replacement option at this stage, until they know what work we planned to do around removal first, this will determine the required work and the price.

On discussion with the Environment Agency, it was clear that a fish pass would be required for any new structure, and this could cost up to £100k potentially on top of costs already quoted.

11. Health, Wellbeing and Community Safety Implications

11.1 No specific health and wellbeing considerations have been identified at this stage.

11.2 Community safety concerns around the lack of lighting as mentioned above.

12. Health and Safety Implications

12.1 The current health and safety issue for the public lies around the bridge closure which the public are regularly trying to breach rather than take the longer diversion route. The responsibility of this closure and diversion lies with Essex County Council.

12.2 CCC Park Rangers are keeping a daily check on the area to help with monitoring this and reporting of any issues. They are also monitoring the remains of the weir structure for any further deterioration.

12.3 CCC Health & Safety Officer is fully informed of the situation and forms part of the Working Group to ensure this is considered in all aspects of the work.

12.4 Essex County Fire and Rescue Service have been informed.

13. Risk Management Implications

Corporate Risk

There is a financial risk of further collapse causing damage to the ECC owned bridge immediately downstream and integral to the structure.

Any change in river flow raises concerns from the public regarding potential flooding.

Concerns have been raised regarding longer term structural effects of lower water levels on the riverbanks and questions asked about the knock-on effect for structures next to the river.

With lower water levels we will not be able to refill the boating lake at Castle Park during the summer months or after any clearing out. We are considering the immediate and longer-term implications of this.

Community Aspect

In approx. 1993 Colchester Canoe Club started use of the weir for white water practice, training thousands of canoeists over the years. For the last 3 years it has particularly benefitted their freestyle team with a member becoming junior European champion. The junior section of freestyle is very successful with 3 members undertaking initial training with the British junior team. The canoe club are keen to have the weir replaced and improved for canoe use including portages (steps for getting in and out of a boat) either side.

There are concerns about the exposed riverbed mud looking unsightly and being smelly.

Property

Estates team have checked ownership. The weir is owned by CCC and the bridge is owned and maintained by ECC.

Flood Risk Aspect

An initial meeting was held with E.A. representatives on 22 Jan 2024 and they confirmed that there is no increased flood risk resulting from the loss of the weir. A formal response is expected in writing in follow-up to this meeting.

Heritage Aspect

The structure is old and had good aesthetic value. It had some repairs particularly to the water wheel which was removed and repaired in approx. 2000/2001 along with brickwork repairs in the chamber. Heritage England have been asked for their opinion and confirm that the asset is not designated, and as it is not on their 'At Risk' Register, it would likely not be eligible for their grant assistance programmes unless the weir serves a purpose in protecting other nearby designated heritage assets from river water damage.

Water Quality

Anglian Water have been consulted and there is the need to continue to inform them of any works causing disturbance which may cause siltation of the water or add any other debris to it. This directly effects their abstraction point upstream of East Bay Weir. (downstream of Middle Mill). They have also been asked for formal feedback on the potential options.

14. Environmental and Sustainability Implications

14.1 Opinion has been sought from the following key bodies:

Environment Agency, Natural England, Essex and Suffolk Rivers Trust, and Essex Wildlife Trust. Initial feedback suggests that the complete removal of the weir structure has large environmental benefits.

Appendices

Appendix A - Photos

Appendix A

Weir Showing ballast bag protection installed 20th Dec 2023



Weir showing initial collapse in December 2023

