

DRAFT

The Waterways Watercourse

Notes of the multi-party meeting held on 26th May 2017 in the Waterways Community Room

Those present

Adrian Olsen (Chair), Hilary Sorensen, Louise Robertson, Tao Tao Chou, Richard Mayon-White – Waterways Management Company (WMC)

Dr Curt Lamberth, (Consultant)

Cllr John Howson (Oxfordshire County Council)

Cllr Tom Landell-Mills (Oxford City Council)

Gordon Hunt (Oxfordshire County Council Drainage Department)

Tim Rodway, Bruce Lawson (Berkeley Homes "BH")

Mark Roberts, Denise Kinsella (Thames Water "TW")

Everyone was thanked for attending the meeting. Each person invited had some responsibility or interest in the watercourse, either in the planning, design, maintenance or as users of the watercourse.

Hilary Sorensen began the meeting with a short summary of the problems of managing the silt on the Waterways and what action has been taken in the last few years.

We are in an area of high density with the Trap Grounds to our south so they need to be given clean, unpolluted water.

The Waterways Management Company has, in the past 5 years, spent in excess of £100,000 in clearing silt. A list of the expenditure was handed round. There was a contribution from the County Council which is responsible for the culvert under Frenchay Road. They contributed £8,000 and WMC are very grateful for this contribution.

There was another related issue when parts of the estate to the east of the canal were liable to flooding because water was not clearing through the siphon system quickly enough. The silt and water levels were so high on the west side of the canal that it was not possible to clear the obstruction until the silt was removed and the water levels lowered. An emergency channel had to be made to take excess water to the canal and over about 18 months this cost £45,000 in licence and discharge costs to the Canal and River Trust.

The owners of properties on the Waterways have therefore spent £139,000 on the removal of silt in 5 years. (401 homes at approx £350 each property.)

From Dec 2014 to Dec 2015 WMC paid for a complete de-silting of the watercourse to return to 'Point 0' with no silt. There were, during this period, several pollution incidents.

In March 2016, following an earlier pollution incident and as a gesture of good will, the balancing pond was cleared by Lanes, on behalf of TW, taking three days. We are not aware of the cost of this work. Just over a year later, in May 2017, WMC paid Lanes to clear the balancing pond again. They cleared between 22 and 24 tons wet silt. Lanes considered this was equivalent to 12 – 15 tons semi-drained silt.

Dr Curt Lamberth had been contracted by WMC to investigate the quality and quantity of the water entering our balancing pond. There is no contribution of silt from the lake or swale on our eastern site. His report estimates a level of 2 tons of dry silt is brought in through the TW siphon under the canal into

the balancing pond each year. The particles entering our system are mainly organics, typical of road run-off.

A specialist in Sustainable Urban Drainage systems was consulted by WMC but he explained that the system on the Waterways is not a full SUDS by current standards as the flow rate is not controlled and silt is not properly trapped at source.

A plan of the huge catchment area for the siphon was circulated. The catchment area is not just the Woodstock Road, the area extends to the Banbury Road and numerous side roads.

BH representatives agreed that they had not expected that amount of silt to be brought into the balancing pond when the watercourse and wildlife corridor were designed.

Dr Lamberth explained that he had made a series of measurements over a long period and found that following an upstream clearance of the TW drains the water quality improved for a period.

He measured the sediment in storm surges and explained that the balancing pond is not sufficient to collect the silt which flows downstream during a storm as the organic matter is so light it is mixed up in the turbulent water and flows on. Something similar happens in silt traps and gully pots, where heavy rain flushes out much of the material collected, especially the lighter organic material.

Before the Waterways was built, silt traps were positioned to the east of the siphon to collect (a) heavy gravel & (b) oil, as the site was occupied by a manufacturing company. They do not collect lighter material.

Road cleaning has reduced with the cuts and the County Council do not clear the surface water gullies and gully pots as often as they would like with the cuts to services. However, after a pollution event in May 2016 the surface water pipes in Frenchay Road were found to be 80% full of silt and gravel. These drains have not been cleared for at least 3 years, possibly not since 2001 when the car parks beside the apartments were laid, which might account for the levels of gravel in the pipe-work. These surface drains were cleared in May 2016 by Lanes, taking a full day, and it was all recorded on a camera.

Similarly there have been incidents of oil slicks and pollution in the wildlife corridor, probably originating from the culverts draining the west side of the estate and indicating that the gullies are not regularly cleared or are ineffective in holding material after heavy rain.

TW explained they have only ever had responsibility for the drains up to and including the siphon. They have never taken any responsibility for the water or water quality after it leaves the siphon. Before the Waterways estate was constructed the water and silt drained from the siphon southwards down a ditch by the side of the canal towpath and was dealt with by Unipart.

Interceptors were discussed. It is without doubt that the silt coming under the canal through the siphon from the TW surface drains has vast quantities of sediment. TW were asked if a more effective interceptor could be fitted to trap light organic matter.

BH asked for a more detailed plan of the TW drains and the interceptors and their position within the catchment area. TW explained that these plans are not open or available but BH may be able to access them.

It was thought that the balancing pond was not capable of dealing with the large amounts of material flowing into it, particularly at surge times, and therefore a significant amount of silt was flowing further downstream to be deposited in the wildlife corridor and Trap Grounds. The possibility of enlarging the balancing pond and/or creating a second balancing pond next to it was discussed and BH will look into this. Greater capacity here would help prevent material flowing downstream. Ideally, a combination of the TW silt trap east of the canal and a sufficiently large balancing pond system should trap (almost) all of the material coming from the catchment area and so keep downstream areas completely free – that is

what we should aim for. It was also suggested that there may be silt build-ups in the pipes downstream beyond the Trap Grounds and this may have an impact upstream.

Dr Lamberth asked for a model of the flow and pulse flow rate in the catchment area. TW have remodelled recently. With this data he could see whether a vortex system or a second pond system could be incorporated into the watercourse. Alternatively a weir crest system could separate the clear water for discharging downstream, and trap the silt at source. With the model data the people at this meeting could make alterations to the design. BH said they would contact Stuart Divall, the original watercourse designer, with these models to see what he suggested be done. Dr Lamberth said he would be happy to respond on an ad hoc basis, time permitting. In due course we may need to engage Dr Lamberth more formally to review any proposals put forward by BH and/or TW.

Long term solutions were discussed as the downstream water-course needs to be protected as well. It is evident that the watercourses south of the Waterways are also gradually blocking up with silt including in the Trap Grounds as the water levels are rising.

In terms of future communications among the attendees, all agreed to be openly cc'ed in emails. TW provided contact details for Denise Kinsella to assist in this. Denise will ensure that our correspondence is forwarded as appropriate to their Customer Services department as this is needed for their own internal audit trail.

ACTION

1. Ideally WMC would like to receive less silt. Interceptors suitable for the light organic road run-off should be installed upstream east of the canal. (There is space beside the Bainton Road cycle path to the Waterways for such an interceptor where it can be accessed by tanker.)
TW will look into what is possible.
2. Gullies and Gully traps should be emptied more regularly.
The Councillors and Gordon Hunt will pursue this issue.
3. The balancing pond is doing its job but only partially. If the balancing pond could be altered/enlarged and/or a second one created to trap more silt the silt would not be taken down stream where it affects wildlife and is far more difficult to remove mechanically.
BH will look into this in conjunction with (possibly) Stuart Divall, Dr Lamberth and others as necessary.
4. Other solutions including a Vortex filtration system, a dynamic separator or another system could be designed to improve the water quality as it progresses through the watercourse which would provide a more effective method of trapping silt.
Dr Lamberth will assist in conjunction with BH and with information from TW.
5. TW to provide their recent modelling data of the flow rates, etc of the surface drains that deliver to the siphon to allow BH (and Dr Lamberth as appropriate) to progress with the above actions.
TW to provide modelling data.
6. WMC will send Dr Lamberth's report to TW.
WMC
7. The cost to WMC of clearing the balancing pond is above £2,000 a year, not including waste disposal. A contribution of £1,000 by the BH representatives was promised if TW contributed £1,000 towards silt clearance of the balancing pond annually. TW will look into this possibility.
BH and TW