Mogden Sewage Treatment Works

Residents Liaison Meeting

29 April 2021

Agenda:

- Welcome and introductions
- Review of previous minutes and actions
- Sewage discharge into DNR update
- Complaint's update
- Mosquito update
- Biodiversity update
- AOB

Sewage discharge in the Duke of Northumberland River - Update

Incident Summary

Date of incident	29/01/2021
Incident Summary	At approximately 17:00 on 28 January Mogden STW started to see an increase in grit and silt entering the East Side Inlet Works. Tankers were requested to help clear the grit, however this continued to build up. By 05:30 on 29 January the inlet screens had become completely blocked. At approximately 11:00-11:15 this resulted in flows backing up and discharging from a bricked up culvert into the Duke of Northumberland River. The discharge lasted for approximately 2 hours. As a result, flows in the Duke of Northumberland River increased and resulted in external and internal flooding of properties approximately one mile downstream of Mogden STW. The flooding was relieved by the opening of Kids Mill Sluice Gate at approximately 12:00. This flooding was not initially connected to the incident at the STW due to a miscommunication between Incident and Operation teams regarding the discharge location, with the initial discharge location reported as the River Crane before being corrected to the Duke of Northumberland River.
Cause of the incident	The root cause of this incident was the unprecedented amount of grit that entered Mogden STW from the incoming network. It is estimated between 10 and 12 tonnes of grit was cleared from the East Side Inlet Works. The source of the grit and silt has not been identified.

Site Overview

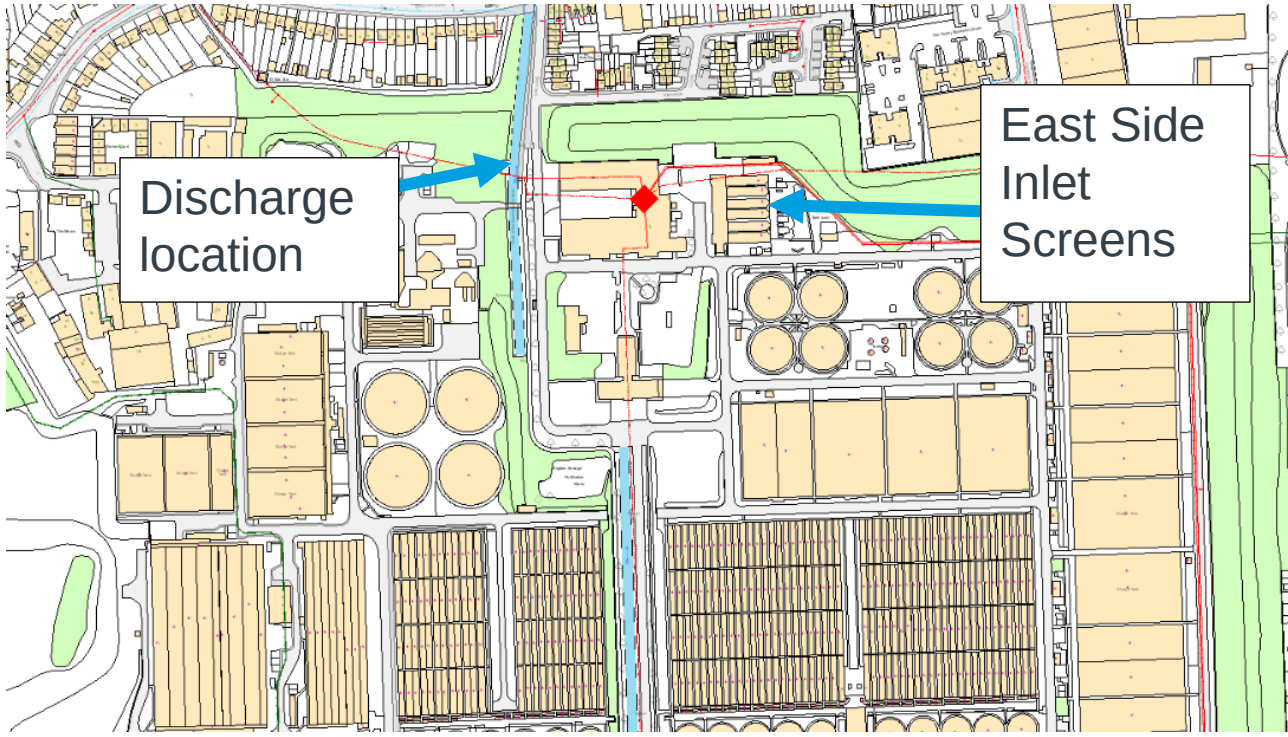
Sewage is received from the Chiswick and Western Low-Level Sewers and is pumped to the High-Level Culvert (HLC) and mixed with storm surplus from the West Side Works and cess imports.

The HLC consists of six separate flumes, each with an electronically controlled penstock that is operated locally under instruction from the Process Controller, each feeding one of the six screens.

The flow passes through 12 6mm band screens. Screenings are fed to a dewatering belt conveyor and then to 3 dual washpactor units, then to 4 compactor skips.

There are 6 grit channels, one for each pair of screens. The grit is removed by a dredger and pumped to 3 grit classifiers for dewatering and is then discharged into 3 skips for removal.

The screen sewage passes through a flow control penstock, which limits the flow to treatment. Excess flow overspills a weir and is directed to 8 storm tanks.



Root Cause

- The root cause of the incident was a significant build up of grit and silt at the East Side Inlet Works. Heavy rain and snow melt in the catchment caused a surge of flows into Mogden STW.
- It is estimated that 10-12 tonnes of grit was cleared from the East Side Inlet Building.
- The build up of grit occurred before the grit removal system in the inlet works and therefore was not linked to any issues with the grit removal system.
- Investigations are ongoing to identify the potential source of the grit in the network.

Grit removed from the inlet

Incident Learning and Actions

- A clean up has been completed of the areas affected by the flooding.
- The culvert was bricked up in the first week of March and a long term solution is being reviewed by the Asset Management team. Modelling will be carried out to identify the potential spill point if levels in the incoming sewer reached the same height again
- The Environment Agency have been approached regarding the sluice gate operation and future emergency procedures.
- Investigations are being undertaken to identify the potential source of the grit into the sewage treatment works. Additionally, a review of similar issues with grit at other trunk sewer locations across the network is being carried out.
- There will be increased use of the ‘What3Words’ app across all of Operations to help identify discharge locations. This will help prevent any confusion over the watercourse impacted.
- A review of event management procedures will be carried out to ensure incidents are escalated appropriately.
- Further monitoring of the Duke of Northumberland River is to be undertaken to assess for long term impacts.

Duke Of Northumberland River Clean

Duke Of Northumberland River Clean

Progress Report April 2021

- **Phase 1** of the clean up:
  - Removal of bulk rag around the outfall
  - Precautionary disinfection of hard-standing surfaces from floodwater impact.
  - Began **6 February.**
  - Some initial delays due to sub zero temps restricting working in water.

- **Phase 2** of the clean up:
  - Hand clean of all rubbish (inc general litter) from specialist environmental response company (Adler and Allen)
  - Riverside Walk, Octavia Road and Silverhall Park conducted **3 – 9 March**
  - Behind Mill Plat Av conducted **8-9 April**
  - A+A removed 59 x bags and 10 bulk bags from the main river. Split between 20% sewage waste and 80% general litter

Duke of Northumberland River Clean

Next steps and ongoing dates

Environmental Monitoring Surveys:

- All surveys confirmed (except dates).
- Macroinvertebrate survey (Spring) conducted on **31 March**
- Analysis and report due early **May 2021**
- All findings and reports will be shared.

ITEM	DATE
Spring invertebrate survey	31/03/2021
Invertebrate analysis	W/C 03/05/2021
Initial Summary	W/C 10/05/2021
Fish survey	TBA
Fisheries Summary	TBA
Autumn invertebrate survey	TBA
Analysis	TBA
Final Assessment Report	TBA

Macroinvertebrate Survey (Spring)

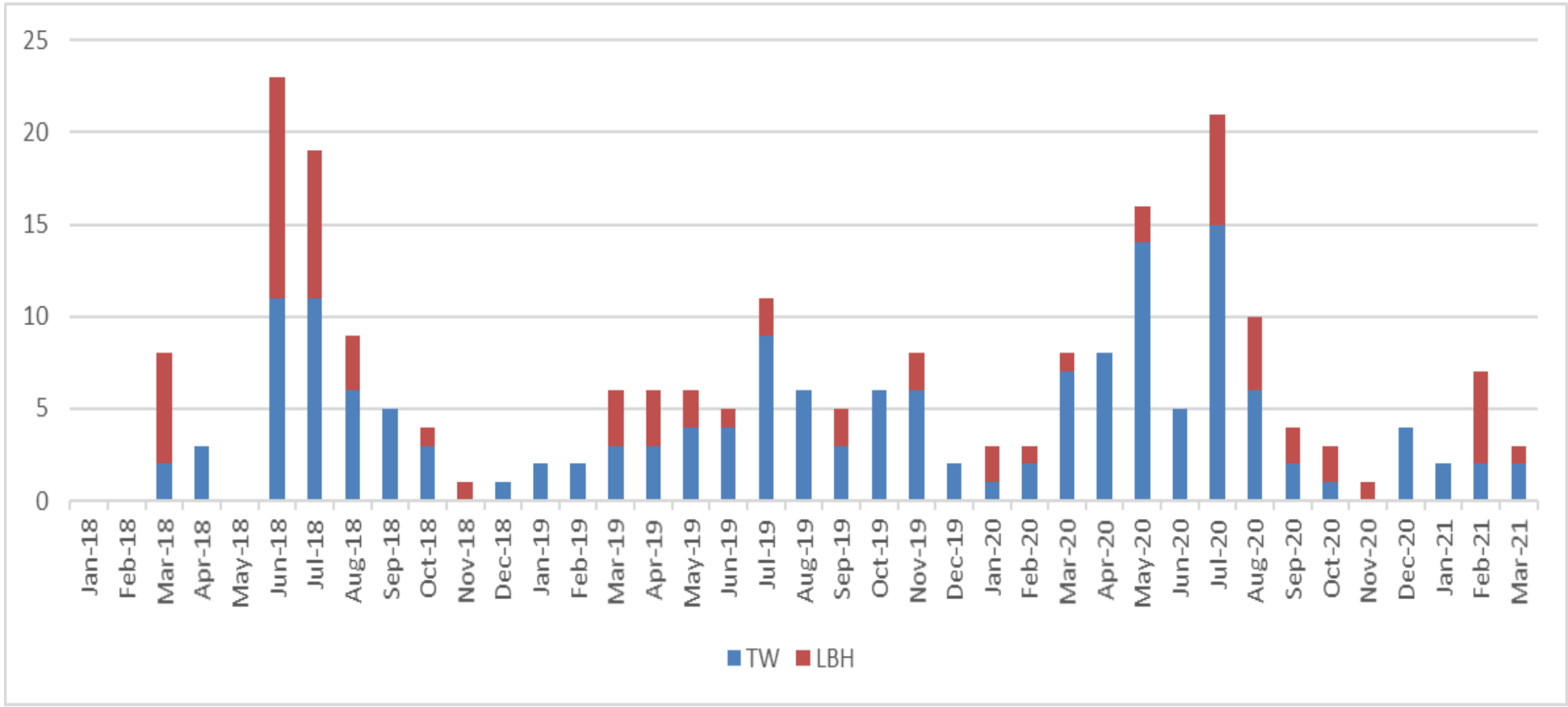
Initial observations

- Sample Site locations:
- Upstream (TQ 16240 76022) – ~700m upstream of POI. Opposite main entrance to Mogden Water Treatment Works, just below footbridge.
- Downstream 1 (TQ 15344 75617) – ~250m downstream of POI. Downstream of The Royal Oak pub.
- Downstream 2 (TQ 16240 76022) – ~1600m downstream of POI. Taken within Silverhall Park.

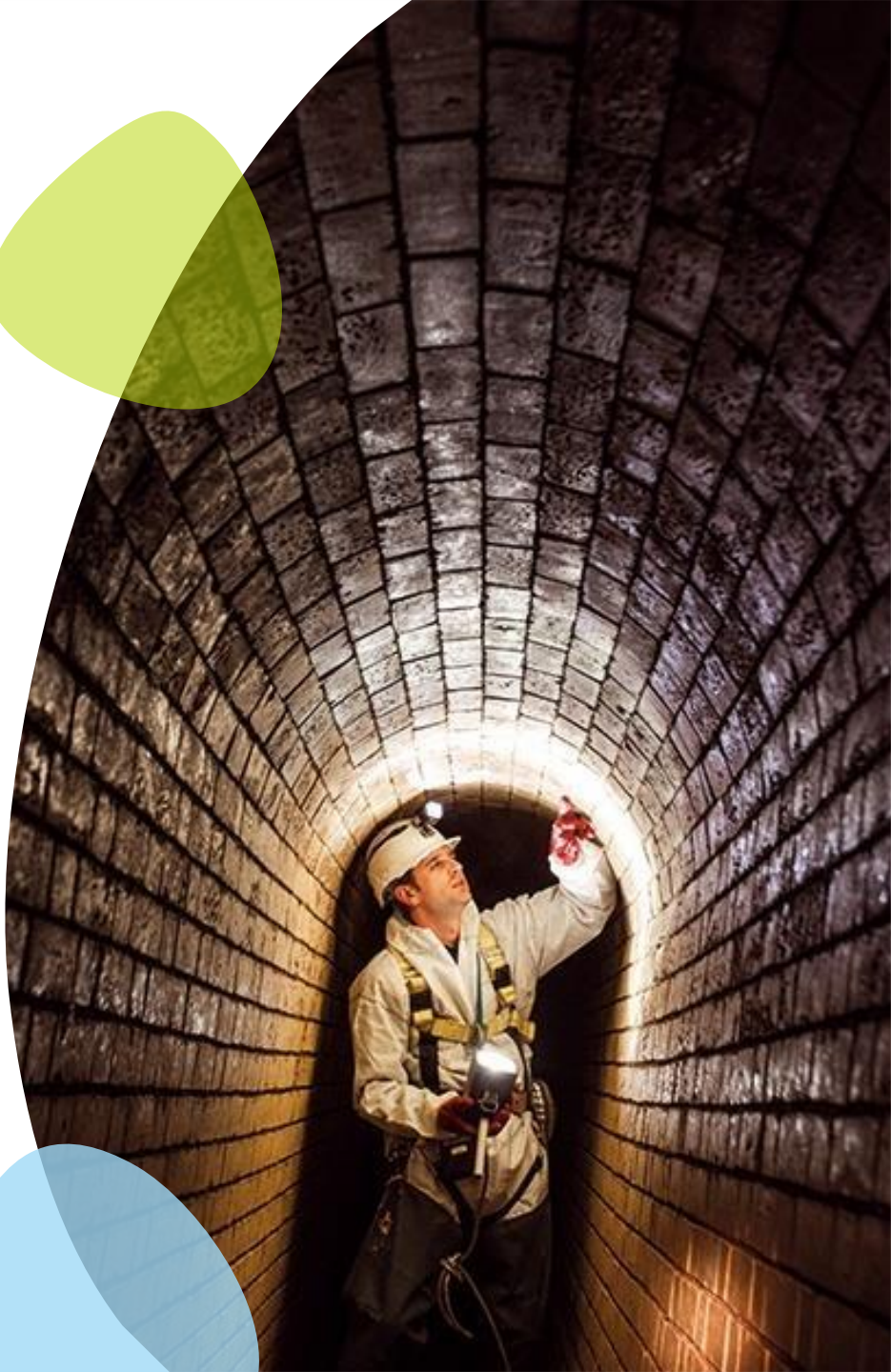
- Observations:
- Three-spined stickleback observed at Upstream site. Heavy filamentous algae and silt layer. No visible sewage fungus.
- Shoal of 80+ silver fish, ranging from 4cm to 20cm in length (likely chub and/or dace) observed ~40m downstream of POI (TQ 15328 75404).
- Shoal of ~100 silver fish, 4-20cm in length (likely chub/dace, possible bleak) observed ~90m downstream of POI (TQ 15335 75500).
- 1 large adult bullhead observed at Downstream 1. No sewage fungus visible.
- 1 small fish observed (unidentified) at Downstream 2 (Silverhall Park). This site was very deep (1.2m+) in some areas, so sampling was focused on the right hand bank, accessible from the park footpath. No sewage fungus visible.
- Macroinvertebrate samples showed 100% live specimens at all three sites.

Customer communication & engagement

Complaints received January 2018 – March 2021



Mosquito Update



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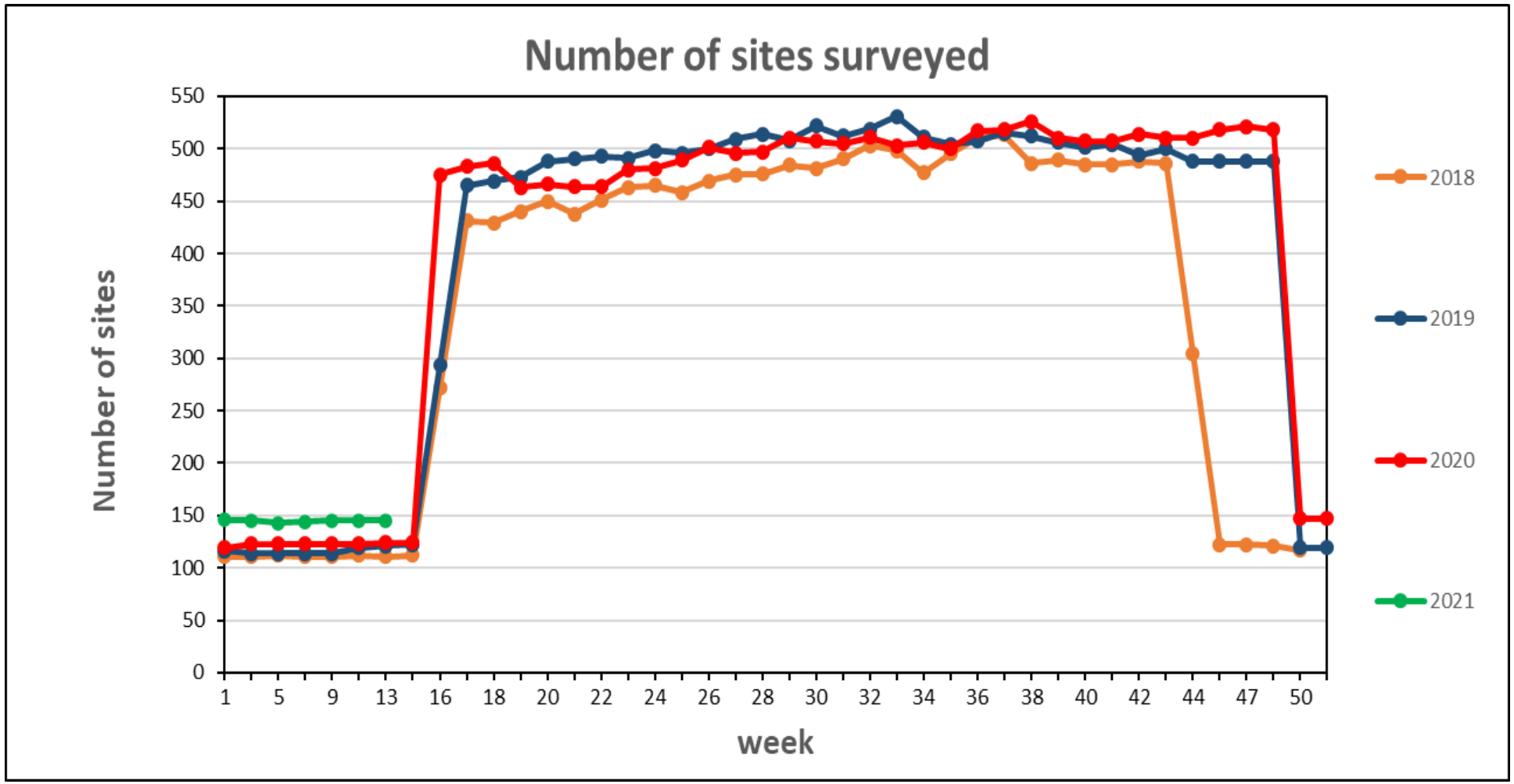

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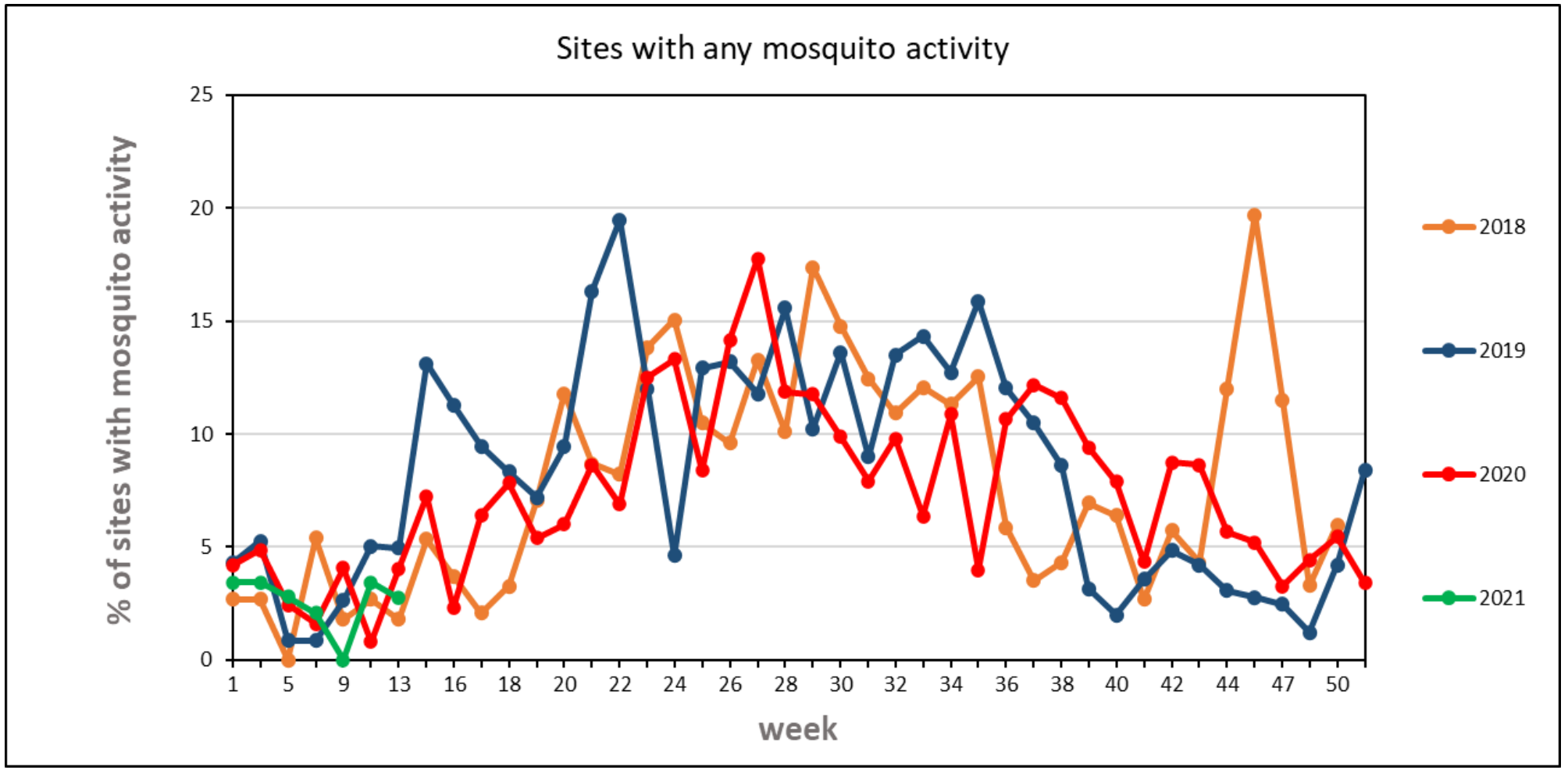

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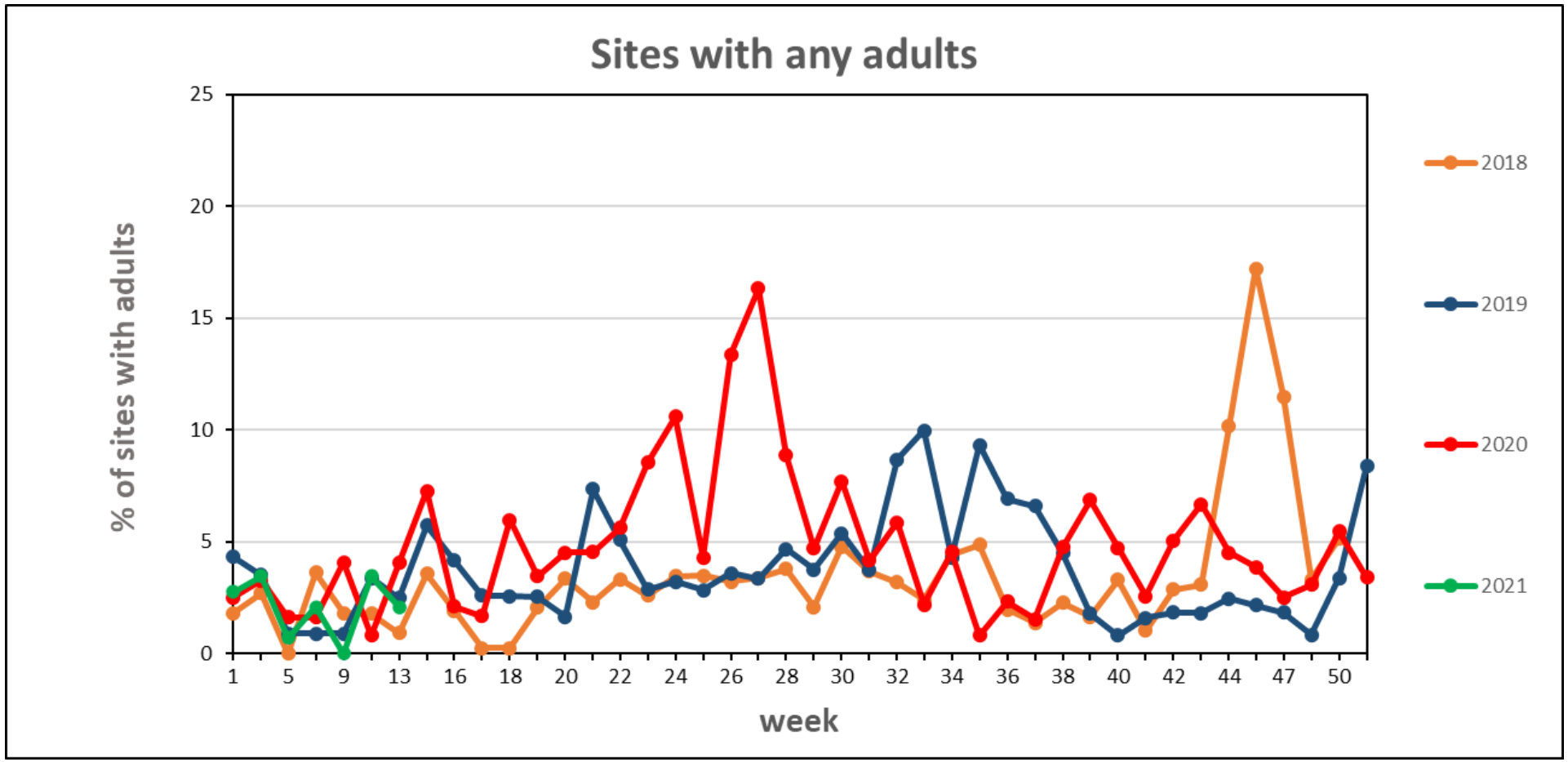

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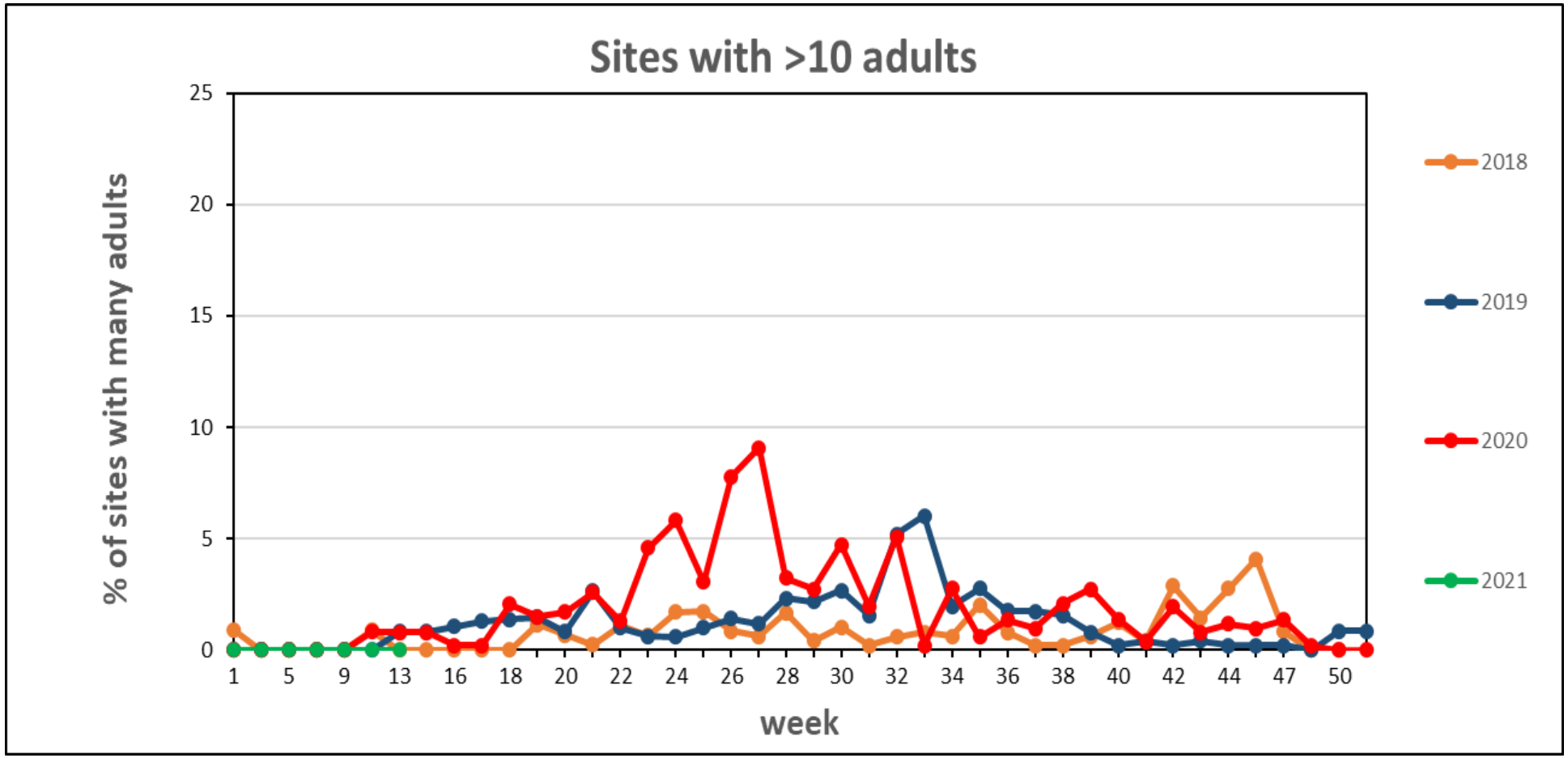

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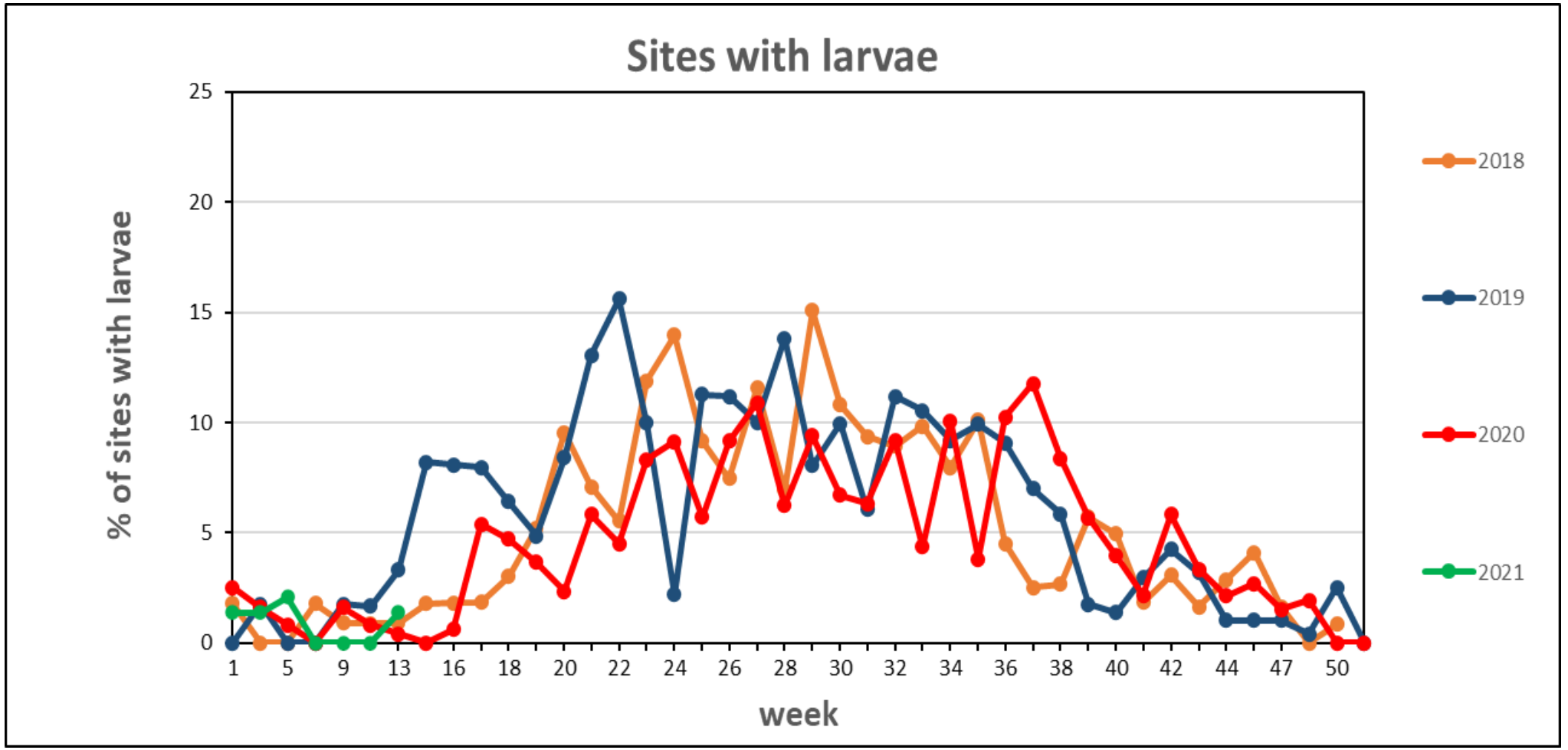

Biodiversity update

Biodiversity update

Butterfly survey walkover:

Meadows: small white, large white, orange-tip, peacock, brimstone, red admiral, speckled wood and common blue species
Other species: carder bee, 7-spot ladybird, goldfinch, kestrel, fox

Duke of Northumberland - Fish baffle installation (outside Oct – June)

Booked for week beginning 12th July with contractors

Wildlife Interpretation Bench

In liaison with Friends of the River Crane Environment (FORCE) & Hounslow Highways team, we have found a new location for the wildlife carved bench, at the beginning of Riverside Close. Hounslow are kindly organising a date for installation.

AOB

Thank you