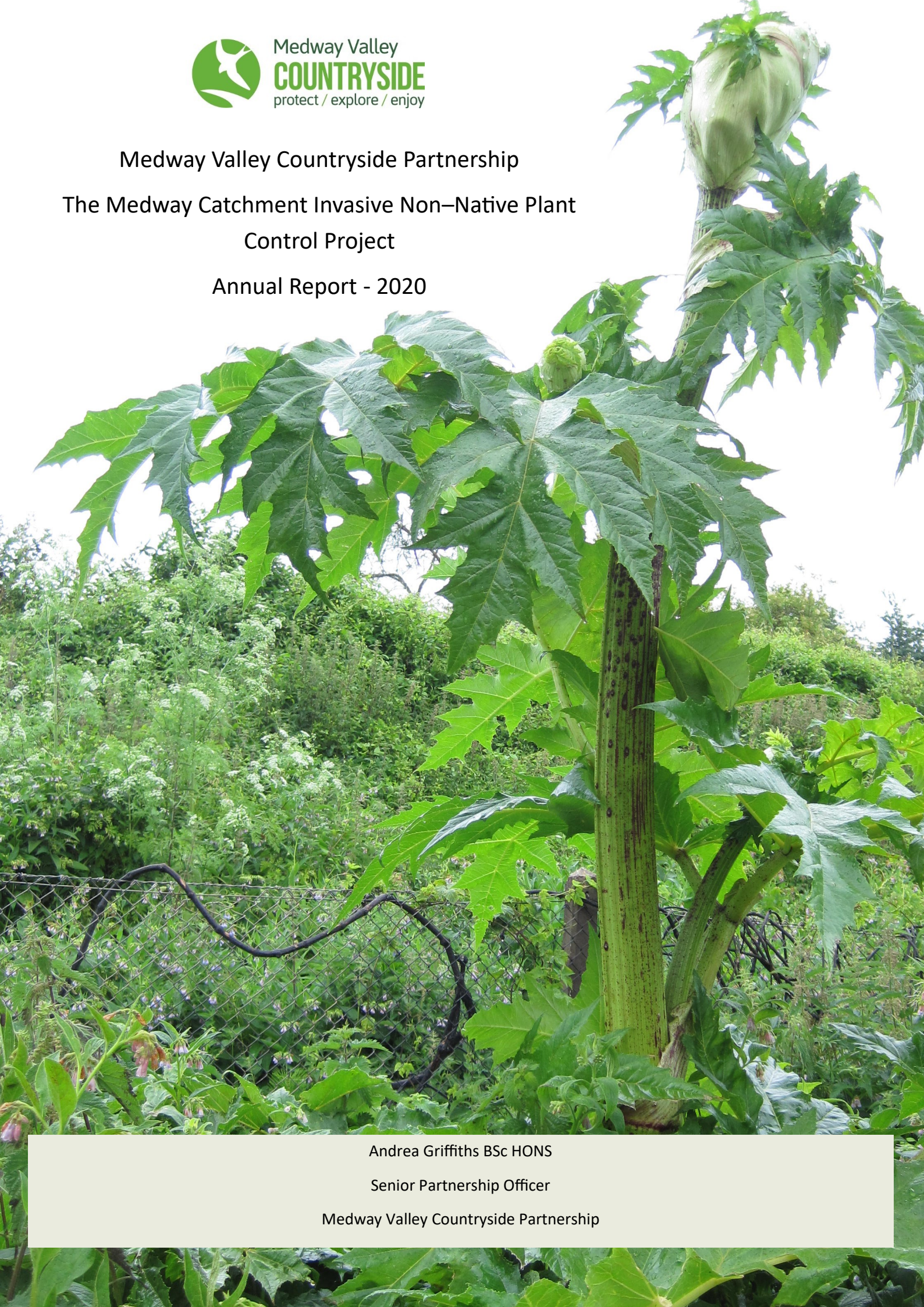
Medway Valley Countryside Partnership

The Medway Catchment Invasive Non–Native Plant Control Project

Annual Report - 2020



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Medway Valley COUNTRYSIDE protect / explore / enjoy

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1.0 Introduction:

Medway Valley Countryside Partnership (MVCP) work in the boroughs of Tonbridge and Malling and Maidstone to conserve, enhance and protect the local countryside for the benefit of both local people and biodiversity.

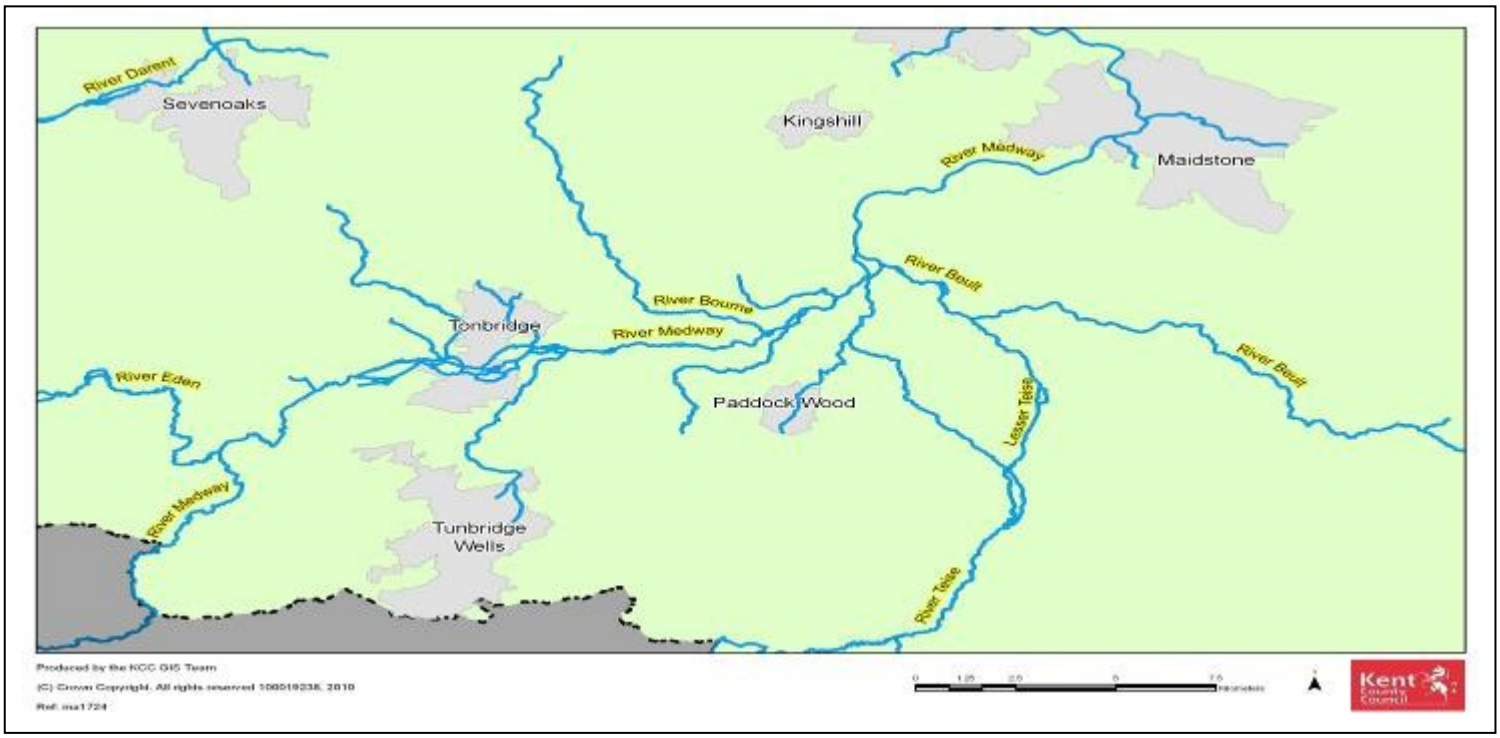
As part of a larger Kent County Council Countryside Management Partnership family, MVCP work on a wide variety of conservation and access projects, working in partnership with many other organisations, linking in with local parish and borough councils and liaising with landowners.

Going beyond their normal geographical work delivery borders, MVCP have been managing the Medway Catchment Invasive Non-Native Plant Control Project for almost 20 years.

Especially for Giant Hogweed control, on an annual basis, the project covers around 200km of riparian habit and includes (where landowner consent is granted and access allows) all of the Medway from East Sussex to the estuary. It also includes the main tributaries; Beult, Teise, Lesser Teise and Gibbs Brook (Surrey) as well as smaller tributaries such as Wateringbury Mill Stream and (in 2020) parts of Crane Brook.

As well as Giant Hogweed, MVCP also control Floating Pennywort, Japanese knotweed, Water Fern and Himalayan balsam. The project supports the involvement of volunteers and includes awareness raining and local training.

This report details the activities of the project in 2020, highlighting the achievements and future requirements.



Map 1 showing river systems included in the project © MVCP

2. Plant Control 2020:

The project has expanded greatly over the last few years and now a number of plants are targeted in MVCP's work, not just Giant Hogweed. To reflect this the following few pages give both an introduction to each of MVCP's target plant species together with information on the 2020 treatment year and maps showing 2020 locations of plants recorded and treated.

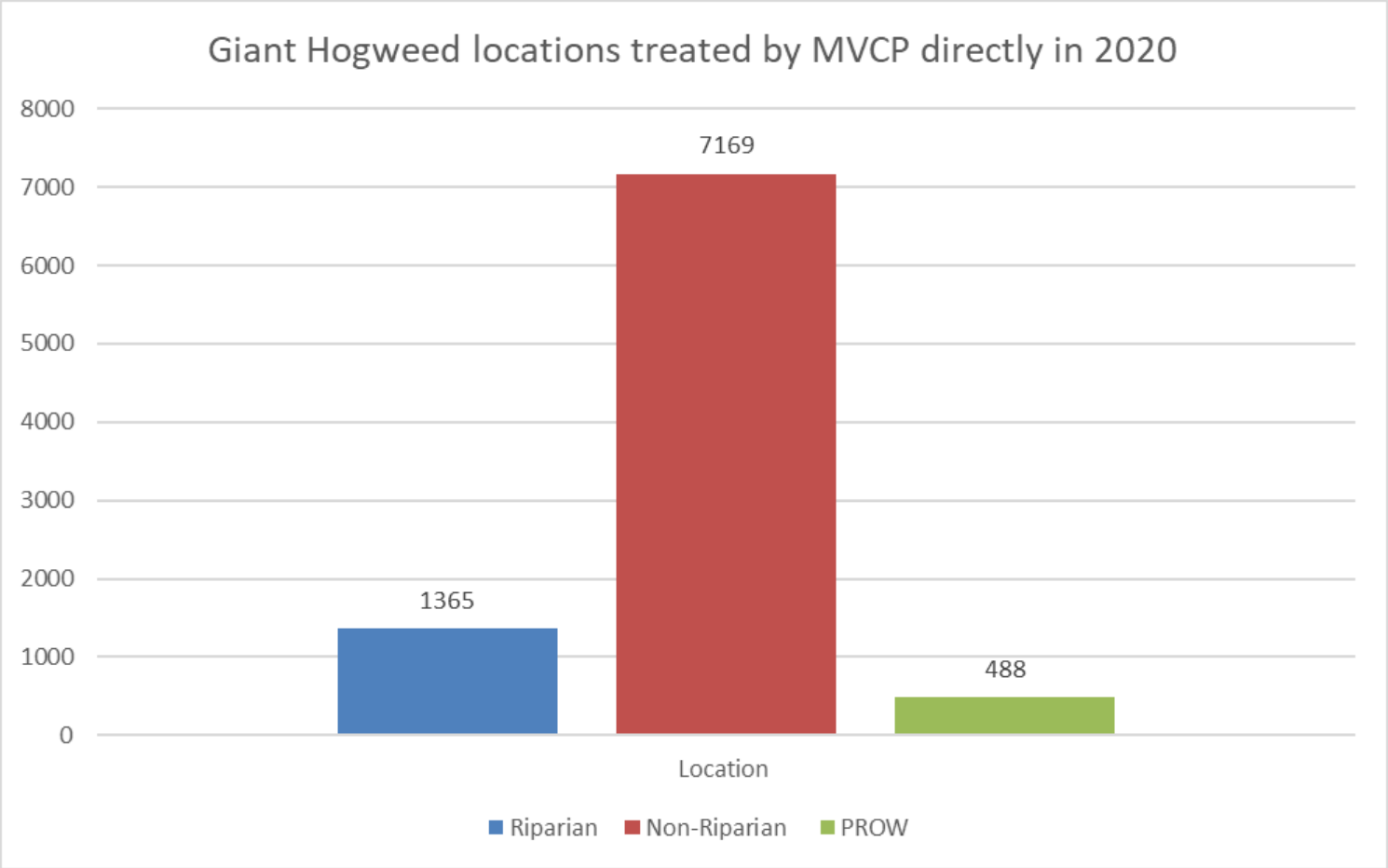
2.1 Giant Hogweed (*Heracleum montegazzianum*)

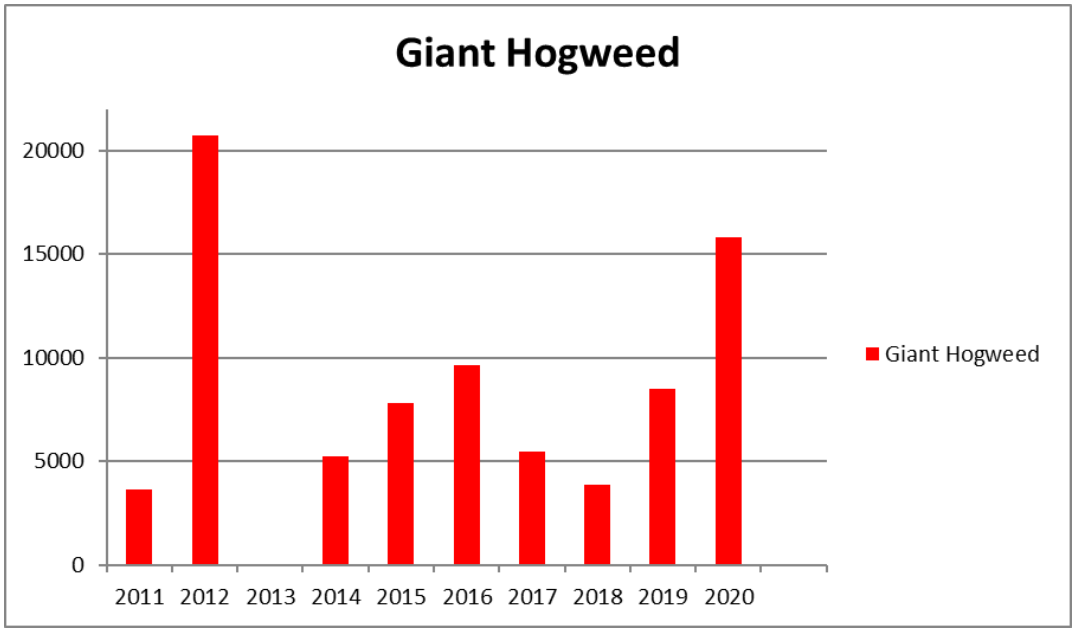
Giant Hogweed was introduced to the UK as an ornamental garden plant but was then recorded in the wild from the late 19C. It is very invasive, with each plant potentially releasing 50,000 seeds each year. Seeds spread along water courses or can be spread by the wind. It grows aggressively, shadowing out other native plants, causing bank erosion when it dies back and thus increases flood risk. It is also a dangerous plant. Contact with any part of the plant should be avoided as it's sap is toxic and can damage the skin, making the skin burn, blister and be sensitive to sunlight. The physical effects of contact with the plant can last for a long time. Giant Hogweed is listed under Schedule 9 of the Wildlife and Countryside Act 1981 and it is also classed as a controlled waste under the Environmental Protection Act 1990.

In 2020 **15,558 Giant Hogweed plants** have been recorded and chemically treated across the catchment by MVCPs project. 6,536 approximately were treated by MVCPs external contractor in the upper Medway, Teise and parts of the Beult and Gibbs Brook. 9022 were treated by MVCP staff directly in and around the Medway Navigation, lower parts of the Beult and Crane Brook.

As shown in graph 1 (page 5), out of the 9022 Giant Hogweed plants treated by MVCP directly, 488 were on Public Rights of Way (PROW), 1365 were along the riverbanks and over 7169 were in other locations, further than 10 metres from the water. Some of these locations, further from the rivers, are highlighted in Map 11 on page 11. So, whilst the 2020 count is higher than the count in previous years (as seen in graph 2, page 5), rather than an actual increase in plant numbers, we believe this data reflects this years increased capacity due to funding and the use of reserves (see page 16) and therefore increased survey effort including investigating possible hotspots slightly further from the river. We also introduced parts of Crane Brook to the scheme in 2020 too which will account for the slightly higher count.

Plant biomass on the main river is clearly reducing (see page 11) and the increased count reflects the increased effort to record and discover hotspots further from the water.





The following pages (6 to 11) show where the Giant Hogweed has been located in 2020. All the recorded plants were chemically treated.

Graph 1 (above top): Giant Hogweed treated by MVCP directly in 2020 and the areas affected by plants.

Graph 2 (above lower): Giant Hogweed count from 2011 to 2020 (please note, the lack of data for 2013 is not due to the fact plants were not treated, but due to data recovery).

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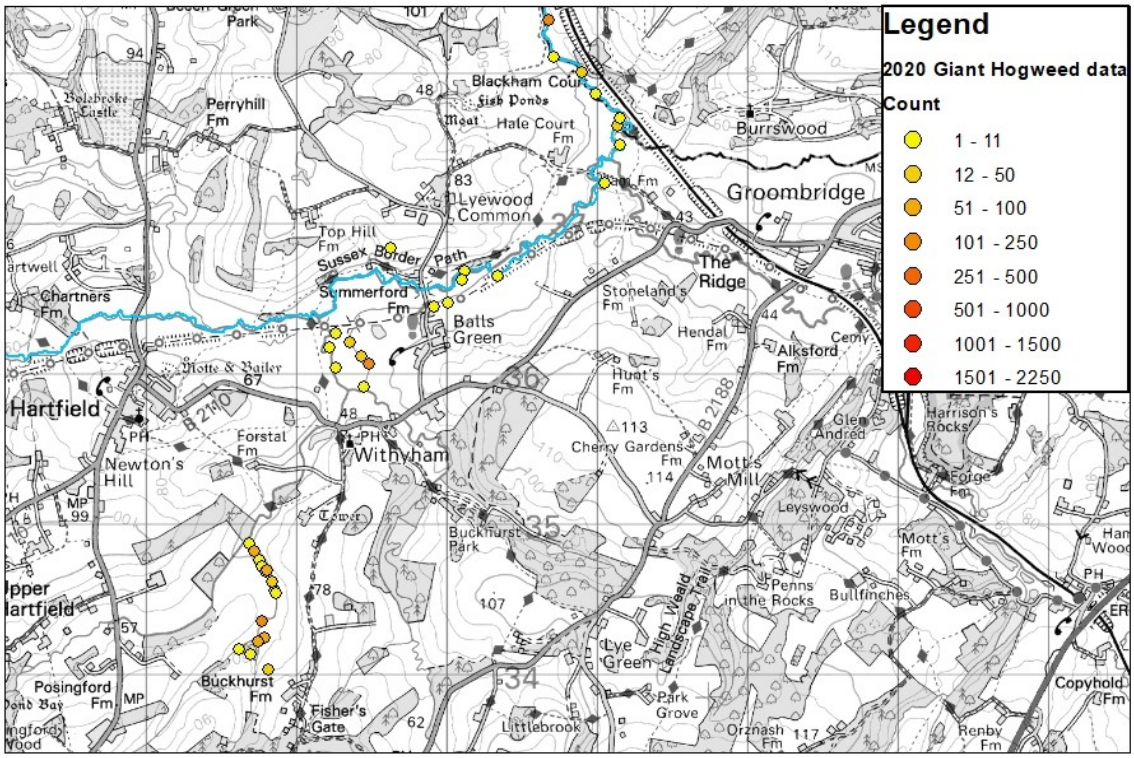
MVCP Giant Hogweed location data - map #1



Map 2: Upper Medway 1—2020

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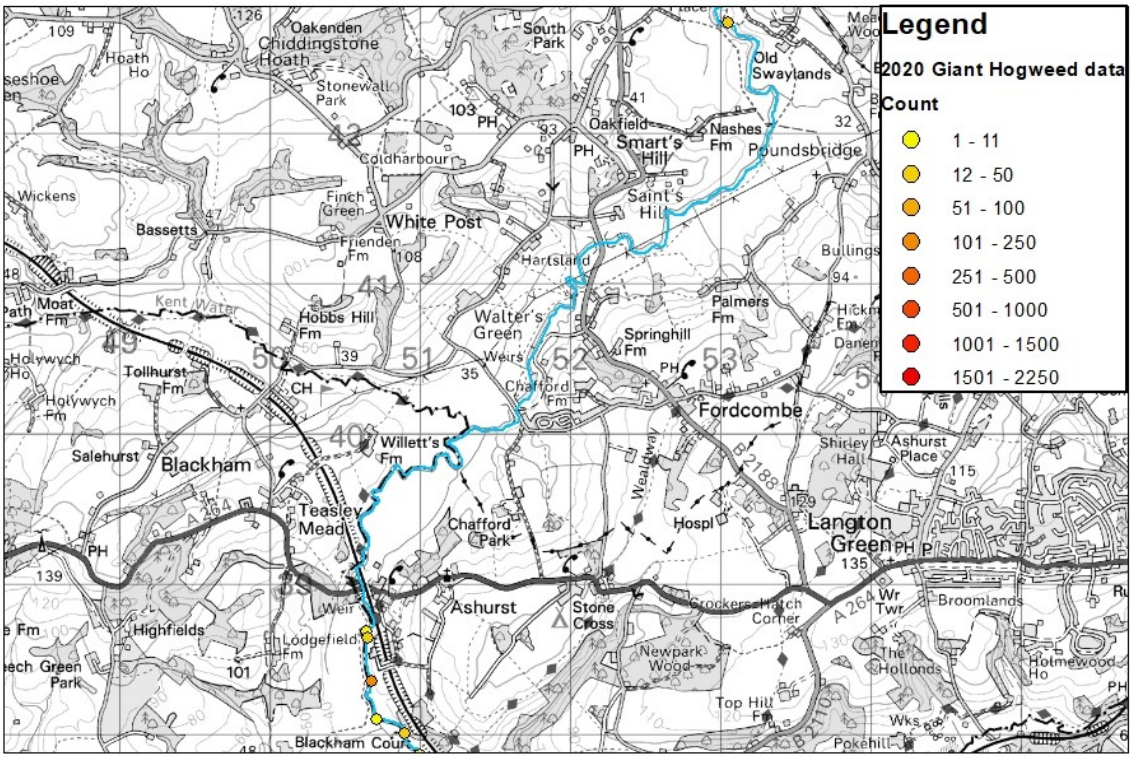
MVCP Giant Hogweed location data - map #2



Map 3: Upper Medway 2—2020

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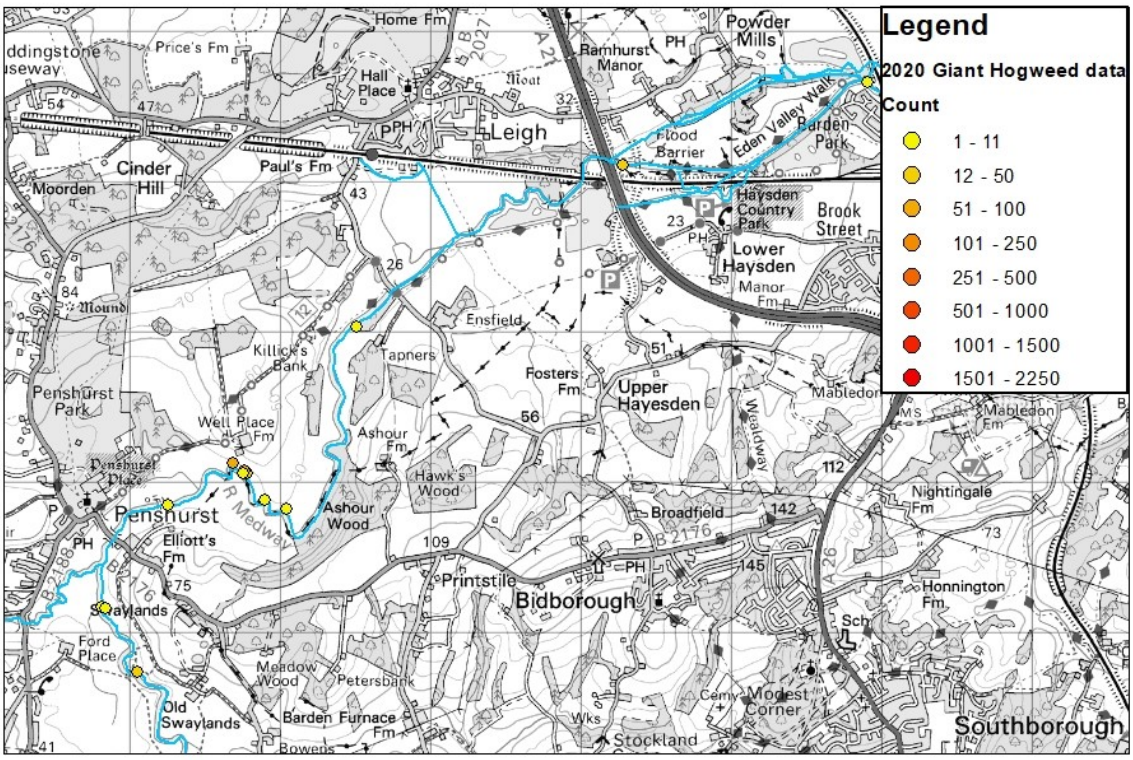
MVCP Giant Hogweed location data - map #3



Map 4: Upper Medway 3—2020

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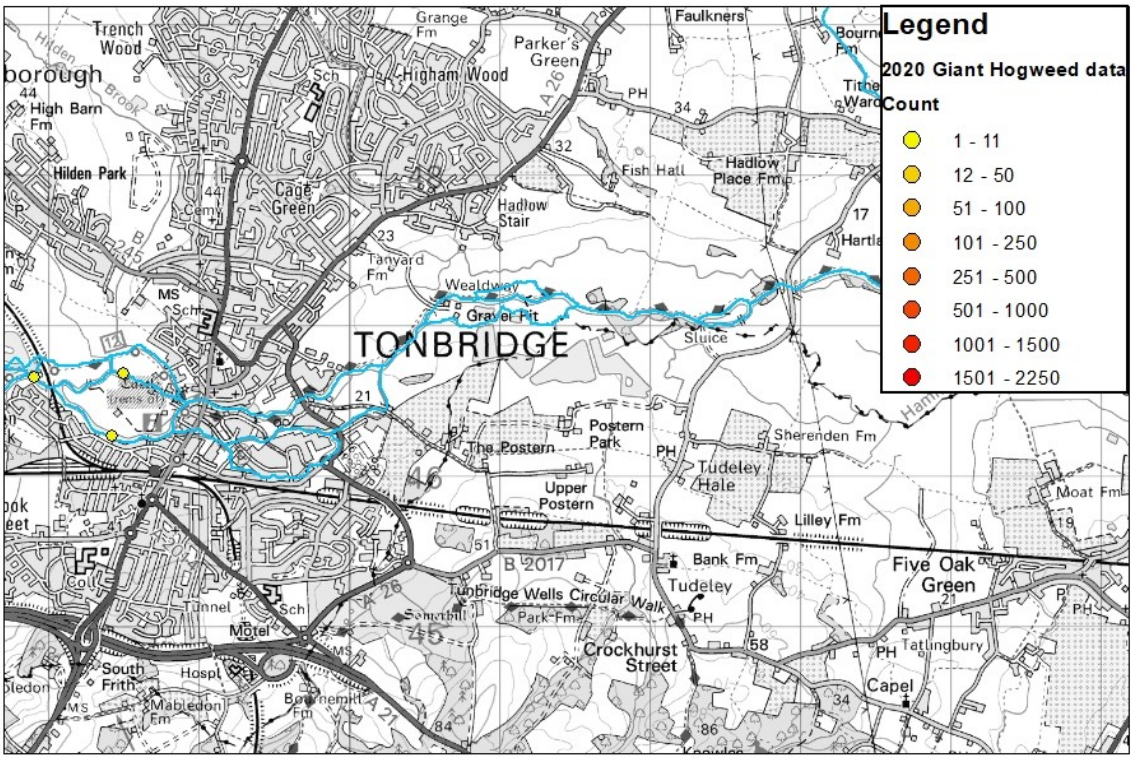
MVCP Giant Hogweed location data - map #4



Map 5: Medway Navigation 1 —2020

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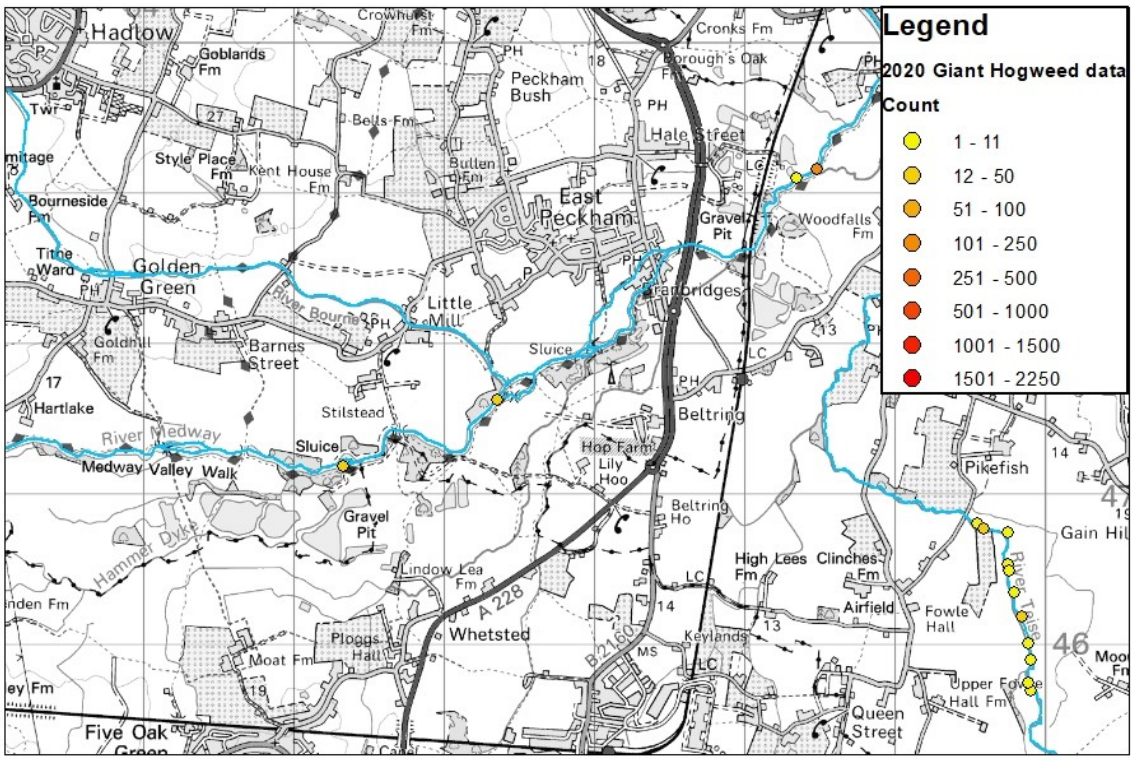
MVCP Giant Hogweed location data - map #5



0 600 1,200 2,400 Meters

Map 6: Medway Navigation 2—2020

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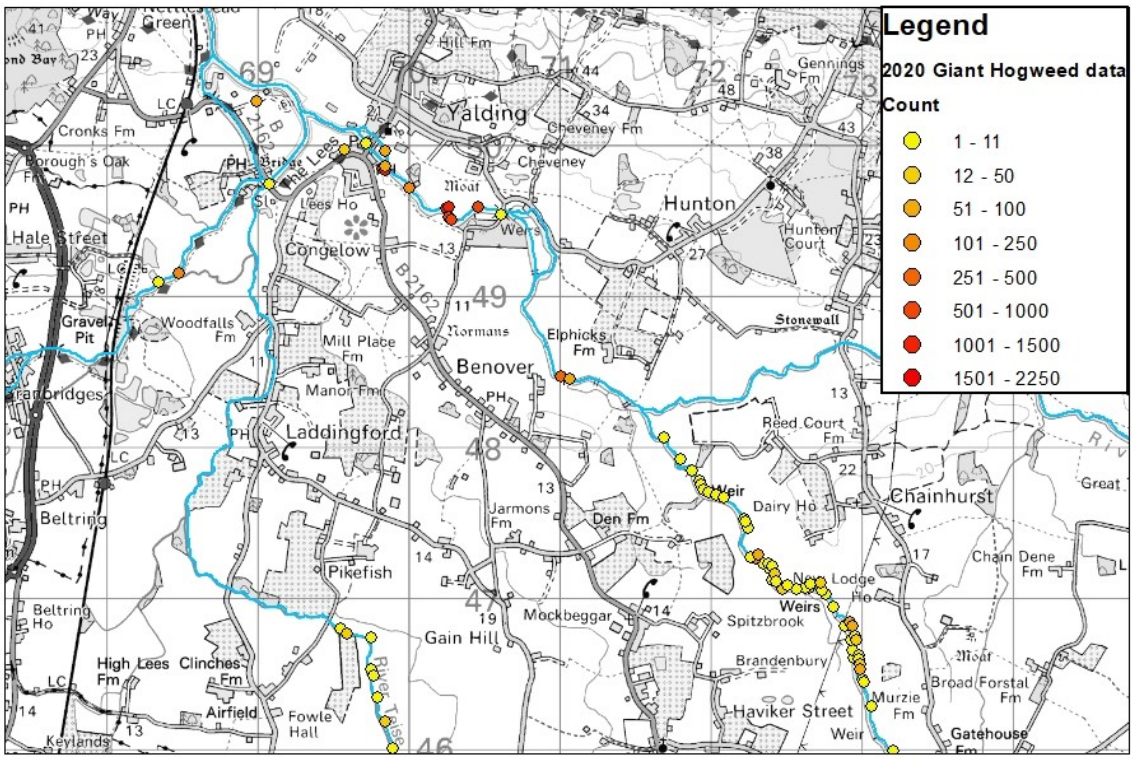
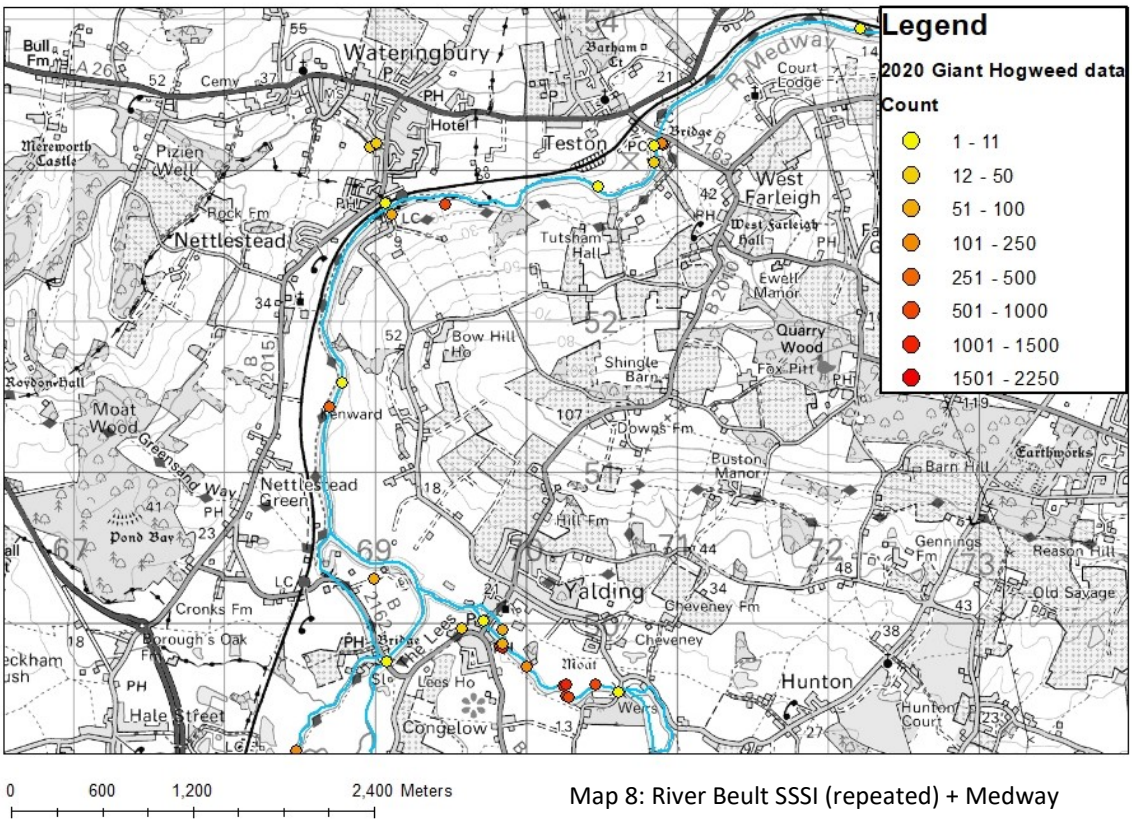
MVCP Giant Hogweed location data - map #6



0 600 1,200 2,400 Meters

Map 7: Medway Navigation 3 + Lesser and Greater Teise and Lower River Beult SSSI —2020

MVCP Giant Hogweed location data - map #9



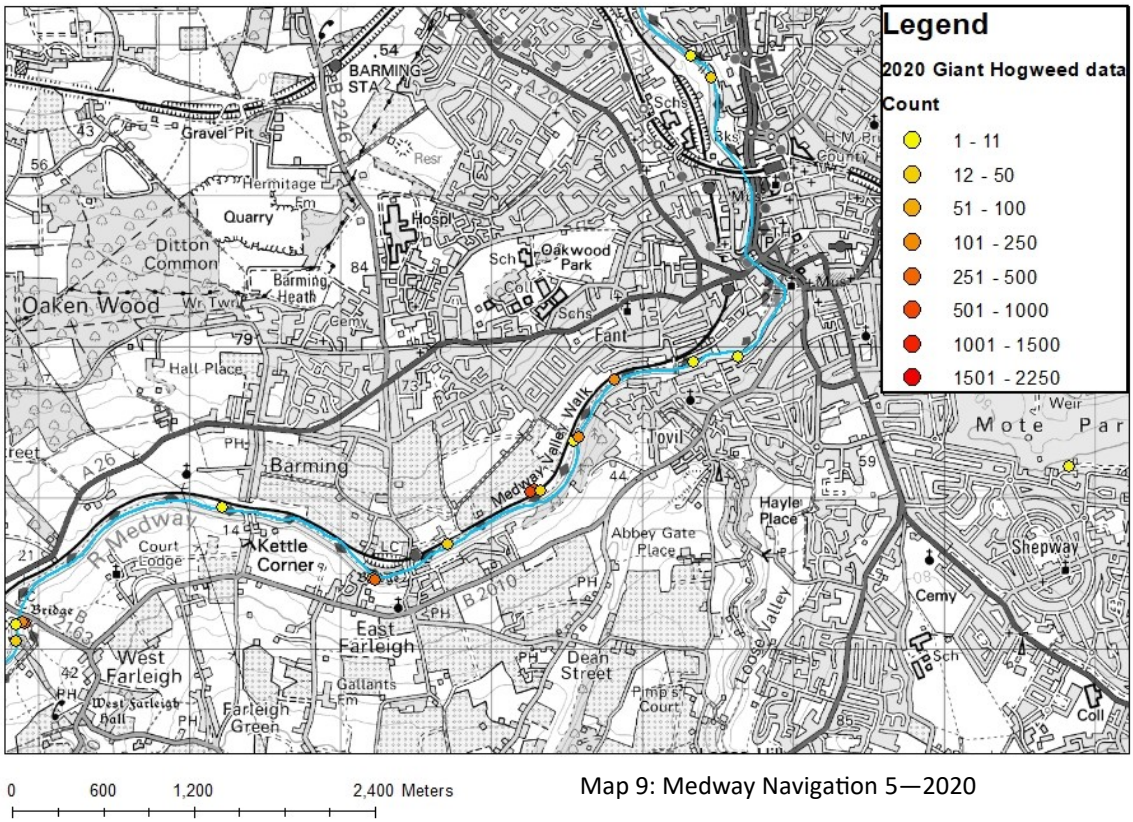
Map 8: River Beult SSSI (repeated) + Medway Navigation 4—2020

The Yalding area on the Beult SSSI shows a few large hotspot areas. These have been found by MVCP either further away from the waters edge and/or in hard to access locations. All the plants recorded and detailed on the map, have been treated by MVCP in both 2019 and 2020 with plans (pending funding) to carry out multiple treatments on these locations in 2021.

One landowner in the location of the Beult was issued with a warning (Community Protection Order) in 2019 for failure to allow treatment or to carry out treatment themselves. That land in question is now in the scheme with multiple treatments planned to get on top of the infestation in that location. Please note, this is not the land pictured below.

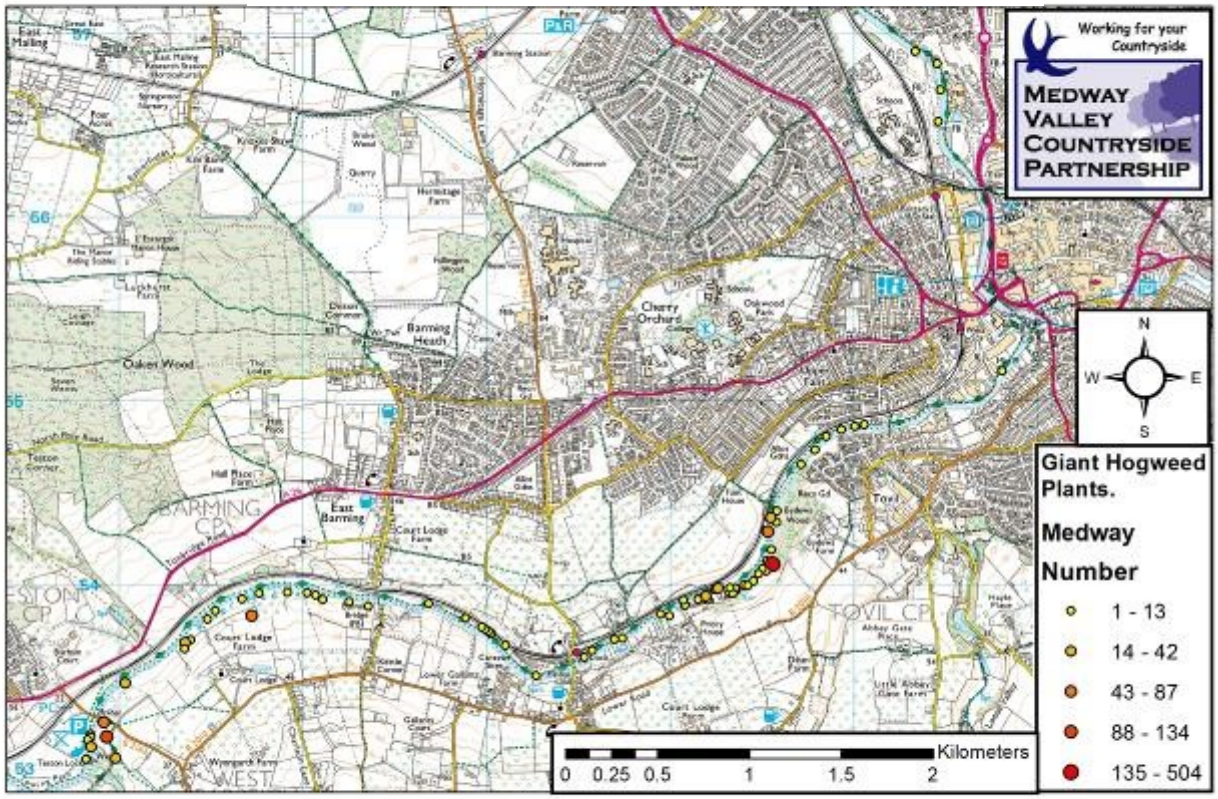
Giant Hogweed Hotspot on Lower Beult SSSI © MVCP 2020

MVCP Giant Hogweed location data - map #10



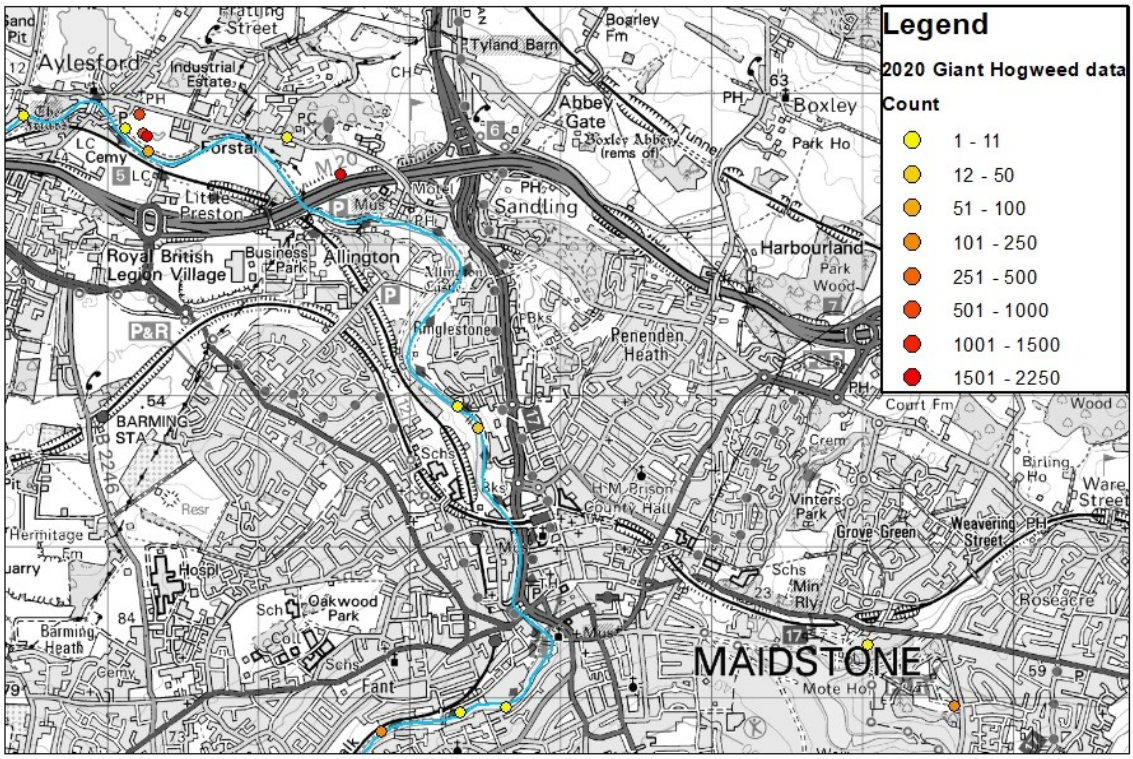
Map 9: Medway Navigation 5—2020

Giant Hogweed - Medway (Tonbridge to Maidstone) - 2015



The frequency of Giant hogweed in this location 5 years ago (as detailed in Map 10 - 2015 above) was much greater than that witnessed in 2020, as evidenced via the comparison with Map 9. The abundance of plants in the Teston area has also greatly reduced in the last 5 years due to the project, as can be seen in the bottom left of each map.

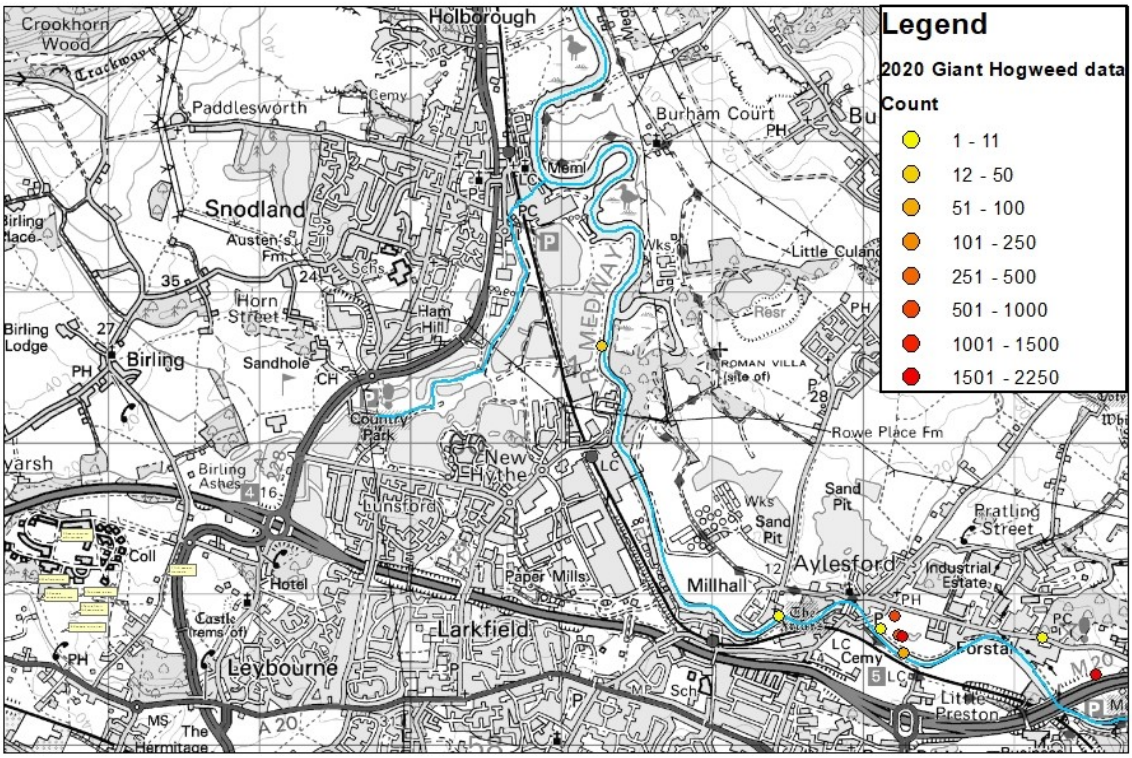
MVCP Giant Hogweed location data - map #11



0 600 1,200 2,400 Meters

Map 11: Medway Navigation 6—2020

MVCP Giant Hogweed location data - map #12



0 600 1,200 2,400 Meters

Map 12: Medway Navigation 7—2020

Additional effort is needed in 2021 to treat a hotspot location near Peters Village in the Medway Gap. The Medway Gap proved difficult in 2020 due to issues related to social distancing and boat use due to Covid 19.

2.2 Floating Pennywort (*Hydrocotyle ranunculoides*)

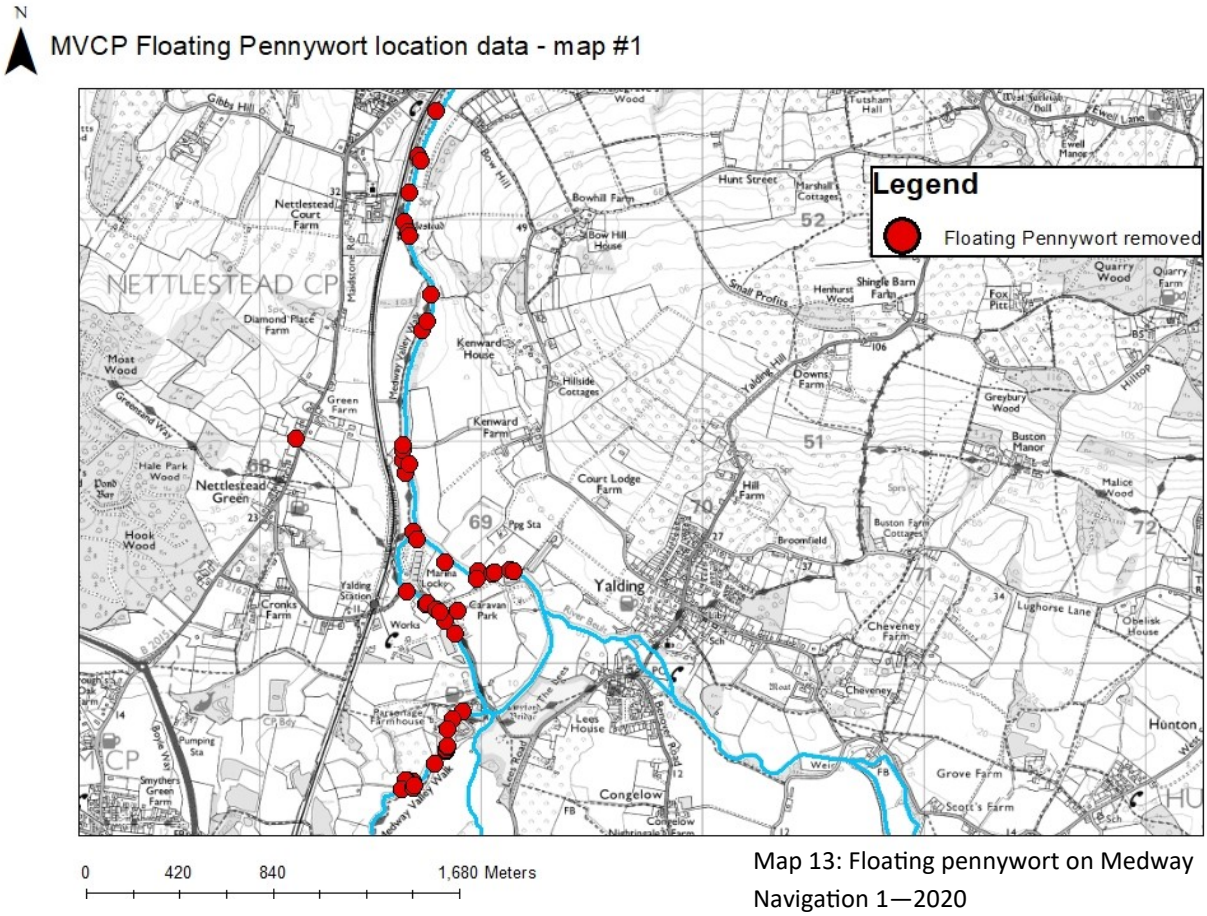
As a result of irresponsible discard from pond waste, this plant began growing wild in the UK in 1990. It is a priority species for control as it is highly invasive - growing at a rate of 20cm a day and spreads by the smallest of fragments. It forms dense mats on the surface of water bodies and can restrict access and recreation as well as reduce the light and oxygen levels of the waterbody and it outcompetes native plants.

In 2019, with funding from the Rapid Life programme, MVCP partially switched from chemical control to manual control but the activities last year were not proactive enough. In 2020, we have worked hard to establish a new plan and partnership and efforts have been much more successful with far less Floating pennywort seen this year and mats more quickly able to be removed and controlled. MVCP has worked with British Canoeing and Maidstone Canoe Club (MCC) to empower local volunteers and ensure swift reaction times. Training events and, where feasible during the Covid 19 pandemic, larger scale events have been delivered to manually remove the Floating pennywort from the area swiftly. The joint partnership between MVCP, local canoeing volunteers and the Environment Agency has been especially beneficial and was highlighted by a Defra visit in September 2020.

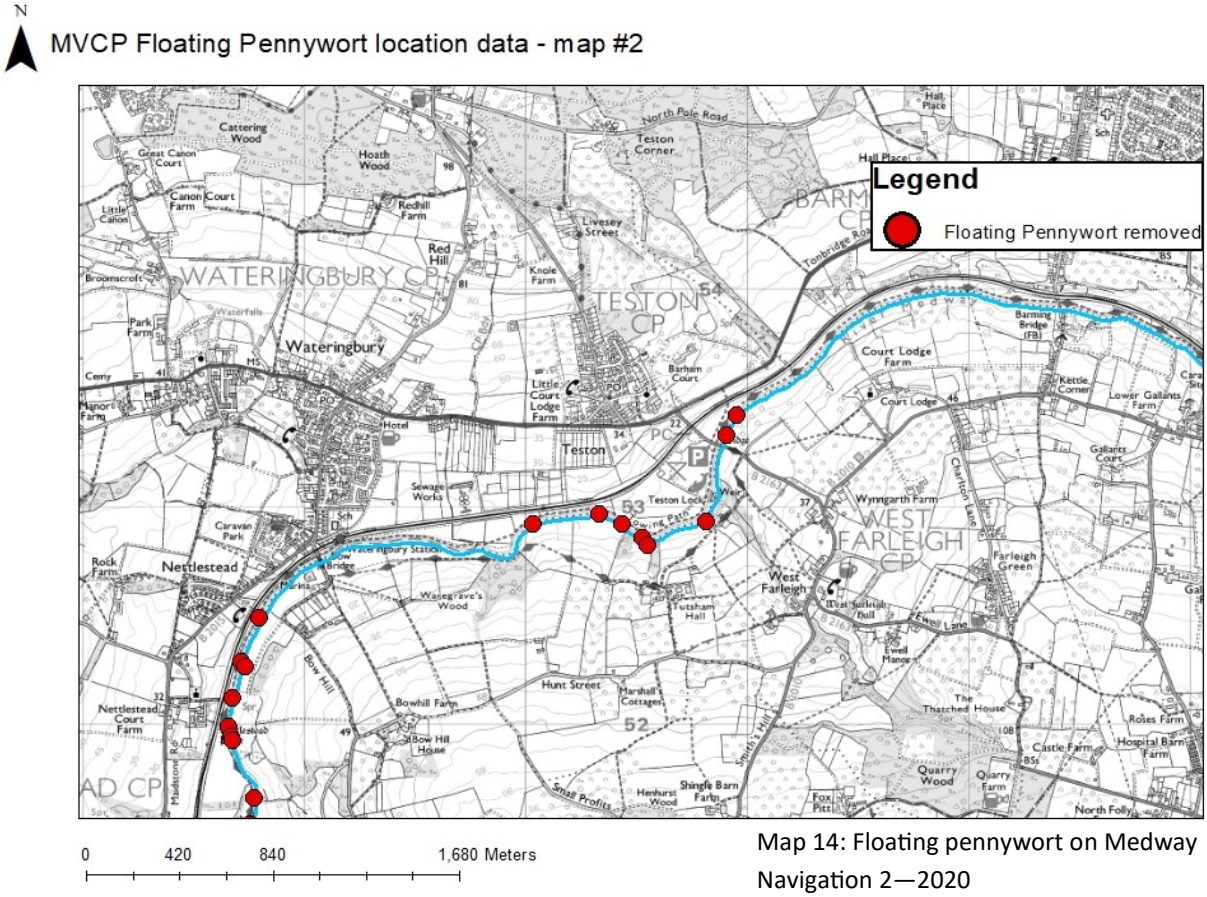
Above left and right: Floating pennywort (FPW) before and after manual removal in June 2020 © MVCP 2020

Above left: E.A assisting with FPW removal © Jake O'Neill 2020. Above: Lord Gardiner / Defra visit to observe work and partnership with MVCP, E.A, MCC and British Canoeing © MVCP 2020. Far left: MCC with FPW in Kayak © MCC 2020. Left: MCC and E.A © MVCP 2020.

The following maps show where the Floating pennywort was observed and controlled in 2020 with the exception of a few small mats close to Maidstone which are not detailed here. Due to evidence of some rooting into the bank and the fact that even small fragments can grow into new mats, repeat visits throughout the year have been required on a very regular basis.



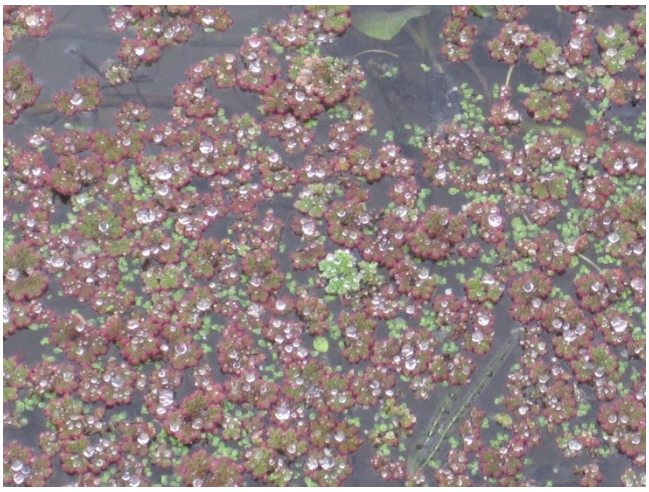
Map 13: Floating pennywort on Medway Navigation 1—2020



Map 14: Floating pennywort on Medway Navigation 2—2020

2.3 Water Fern (*Azolla filiculoides*)

This very small plant can form dense mats of floating vegetation and is highly invasive, spreading vegetatively and by spores. It outcompetes native species and the dense mats reduce light and oxygen below the surface causing deoxygenation and stopping air breathing insects from surfacing. MVCP use the North American weevil biocontrol method to control Water Fern, with very successful results, however due to Covid 19 and the furlough of CABI staff, no weevils were available for release in 2020 and we are seeing an increase in Water Fern throughout the Medway Navigation, possibly due to reduced flow and increased temperature.



Water Fern on the Beult in 2015
© MVCP 2015

2.4 Japanese knotweed (*Fallopia japonica*)

The effects of Japanese knotweed have been well documented in the media. Being very hardy, it can damage buildings and infrastructure and if present can delay and increase costs for development. Along rivers it can outcompete native flora and damage riverbanks, increasing erosion and flood risk. It spreads vegetatively and even a minute amount of stem can create a new stand. As such, irresponsible compost or garden waste dumping and also poor management such as strimming and cutting have greatly increased the spread. It is common in urban areas, gardens, along railway lines and adjacent to rivers. Japanese knotweed is listed under Schedule 9 of the Wildlife and Countryside Act 1981 and it is also classed as controlled waste under the Environmental Protection Act 1990. As in previous years, MVCP have carried out control along the river Teise where it is still quite abundant and on parts of the Medway where needed. Maps are available upon request.

2.5 Himalayan Balsam (*Impatiens glandulifera*)

Our tallest annual plant which was introduced to the UK in the 19th Century. Due to a very effective explosive seed dispersal method it is very common and widespread. Due to its rapid annual growth it outcompetes sensitive native riparian flora and potentially reduces the soil mycorrhiza. When dense it can impede flow along rivers and ditches and when it dies bank it compromises riverbanks, causing erosion and therefore increases the risk of flooding.

Due to Covid 19, MVCPs Balsam removal events were not carried out in 2020 and MVCP still await the potential biocontrol agent via CABI from Kashmir but that is delayed due to various global and political issues. In the meantime, MVCP began collating a list of other groups and volunteer parties who are controlling balsam in order to ascertain the control efforts across the catchment.
This will be continued, expanded upon and promoted in 2021.

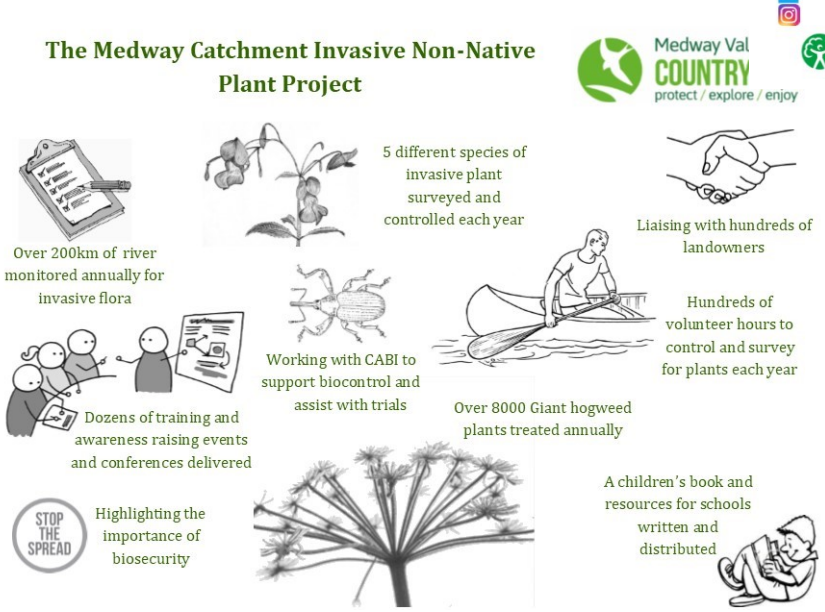
Young Himalayan balsam
© MVCP 2019

3.0 Volunteers, Awareness Raising and Training:

Due to Covid 19 in 2020 the project has not involved as many volunteers as in previous years as group activities have been restricted. We have been assisted by a number of wonderful volunteers who canoe however, including members of Maidstone Canoe Club. Specifically, these volunteers have assisted with surveying for and removing Floating pennywort (see pages 12 and 13) and it is estimated that there has been a total of **112 hours of volunteer time** on this element of the INNS project in 2020.

Awareness raising has also been restricted due to Covid and MVCP have not been able to run as many training sessions as we have done in previous years. We produced a project postcard to raise awareness of the project and we continue to promote our Children's Book on INNS plus we have written and distributed 1 newsletter so far with another pending before the end of the calendar year. In addition, we ran a training event via Zoom for local volunteers and professional peers in September.

Above: E.A and Maidstone Canoe Club supporting MVCP with FPW control © Ian Butler 2020. Below and Right: Medway Catchment Invasive Non-Native Plant Project Postcard Front and Back © MVCP 2020



4.0 Additional Information and Future Requirements:

The project needs at least the same amount of funding as 20/21 in 21/22 and beyond in order to maintain the current degree of delivery. Funding for this vital project remains an annual concern and especially now given that a degree of funding in 20/21 came from MVCPs reserves.

Many of the target species such as Floating pennywort are highly invasive and will dramatically affect the waterbodies, navigation and biodiversity if not controlled. Project costs, currently arguably low in comparison, will greatly increase if plants are left without control for even a short amount of time.

In addition to the standard project as outlined here, MVCP also aspire to add additional species and expand into investigating certain animal species which would require a rapid response:

- In 2020, MVCP joined the Mid Kent Beekeepers Association in order to be registered as part of the Asian Hornet Action Team. We feel this is a vital service we can offer going forward as Asian Hornets are predicted to become more common and more frequently sighted in the coming months and years and are a great threat to our already declining pollinators.
- MVCP aspire to launch a citizen science project to increase the volunteering effort to survey for Oak Processionary Moth caterpillars, thereby raising awareness, actioning rapid response control and adding to Forestry Commission data.
- In 2020 a significant increase in Orange Balsam *Impatiens copensis* was observed throughout the Medway navigation. We believe this species should be manually removed now when spotted as the increase in it's abundance is notable. This will require more in-channel work due to its low position on the banks. Unlike it's relative, Himalayan balsam, it's appears to be more of a woody species so may need to be repeatedly cut if it can't be dug out of the bank safety (and without causing any bank erosion) from the water.

5.0 Acknowledgements and Contact Information:

Many thanks to the project funders in 20/21; the Environment Agency, Maidstone Borough Council, West Kent Public Rights of Way, Yalding Parish Council and Tonbridge and Malling Borough Council.

Many thanks indeed too to our River Warden volunteers for assisting with surveying and control works of Floating pennywort. Special thanks to Ian Butler and Maidstone Canoe Club. Special thanks to Brian Thomas of FCS Vegetation Care and Control and to Jo Hill and Derek Whitehead of MVCP.

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