Report No. 06/16
Operational Review Committee

REPORT OF THE INVASIVE NON-NATIVE SPECIES PROJECT COORDINATOR

SUBJECT: SDF PROJECT 0343: PWYTH MEWN PRYD/STITCH IN TIME - UPDATE

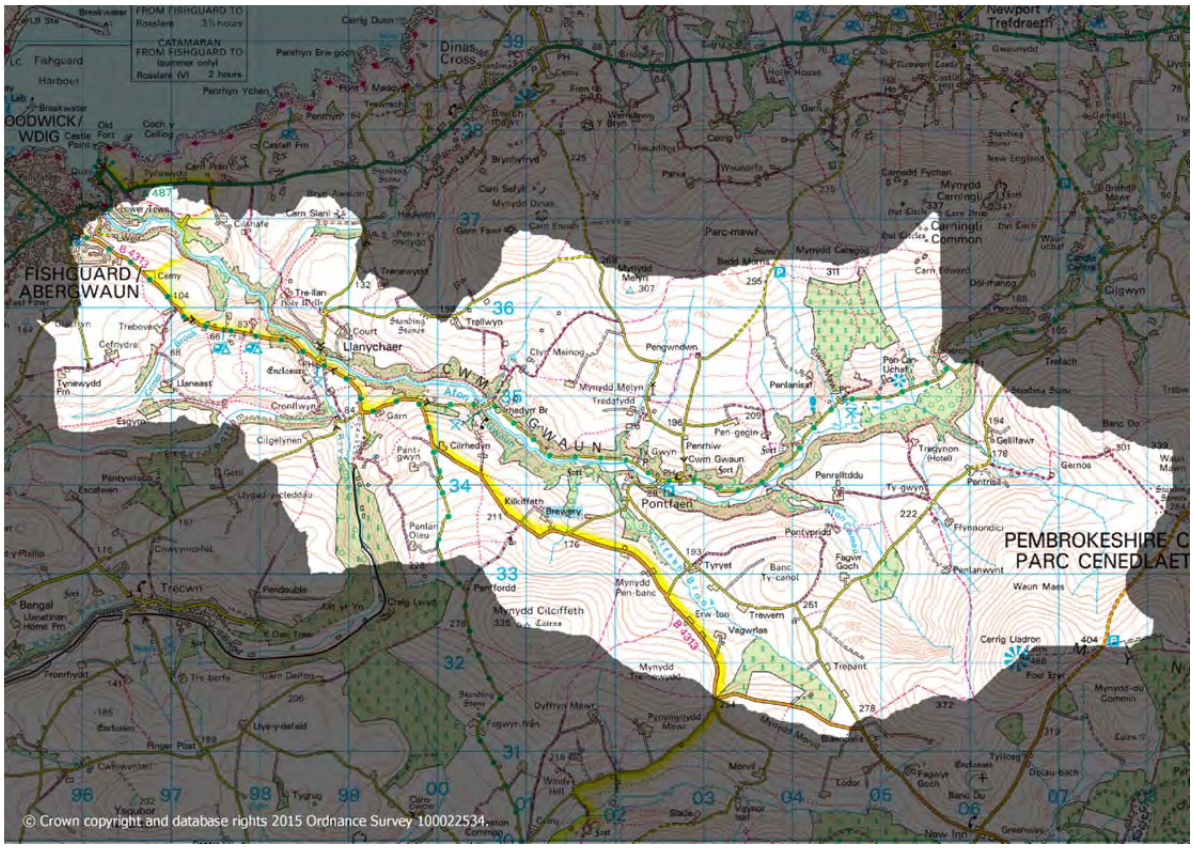
Purpose of Report

To provide Members with an update on the Pwyth mewn Pryd/Stitch in Time project, managed by the Authority and funded by the Sustainable Development Fund.

Background

1. The Stitch in Time project received approval for £25,318.25 of SDF funding in 2014. PCNPA has provided match funding of £6,000 and is making in-kind contributions. The project will run until August 2016.

2. The project is developing a catchment-based approach to invasive non-native plant control in the Gwaun Valley. The three target invasive species are Japanese knotweed, Himalayan balsam and Rhododendron (*R. ponticum*). All three species are identified by the Pembrokeshire Biodiversity Partnership as priority species for control.



The Gwaun catchment

3. The intended outcomes of the project are:
    i. An invasive species control model, applicable to ecologically-sensitive catchments
    ii. Mapped records of the target species
    iii. Reduction in extent of invasive species in the Gwaun valley catchment
    iv. Raised awareness and a legacy of partner/individual/community capacity to manage key invasive plant species
    v. Online documentation of the project as a reference resource

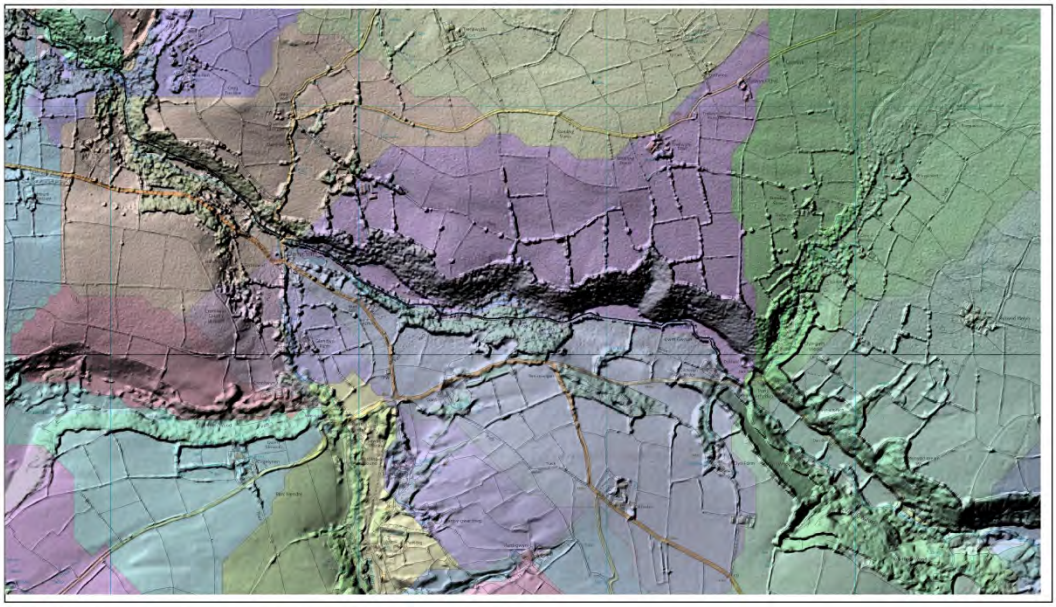
4. A part-time Invasive Non-Native Species (INNS) Project Coordinator post is being funded by the project. The Project Coordinator's role includes devising and implementing a control strategy for the target INNS and involving people in survey and management of them.

Project strategy

6. A number of organisations and individuals are involved with INNS control in the National Park and Pembrokeshire, but in many cases the approach is piecemeal. For example due to land ownerships, treatment may not eradicate the target species at a particular site, only control it up to a certain boundary.

7. Such containment efforts imply indefinite treatment costs and, by leaving a source of infection, do not necessarily prevent species spread to new areas. Systematic eradication (or near-eradication) from a defensible area is the most cost-effective solution in the long term, as management is reduced to preventing or treating any re-infestation.

8. INNS often spread along (down) watercourses. Catchments, and sections of catchments, are therefore an appropriate scale at which to work. Use of geographic information systems (GIS) has enabled the project to take a tactical approach within the catchment, based on stream order and drainage basins. Essentially, this means working from the top of a drainage unit down and from the outside in.



Half-drainage basins in a section of the Gwaun Valley

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9. The project has applied learning and skills from other initiatives, including the SDF-funded Cemaes Himalayan Balsam Eradication Projects (2012 and 2013), run by Cymdeithas Llandudoch.

10. Biosecurity measures are taken to ensure that plant fragments are not inadvertently transferred off-site. Leaving waste in situ is the most cost-effective and bio-secure option.

11. GIS is used to record the year-on-year treatments applied at each site and reductions in the extent of infestation over time.

12. Land Registry services are used to ascertain land ownership and contact details where these are not already known.

Progress and highlights

13. The treatment season is generally focussed on May-September for the three named species, hence this is a timely point to review and share progress.

    a. Survey has benefited enormously from dedicated volunteers and from sightings and grid references submitted by members of the public. Geo-tagged photographs add useful detail to invasive species records, which are shared with the West Wales Biodiversity Information Centre. The target species have been recorded at around 120 sites in the Gwaun Valley catchment so far.

    b. As well as being involved in survey, volunteers also help with management and control. Work parties uproot Himalayan balsam plants before the seed pods mature (the pods can eject seeds 6m from the plant), and have cleared vegetation near to Japanese knotweed plants to make them accessible for

professional spray treatment. As at the end of March 2016, more than 80 volunteer-days had been contributed.

c. Japanese knotweed management uses chemical control and requires trained personnel. The SDF project includes a budget line for use of contractors. However, the Project Coordinator and a PCNPA Ranger treat small and/or hard to access Japanese knotweed infestations (which would not be a cost-effective use of contractor resources) using weed wipe or stem injection. Four volunteers were funded to undertake spraying training in 2015; they will be able to put their training to use in 2016.

d. In 2015, Natural Resources Wales made a contribution of £4,999 to the project, for practical species control in the Gwaun (and Nevern) valleys. This sum was principally allocated to Rhododendron clearance in the Trecwn valley (see below), and supplying the Newport Paths Group with a brushcutter for the 2016 balsam season in the Nevern and Clydach. The Group funded brushcutter training themselves in order that they could work alongside contractors.

e. The Project Coordinator has collaborated with many other groups including Cymdeithas Llandudoch, Friends of Pembrokeshire Coast National Park, Pembrokeshire Rivers Trust and Nevern Angling Association. Groups have been involved in survey and in pulling Himalayan balsam. The Friends have subsequently "adopted" some sites for ongoing monitoring and pulling any Himalayan balsam that emerges – allowing the Project Coordinator to focus on other sites.

f. The Project Coordinator is working with Cymdeithais Llandudoch and Pembrokeshire Rivers Trust to produce a Himalayan balsam best practice/education note for landowners, and with the NPA's Discovery Team on the Europarc project, *Junior Rangers Engaged for Nature*. In addition to work with groups, the Project Coordinator has worked on a one-to-one basis with less able people.

g. In winter 2016, attention focussed on Rhododendron clearance at the northern end of Trecwn Valley. The site manager, Valley Management Services Ltd, for Renewable Developments Wales Ltd, provided access and in-kind assistance, including 16 days of personnel time. This enabled Valley Management Services Ltd staff, NPA staff and contractors to cut and process dense Rhododendron cover on steep slopes at the head of the River Aer, which flows northwards into the Afon Gwaun. (Trecwn Valley includes a watershed: to the immediate south is a headwater of the Eastern Cleddau.) Landowners at Trecwn's north-eastern boundary have also allowed Rhododendron control to take place. The work at Trecwn has opened a new partnership between the NPA and the owners/managers of Trecwn, with the Project Coordinator spending 15 days on site in Q1 2016 – this included facilitating meetings between Trecwn staff, the NPA, NRW, contractors, Tir Coed, Coed Cymru and a remote-sensing student. NRW's financial contribution to the project was key to the work at Trecwn.

h. The project has enabled the NPA to devise an informal 'triage' system for dealing with INNS sites encountered or reported more generally in the National Park. This will help determine an appropriate level of NPA intervention (including non-intervention), based on cost-effectiveness and sustainability.

Risks

14. A number of issues have been encountered.
    i. Some gaps in survey coverage remain, due to terrain. Survey has however been prioritised within and between drainage basins, i.e. on a risk basis.
    ii. Weather can be a major factor: poor weather can result in postponement of volunteer events, wet and/or windy weather prevents foliar application and flooding in winter can impact the clearance of knotweed die-back. Summer flooding (e.g. August 2015) increases rhizome, fragment and seed dispersal.
    iii. Contractors often get booked up well in advance of the treatment season. This was only a problem in the first treatment season. However, early booking enables contractors to take on more operators if needed – bringing a local socio-economic benefit.
    iv. Farm-to-farm INNS spread is apparent, so landowner awareness is a key part of prevention.
    v. River blockages can facilitate the build-up of Himalayan balsam seed banks. Flooding then spreads seed to surrounding banks, contributing to bank erosion.
    vi. No two sites are quite the same – all are liable to unique combinations of factors such as flooding, human disturbance etc.
    vii. Excluding river banks using fencing appears to facilitate the establishment and spread of Himalayan balsam. Grazed banks appear to be less susceptible to establishment.
    viii. Only in very few cases (two) has access been refused.

Treatment evaluation

Himalayan balsam

15. Himalayan balsam has been found at about 30 sites so far, with a total extent of 4.5 ha. Control is in progress on a total of 3.5 ha with excellent results. Effective eradication is a possibility by 2019.

Japanese knotweed

16. Japanese knotweed has been found at about 60 sites so far, with a total extent of about 9 ha.

17. Plants were stem injected and foliar sprayed in 2015. At the time of this report, stem injection appears to have given the best result (no/very few stems visible above ground). Foliar sprayed plants show reduced above-ground plant mass/growth/vigour, but will require 3-5 seasons of treatment. (Due to the stem diameter required for injection not all knotweed can be injected.)

Rhododendron

18. Rhododendron has been found at about 30 sites so far, with an extent of 11 ha. 8 ha of this lies within the Trecwn Valley (Gwaun catchment) of which about a quarter has been treated. We will be able to assess effectiveness next year.

Continuation strategy

19. Effective eradication of the target species is the goal. If and when an area is deemed to be clear, monitoring for regrowth or reinfection will be needed. Volunteer effort is

key to this and developing monitoring capacity locally will be a valuable legacy of the project.

20. The Gwaun Valley workload would be expected to decrease in successive years, allowing new catchments to be taken on, including small 'catchments' such as coastal streams. Delay gives a chance for INNS to re/colonise, so continuity of resourcing is highly desirable in order to keep up the momentum of control and to protect resources already invested.

21. Accordingly, the PCNPA Biodiversity Officer submitted an application for a Heritage Lottery Fund Heritage Grant development phase project in June 2016. If this application is successful, a second round application would follow in 2017 for delivery from 2018 – 2023.

Financial, Risk & Compliance Considerations

22. The NPA has statutory responsibilities with regard to INNS on land it owns or leases, duties under the Environment (Wales) Act 2016 (biodiversity and resilience of ecosystems duty) and under the Well-being of Future Generations (Wales) Act 2015 (a resilient Wales).

Human Rights/Equality Issues

23. No issues have been identified.

Biodiversity Implications/Sustainability Appraisal

24. Pembrokeshire Biodiversity Partnership published an INNS Action Plan in 2014. The Plan prioritises species for action according to the threat they pose. Rhododendron, Himalayan balsam and Japanese knotweed are included as priority species for control. Accordingly, this project is helping to implement the Biodiversity Action Plan for Pembrokeshire. The project has benefited from considerable input from the Partnership's Biodiversity Implementation Officer.

Welsh Language Statement

25. No issues have been identified.

Recommendation

That Members note the report.

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