

Hoveton Project Update for Broads Angling Services Group (BASG) – January 2019

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www.gov.uk/natural-england



Environmen Agency



Project aims





Works to date







Works to date





Future work

- Completion of dredging
 - October December 2019
- Biomanipulation
 - January 2020 onwards
 - Installation of fish barriers
 - Fish removal

- Subject to permission from E.A



- Cost to date much higher than expected
- Behind schedule
 - 1 year extension requested
- Securing outstanding permissions
- New personnel
 - High project officer turn-over
 - New project managment

Assessment of potential impacts





Photo courtesy of Fishtrack

Assessment of data, other considerations and way forward



- What do the data tell us?
- Other things to take into consideration
- Assessment of impact
- Proposed way forward

How have surveys changed our understanding?



- Assumed HGB largely similar to other Broads
- Baseline survey
 - lots of fish!
 - spawning bream
- Comparative surveys
 - significantly more in HGB
- Spawning habitat survey
 - HGB significantly better, locally
- Tagging data
 - catchment-wide influence of HGB
 - Concerted move to HGB area
 - Significant number of spawning bream
- HGB far more important and at greater scale than expected
 - particularly cyprinids

Implications for closing off HGB



- Desk-based work
- Focus on bream
- Strength of data available
- How important is access to HGB?
- Alternative habitat available?
- Risk in-combination with other factors?

Strength of data



- Difficult to pinpoint spawning locations
 - Resolution of receivers
 - Difficult to record!
 - 2 in 4 years
 - DO spawn on HGB
- Bream present in other locations at 'spawning time'
 - HGB not unique, but probably significant
 - spawning likely elsewhere too
- Tagging data representative of population
- 1 year of tagging data
 - site faithful?
 - chub example

Spawning movements significant?



- Apparent concerted move to HGB area
 - ~15 km by river
- Other studies show greater movements
 - Dutch study
 - 4,619 bream marked and released
 - Dispersed via canals and dykes
 - 3 years of recapture data
 - 452 recaptured
 - Majority recaptured 20 km+ from release site
 - Furthest recaptured 60 km+ from release site

Dutch case study





Conclusions



- 15 km not unusual / remarkable
- Tagging data
 - bream roam large areas
 - re-assess understanding / thinking
 - access to other sites / areas
 - 'awareness'??
 - connectivity
 - within achievable range
- Evidence of site fidelity

Habitat preferences



- Bream are highly adaptable
 - common
 - variety of habitats
- Access to large system
- Evidence of spawning on various substrates
 - Locally
 - Sedge roots
 - Typha
 - Lilies
 - Willow roots
 - Elsewhere
 - Submerged plants
 - Tree roots
- Likely to spawn elsewhere
 - anecdotal evidence / casual observations
 - surveys needed

Risk from Prymnesium / salt



- Prymnesium and salt pose significant risk to fish across wide part of the system
- Evidence fish can detect salt
 - Study of Dutch estuary
 - Adults choose freshwater spawning areas
 - Anecdotal evidence locally
 - Leaving Upper Thurne to spawn?
- Vulnerable to large events
 - Quick
 - Trapped
 - Blind-ends
- No evidence fish can detect *Prymnesium* (??)

Conclusions



- Impact of closure alone
 - Uncertain but......
 - Probably not significant given;
 - Adaptability of species
 - Other spawning sites/habitat available
 - Specific data lacking to support this
 - » More surveys needed?
 - Impact of initial reaction?
- Impact in-combination with salt / Prymnesium
 - Unknown likelihood
 - Fish displaced to at-risk areas?
 - Potentially very significant magnitude
 - Cannot rule out significant impact



- Risk justified if benefits outweigh costs
 - Woodbastwick example
 - Wet woodland clearance big impact
 - Creation of fen bigger benefit
- Project will be of long-term benefit to fishery
 - Better habitat

Way forward

- Possible cascade effect
- Mitigate future impacts
- Potential to deliver further benefits?
 - Enhance through Mitigation Plan
 - Retrofit fish barrier to create freshwater refuge????????????

Mitigation Plan



- Existing wider benefits of the project
 - Clearance of Woodbastwick dykes
 - Turf pond creation
 - Research and PhD
 - Informing future projects
 - Restoration science
 - Engineering techniques
- EA / NE to work together on Mitigation Plan
 - Further survey work
 - Extension of spawning habitat survey
 - Didson surveys to identify spawning sites

Mitigation Plan (continued)



- Extension of Northern Broads fish tracking project
 - Longer duration
 - More receivers
- Improved salt monitoring
 - More sondes
 - Coordination of monitoring
- Habitat creation
 - Targeting of bankside tree clearance
 - Further
- Freshwater refuge??????



Thoughts? Questions? Discussion.







