

Ratherheath Tarn – Redevelopment Project

Full Supporting Information Pack

Ratherheath Tarn Fishery – Background

Ratherheath Tarn is located at the east end of Ratherheath Lane, just off the A591 approximately 1 mile north of Kendal.

The tarn is part of the Cropper Estate. WADAA have held the fishing rights for circa 30 years and it is seen as one of the most important venues not only in the club, but also in Cumbria. There are very few venues of this size and character in the county; the upland topography means venues of this size and nature are very rare. As a result, Ratherheath Tarn has been the cornerstone of coarse fishing in Cumbria over the last 30 years. This tarn environment is the very highest quality.

During its tenureship, WADAA has made many changes and improvements to the tarn. Because of the topography of the surrounding land, the lake, though generally shallow (3-4') has dramatically varying depths peg to peg. As a result, to ensure anglers have a sufficient depth of water, a number of pegs have wooden platform walkways constructed to access deeper water. In other areas, wooden platforms have been constructed adjacent to the bank and a small number of swims are fished from the bank. During its last major redevelopment about 20 years ago, the venue held 43 pegs, distributed along all banks. This redevelopment was carried out following an outbreak of top mouth gudgeon which resulted in the lake being completely drained.

Access to the rear of the tarn was difficult with anglers having to walk outside of the agricultural boundary fence to access the centre land. This access was improved about 8 years ago with the construction of 2 stone bunds at the top ends of the lake. Additionally, a new locked car park was built adjacent to the southern bank.

Once known for the quality of its tench fishing, more recently the venue has held significant stocks of bream up to 7lb (these fish were transferred in from Grafham Water) and vast shoals of roach. More recently through good stocking and stewardship, the venue's carp stocks had grown to excess of 20lb.

Ratherheath Tarn Location



Photo 1 - Ratherheath Tarn
from Ratherheath Lane



Photo 2 - Ratherheath Tarn -
Front arm, viewed from the
Dam wall end



Photo 3 - Ratherheath Tarn -
Dam wall



Photo 4 - Ratherheath Tarn -
Front arm bund



Photo 5 - Ratherheath Tarn -
Front arm viewed from the
bund



Photo 6 - Ratherheath Tarn -
Back arm viewed from the boat
house



Photo 7 - Ratherheath Tarn -
Rear bund



Photo 8 - Ratherheath Tarn -
Rear arm viewed from the bund



Photo 9 - Ratherheath Tarn -
Rear arm raised walkway



Photo 10 - Ratherheath Tarn -
outfall





Photo 11 - Ratherheath Tarn -
Water Inlet

Member Opinion

In order to develop a strategic plan for the venues managed by the club, 'Fishery Plans' have been created for each. The fishery plans have been constructed as a result of an extensive survey amongst the membership.

WADAA Coarse Angling Survey										
	Question No.	Question	Answer							
			Weekly	Monthly	Less					
Venues	1	How often you you fish Ratherheath								
	2	How often do you fish Cleabarrow								
	3	How often do you fish Belham								
	4	How often do you fish Grassmere/Rydal								
	6	How would you improve Cleabarrow								
	7	How would you improve Belham								
	8	How would you improve Grassmere/Rydal								
	9	Rank these in order of importance (1-high, 8-low)	Species	Stocking Levels	Environment	Parking	Access	Toilet Facility	Pegs/Platforms	Other
	9(i)	If you have stated 'Other', give detail								
Membership	10	Do you consider £75 membership good value	Yes	No						
	10(i)	If you have stated 'No' what could be improved								
	10(ii)	Would you support the club looking for additional new waters	Yes	No						
Angling Style	11	How would you describe your fishing (mark as many as applicable)	General Coarse	Carp	Tench	Match	Predator			
Engagement	12	Would you be prepared to help/support the club to improve the coarse fishing	Yes	No						
	13	Do you have any skills/equipment to support the club (mark as many as applicable)	Weed Management	Building	Fencing	Fishery Management/Baliffing				
	14	Would you be prepared to attend a club meeting to discuss ideas	Yes	No						
Other	15	Please use this section to add any further comments or ideas you might have	1							
			2							
			3							
			4							
Please complete the survey an email the completed return to : n.butterfield@yahoo.co.uk										

The surveys showed the importance of Ratherheath as a venue to our club, with 85% of the returns indicating it as the primary venue within the club's portfolio. The coarse element of the club is unlikely to be sustainable without Ratherheath Tarn.

Current Status and Issues

Despite its status as the most important coarse venue on the WADAA book (and in Cumbria) with a strong following of loyal anglers, the venue is currently in a poor state with numerous problems.

Otter predation.

Otter predation in Cumbria has become increasingly problematic over the last decade, though the rates have escalated exponentially over the last 2 years.

Over the course of the last 5 years, the club have lost valuable stock as a result of otter predation.



Current Status and Issues cont.

Water clarity

It is unclear as to whether the water clarity is a cause or effect. Clearly a reduction in fish stocks has an impact on water clarity, though this is primarily during the summer months as all waters clear in winter. Ratherheath doesn't have a water-course inflow, it is fed primarily from run-off, meaning water entering the lake is generally very clear.

Weed

To some degree, the weed and water clarity go hand-in-hand. Ratherheath is generally shallow tarn averaging depths of about 3'. These depths are reducing each year as the venue silts up. This silting is accelerated with the huge amounts of leaf material that enter the tarn each year. This shallowing encourages weed growth. The weed traps the silts and the cycles accelerate. Poor bankside habitats and a lack of sympathetic planting increases water nutrient levels encouraging weed growth.

Current Status and Issues cont.

Water Levels

The tarn drains from the front arm to the back arm and out of the culvert. Over the years, the land adjacent to the culvert has eroded and water can seep away. This has a lowering effect on the water level. In order to maintain water levels throughout the summer, particularly dry summers like we have just had, it is important to enter the year 'brim-full'. In order to achieve this, some significant banking work would need to take place around the tarn.

Costs

The venue is rented from the Cropper Estate. Any development plans have to be financially sustainable for the club. We have seen that a reduction in the quality of the offering at Ratherheath has a significant impact on the number of members in the club which in turn impacts the available investment funds.

Additional knock-on impacts

Ratherheath Tarn was a key day ticket venue for the South Lakes. It's poor condition means that day ticket sales have been withdrawn. This has had a number of impacts:

- Commercial impact to local businesses, especially the (only) local tackle shop in Kendal
- Reduction in available funds to WADAA creating difficulties in supporting the wild natural waters under it's control (Rydal, Grasmere and Blelham)
- Loss of a venue with good disabled access potential
- Loss of the only match fishing venue within 40 miles capable of supporting 30 anglers

Advisors

In developing a plan of action, WADAA has sought advise and support from a variety of people over a range of subjects:

Darren Wilson and John Cizdyn - Environment Agency – Water quality and impactors

Richard Bamforth, Angling Trust – Predation protection measures and otter fence design

Land and Drains– Fencing contractor – Fence design and routing

David Harpley – Cumbria Wildlife Trust – Water quality and environmental factors

Dr. Brian Irving – Aquatic planting and reed bed filtration

Robert Bowyer – Carter Jonas (Land Agent) permissions

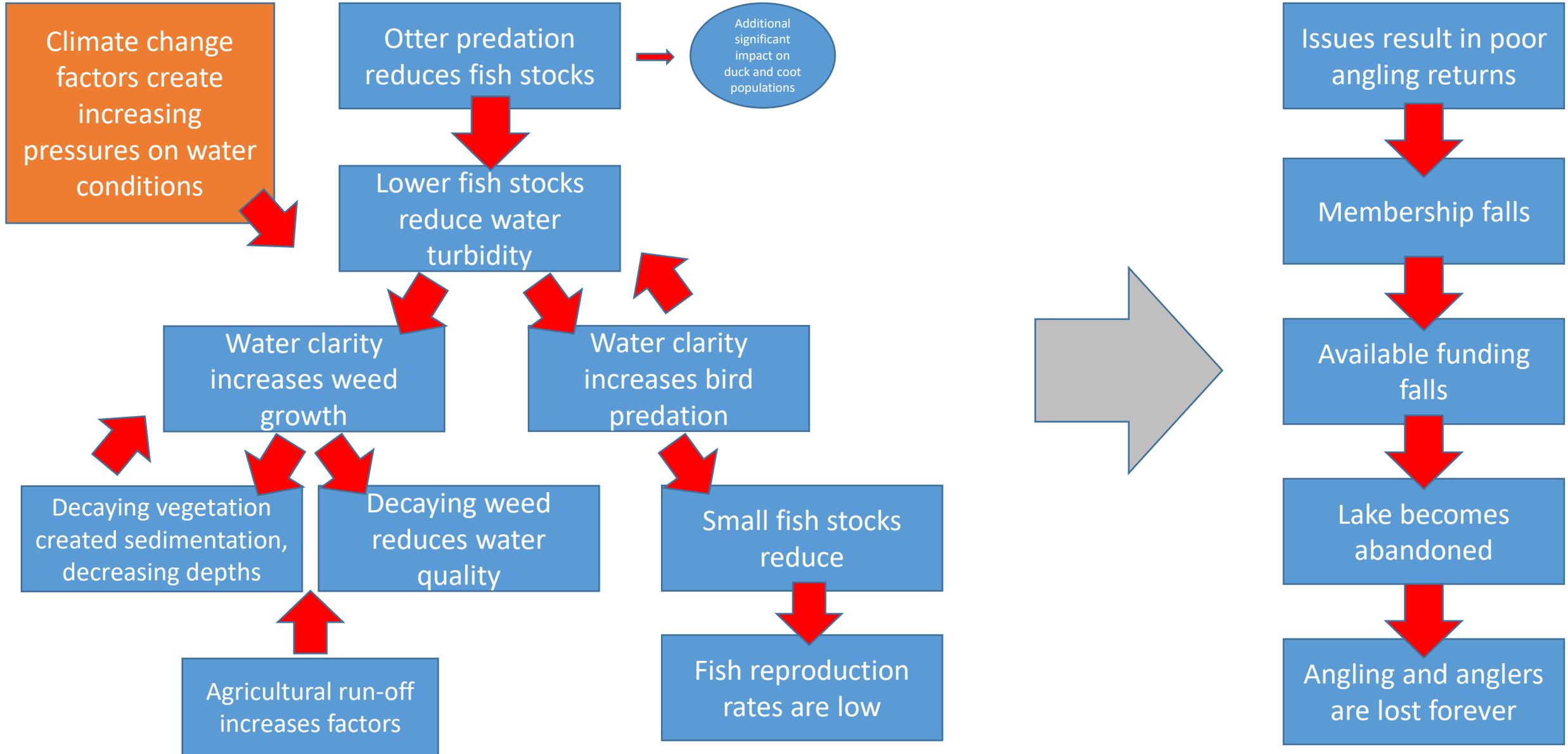
British Disabled Angling Association – Disabled Access Provision

Sport England – Disabled Access Provision

Sir James Cropper – Landowner

Because of the wide ranging issues which need to be addressed, no single body has the means to execute the required plan. The development plan for Ratherheath Tarn is a ‘team effort’ requiring coordination and contribution from a wide variety of sources.

Cycle of Destruction



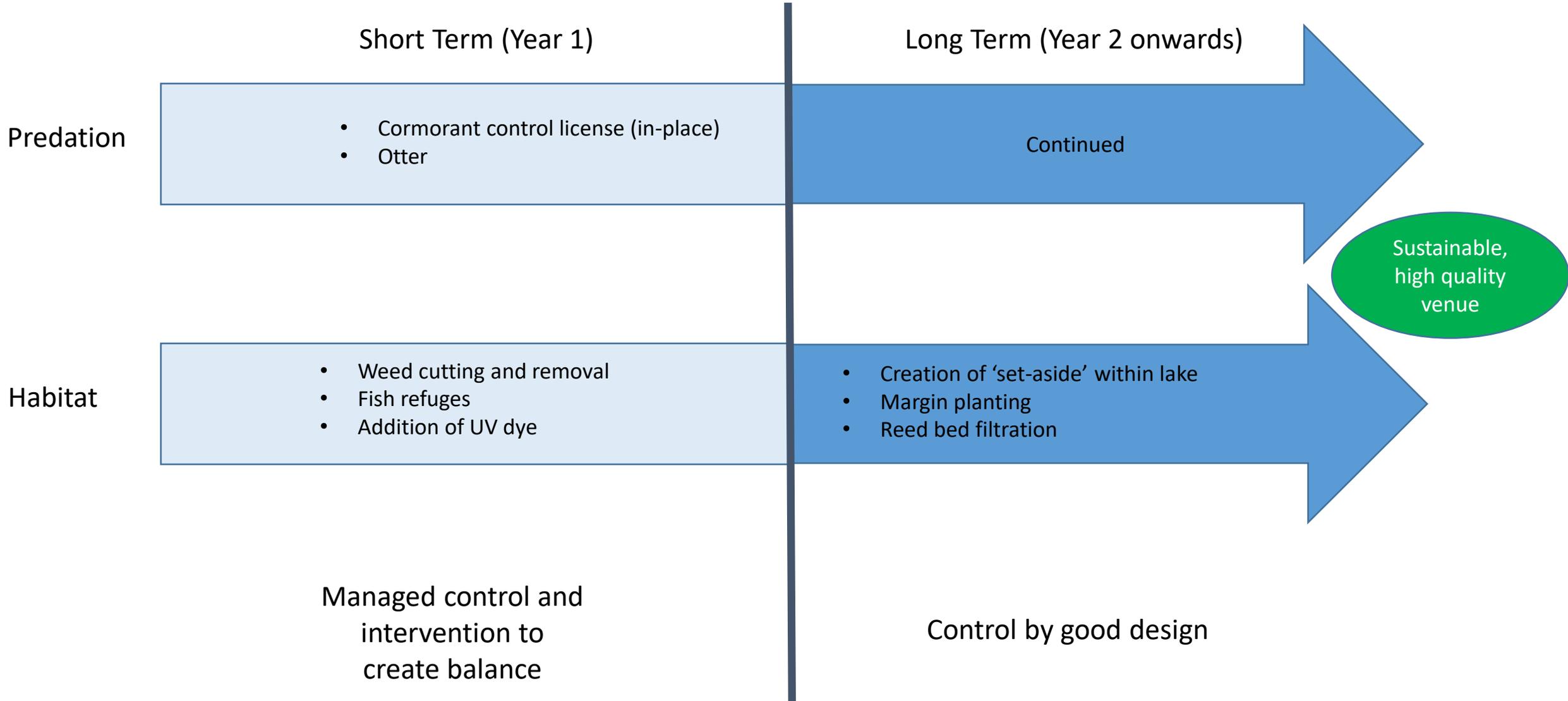
Severe Weeding at Ratherheath Tarn 2018



Severe Weeding at Ratherheath Tarn 2018



Multi-level Solution Approach



Predation and Predation Protection

As has been noted, otter predation has increased massively year on year for the past 10 years. We believe that a sustainable carp population on the venue is about 200 fish. Our estimations are of a current stock between 80 and 100.

In addition, the local duck and coot population has been significantly reduced, with numerous bird carcasses also found.

This level of predation is unsustainable. There are 2 potential solutions:

1. Provide protection in the form of a fence for the venues carp and bream stocks
2. Change the stocking profile away from larger carp and bream to smaller silverfish.

The latter option has numerous issues:

1. The current member profile predominantly fish Ratherheath for the carp stock
2. Due to the size, the venue would require a large stocking of alternative fish to provide the required stocking densities
3. Higher volumes of small fish would likely increase bird predation
4. Silver fish venues do not support rental fees.

Predation and Predation Protection

In order to maintain the stocks of adult fish (primarily bream and carp), the only logical way forward is to protect the venue from otter predation. In discussion with the EA, the only deterrent to otter predation is fencing. Fencing Ratherheath is not a straightforward proposition:

- The size and topography make it very expensive
- The size makes electrifying difficult with an isolated power source, with a constant risk of theft
- The proximity to a public highway presents potential safety issues

In order to overcome these challenges, the fence would need to:

- Be of a non-electrified design
- Follow a routing which allowed access to the rear arm of the lake
- Require trees to be cleared from the routed path



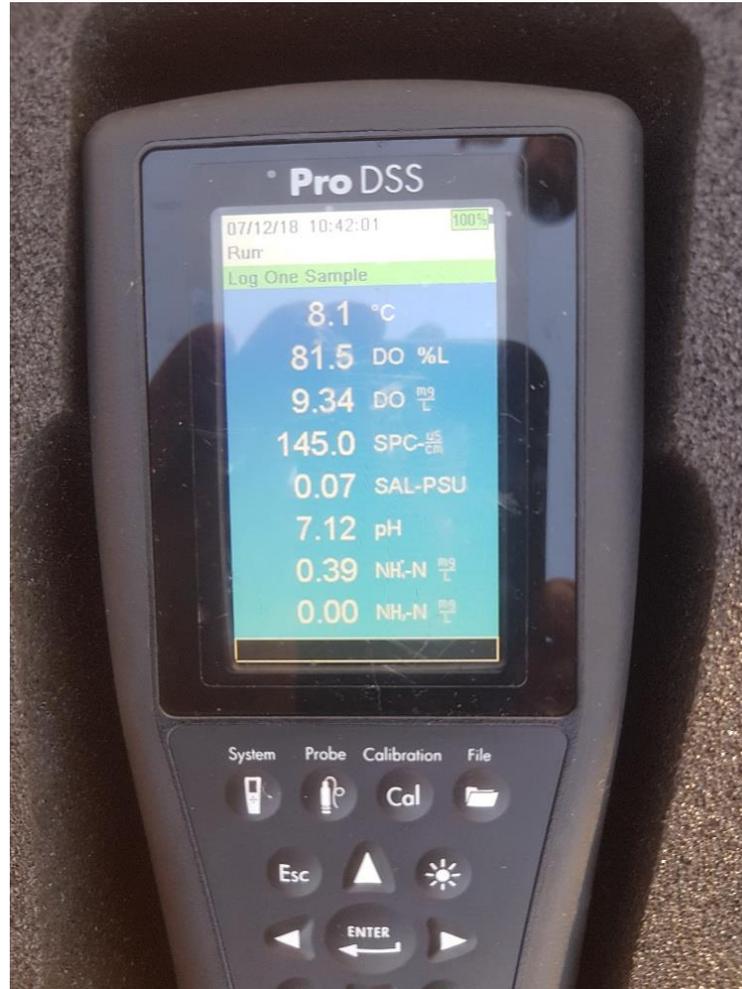
Otter fence route – whole tarn
(approximate length 900m)

It is anticipated that the fence design will have an
Expected lifespan of between 15 and 20 years



Underlying Water Quality

The underlying water quality of the tarn is very good. The water has been tested by Fisheries Officer, Darren Wilson from the EA and the results show the tarn capable of sustaining high stocks of healthy fish.



Habitat Enhancement

A number of issues at Ratherheath can be traced to poor management of the surrounding habitat. This has led to a deterioration in water quality with knock-on impacts to weed growth and fish reproduction and survival rates. As the active management of the habitat has reduced over the last decade, these issues have progressively worsened, peaking with the lake becoming almost unfishable for periods during 2018.

Improvements to habitat need to be made in a number of areas:

1. Water nutrient level reduction using set-aside and reed-bed filtration
2. Fish survival improvements by increasing margin planting
3. Water level maintenance by improving water inlet and outfall
4. Juvenile fish survival improvement using refuges
5. Water level increase through improved bank maintenance
6. Water depth increases and hydrogen sulphide reduction through improving silt management
7. Improving water conditions using chemical additions
 - UV dye to reduce light penetration and inhibit weed growth

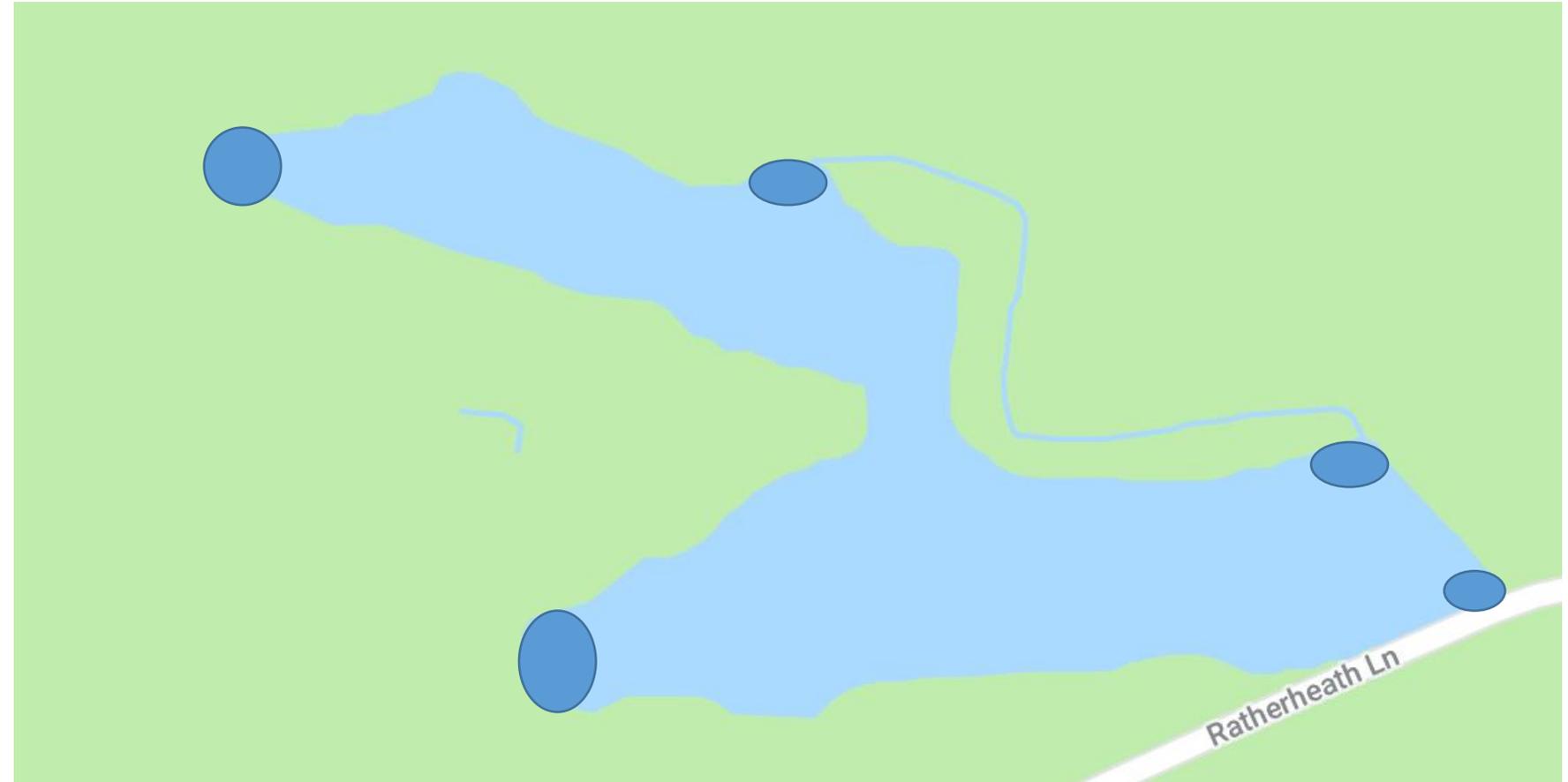
These improvement can be prioritized and scheduled over a number of years.

Priority 1 - Water Nutrient Level Reduction Using Set-aside and Reed-bed Filtration

Ratherheath is fed primarily from farmland run-off at the eastern end of the tarn. This water is rich in nutrients and as such encourages prolific weed growth. This is unlikely to change and measures must be implemented to control/reduce these nutrient levels by natural means. The best way to do this is using controlled reed bed planting to act as natural filters. Reed beds need to be planted to best maximize their impact on in-coming water but also must be sympathetic to the use of the venue for angling. The following diagram identifies 'set-aside' areas for the planting of reed beds:

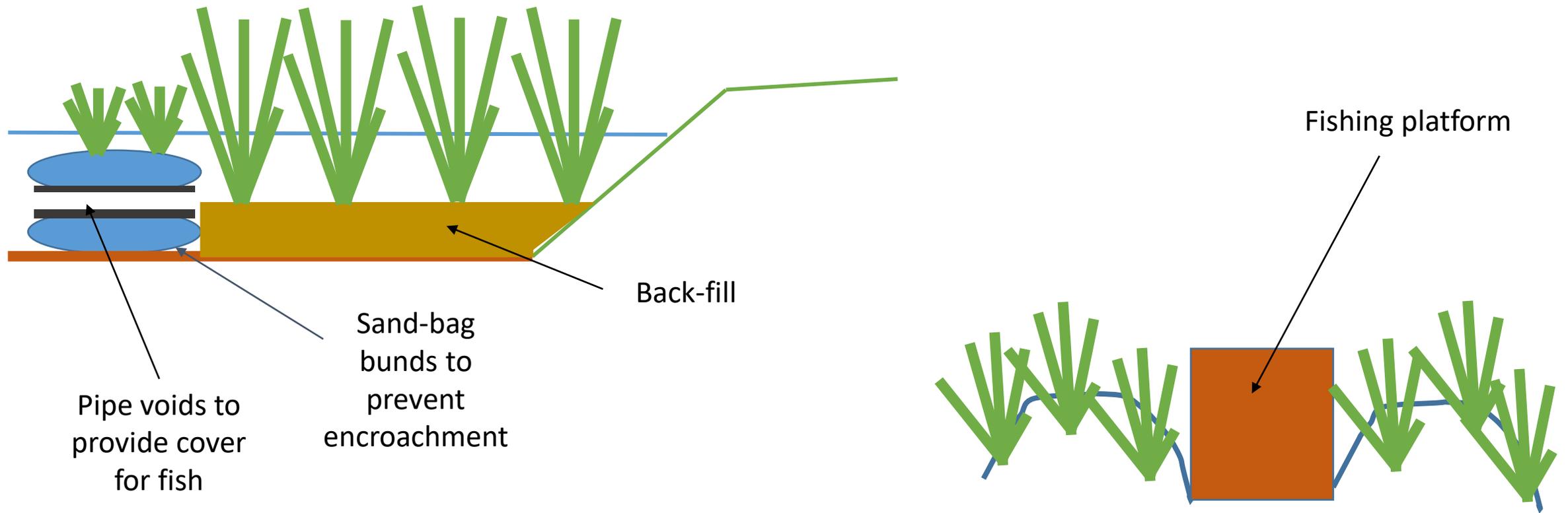
The set-asides identified are:

- away from the main fishing areas
- in areas where the water is shallow
- at the points of water ingress



Priority 1 - Fish Survival Improvements by Increasing Margin Planting

Marginal planting is almost non-existent. Improvements to margins would significantly enhance the overall habitat. Marginal planting should occur between the fishing platforms. This will require the creations of 'mini-bunded' areas using sand bags, backfilled with soil and planted with reeds.



Detailed Planting Scheme by Dr. Brian Irving MBE

Ratherheath Tarn

Vegetation Survey (Walkover)

Conducted on Saturday 5th January 2019

1. Introduction

A walkover vegetation survey was undertaken at Ratherheath Tarn, both marginal plants, open-water and bankside vegetation species were considered. Clearly, a survey in midwinter is not ideal but for the establishment of a baseline survey most of the dominant plants were readily identifiable.

The survey has identified the need for vegetation management both for aquatic fauna, human access and angling needs. This survey also makes recommendations and planning to establish a positive outcome for all.

2. The Survey

The conditions on the day of the survey were cloudy with diffuse bright light and wind speed was around 4 mph.

3. Open water surface vegetation

Canadian pondweed *Elodea Canadensis*

The southern basin of the lake is dominated by Canadian pondweed *Elodea Canadensis*, this species is an alien and should be eradicated where possible. Water depth in this basin is 4-5ft and is ideal for the establishment of this species. Research suggest that the plant was introduced around five years ago. Currently the plant carpets all areas from the margins across the open water, indeed, the full extent of the southern basin. In the northern basin it is restricted to the margins to around 3ft water depth. As the northern basin has a depth of around 8ft at its deepest point with steep sides it is unlikely that the plant can get established to the same extent as the southern basin. What is clear is that the plant is typically having an effect on all species through shading, nutrient depravation and oxygen demand.

Detailed Planting Scheme by Dr. Brian Irving MBE cont.

4. Marginal vegetation

Water Lily *Nymphaea* sp.

The eastern end of the southern basin has a scattering of Water Lily *Nymphaea* sp. It is not possible to identify the plant to species but this will be monitored. The species occurs in five large patches or 'pads' where the lake is less shaded by surrounding trees.

Bull Rush *Typha* sp.

This plant occurs in the open area at the eastern end of the southern basin and nowhere else. This is typical of the species as it needs an open (unshaded) margin to grow. This is also the area where the input stream enters the lake. Around 9 beds were identified within this area with robust root spread.

Water mint *Mentha aquatica*

Broad Leaved Pondweed *Potamogeton natans*

Water plantain *Alisma plantago-aquatica*

The three species listed above all occur throughout the marginal areas of the lake. Where they are absent the margins are either heavily shaded or Canadian pondweed is abundant.

5. Marginal Trees and Woodland

The margins have typical aggressive willow *Salix* sp. growth some of which have fallen across the water and have created secondary root systems. Heavy shading will be apparent in summer thus creating a dominance of willow scrub with little or no herbaceous plant growth in their vicinity. The lake is surrounded by mature mixed deciduous and coniferous woodland which shades the southern margins with the exception of a small area where the input stream enters the lake forming an open bay.

Detailed Planting Scheme by Dr. Brian Irving MBE cont.

6. Recommendations

It is recommended that a robust vegetation management regime is carried out before any fish are stocked into the lake. The baseline established here informs the initial and the ongoing regime of intervention and maintenance of lake vegetation but does not include the mature woodland.

The prime time for intervention works are during winter and early spring (December – March). Because of the nature of the lake (a viable fishery) the use of chemical herbicide is not appropriate as a vegetation management control. The only option therefore is either mechanical stripping or hand stripping of the Canadian pondweed. This is the main priority in year one. The herbaceous plants and bulrush should be propagated from local stock during late March.

Bull rush, broad leaved pondweed and water plantain should be re-distributed around the margins where light is available (north facing). This should be done in spring using typical gardening methods and metal anchor wires. Some seeding of bull rush can be achieved by distributing the contents of ripe seed heads embedded in clay balls and thrown around the margins. Propagation in this way will use established plants that are already thriving in the lake.

Water Lily beds should be assessed in mid-summer for spread and density, it is at this time a decision should be taken as to their best management process. This could be either thinning or the establishment of more beds.

Clearance of marginal willow should be undertaken in conjunction. All pondweed should be piled, dried and burned on site. The method of clearance should be drag blades to cut through the roots followed by raking to the banks.

The winter period of year 2 should be more of the same methods with a further emphasis on American pondweed as the priority species for eradication. By year 3 the Canadian pondweed should be under control and easily manageable.

The establishment of a thriving aquatic ecosystem should take around 3-4 years as long as a management regime is adhered to.

Priority 2 - Water Level Maintenance by Improving Water Inlet and Outlet

Management of the water level is critical to maintaining a good habitat, particularly of managing weed growth. Water levels at Ratherheath Tarn are controlled largely by a single inlet and single outlet.

Inlet – see photo 11

Water runs into the tarn in the eastern corner through a pipe which runs beneath the dry stone wall, draining water from the adjacent wetland. The inlet pipe is in poor conditions and requires replacing. Because of erosion, water now circumvents this pipe. The engineered solution of this needs to maintain the security of the otter fence.

Outlet – see photo 10

This outlet controls the overall water levels of the lake – it is critically important. Not only must this sluice be robustly engineered, it must also be secure. There have been instances in the past where this has been removed (vandalised) and significant quantities of water have drained away. If this has happened during the 2018 drought it would have caused a serious fish welfare issue.

Several issues need to be addressed:

1. A security/locking device need to be added to prevent the gate from being removed.
2. The gate mechanism need to be redesigned to support the targeted water level rise
3. The surround concrete culvert may need to be enhanced

Priority 1 - Juvenile Fish Survival Improvement Using Refuges

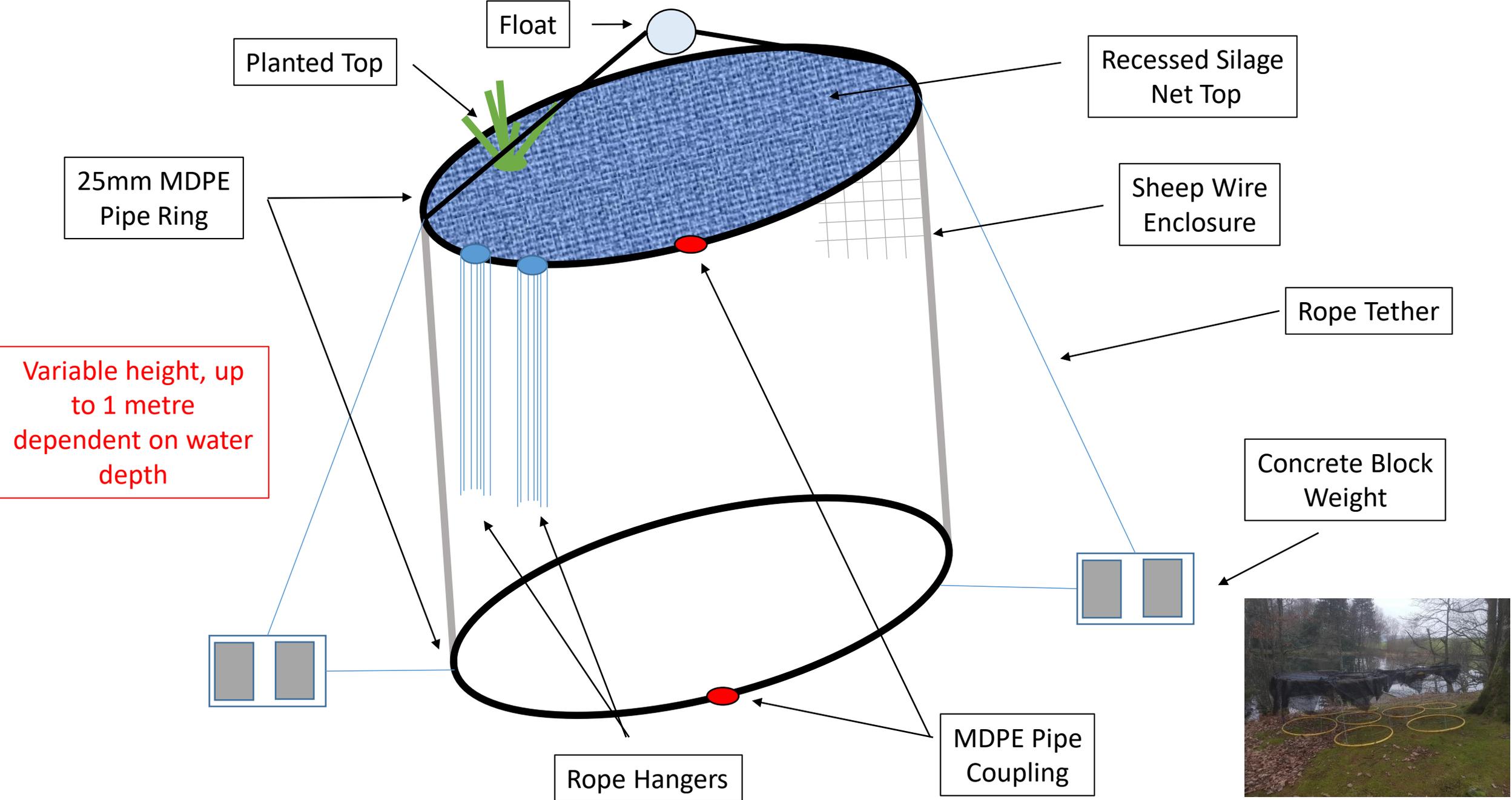
Natural rates of fish reproduction in the tarn have been notoriously poor. A primary reason for this is a lack of protection afforded to yearling fish to get them over winter.

Survival rates can be dramatically enhanced with the addition of fish refuges. These provide protection and shelter to young fish over winter. They also provide significant cover to avoid avian predation.

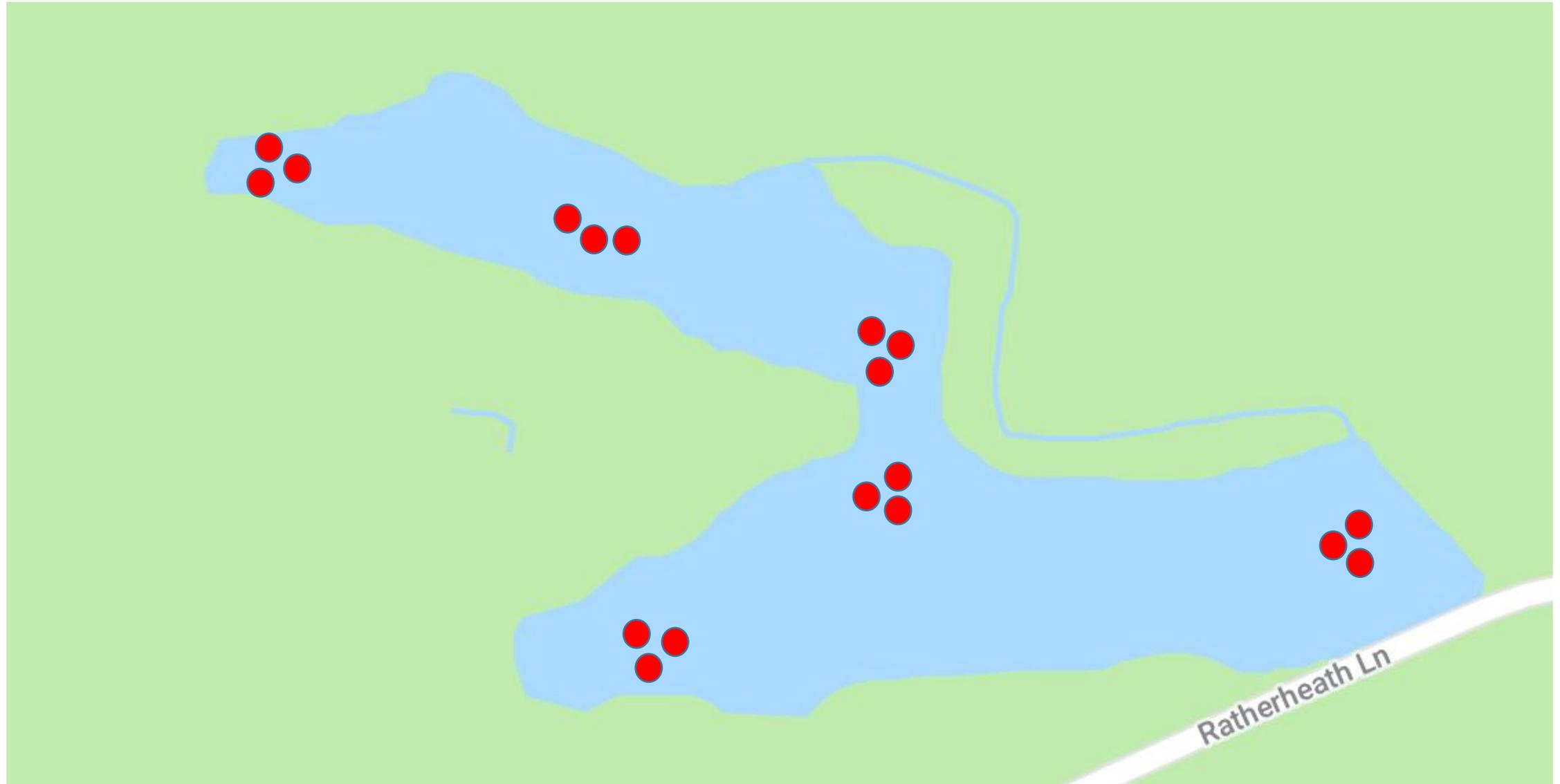
Fish refuges can be constructed cheaply. A number of fish refuges should be constructed and distributed around the tarn. Fish refuge design as detailed in the following article;

<http://www.bruno-broughton.co.uk/pdf/Protecting%20Your%20Fishery.pdf>

Priority 1 - Juvenile Fish Survival Improvement Using Refuges



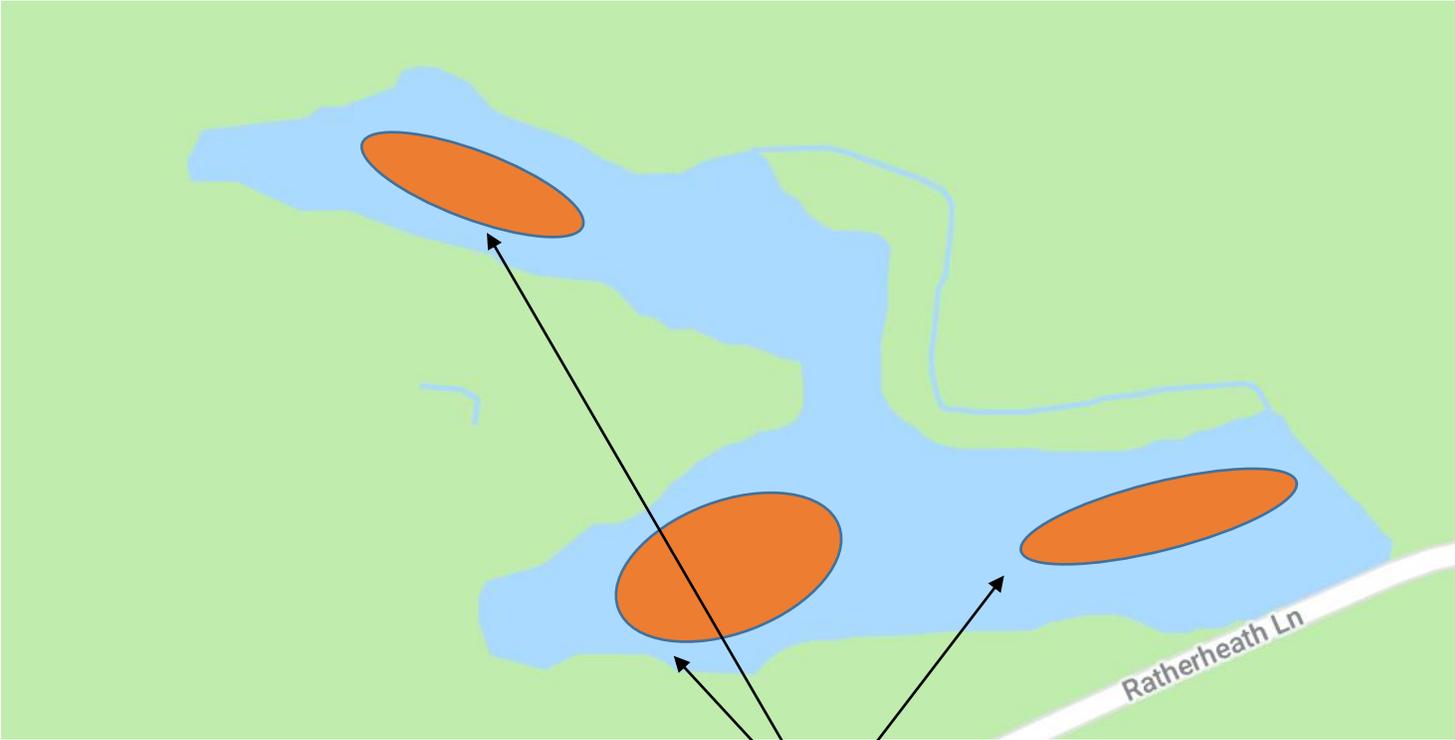
Fish Refuge Locations - Ratherheath



Priority 1 - Water depth increases and Hydrogen Sulphide Reduction Through Improved Silt Management

<https://www.essentialponds.com/siltex-silt-control.html>

Survey the whole lake and identify areas where the silt exceed 6" depth. Treat these areas with Siltex over a 3 year period.



Identified areas of deep silt



Priority 2 - Water Level Increase Through Improved Bank Maintenance

Increasing the water level by 6" would have a significant impact on improving the overall water habitat:

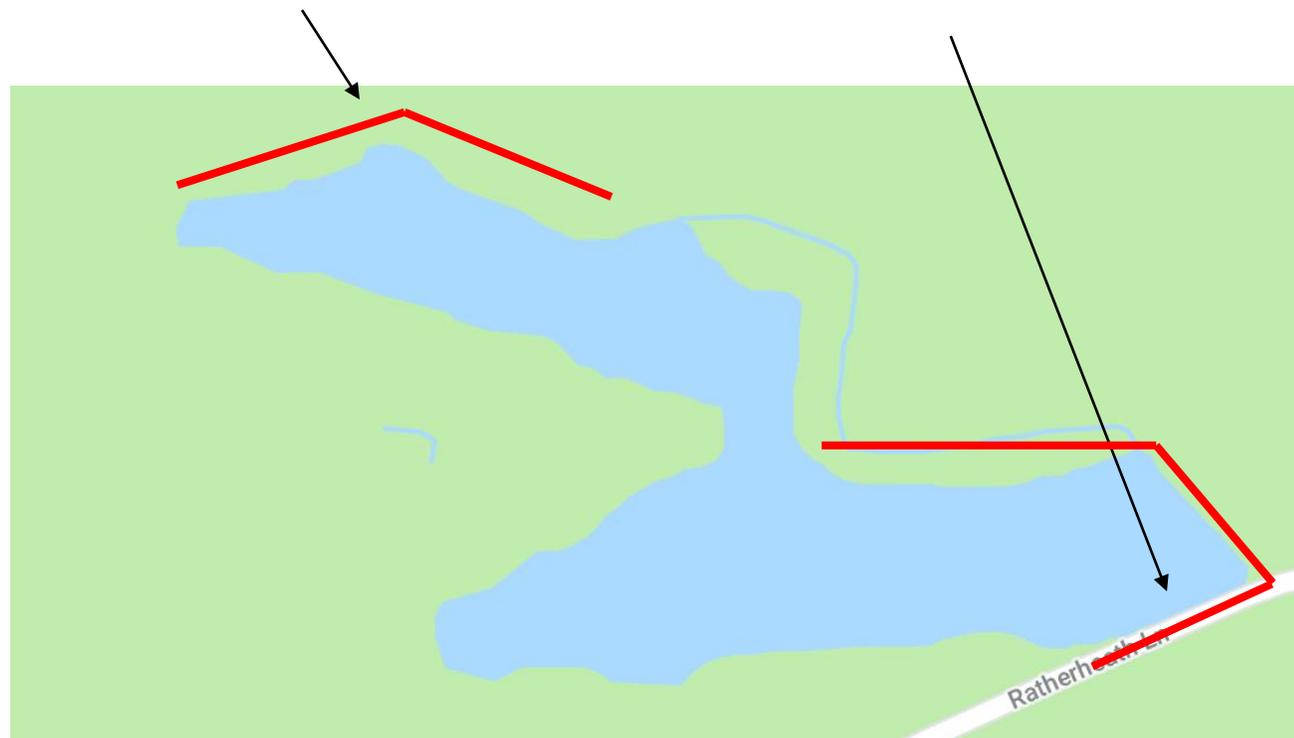
1. Increased margin depths providing fish access to enhanced cover
2. Reducing Light penetration through the water column reducing weed growth
3. Reducing the required length of fishing platforms

The surrounding topography would support this water level rise with the exception of the 2 areas identified:

Area 1 – This area is generally low lying. It has previously had a raised bund pathway constructed. This has been breached in a number of places and needs rebuilding/reinstating

Area 1 - see Photo 9

Area 2 - see Photo 2



Area 2 – The banking in this area is constructed from railway sleepers. These need to be re-laid with additional height.

Priority 1 - Improving water conditions using chemical additions

Altering the chemical balance in the water can have quick beneficial effects, however it should be viewed as a temporary measure whilst more sustainable improvements mature. However, these would give a short term boost.

Addition of UV Dye

Adding dye to the water reduces UV penetration and as a result inhibits weed growth.

<https://www.dyofix.co.uk/>

Consultation with Peter Watson for expert guidance

Weed-control measures

By Amanda Badger, co-owner of Lenches Lakes, Worcestershire

THE VENUE

Lenches Lakes, Church Lench, Evesham, Worcester WR11 4UH

TYPE OF WATER

2 x 3 acre stillwater spring-fed lakes reaching depths of 1.5m to 4.5m

EACH year from early spring to September effective aquatic weed management is key to being able to offer the lakes to flyfishing or other summertime water activities. The aquatic weeds that are a huge nuisance to me are Spiked Water Milfoil (*Myriophyllum spicatum*), algae and blanket weed.

Having drained and dredged one lake last summer I was keen to keep it as weed-free as I could. I obviously wanted some weed but not a total invasion. In previous years I have used aquatic herbicides such as Clarasan, containing terbutryn, and Midstream containing dichlobenil. Both were extremely effective killers of submerged vegetation. But I can assure you it was not as simple as that! Weeding also took place with a weed-cutting 10-foot bar that is rowed out to a casting distance from the stands, pushed in the water, then the tractor winches the bar back to the bank cutting weed as it goes. This is a three-man time-consuming job.

Since the removal from the market of these chemicals I have struggled to manage weed.

This year I gave DyoFix Pond Blue a go, with the marketing blurb selling it as: • Algae & weed prevention for ponds and lakes • Blocks sunlight, denying algae's food source • Harmless to fish, wildlife and insects • Completely free of pesticides, algaecides and other harmful chemicals • Economical to use • Easy to apply • Long lasting • Used by commercial fishing lakes, golf clubs and local authorities

The gist of DyoFix is that the inert vegetable dye blocks sunlight from vegetation hence not allowing effective photosynthesis. I thought this sounded like a real game-changer so I phoned one or two local syndicate waters who had tried it the previous year. They didn't hesitate to recommend it so I made the call.

It was a reasonable price compared to the traditional chemicals. I decided to introduce the DyoFix Pond Blue (this is the basic product and the most reasonably priced), into the lake in early spring, not letting weed get a grip in my relatively barren lake. Ordering was made simple by efficient and friendly staff who offered their services regarding calculating volume of water to be treated. Initial dose and further maintenance doses were quick to be delivered. I set about flinging the sachets of dye all around the lake to help disperse this 'portalo' blue dye. Job done - very satisfying.

The blue dye spreading through the water was very dramatic, it quickly dispersed into every nook and cranny of the lake and I was now looking at crystal-clear water with a heavy tint of blue. A month went by and I was keen to keep concentration levels high so I erred on the side of caution and was dosing with slightly more than recommended. I had been assured there was no threat of harm to waterlife if applying more than suggested amounts.

I have continued to dose both lakes, keeping up concentration levels throughout the past five months. It is



This is Spring Lake - the pea soup is clearing fast.

now the end of July, the water is far too warm for rainbow trout to have a good time and the sun continues to increase the water temperature.

The two lakes have taken on quite different characters. Firstly the lake which was not dredged, Spring lake, has remained relatively weed-free! Still one or two areas with low lying weed, but no big deal. So definitely a result on that front. Blanket weed - none, not even in the margins (the blurb states the dye is not effective in water less than 90cm). However this lake has lost clarity, a bit of a pea-souper with fine algae suspended in warm water. The algae in this lake are obviously having a ball.

Whitsun lake, the dredged lake, is a different story being a brilliant Bombay Sapphire blue with stunning crystal-clear clarity. The Spiked Water Milfoil has put up a strong fight and has made a staggering reappearance! Although some flyfishers consider it to be abundant, in my experience it has been a lot worse. Blanket weed has been present in the margins, but not in the quantities of previous summers. No sign of pea-soup inducing algae.

An observation that the two lakes share is that the Argulus population seems to have declined significantly. With various techniques of Argulus management the days are

This is the Lake Shadow, the water is really reflecting a blue summer sky, hopefully you can detect the hint of grey/black to relatively clear water.



long gone of trout being smothered with them. However I generally get some Argulus present, maybe three to five on a single trout. This year I have had one or two trout with one or two Argulus. So here at the Lenches Lakes the Argulus have had a bad year. Tim Small of Bushyleaze has also noticed a significant decline in Argulus. He too has used Pond Blue. Is DyoFix responsible? Has anyone else made a similar observation?

I shared my results with the manufactures of DyoFix, Town End. I also wanted to check out a thought that had been voiced by a neighbouring syndicate stillwater, which suggested that the product DyoFix Lake Shadow was a lot more effective than the base product DyoFix Pond Blue.

Having taken advice and with nothing to lose and everything to gain, I gave Spring Lake a massive dose of Pond Blue (5 kilos) to try and get on top of the pea soup algae and with Whitsun lake - I put some Lake Shadow in with the existing Pond Blue. Initially Spring Lake had that blue tinge to the pea soup and Whitsun took on a black (dark grey) effect, whilst the clarity remained impressively sharp. Four days on there are staggeringly exciting developments in both lakes.

Spring Lake has now regained some clarity - see photo, the soup is clearing, the algae dropping like flies! I can see at least five feet and it is only day four.

Whitsun lake is where it's really happening - the now grey/black tinted clear water has started to work its magic. No spikes of Milfoil are peaking from the water's surface, I get the boat out to get my rake in the depths. The results are beyond my wildest dreams. Spiked Water Milfoil is definitely on its way out and the top four to five foot (i.e. from the surface down) of its strands are looking pretty sick, brown and dying, whereas the weed on the lake floor still looks green and relatively healthy. I guess it dies from the water surface down.

Hence after four days, I can reliably say that both lakes are responding well to the DyoFix products. My fantasy forecast is that I regain the water clarity in Spring lake and all the

Milfoil-green from the lake bottom and dying from top four-five feet of water.



Milfoil in Whitsun lake, that I have battled with from day one at the lakes, becomes history! It looks encouraging. I spoke to Peter J Watson today at Town End (Leeds) Plc, manufacturers of DyoFix Fix products, my number one point of contact. He is aware I am writing this contribution to Newslines, welcomes enquiries and will do his best to make the products work for you.

I have now ordered enough Lake Shadow to give each lake a top-up dose through August and September when the water temperatures should be receding and weed/algae growth minimal. In conclusion: you get to know the product and the concentration levels that suit your waters. I will be sticking with Lake Shadow next year. Initially, dose of Lake Shadow

is double the amount of Pond Blue, 18kgs at book price of £30 per kg (compared to Pond Blue 9kgs @ £40/kg book price) total cost of £540. Spends of over £300 get a 30% reduction = £380. The lakes require approximately 10% top-up each month (dependant on rainfall and light fade), so say 2kgs a month maintenance dose from April to October = 12 kgs (total £360 minus 30% discount £252). Total annual weed control cost £632. If the product continues in the vein of the last few days, I feel a spend of £632 well worth it. It is easy to apply, poses no threat to wildlife (so good to be able to inform interested parties), and it is not a chemical/pesticide/algaecide.

Only time will tell how long the weed takes to break down, however, I am confident that it will not hinder my flyfishers experience in September. I will be maintaining the concentration levels and use this year's experience to my advantage next year.

• Direct Inquiries to: Mr Peter J Watson, 0113 2564251, peterwatson@dyes.co.uk
• Town End (Leeds) Plc (manufacturers of DyoFix products), Silver Court, Intercity Way, Stanningley, Leeds LS13 4LY.

"The gist of DyoFix is that the inert vegetable dye blocks sunlight from vegetation hence not allowing effective photosynthesis"

Pegging Plan

Originally, the tarn had 43 platform pegs spread evenly around the venue. This was probably too many. Reducing the peg numbers to 30 would be more appropriate for the venue and would also significantly reduce the maintenance burden.

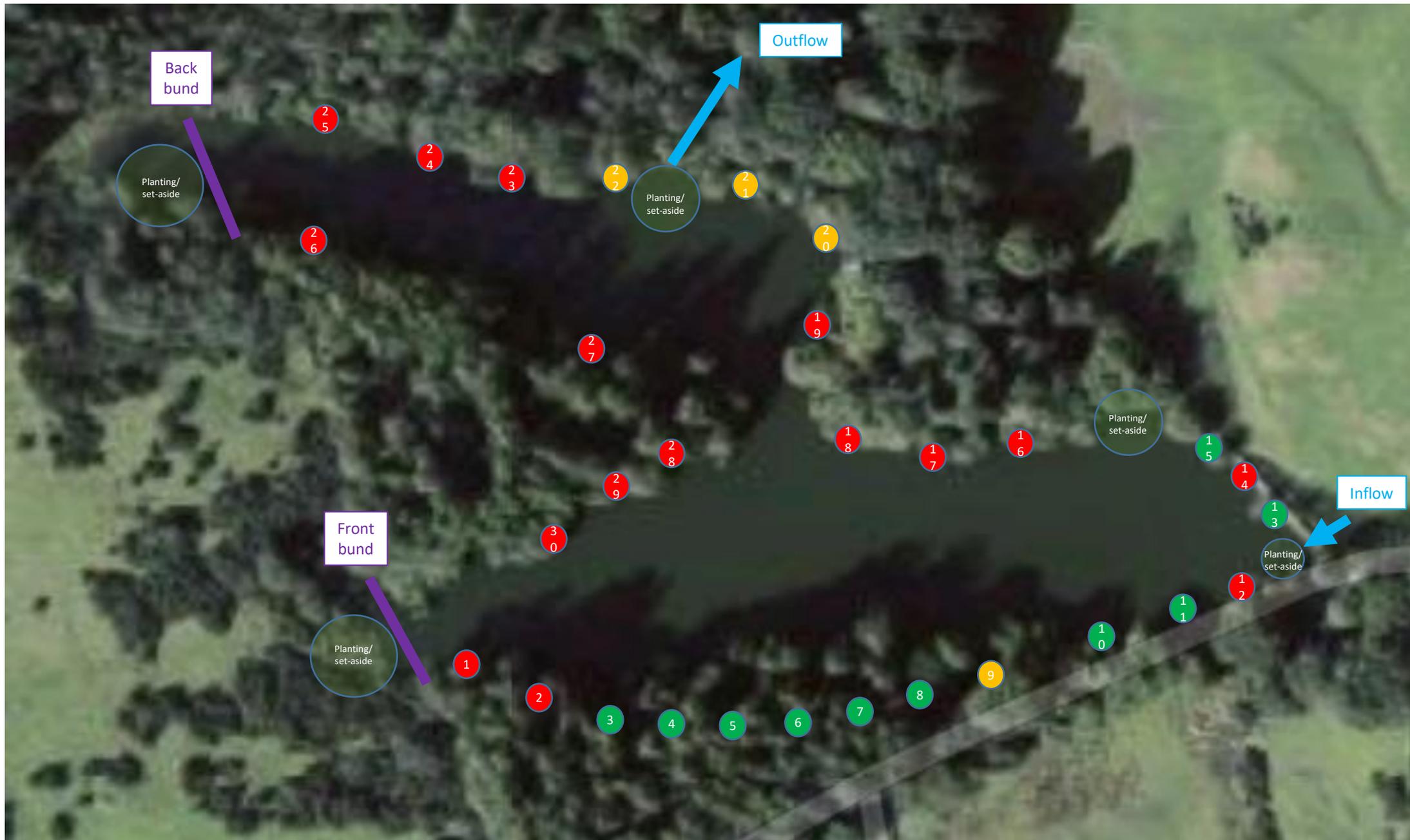
Given the tarn is to be used by a wide variety of anglers (carp, general coarse and match), pegging must be appropriate to accommodate this.

Additionally, as a signature venue, we must provide suitable easy access for our disabled and mobility constrained anglers.

- Provide easy access for mobility constrained anglers
- Provide pegging that is suitable for coaching
- Provide pegging large enough to be used by adult/junior combinations
- Avoid 'opposite pegging' on the narrow sections
- Avoid over dense pegging and maintain areas of 'set-aside' to manage bio-diversity and water quality
- Allow enough space for multi-rod carp fishing
- Provide areas for roving/surface fishing
- Provide pegging which would support using the water as a day ticket venue
- Provide anglers with sufficient space and a sense of solitude

Pegging

-  Existing platform good
-  Existing platform requires attention
-  New platform required



Peg Construction

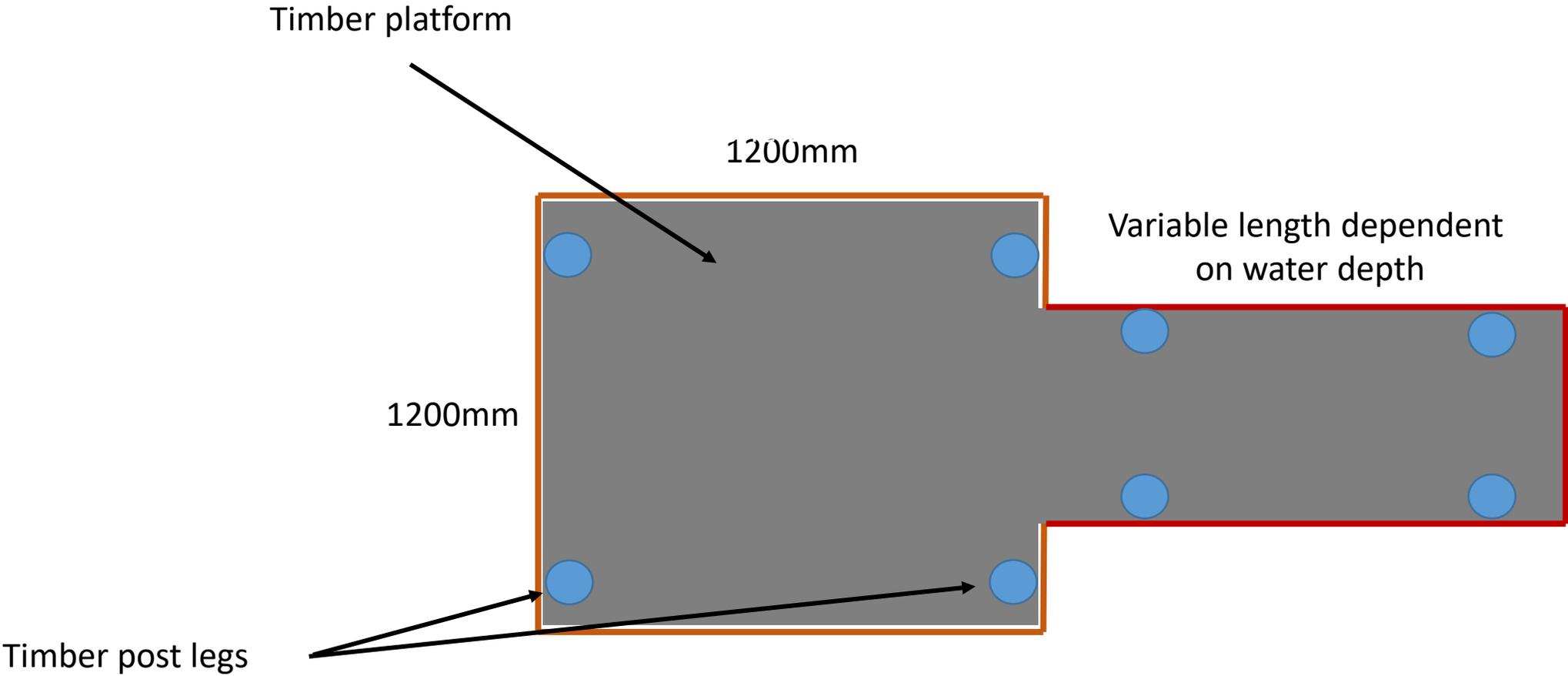
Ratherheath is a shallow tarn with depths rarely exceeding 1 metre. Wooden platforms are used to put the angler out into a decent depth of water – this is necessary for the safe landing of fish.

Current platforms are predominantly all timber construction. The 19 platforms which remain on the venue are in a mixed condition with some requiring some attention. These would require replacement of the timber decking and/or leg supports.

Where a new platform is required in entirety, these should be constructed from treated timber legs to ensure long term (15 years plus) durability.

Given the variation in water depth, some platforms will require extended walkways. These need to be constructed on a case by case basis.

Peg Construction



Stocking Plan

With Otter Fence

As the principle coarse water in the WADAA portfolio, the stocking plan should be varied to appeal to as many members as possible. Given its size and variations in topography, it lends itself to a multi-species approach, with an overall density of around 750lb per acre. Whilst the club recognizes the appeal of carp (and the importance therefore from a revenue and sustainability point of view), Ratherheath is a prime, natural mixed fishery and the stocking policy is reflective of this.

Carp – Stocks of fish between 8 and 14lb should be the norm, with a smattering of 15lb+ fish

Tench - the venue should hold a decent number of tench up to 4lb.

Bream – the venue should hold high stocks of bream up to 3lb, with a decent breeding stock of larger 6lb fish

Roach – the venue is capable of sustaining large numbers of roach. These should be encouraged given the beneficial impact they have on water quality and for providing sport early and late in the year

Perch – the venue will benefit for having a number of perch present, these should be of a larger size and care must be taken to manage excessive numbers of small fish.

WADAA Angling Coach

James Atkinson

Hi my name is James Atkinson I am one of the directors of WADAA Ltd and have been a member since I was 14. Growing up near Carnforth, Windermere and District Anglers gave me the opportunity to develop my angling ability. Having the opportunity to fishing more regularly I fell more in love with the sport, this led to me entering the England youth fly fishing national final. The club supported me throughout this process and the Club Manager at the time (Neil Birkinshaw) helped train me on Esthwaite Water and then travelled down with me to the final. With constant support from my parents and the club it led to me competing at international and world level for the England Youth Team.

At this point I was a fishing addict, and I was keen to share my passion and new learned knowledge with others in the club, particularly the juniors in the club. WADAA then paid for me to complete my Level 1 Coaching Certificate with the Angling Trust. I passed this with flying colours at the age of 16 and I have been using the techniques I learned during my training course to help coach anglers ever since.

Now at the age of 24 I am a qualified science teacher at Giggleswick School in North Yorkshire. Working with young people is massively rewarding to me and I always aim to make an impact to who ever I am working with. I am particularly interested in trying to involve more young people in angling both coarse and game. I aim to use my experience from fishing all over the world and the knowledge I have from teaching and working with young people on a daily basis, to try and get more people into fishing and show them what a fantastic sport it is and how it can benefit everyone in many ways.

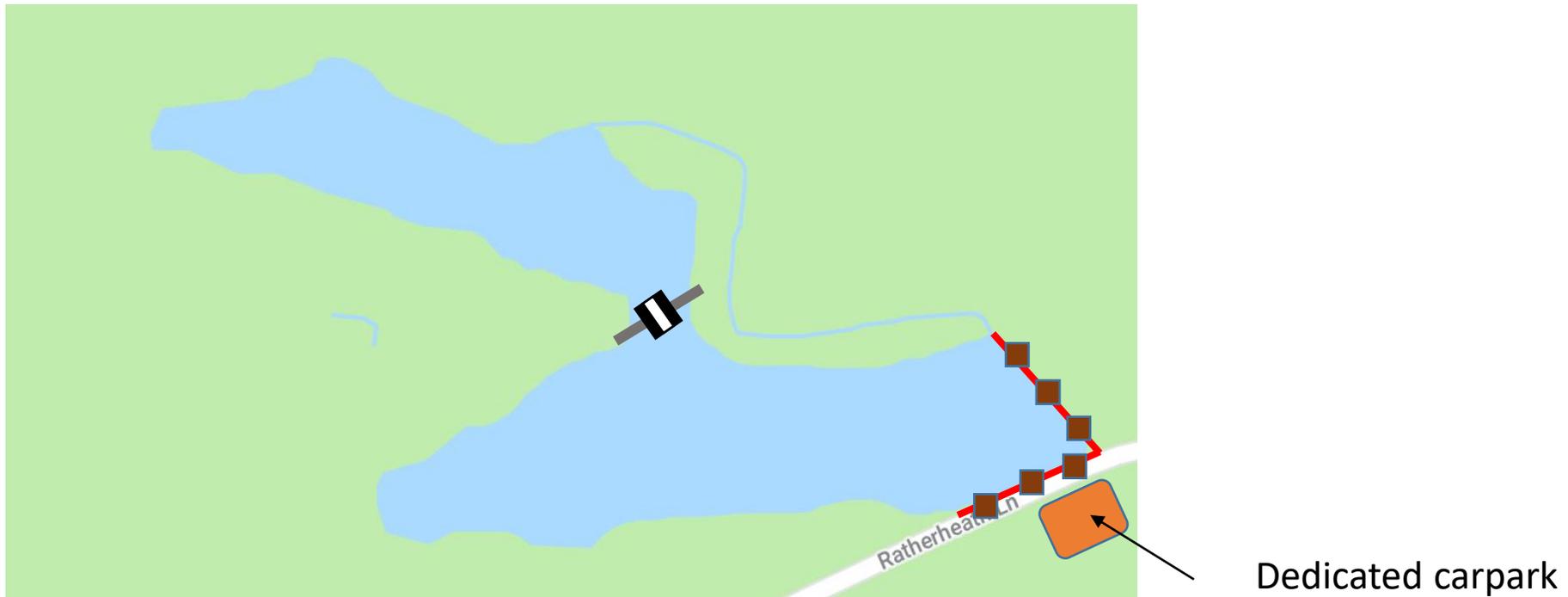


- 3 Youth loch style international caps (2 gold and 3 bronze medals).
- Youth loch style international champion 2011.
- 3rd place in the loch style international 2009
- One of only 5 people ever to qualify for the senior team at 18.
- Part of the gold medal winning team at Lough Owel and winner of the biggest fish in my first senior international.
- Team silver medalist at the international on the Lake of Menteith and 5th individually.
- 2 world caps at youth level and was top English rod on both occasions. Highest ranking of 2nd in the world.
- 11th place at first senior rivers national final and recently qualified for my second national final.

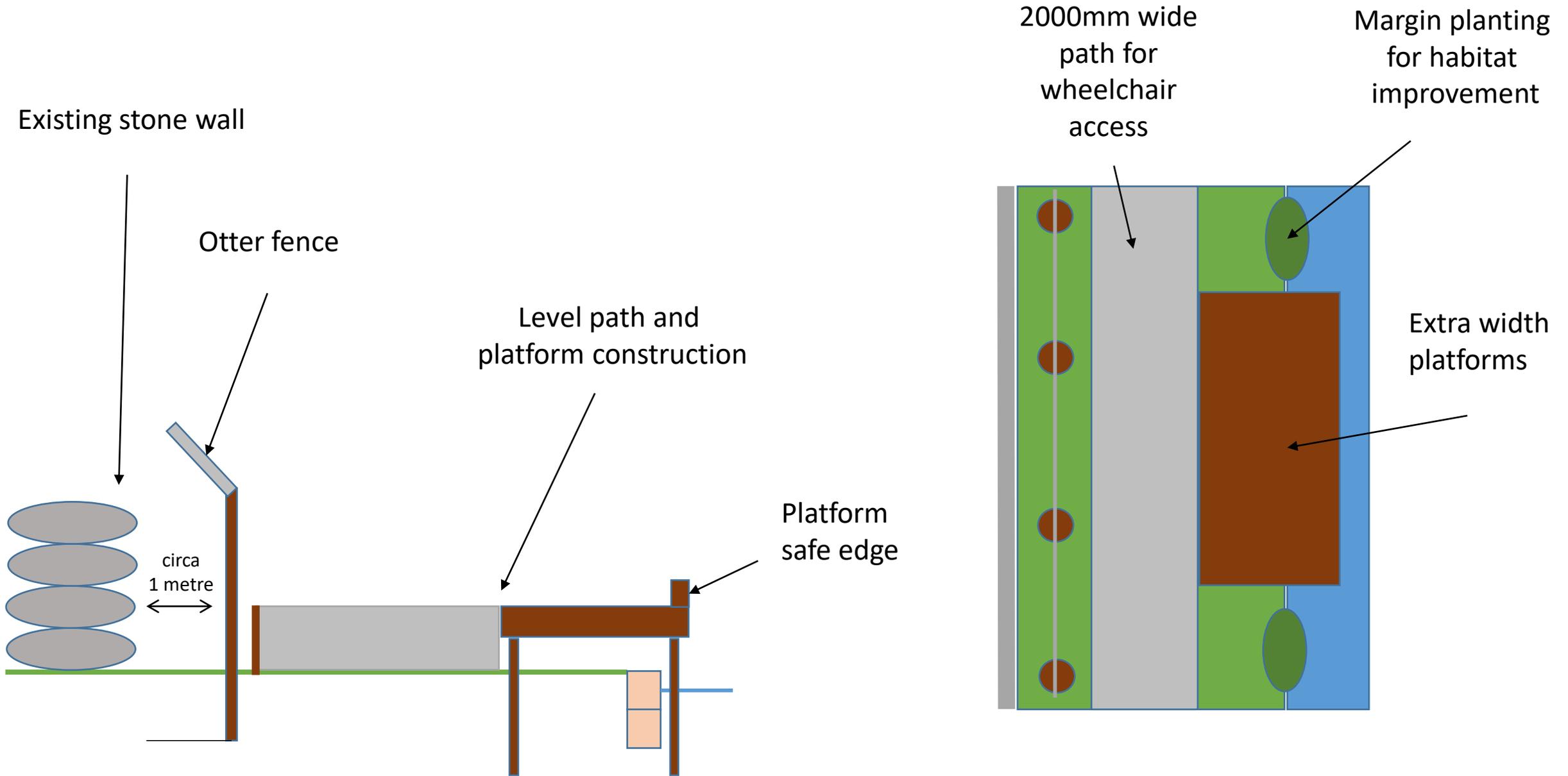
Improving access for mobility constrained anglers

The land surrounding Ratherheath Tarn varies greatly in height, however the banks adjacent to the eastern end are very flat. This provides an ideal opportunity to develop some dedicated access for disabled, mobility constrained and young anglers. The age profile of anglers in the club increasing and this will create additional demand for easy access fishing.

The club also needs to develop facilities which promote interest from young anglers – again, access for coaching and supervision could easily be developed. We would use our own accredited angling coach to support these activities.



Construction of easy access fishing



Enhanced Access Pegs



Local Testimonials/Letters of support

Dear Nick,

So pleased to hear you have been given the opportunity/position in WADAA that enables you to put things back into some kind of state of repair concerning Ratherheath Tarn.

To be quite frank I was shocked and quite angry at it's condition when I visited recently.

As you know I am in the position of being Chairman of Border match angling club here in Cumbria, with our membership spreading from Northumberland to Yorkshire, but mostly our members live in Cumbria.

I was disappointed not being able to continue with the Cumbrian league we started some 10 years ago with Ratherheath Tarn being the crown jewel in the venues we used and kindly offered by yourself and the WADDA members who took part in the league.

It's something we and other Cumbrian fishing clubs would dearly love to established again.

At the moment unfortunately the total lack of waters suitable for such events do not exist in Cumbria to the detriment of our community. (especially the youngsters)

In fact the last one, we had to use venues in Lancashire!

We do find it rather frustrating that we do not have a match fishing venue/lake in the whole of Cumbria and have to take our money out of Cumbria, this does nothing to help local clubs reinvest that money back into Cumbrian fishing in general.

As you most probably know BMA club have to travel hundreds of miles into neighbouring county's to have a fishing match, spending £1000's which could be put back into local club coffers.

On a personal level, I am Cumbrian born and bred and would dearly love to put my money into the future of Cumbrian fishing.

I do feel our children and grandchildren are missing out on such a wonderful sport.

Also if you require any help in bringing such a stunning venue back up to its former glory, may I offer you our support if a ny way ,shape or form, all you have to do is ask and we'll be there to help.

Yours sincerely, Mr Kevin Aitken

Chairman, Border Match Angling Club

Local Testimonials/Letters of support

Nick

Sorry to hear about the issues you are experiencing at Ratherheath Tarn with regards otter predation and the serious effect it is having on coarse angling within your club and local area.

Many years ago there were few day ticket coarse fisheries in the Cumbrian area, with many anglers travelling into Lancashire or Yorkshire to find good quality coarse fishing.

In the mid eighties while secretary of Haig Angling Club, Whitehaven I made lots of enquiries and eventually contacted all the Cumbrian Coarse Angling Clubs setting up a Cumbrian League. The difficulty was finding local (Cumbrian) waters to fish these inter club matches, we were restricted to Mirehouse Pond, Ulverston Canal and Ratherheath Tarn.

Ratherheath was quickly recognised as one of the best fisheries in Cumbria with excellent tench and roach fishing.

Word soon spread through the angling community and many anglers travelled to the venue and eventually into Cumbria with families on holiday having found places where children were welcome could be introduced to angling by parents or grandparents or watch others catch fish, and to quote a phrase "be hooked" thanks to Ratherheath.

Dayticket waters in Cumbria were/are still scarce, places like Ratherheath provided excellent fishing and being positioned with easy access by road combined with good availability to day tickets helped promote both coarse angling and no doubt tourism in the area and as I've previously indicated this availability of coarse angling brought anglers and in many cases their families into the area, generating income to local businesses; created lots of friendships and contacts, many remaining in place today.

On taking over as Chairman of Haig Angling Club after seeing our membership drop by 60% over last few years I've been looking to resurrect interest in coarse angling and in visiting other club's waters, promoting Cumbrian fisheries as over the last ten years I have noticed while being the match organiser with Haig AC, Border Match group a decline in anglers wanting to fish natural non-commercial waters (although many anglers like the peace and tranquility, as found at Ratherheath, when paying to fish, daytickets) they also want to catch. If they cannot realise their needs at Ratherheath or any other location in Cumbria they will resort to travelling East into Yorkshire or South to the likes of Whiteacreas where family holidays and angling can be combined.

Waters like Ratherheath being at the gateway to the Lake District (an area many link with game fishing) are key to helping both maintain and promote the availability of coarse angling in Cumbria.

I hope you can resolve the issue at Ratherheath raise the funding to install predator defences and maintain the availability of a venue that undoubtedly promotes coarse angling, helping the local area and Cumbria alike.

Tight lines

Mike Pattinson
Chairman, Haig Angling Club

Local Testimonials/Letters of support

To who it may concern

Ratherheath is a local water that is an essential part of the local angling scene. It is where a lot of local anglers have learnt the basics over the years, from catching carp to their first perch on a whip. It has given anglers good coarse fishing over the years and is a very unique water to the local area.

This water also adds to the local day ticket scene providing fishing for anglers who aren't members of the club and might be visiting the Lake district. i.e tourists. With tickets being sold at the local tackle shop it helps support small and local businesses in the area.

Ratherheath was also a fantastic and popular match venue. It would host many matches throughout the year for anglers from far and wide.

This water needs looking after. There aren't many places in the Lake District that can be stocked and still have a very wild feel to them. This water needs a fence round it...the sooner, the better.

Many thanks

Dave Nemeth
(Secretary for Kendal & District Angling Club)

Local Testimonials/Letters of support

4 Acacia Crescent,
Woking in Farnham
Camberley
W14 6THP.

14.1.19

To whom it may concern,

I write to support WASHA in their plans for the development and improvement of Bokerley Tarn.

In an area not particularly blessed with quality coarse fishing Bokerley Tarn stands out as a quality water providing excellent fishing for local and visiting anglers. It is a unique water with high quality habitat which should be maintained. It is a great water for youngsters starting to fish and also supports local tackle initiatives through club tickets.

There are few match fishing venues in the home District and Bokerley is ideal in this respect and through its aspect of

the sport facilitates cooperation between the various bodies and clubs in and around the area.

Bokerley is vitally important for all the above reasons.

Yours faithfully
David Dixon
(Chairman B.A.A. Hvt.)

Local Testimonials/Letters of support

21/01/2019

Dear Nick,

We as a club of 500+ members would like to throw out wholehearted support behind your application for a grant to help you otter fence Ratherheath Tarn.

Hearing of the devastation of a fishery so close to ours spurred us on to spending over £50,000 on otter fencing three out of our 8 ponds. Ratherheath was a favourite amongst our matchmen who still talk fondly of the fishing competitions there and the privilege of being able to fish in such beautiful surroundings. The misguided reintroduction of otters and the protection of cormorants has dealt two body blows to any fishery owner. None fisherman may be surprised by the close affinity between the coarse fisherman and his quarry; the desire to catch but protect, to hunt but nurture. And what are we by law required to do but stand and witness the depredation of our waters with no recourse to action.

With the grant aid a facility can be regenerated that will again be a magnet for locals and tourists who can take their families and have a rewarding days fishing in the majestic lake district setting of the tarn. Apart from the lakes themselves which are often hard to fish from the bank there is a dearth of venues for day ticket fishing in the north, east and western lakes only ourselves and Ulverston canal in the south offer any hope for the day ticket angler.

Again we can only offer our 100% support for your application and hope we will be able to fish there soon.

Yours sincerely

John Cook (Furness Fishing Association Coarse Section Secretary)

Local Testimonials/Letters of support

To Whom It Concern – Ratherheath Tarn

Dear Sir

Ratherheath Tarn's history is closely linked to many local's reasons for beginning coarse fishing in South Cumbria. It's importance cannot be stressed highly enough. It is accessible, offers variety angling, a good size and in fantastic surroundings. Everyone that coarse fishes (almost to a man) fished this excellent middle sized water as a child or youngster. It introduced many anglers to coarse fishing over the years. The tarn gives sport to the beginner as well as the specimen hunter, with carp to almost 20 pounds coming out regularly.

Sadly, Ratherheath Tarn slowly fell into decline over the recent few years...mink, cormorants and particularly otters found the tarn and steadily emptied it. Too many predators quickly damaged stocks of fish and the tarn went into a downward spiral. Anglers soon deserted the tarn and the club that ran the tarn. Membership on the coarse side of WADAA reduced rapidly. As less fish grazed the bottom of the tarn, weed appeared and took hold. I assume farmers use of fertiliser will have been the main culprit, but the loss of a good population of fish will have had an effect on the weed's ability to grow and spread.

As a venue for children and disabled anglers, Ratherheath Tarn is second to none. Its ease of parking coupled with the flat, pebbled path round the tarn, makes access and movement its main benefit, to those that aren't agile. Specialised disabled pegs also help with angling for the less enabled.

Local anglers never really got Ratherheath Tarn out of their system and is regularly visited, just for a look, to "walk down memory lane". Some anglers fished it as children and continued to fish it as adults, the tarn never lost its appeal, whether it was for beginners or specialist anglers. Matches used to be held regularly on the tarn and were well attended. I understand that the day ticket is to be reintroduced onto the tarn and this would be a fantastic way to familiarise these anglers with its resurgence.

Ratherheath Tarn was the "go to" tarn for the holiday maker. It was ideally placed for holidaymakers to Windermere, Kendal and the rest of the South Lakes. It offered a good wide variety of species where new starters and specimen hunters could find some highly enjoyable sport.

Since Ratherheath's decline angling hasn't been the same in South Lakeland. That sounds dramatic, but it really was that important to the area. It was that important to the angler. It was a fantastic benefit to the holidaymaker in the Lakes.

Please give consideration to Ratherheath Tarn, without doubt the most important angling venue within the area.

Many Thanks

Geoff Waites
Proprietor
Carlson's Fishing Tackle
Kendal
Cumbria.

Local Testimonials/Letters of support

Carter Jonas

52 Kirkland
Kendal
LA9 5AP

T: 01539 722592
F: 01539 729587

Your ref:
Our ref:

FAO: Nick Butterfield
WADAA Ltd
Bellevue
Prince's Street
Ulverston
LA12 7NB

17 January 2019

Dear Nick

TOLSON HALL ESTATE – RATHERHEATH TARN

Further to our recent correspondence regarding your application for funding to improve Ratherheath Tarn: I am able to confirm that my client, Sir James Cropper, who is the owner of Ratherheath Tarn, is supportive of the plans you have proposed.

Furthermore he is willing to offer a lease with a five year term, subject to contract and other terms being agreed.

My client recognises the benefits that the application, if successful, will have to the fishery in terms of habitat and ecology, but also the social benefits of having a club water close to a large conurbation, and available for members and day-ticket holders to use.

Please do let me know how we can help to further to success of this application.

Yours sincerely,



Robert Bowyer MRICS
Surveyor

E: robert.bowyer@carterjonas.co.uk
T: 01539 814 916
M: 07971 634 561

Local Testimonials/Letters of support

Our ref: DW/Ratherheath/01

Your ref:

Date: 21st January 2019



Mr N. Butterfield,
C/O Windermere & District Angling Association

Dear Nick,

RE: RATHERHEATH TARN

I am writing in support of the work you are undertaking at Ratherheath Tarn, Kendal. I've had the pleasure of working with you, advising in relation to fishery management over the last 6 months where we've considered topics such as water quality, habitat, predation, angling facilities and fish stocking. Following our discussions, I was delighted to see the implantation of fish refuges and your plans for new angling platforms and footpaths to create excellent angling facilities for your members as well as improved habitat and refuge areas to help with avian predators to protect your fish stocks. Ratherheath Tarn has also seen large stands of invasive weeds emerge that are difficult to control now that herbicides to control submerged vegetation have been withdrawn from use. It was recommended a weed cutting boat (contractor) was employed to remove most of this weed while native plants are introduced to create better habitat conditions which the club are embracing. Otters are becoming of concern for fisheries and can have detrimental impact to species such as carp, particularly in the colder months where they'll exploit these vulnerable species. With Ratherheath supporting a number of large Carp, there is already evidence of otter predation at the site with a number of carcasses found showing typical otter predation. Large carp are costly to replace and may result in anglers not renewing memberships, reducing club revenue and the ability to replace fish as well as impacting on the clubs ability to maintain and develop the fishery to the current high standards. I am in full support of your project to install a suitable otter fence around the fishery and support your application for funding to protect your asset from otter as well as making many other improvements.

If I can be of any further assistance or you wish to discuss any aspect of fishery management, please don't hesitate to get in touch.

Yours faithfully

A handwritten signature in black ink that reads "D. Wilson".

DARREN WILSON
Fisheries Officer

Email: darren.wilson@environment-agency.gov.uk

Expected Benefits and Targets After Project – how will we measure success

Increase in club membership for 126 to 325 within 4 years

Increase in permanent disabled angling provision/coaching areas to 6 double platforms (40% of the venue)

Increase in the sale of day tickets from current 0 to 500 per year

Increase in the number of match bookings from 0 to 15

Re-instatement of the Cumbria inter-club team competition

Increase in the number of visitor (outside the area) fishing trips

Increase in the number of website hits

Development of junior and adult coaching sessions – 4 sessions per year

Increase in coarse/trout angler cross-over (particularly during the summer months)

Lake District Visitors

15.8 million!!

Current surveys show that **15.8 million** visitors come to the Lake District each year. Most come to enjoy the scenery, peace and quiet and walking but many others visit specific attractions or take part in an outdoor activity. Finding convenient, quality coarse fishing within the Lake District is very difficult. High private land ownership and unsuitable venues restrict opportunities. Ratherheath Tarn is one of the very few venues on which we could actively encourage day ticket sales.

WADAA is attempting not only to promote the availability of it's venues for day tickets, but also making the whole experience easy and convenient. Information about the venues can be found on an extensive website (the club has just investing heavily upgrading this onto the latest platform technology ready for spring 2019). Day tickets can be purchased via the website using paypal.



Day Tickets

Day tickets are available for a number of trout and coarse waters. Tickets can either be purchased online or from a number of agents in South Cumbria (listed below).
Two junior under 16 may fish for free with an adult day ticket holder. (If you have more juniors present, you will need to buy a second ticket).



- **Bigland (Otter Tarn)** - Rainbow and brown trout
- **Farletonview** - Rainbow, brown and tiger trout
- **Ghyll Head** - Rainbow and brown trout
- **Grasmere** - Pike and coarse
- **Rydal Water** - Pike and coarse
- **Ratherheath** - Mixed course fishery (Carp, Roach, Bream, Perch, Tench)
- **Castlehead** - Mixed course fishery (Carp, Roach, Bream, Perch, Tench)

Member Work Party/Involvement

1. Weeding
2. Supervision of path/peg construction
3. Construction of fish refuges
4. Habitat enhancement/margin planting
5. Stocking assistance
6. Creation of set-aside areas
7. Project Management
8. Quality Checking

Landowner Involvement

1. Tree clearance
2. Arm Bund width extension x2
3. Access path widening
4. Disabled parking creation
5. Fish pass construction x2
6. Inlet construction x 2

Contractor Involvement

1. Construct Fence

