Rye to Good 3 consultation details 2025

Please make sure you read through the text provided alongside the plans to ensure you get the full picture, before proceeding to <u>complete the consultation</u>.

This consultation is not anonymous, we will take your contact details so we can respond to any questions or concerns you may have. Only Surrey Wildlife Trust will have access to your details for these purposes, and your contact information will be stored securely. If we share any of your questions, concerns or ideas with anyone else, these will be anonymised.

Project background

The Rye Brook is classed as having 'Moderate' ecological status according to the Water Framework Directive and for some time the River Mole Catchment Partnership has been working towards getting the Brook to 'Good Ecological Potential', but this is a long and complicated task. You can find out more about the status of the Rye Brook here.

The main categories that the Rye is scoring poorly on are Biological quality elements and some of the Priority hazardous substances.

In 2017, the South East Rivers Trust (SERT) completed a survey which identified a series of barriers to fish migration, meaning several species can't reach valuable habitat upstream.

In 2022 the Friends of Ashtead Rye Meadows commissioned a contractor to design a restoration project in Centenary field to improve the habitat for Fish and other species.

Aims of this project

The aim of this project is to produce designs which will:

- make all the barriers in SERT's 2017 report passable to fish.
- improve the habitat through Centenary Field and Kestrel Fields where the Brook has been made unnaturally straight
- restore the function of the M25 and A243 balancing pond, so that it filters the road runoff before it enters the Rye Brook

If we are able to implement these designs, this will contribute to improving the ecological status of the Rye Brook and reduce the concentration of Priority hazardous substances, getting us a couple of steps closer to reaching good ecological potential according to the Water Framework Directive.

Elements of the designs

This section gives a brief description of how each element of the designs would help us achieve the above aims.

Please bear in mind, these are still draft designs so the precise details still need to be added in, but this is your chance to have your say before the plans are finalised. If there's something you'd like to see when the detail is added, please tell us.

Meanders: labelled M1-8

Meanders 1-4 have been located where there are trees or roots currently blocking the flow of the stream, causing a drop in height that is impassable to most fish. The meander diverts the flow around these barriers without damaging the trees. The existing flow will be blocked at the upstream end to ensure the flow takes the new route, however the downstream section of the straight route will be left as a backwater. This is an area where fish can take refuge in high flows to avoid being swept downstream.

Meanders 5-8 are additional features to further improve the habitat for fish and other wildlife.

Adding meanders and adding length to the brook helps hold water back and potentially spill into low lying parts of the fields and any adjacent ponds or scrapes in high flow. This means that in heavy rainfall, the flow of water heading downstream towards Leatherhead is more controlled, and more of a steady even flow rather than a large quantity of water all at once. The exact quantities of potential water retention haven't been quantified but the project is likely to slightly reduce flood risk downstream.

Small brash berms

The precise size, quantity and location of this woody brash material is yet to be determined. They have to be carefully located to ensure they narrow and speed up the flow as intended.

Adding these berms will narrow the flow in low flow, speeding up the flow in places. The faster flow will pick up the silt revealing any gravel underneath. The silt will get trapped in the berms creating a more solid structure, effectively creating small meanders within the larger channel.

The gravel revealed is valuable habitat for river invertebrates which are near the bottom of a river food chain, it is also good spawning habitat for some species of fish.

These will be entirely submerged during high flow and will not have a significant impact on the capacity of the Brook. Overall, the capacity of the Brook will be increased through the proposed measures.

Barriers 1-4: labelled B1-4

The measures recommended to make these structures passable to fish vary.

A river baffle is a structure placed in a river or stream, to alter water flow, typically to help fish navigate obstacles like weirs or pipes.

Both baffles and rock ramps slow the flow of water, creating resting areas for fish. These rest areas allow fish to rest and recover before continuing their migration upstream. They can also slightly raise the level of flow upstream to ensure sufficient flow over a barrier.

At barrier 2 the low flow will be narrowed to ensure there is always a sufficient volume of water flowing over the barrier to allow fish to pass over it. At high flow the water will still flow over the narrowing structure.

At barrier 3, in addition to the rock ramp a small notch will be cut in the existing concrete structure to allow fish to swim up through this gap.

The brick culvert

The brick part of the culvert in the upper part of Centenary Field is already starting to collapse. If this were left it would eventually fall entirely into the stream, blocking the stream which would prevent fish passage, flood the path above and potentially cause further flooding upstream as the flow backs up. This section of the culvert has no purpose so can be removed and the bricks repurposed in a rock ramp to make barrier 4 passable.

The adjacent concreate culvert will be retained in order to maintain the path as it is.

The Balancing Pond

The balancing pond was originally designed to filter runoff from the M25 and A243 but over time it has become silted up and no longer functions properly, the water has found an alternative route and the majority of runoff bypasses the filtration and goes straight into the Rye Brook. The chemicals and microplastics from the road runoff have a significant detrimental impact on the species that live in the stream. Some of these chemicals will also end up in drinking water supply, requiring water companies to spend more bill payers money filtering them out.

Potential additional features

There is potential to add more meanders, pond and scrapes through Kestrel Fields to further add to the ecology and flood reduction measure detailed above.

FAQs

1. Will this project cause flooding downstream?

No. Environment Agency best practices have been followed in producing a design that will not increase flooding downstream. The meanders will slow flow and the balancing pond restoration, and any additional ponds of scrapes will increase capacity to hold water back. While the exact level of flood protection hasn't been calculated, it is expected this project will slightly reduce flooding downstream. We will be applying for a Flood Risk Activity Permit before we can deliver any of this work, so the Environment Agency's flood experts will scrutinise our plans and workings to ensure we're not increasing flood risk to any properties downstream.

2. Will this affect access routes in the area?

A full access plan is yet to be drawn up but this will take into consideration and minimise the impact on local road infrastructure and residential access.

Ashtead Woods Road

For the work in Centenary Field, the preferred access route would be via Ashtead Woods Road. Precise machinery requirements are yet to be determined but these works would likely require 5 or 8 tonne vehicles, which will fit down the footpath towards Centenary Field and through the

existing gate. The vehicles should only need to be taken down the road once in each direction and would stay in Ashtead Rye Meadows till they have completed the work required. We would ensure any material deliveries are also in suitably sized vehicles and these would be minimal given the nature of the work proposed.

Barriers 1 & 2

Vehicles required to deliver the works may temporarily block one side of Kingston Road and potentially some of the parking on Kingsbrook. We will endeavour to minimise disruption and will give advanced notice of works in the area.



NOTES:

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- 4. ALL LEVELS TO BE CONFIRMED ON SITE. SECTIONS SHOW TYPICAL PROFILES WHICH WILL NEED TO BE AMENDED TO ON SITE LEVEL DATA.

- 20m + 7 x 5m LINEAR SECTIONS OF EXISTING RIVER INFILLED WITH EXCAVATIONS FROM NEW MEANDERS, TO DIVERT FLOW.
 SITE WON DEFLECTORS INSTALLED AT STRATEGIC POSITIONS TO PROMOTE FLOW DIVERSITY AND PROTECT/ENCOURAGE NEW MEANDERS.

FOOTPATH:

85M LINEAR INDICATIVE LENGTH DEPENDANT ON AVAIALBLE SITE WON WOOD CHIP.

CULVERT:

8M LINEAR BRICK CULVERT REMOVED AND AREA RE-GRADED AND MADE SAFE

LEGEND:

SAFETY, HEALTH & ENVIRONMENT (S.H.E) INFORMATION

SAFETY & HEALTH ISSUES Specific hazards have been identified with the following symbols:

_	· ·
Key	Details
1	Existing overground sewage pipe crosses channel
<u></u> 2	Unstable stone culvert
₫ 3	Electricity pylon
<u>•</u>	Public footpath
<u>^</u> 5	Trees with bat roosting potential

PROJECT

Rye to Good

Location Plan

Surrey Wildlife Trust

Rye Brook

GRID REF.

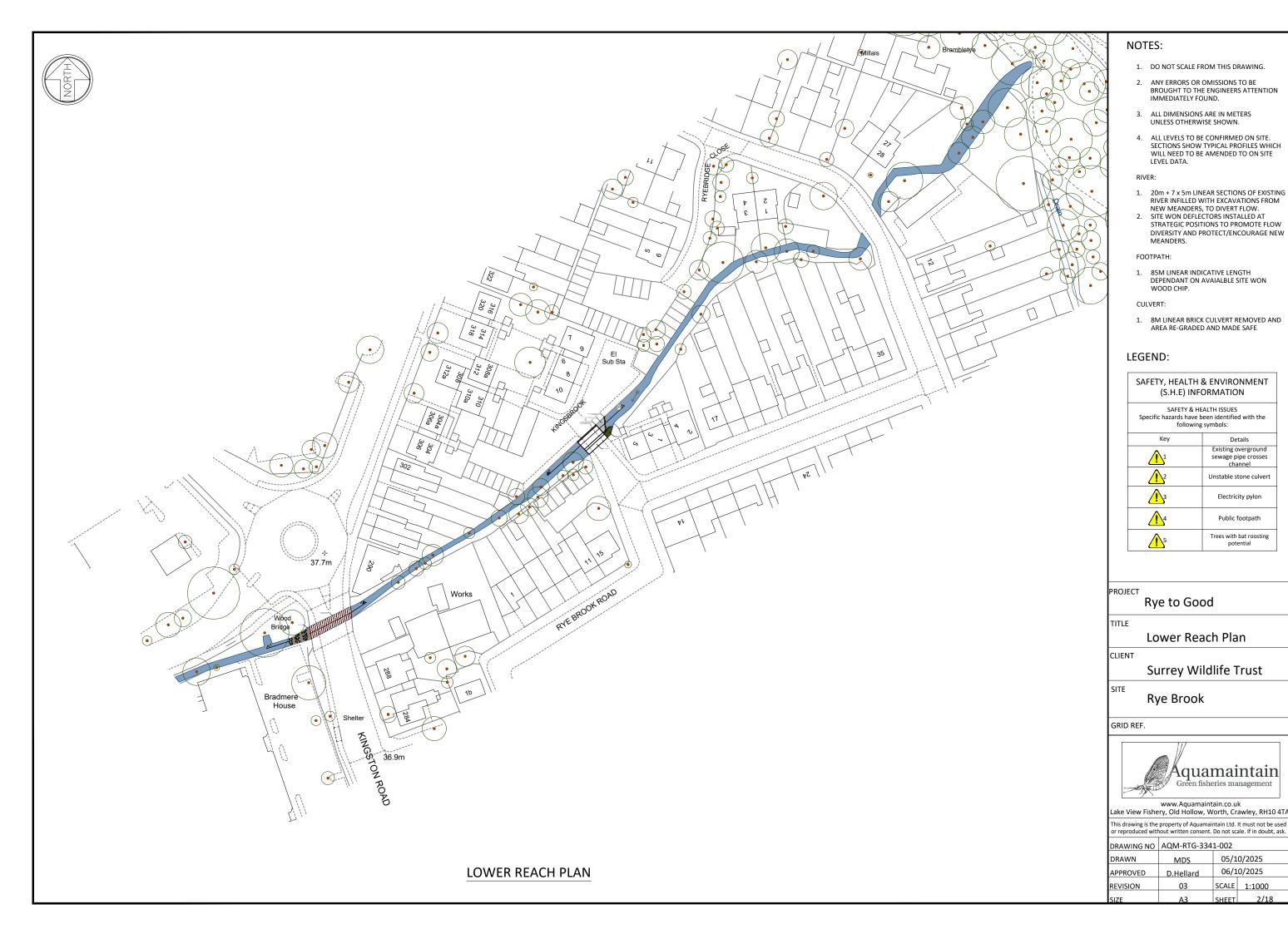


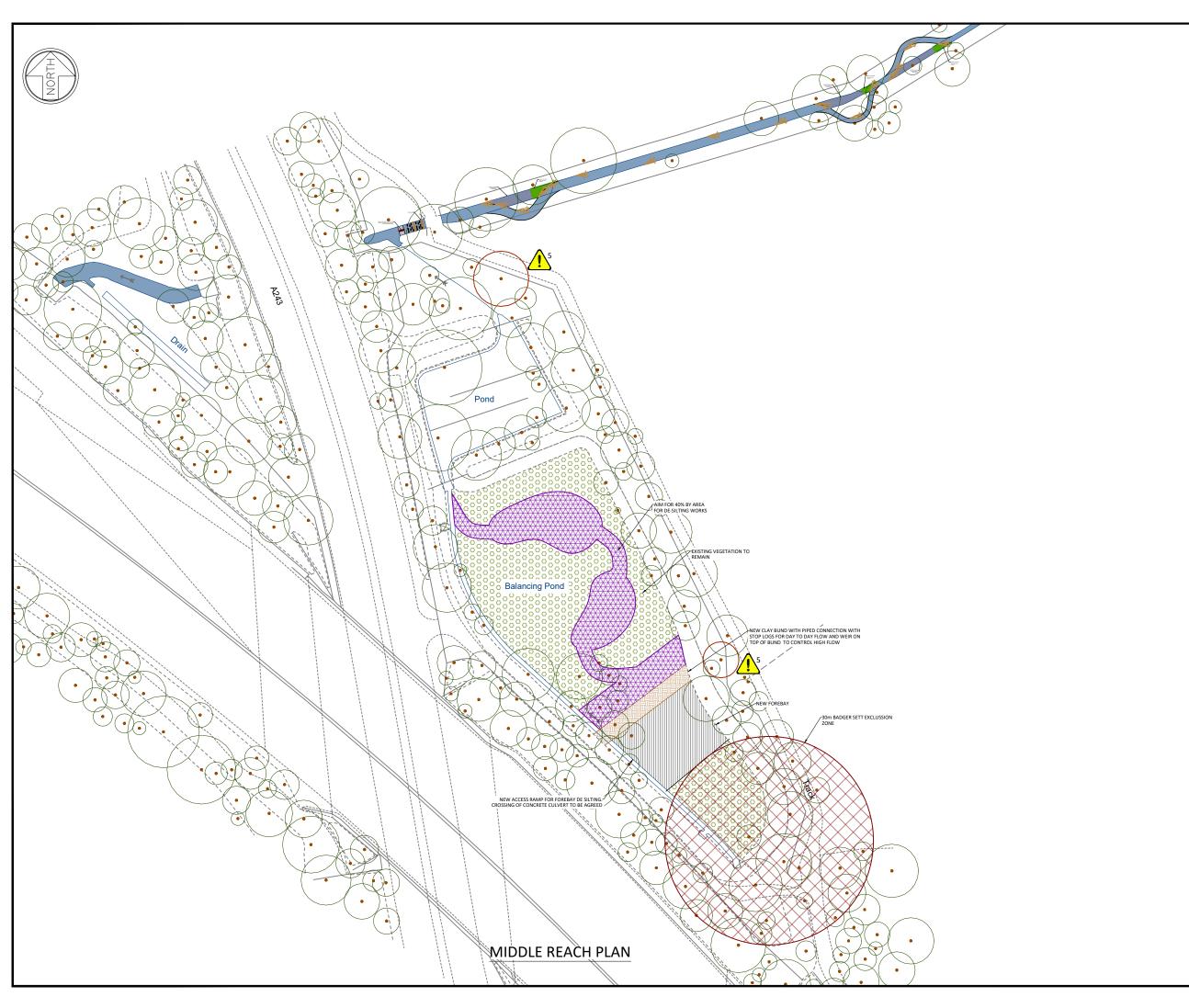
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DRAWING NO AQM-RTG-3341-001 05/10/2025

06/10/2025 APPROVED D.Hellard SCALE 1:2500 REVISION





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CULVERT:

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<u></u>	Electricity pylon	
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<u></u> 5	Trees with bat roosting potential	

Rye to Good

TITLE

Middle Reach Plan

CLIENT

Surrey Wildlife Trust

Rye Brook

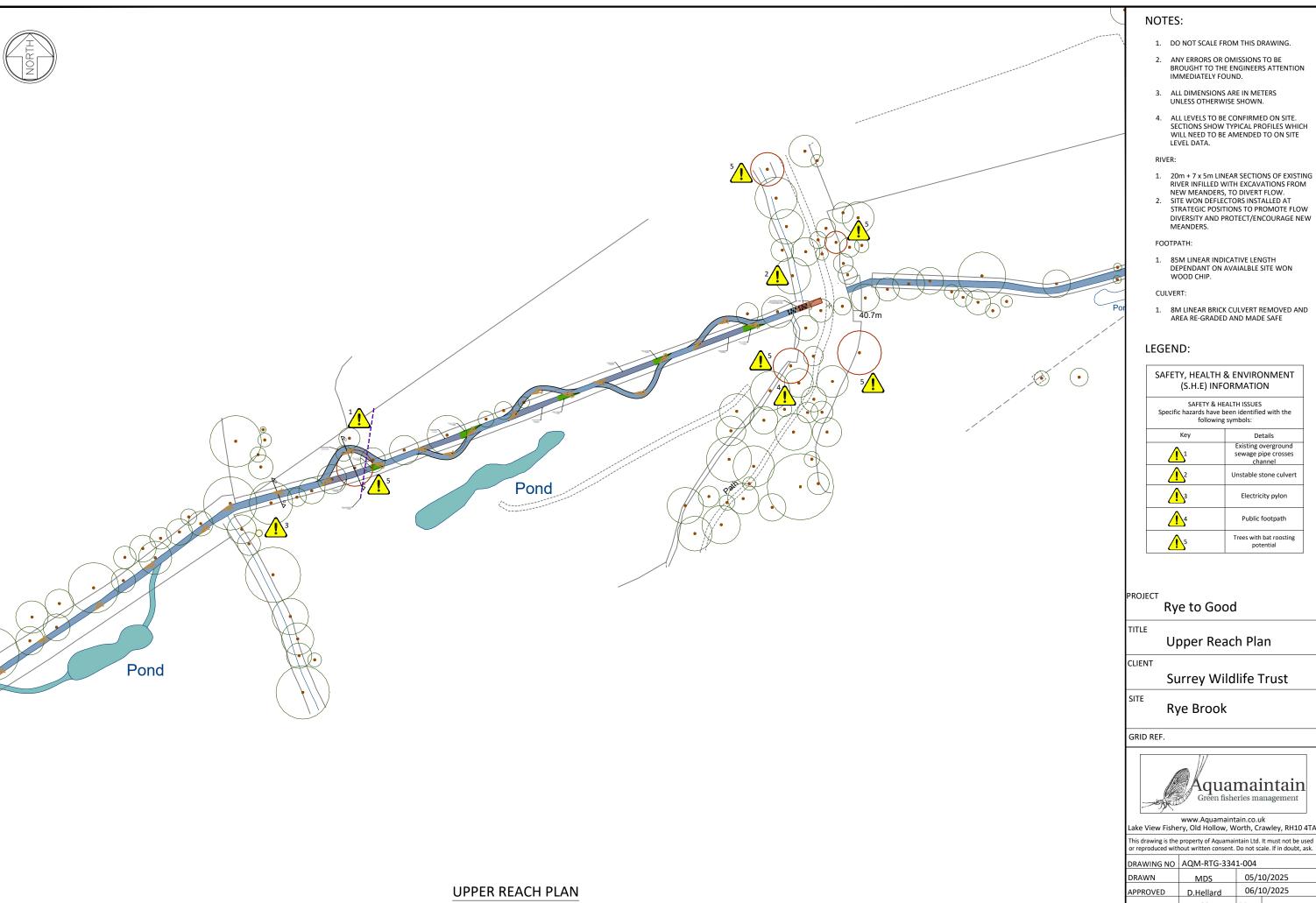
GRID REF.



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DRAWN	MDS	05/10/2025		
APPROVED	D.Hellard	06/10/2025		
REVISION	03	SCALE	1:1000	
SIZE	A3	SHEET	3/18	



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85M LINEAR INDICATIVE LENGTH
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SAFETY, HEALTH & ENVIRONMENT (S.H.E) INFORMATION

SAFETY & HEALTH ISSUES Specific hazards have been identified with the following symbols:

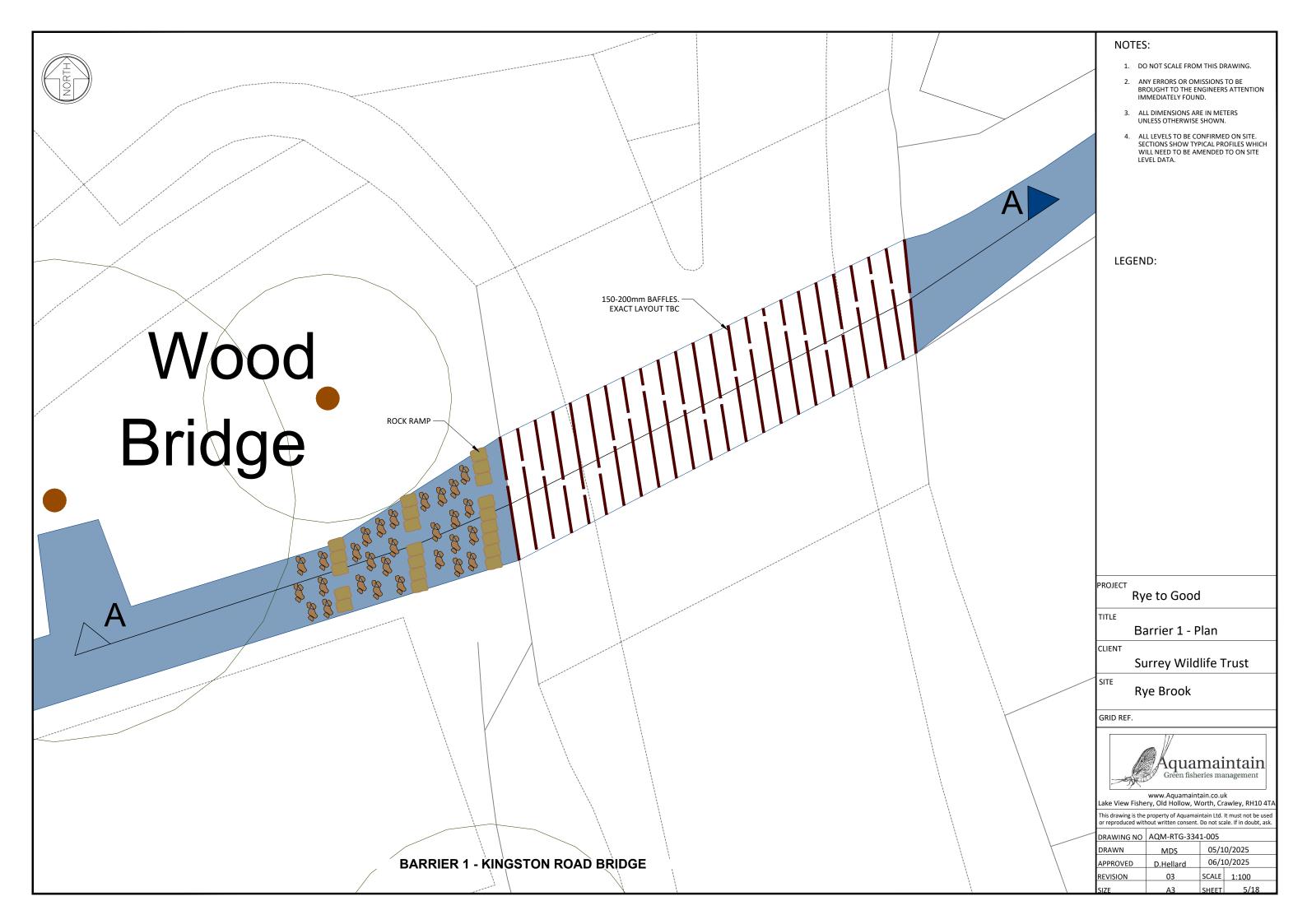
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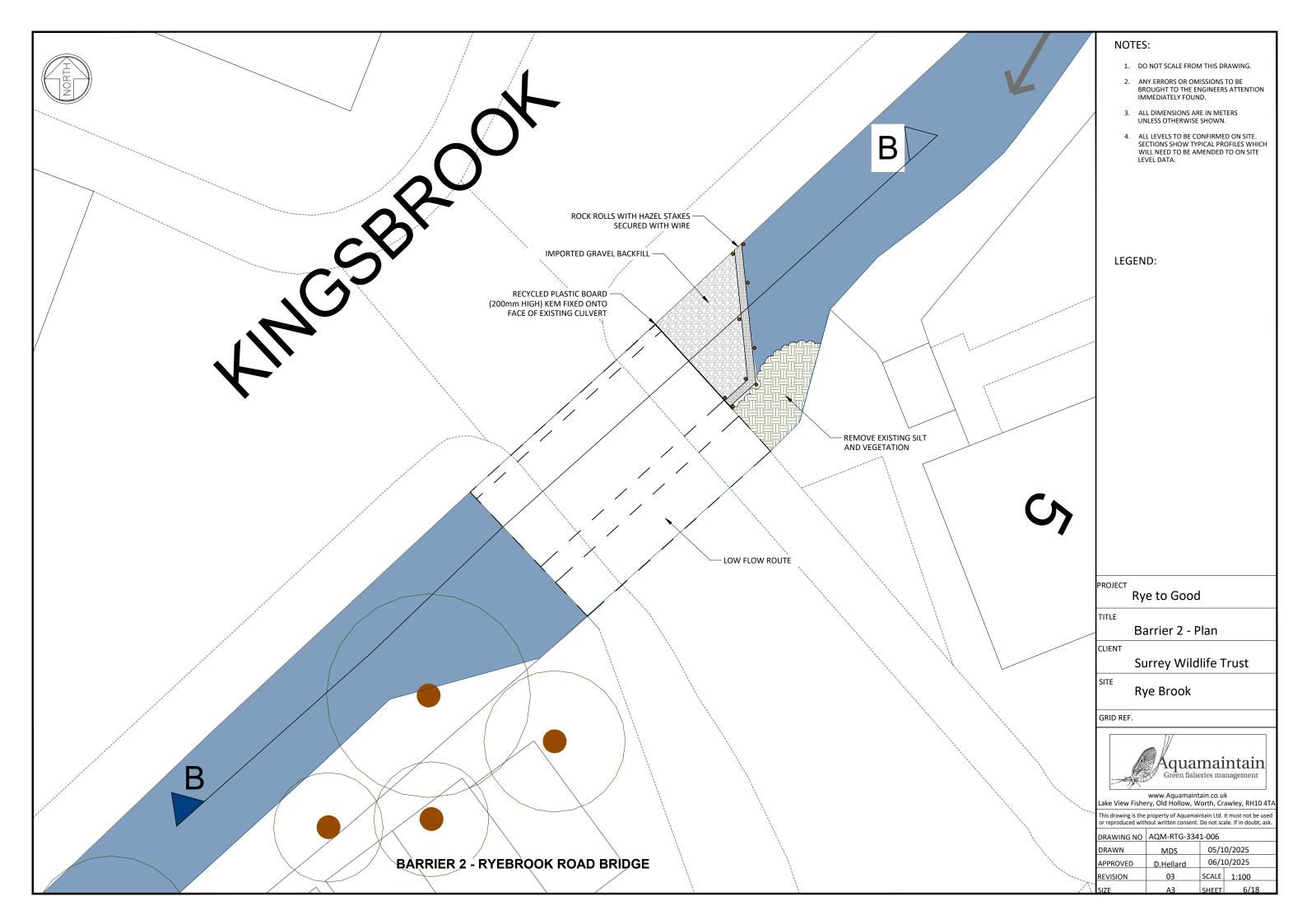
Upper Reach Plan

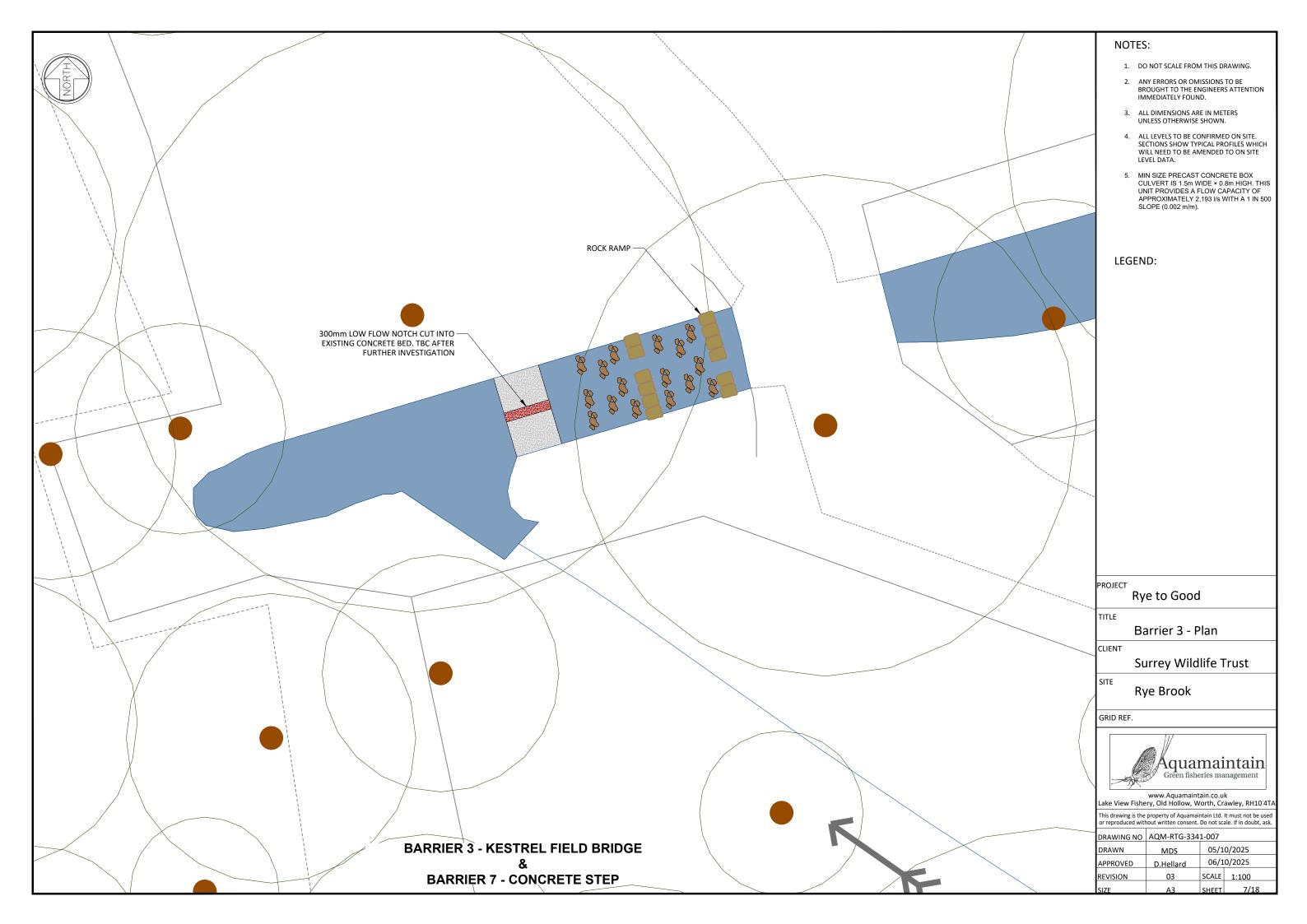
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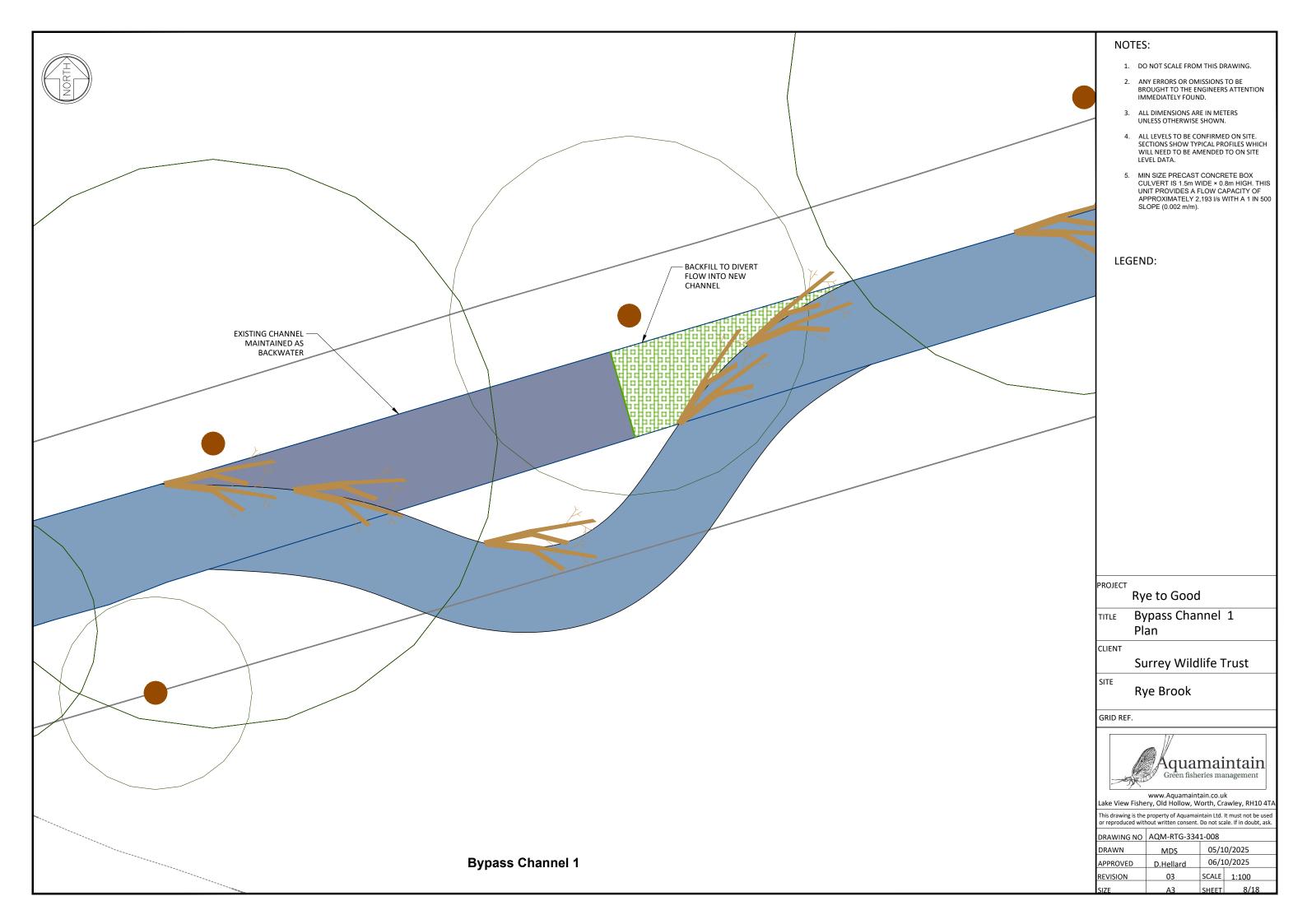


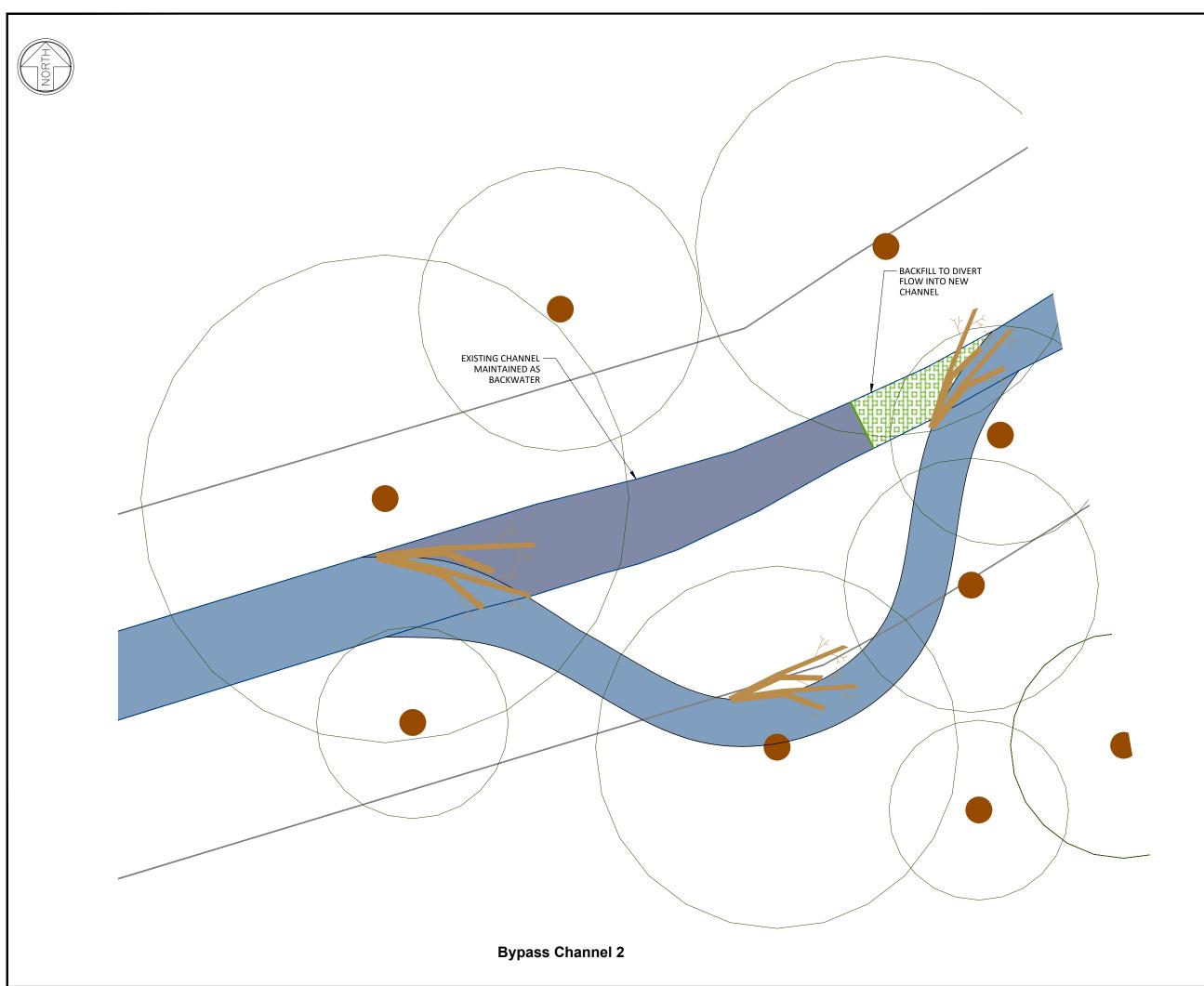
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DRAWN	MDS 05/10/2025			
APPROVED	D.Hellard	06/10/2025		
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SIZE	Δ3	SHEET	4/18	











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 LEVEL DATA.
- 5. MIN SIZE PRECAST CONCRETE BOX CULVERT IS 1.5m WIDE × 0.8m HIGH. THIS UNIT PROVIDES A FLOW CAPACITY OF APPROXIMATELY 2,193 l/s WITH A 1 IN 500 SLOPE (0.002 m/m).

LEGEND:

Rye to Good

Bypass Channel 2 TITLE

Plan

CLIENT

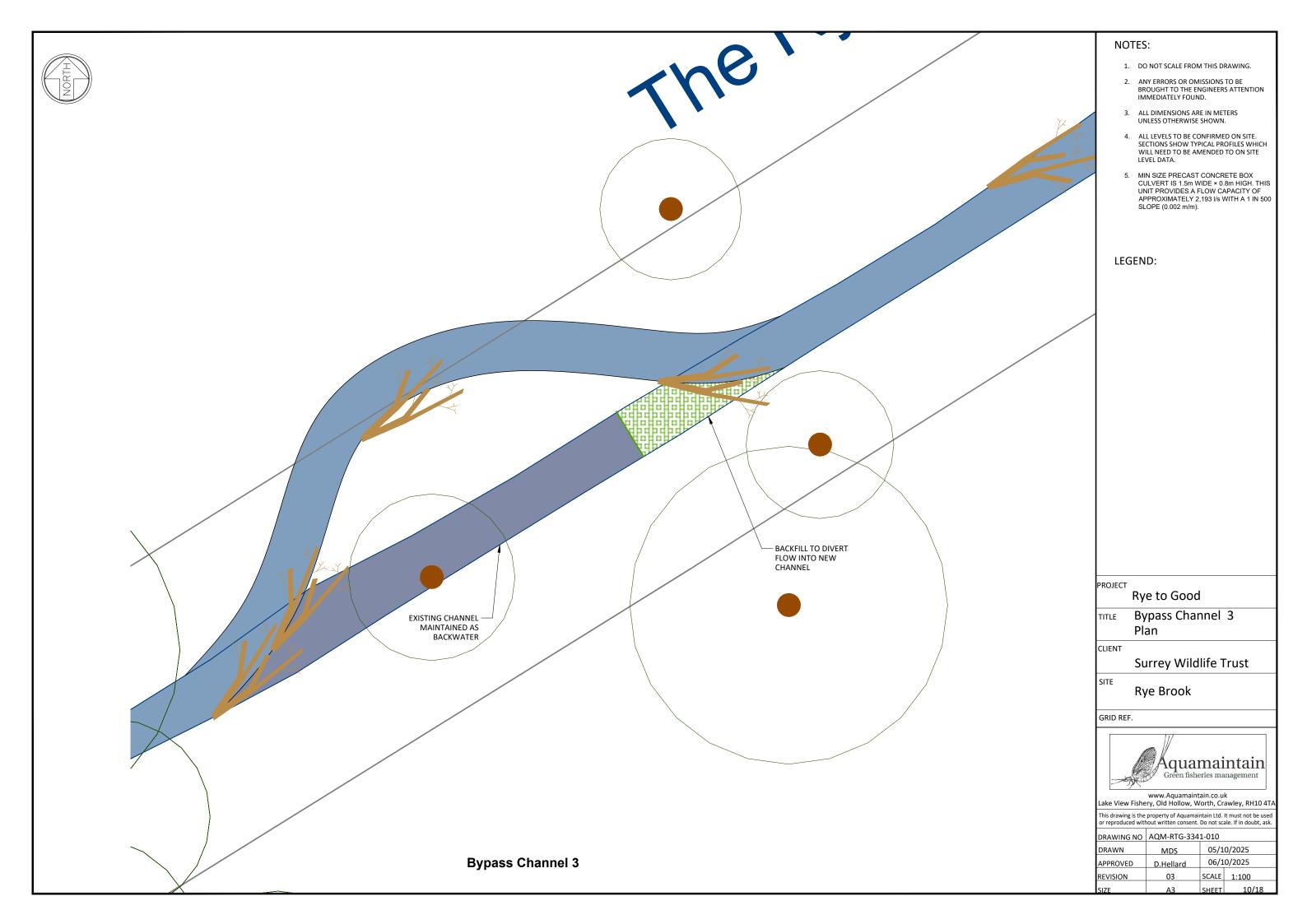
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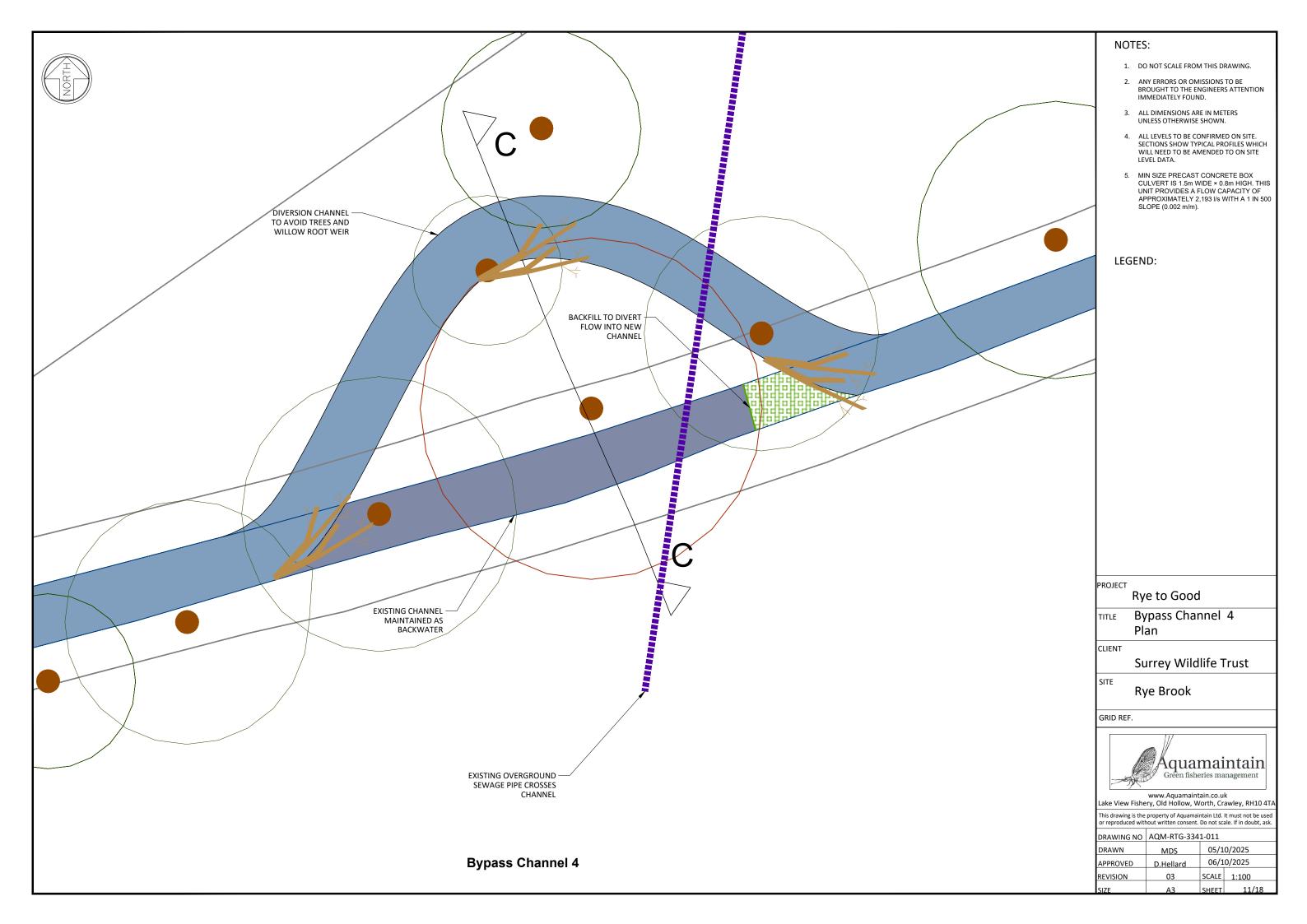
Rye Brook

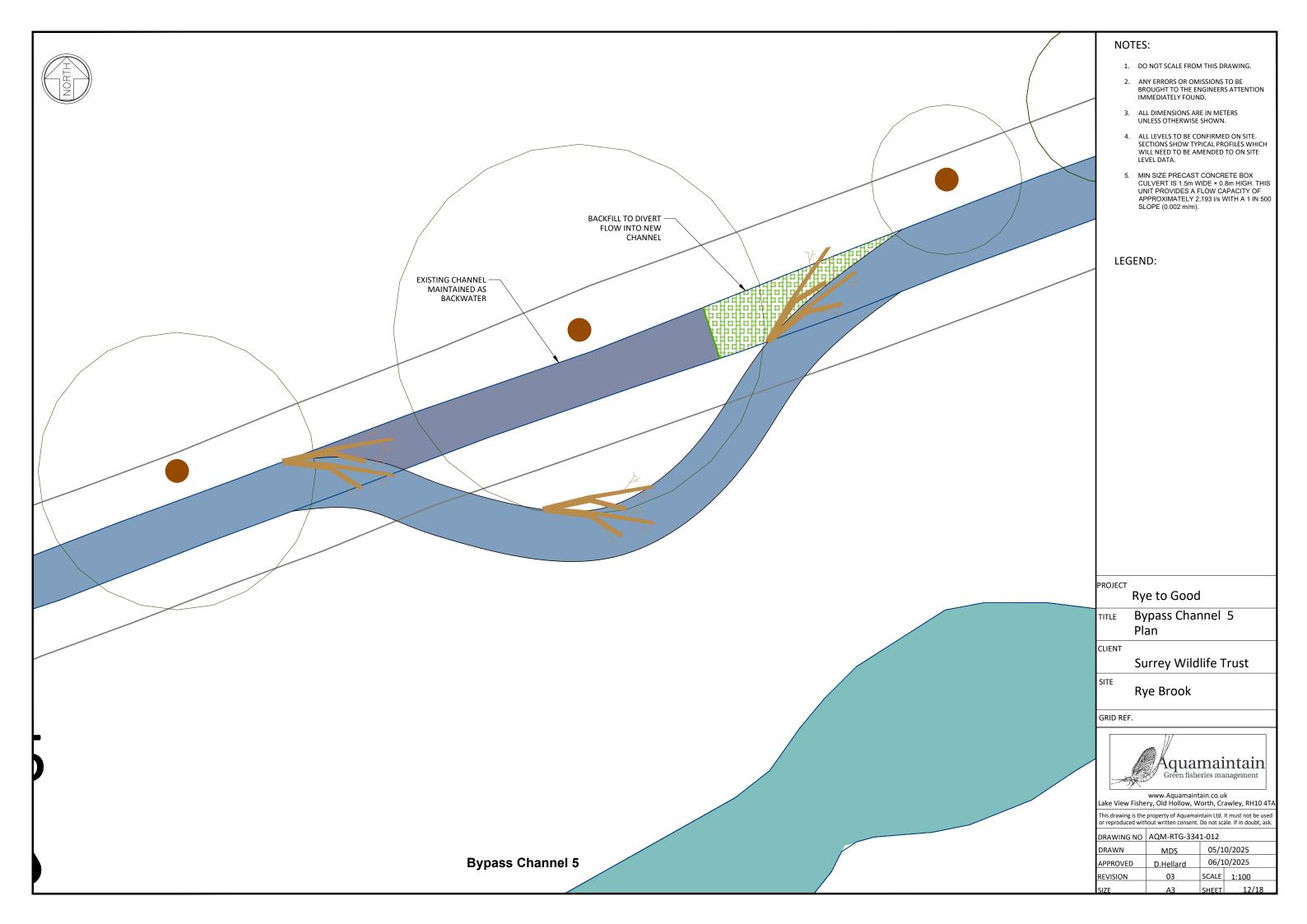


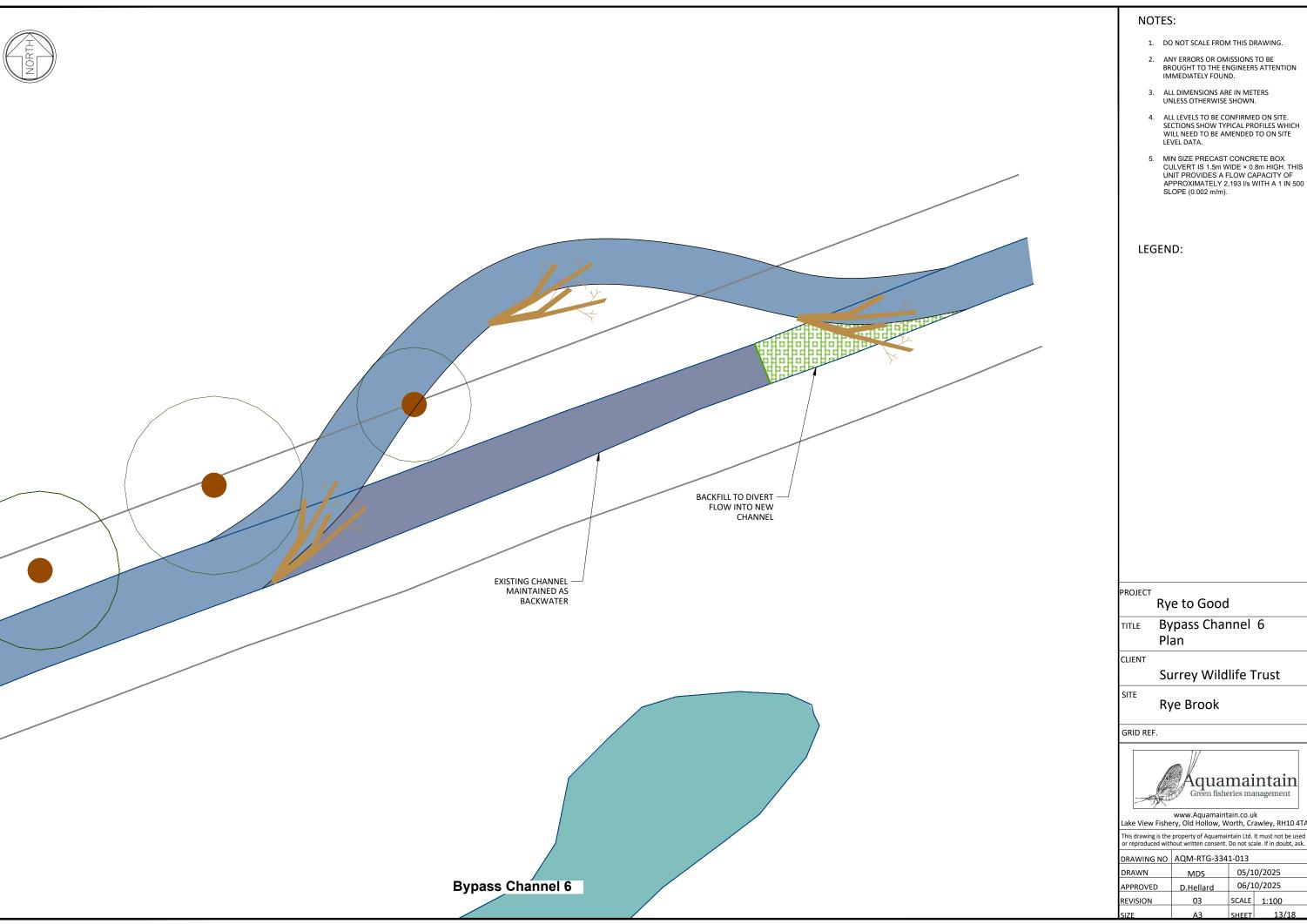
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DRAWING NO	AQM-RTG-3341-009		
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APPROVED	D.Hellard		
REVISION	03	SCALE	1:100
SIZE	A3	SHEET	9/18







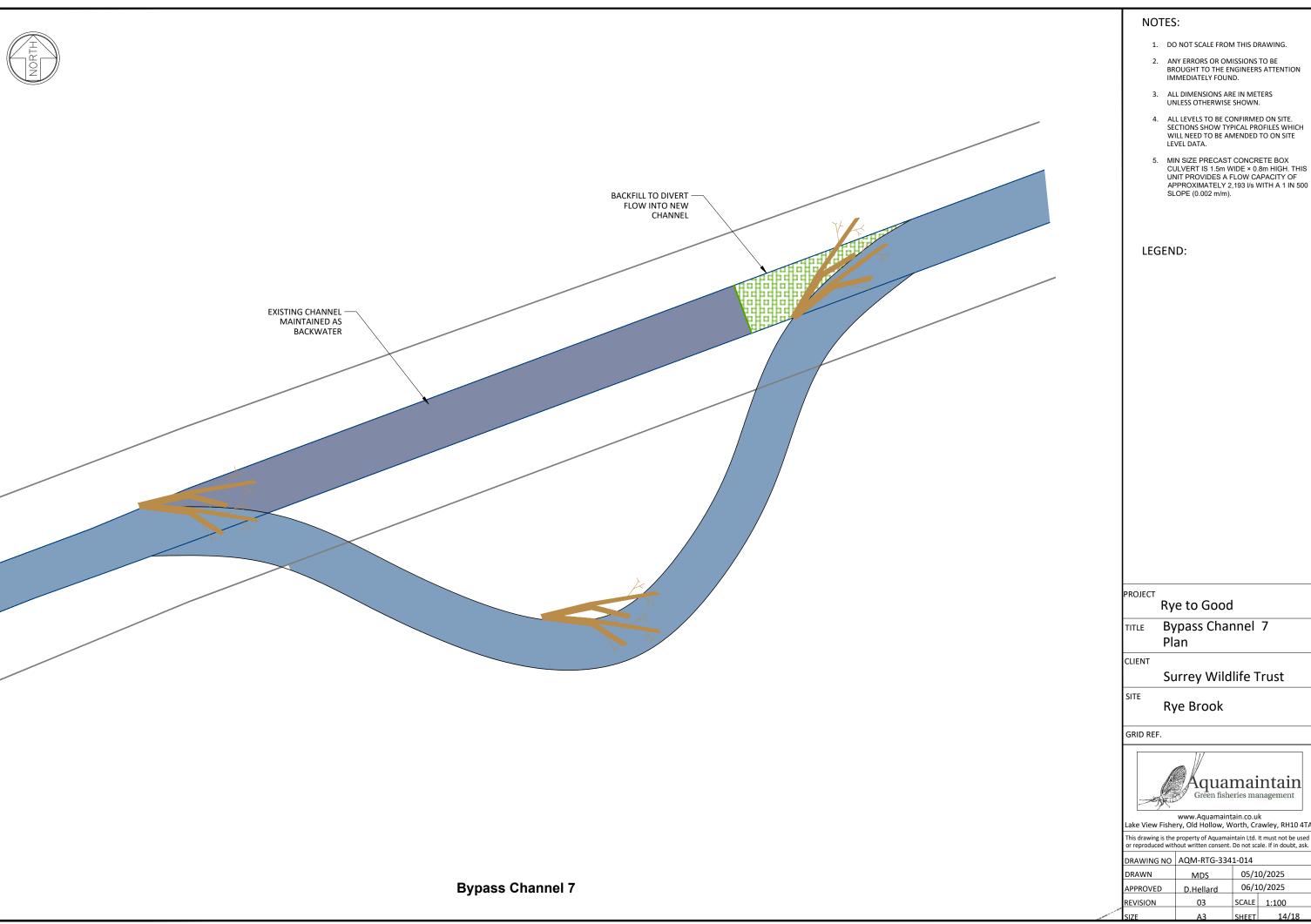


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DRAWN	MDS	05/10/2025		
APPROVED	D.Hellard	06/10/2025		
REVISION	03	SCALE	1:100	
SIZE	A3	SHEET	13/18	



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Bypass Channel 7

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APPROVED	D.Hellard	06/10/2025		
REVISION	03	SCALE	1:100	
SIZE	Δ3	SHEET	14/18	

