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River Intervention and Systems Model

This is one of 15 case studies informing the Infrastructure Systems Review.

System: Great Ouse catchment and water resource.

Systems contribution and value: Modelled interventions considering water, land and ecology, to find balance between different user needs. Illustrated potential impacts on water security, water quality, reservoir and treatment costs, carbon, flood risk and biodiversity.

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Summary

People value the services infrastructure provides, not the infrastructure itself. Large water schemes deliver several services at once – water supply or wastewater disposal, but also environments enjoyed by people for leisure and recreation, habitats for wildlife, flood risk mitigation, carbon sequestration, and more. Different organisations are involved in delivering and managing the infrastructure. Others are impacted by the way it is delivered and operated. Every organisation has its own budget, its own rules and its own way of measuring what matters.

The Fens Reservoir is a joint venture between Cambridge Water and Anglian Water to increase deployable output in East Anglia while relieving pressure on chalk aquifers. The reservoir will be filled principally by drawing water from the region's land drainage and river network. Its operation will significantly influence operation of the drainage system, which will in turn influence land use and soil systems.

This case study examines an aspect of this interaction.

Both companies' water resources management plans (WRMP) were prepared following systems approaches under the Best Value Planning framework, which weighs environmental, social, resilience and carbon value alongside cost. Both WRMPs are accompanied by a strategic environmental assessment examining the wider benefits and impacts of delivering them.

However, it remains challenging to consider the Fens Reservoir system, and systems more broadly, in a fully quantitative manner, and to set out exactly what each intervention means for every level of stakeholder.

To support and facilitate quantitative systems approaches, we have developed PRISM (Practical River Interventions and Systems Model). It is a tool for weighing catchment measures alongside major water infrastructure. PRISM draws out the benefits that arise across the system and how they interact, puts numbers behind them, and reports incremental changes in outcomes in terms that every level of stakeholder can understand and act on.

This case study introduces PRISM and illustrates it with aspects drawn from the Fens Reservoir scheme. It focuses, for brevity, on a peat rewetting intervention, though many other interventions are considered in the full version. The analysis is based on publicly available information and is independent of Cambridge Water and Anglian Water's actual project planning process.

Figure 1: Principles of PRISM – from interventions to outcomes

PRISM links interventions to system performance, services and measurable outcomes.



Interventions	System performance changes	Service outcomes	Outcome metrics
Examples	Examples	Examples	Examples
Reservoirs, transfers and treatment	Increase deployable output	Water supply service	Ml/d of resilient yield
Land management changes	Improve drought reliability	Water quality regulation service	Reduction in expected annual water deficit
Wetlands and nature-based solutions	Reduce supply–demand deficits	Ecological support service	Days of water quality compliance
Operational changes	Increase water retention in catchment	Flood and drought buffering service	kg/year nutrient reduction
Drainage infrastructure	Reduce nutrient and sediment loads	Agricultural production support service	Hectares of improved habitat or soil
	Improve low-flow support	Carbon and natural capital service	Tonnes of carbon impact
	Reduce treatment burden		Avoided whole-life cost

PRISM quantifies the link from interventions → performance → services → outcomes for people, nature and the economy.

Quantitative outcomes allow comparison of alternative portfolios to identify the best combination of interventions.

The evidence base for systems change PRISM

PRISM is a systems model aiming to quantify outcomes as the sum of services that a system provides, and the benefits of interventions in terms of incremental outcome changes. Figure 1 illustrates the principles, figures 2 and 3 show screenshots from the model system itself.

PRISM models the river, the engineered infrastructure and the catchment as one connected system, so that a change in one place carries through to everything it touches, and it reports the same result three ways:

1. for those who plan, fund and regulate
2. for those who design, build and facilitate
3. for those whose land and property is affected.

Scenarios can be assessed in seconds allowing PRISM's use as an interactive tool amongst stakeholders.

Using the planned Fens Reservoir system as a worked example, we modelled what a coordinated set of catchment measures can add alongside it, what the co-benefits are, and how those can be communicated at every level. Modelling a whole catchment also exposes effects falling between the remits of the organisations involved (figure 4), several of which are set out in 'Outcomes', below.

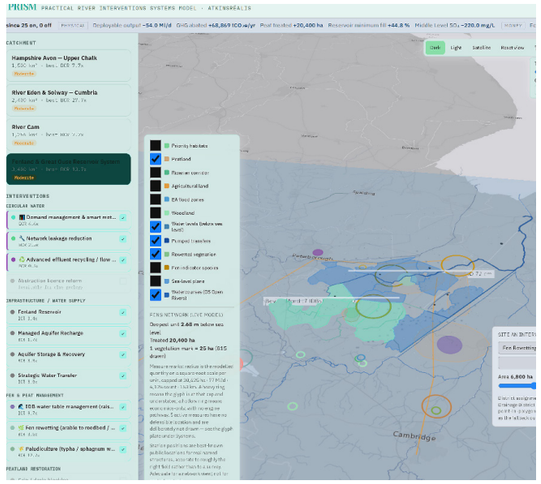


Figure 2. PRISM model interface for Fens case. Example values from a test configuration.



Figure 3: PRISM report for a demonstration portfolio.

Scope

Eastern England faces projected water shortages of around 800 million litres a day by 2050, equivalent to about a third of current use in the region (Water Resources East, Regional Water Resources Plan for Eastern England, 2023). The Fens Reservoir is included in both Anglian Water's and Cambridge Water's water resources management plans and will provide around 88 million litres a day, shared between the two companies' customers, to help address that shortfall (Ofwat, Case study: Anglian Water and Cambridge Water: Fens Reservoir, 2024). The reservoir is planned to be in supply by 2036 at the earliest, and is one of nine new reservoirs to which the government has committed (Department for Environment, Food and Rural Affairs (Defra), A New Vision for Water, CP 1490, 2026).

It is proposed that the reservoir will sit near Chatteris, Cambridgeshire. The area is historically waterlogged. To make it farmable, over centuries, a network of drainage channels has been dug, allowing water to be pumped out to dry the land and make it farmable. The level at which the water level is held is set by internal drainage boards and, on the main watercourses, by the Middle Level Commissioners.

The managed water level governs peat behaviour: wet peat stores water and breaks down slowly; dry peat breaks down rapidly, releasing carbon to the atmosphere and sulphur compounds that enter the water system when it rains – but peat's high absorbency provides buffering against flooding.

Responsibility for governing resources around the Fens Reservoir system is split several ways (figure 5). Drinking water supply sits with the water companies and their regulator; land drainage with the drainage boards and the Middle Level Commissioners; and peat and carbon largely with Defra and the Department for Energy Security and Net Zero. The land belongs to farmers, whose agreement is required in order to make any changes.

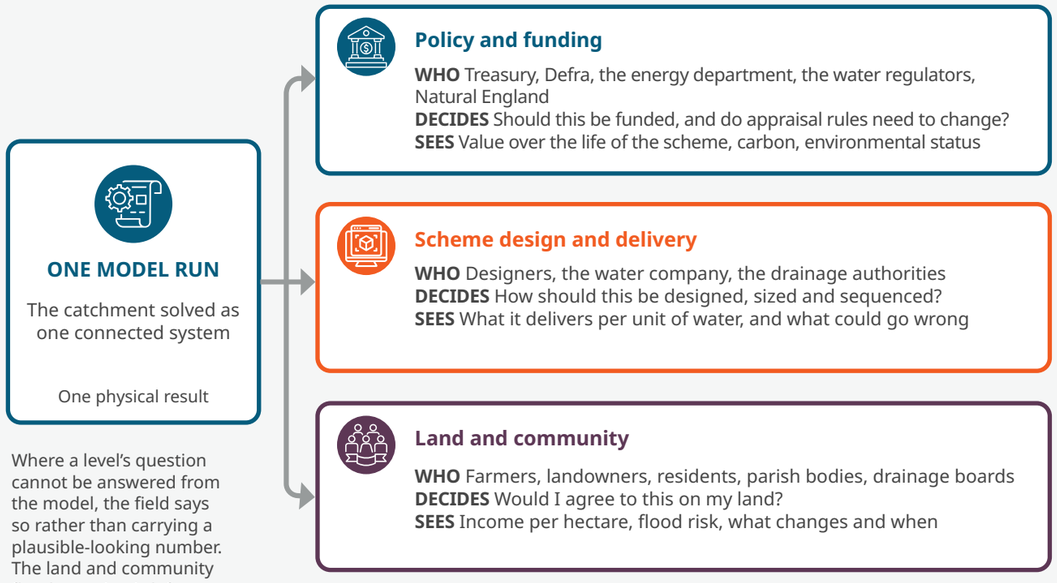
Bringing the water regulators into one body, as the government has committed to do, addresses part of this complexity. However, this change does not extend to the drainage boards, the carbon account or the landowner, and those parties between them set the water level.

These organisations already apply best value planning, strategic environmental assessment and integrated water management across the layers of the Fens Reservoir system. But it is challenging to capture every way that interventions interact with one another, and how each will alter outcomes overall: a measure taken for one purpose produces co-benefits that surface in another body's accounts, responsibilities intersect, and the parties at each tier (figure 4) depend on decisions taken at the others.

By setting out interventions and their interactions quantitatively then communicating them at the tier where each one lands, we can demonstrate the benefits of systems thinking in the system of the Fens Reservoir and beyond.

Figure 4: One model run, three sets of readers

The same physical result, reported in the units each group actually decides in. Nothing is recomputed between them.



Where a level's question cannot be answered from the model, the field says so rather than carrying a plausible-looking number. The land and community flood question is left open for that reason.

Outcomes

PRISM was applied to the catchment around the Fens Reservoir, drawing on 20 published national datasets listed at the end of the case study – climate, river flow, groundwater, soils and peat extent, protected sites, land classification, geology, flood risk and population – together with published research on the behaviour of drained peat.

PRISM can model many different scenarios depending on the interventions selected. As an example, choosing to raise the level at which water is held wets the peat beneath it, slowing decomposition and resulting in less carbon reaching the atmosphere; the same change alters the chemistry of the water leaving the drains, and creates wetland habitats. One operating decision therefore reaches carbon, water quality and biodiversity at once, and PRISM quantifies each of those consequences from the same run (figure 6).

Many organisational actions will have impacts beyond their own tier. For example, a drainage board setting a water level is, in practice, also affecting the national carbon account, resilience to drought and flood, the quality of nearby water and the habitat that land can support.

PRISM can be used to identify and model gains and trade-offs within a system. Focusing on water quality: wetting peat releases ammonium into the surrounding water, against a drinking water standard of 0.5 milligrams a litre; wetting peat can also reduce the release of sulphates to the water.

It remains challenging to consider the Fens Reservoir system, and systems more broadly, in a fully quantitative manner, and to set out exactly what each intervention means for every level of stakeholder.

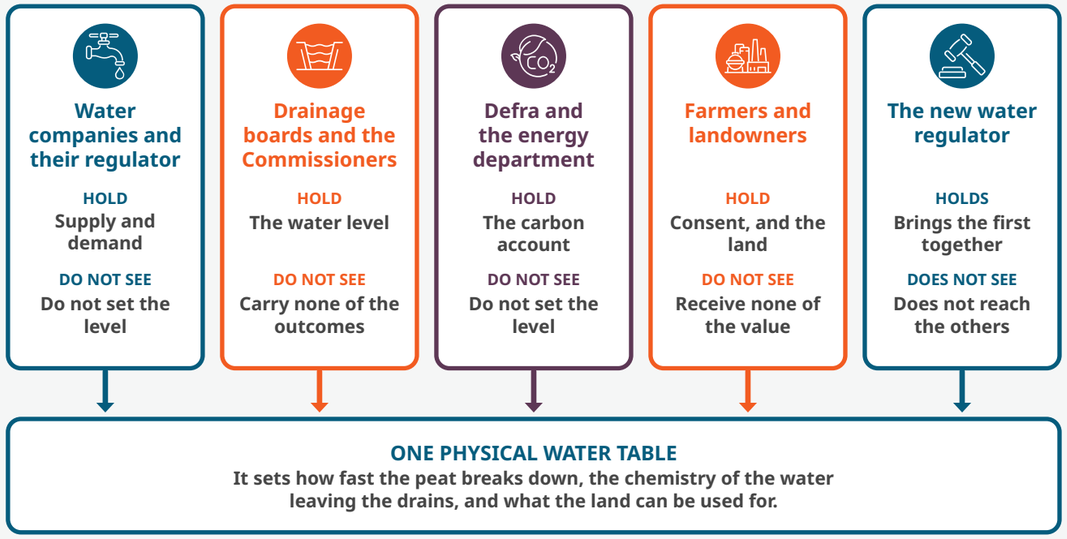
The Fens programme considers these water quality changes and the resulting constraints on abstractions, blending and treatment requirements. PRISM can support this plan by running the hydrology and quantifying the changes in water quality to establish compliance with standards, in combination with reservoir fill and empty rate scenarios.

Similarly on flood risk, holding water at a higher level leaves less room in the system to buffer a winter storm but stores more water that can provide greater resilience in dry periods. PRISM can identify and facilitate planning even when issues fall between organisations' responsibilities.

The evidence base for systems change PRISM

Figure 5: One water table, five parties, no single holder

Each organisation controls part of the system and sees part of the result. None of them sees all of it, and none can act alone.



Bringing the water regulators into one body addresses the first column. It does not reach the drainage boards, the carbon account or the landowner, and those are the parties who between them determine the level. Every connector runs one way: no party receives back the consequences of the level it helps set.

Catchment measures are not only environmental in their effects. Several of those in PRISM's library add to the water available or ease the constraints that limit how much of a source can be drawn on, and PRISM reports those alongside the carbon, habitat and flood consequences so that all can be weighed together.

The same example reaches the landowner as well. Drained arable land on lowland peat earns roughly £450 to £1,100 a hectare a year, while wet farming earns roughly £150 to £600 (Defra Lowland Agricultural Peat Task Force, Final Report, 2023); carbon is valued for appraisal at £273 a tonne (DESNZ carbon values), and biodiversity units trade at around £45,000 each (Natural England, 2025). PRISM holds all three in the same ledger, so the value created by wetting the peat can be set directly against the farm income it displaces.

Systems

Modelling what happens in the fens means representing how the landscape is drained, and not only how much rain falls on it. The fen is pumped rather than drained by gravity. Water is removed from the drain system only when pumps start. The operation of pumps is determined by target levels, which are set as an operating decision rather than by the weather. Therefore, a model of rainfall and rivers alone cannot see that mechanism.

The raw water sources for the reservoir are not yet settled, with proposals identifying the Middle Level system (exiting at St Germans or to Ouse Washes), the Bedford Ouse at Earith or the Ouse Washes, and the River Nene and its Counter Drain as candidate sources, with abstraction only at higher flows and subject to licensing.

It is unlikely that all displayed in figure 9 would be used, and unlikely that they would be used in the proportions any single model configuration shows.

But this demonstrates an example of how PRISM can be used to facilitate building the systems picture. When a target level is changed, the water table moves with it; the carbon released and the chemistry of the water leaving the drains follow from that; and the quality of a filling route changes in turn. This is the physical system model component that underlies the benefits quantification and decision support facilitation of the whole systems model approach.

PRISM's hydrology was tested against the measured river flow record published by the National River Flow Archive (NRFA), being calibrated on one half, and verified against the other previously unseen half.

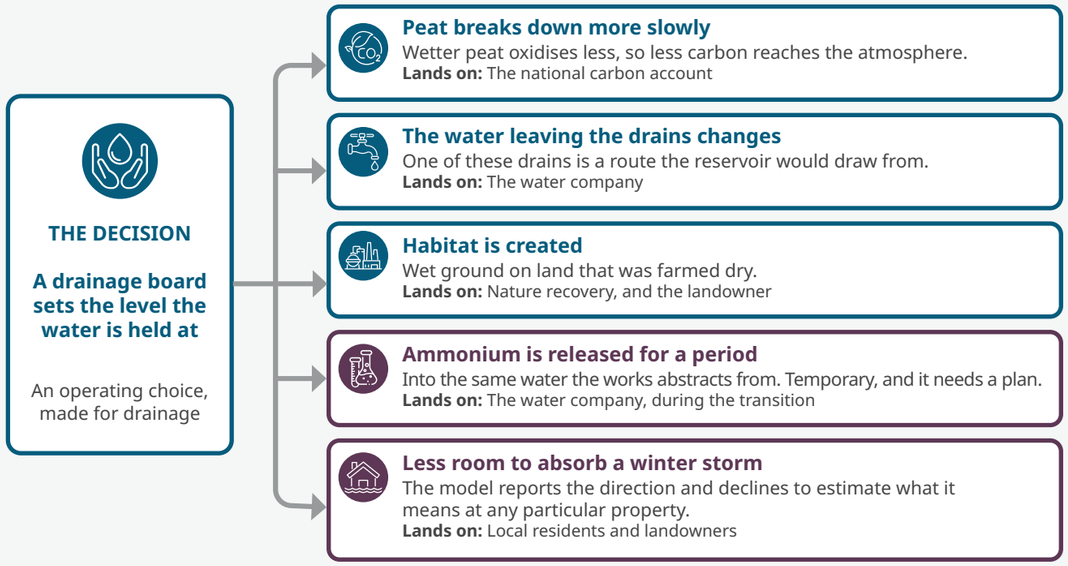
The gauge used is the Ely Ouse at Denver Complex[1]. It is the gauged outlet of this catchment (Figure 11) and it has the longest continuous river flow record of any gauge in the

1 NRFA station 33035

Figure 6: One decision, five consequences

A drainage board sets the level water is held at. Everything below follows from that single choice, and none of it belongs to the board.

BLUE: A GAIN | PURPLE: A TRADE-OFF



The board receives none of these outcomes and has no reason to see any of them.

region. For these reasons, it was used as a reference point for testing the model against measured flows, but it is not a proposed source for the reservoir.

Every result is accompanied by a record of how it was produced: which measures acted through which pathway, the assumptions in force, and anything the model stands in for rather than calculates.

Interventions

PRISM currently holds a library of 31 intervention measures, organised into nine groups. They range from changes to land and water levels through to demand-side and reuse schemes. Each one is described in the same service terms:

- what it does to the quantity of water available
- what it does to the quality of a source and to the land and the biodiversity it supports
- what it costs
- how it interacts with the other measures in a portfolio – whether it reinforces, competes, or produces co-benefits that none of them delivers on its own.

Those declarations travel with every result, so a reader can see what each measure is contributing and on what basis.

Each intervention has metrics of service provided, which drive the gains and trade-offs calculated. PRISM searches the whole library rather than scoring a few combinations.

Because the model records which measures affect each other, the search of more than 2 billion combinations is solved exactly rather than sampled, providing an optimised combination of interventions. Which measures are appropriate in any particular catchment remains a decision for the people who would deliver and consent to them. But parameters, including specific scheme budgets, can be set to produce sensible long- and shortlists for consultation and decision-making. PRISM presents viable measures and indicates how they will meet objectives. Some measures have associated financial quantification and some as yet do not. Ultimate selection and optimisation of interventions lies with users and their stakeholders.

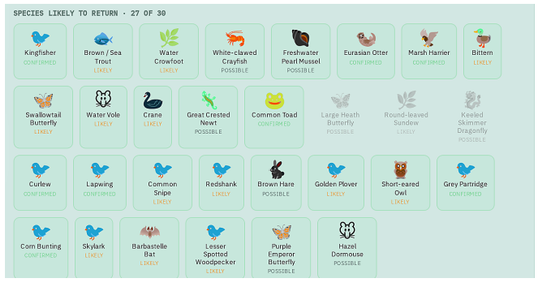
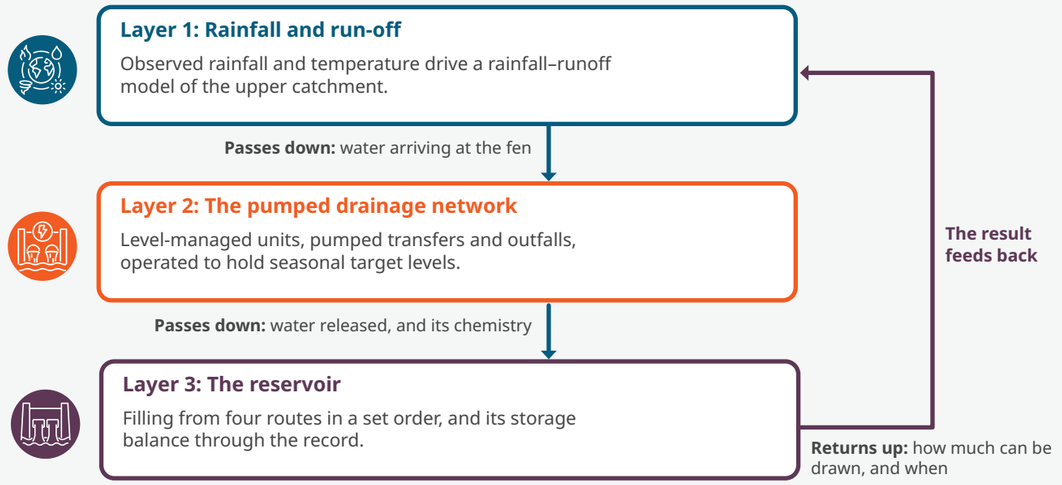


Figure 7. Habitat consequences, species by species, indicating confirmed, likely or possible.

Figure 8: Fens hydrology – why the layers had to be solved together

The fen is pumped, not drained by gravity. Water leaves when a pump starts, and pumps start against a target level, so a model of rainfall and rivers alone cannot see it.



Change a target level and the water table moves, the carbon and the chemistry follow, and the quality of a filling route changes with them. Every step is calculated rather than assumed, and a full run of 24 years of daily records completes in seconds.

Economic assessment

Underlying the appraisal is a single organising idea: the outcome increment. For any intervention, or any combination of interventions, PRISM computes the change it produces in each outcome the system delivers – water available, water quality, carbon, habitat, flood risk. These are assessed against outcomes delivered by the system without intervention. The increment, rather than the absolute level of any outcome, establishes the relative value of one intervention against another, and allows measures acting through different mechanisms to be compared.

PRISM carries a full appraisal of those increments, based on the quantification of services provided by the system. It is expressed in £, based on Green Book conventions, over 25 or 60 years at a 3.5% discount rate for a given strategic water price (HM Treasury, Green Book, 2022, Annex A6). An example of this in figure 12 shows the benefit as overall increment in outcome value (£4,657 million over 60 years) allocated by the measure that creates it, to the organisation that receives it and the framework that would count it.

Cost estimates for the scheme are still being developed, so no actual appraisal result for the Fens Reservoir is reproduced here. The values shown in the screens throughout this report are examples, not settled results.

A scenario is created, run, inspected and locked, and a locked record cannot be re-run or quietly edited. Each carries the model version, a fingerprint of every input and a count of warnings raised.

Outcome value can be distributed to the tier 1 stakeholders, both as an indication of the value they are creating, and as a guide in determining compensation or payments to them. This can be a major advance in facilitating catchment and nature-based solutions that are economically optimal but currently lack mechanisms for implementation.

There are additional qualitative and quantitative benefits in the identified outcomes: greater resilience, adaptability, decision quality, governance, coordination, risk reduction, learning and long-term stewardship.

Systemic assessment

PRISM reports the same run at three tiers, because the parties at each tier decide different things and decide them in different units. One physical result becomes three answers, without recalculating or double counting:

- carbon and resilience on a national account
- deployable output and water quality compliance to those running the supply
- farm income to the person whose field it is

We illustrate this in Figure 14, though as yet without all co-benefits included as financial expressions of service value.

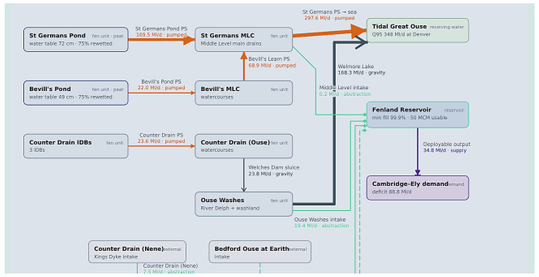


Figure 9. The coupling as PRISM draws it, with the run's values on every link. The sources and proportions shown are one possible configuration, not a proposed operating pattern.

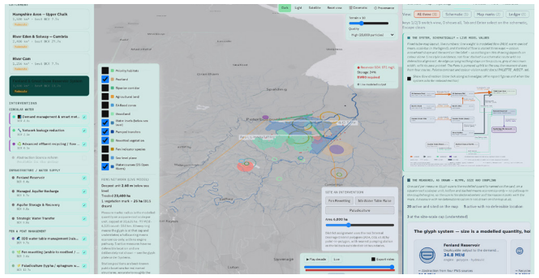
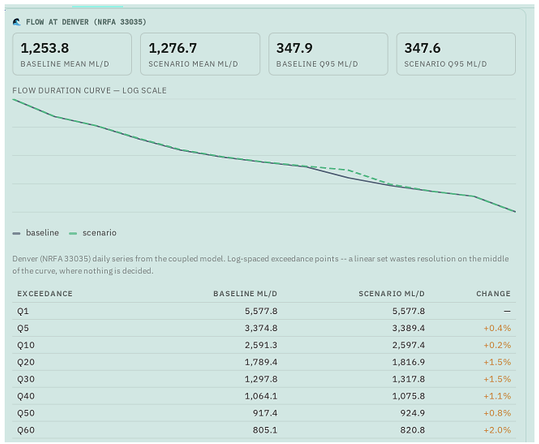


Figure 10. Measures sited by drainage district on the map, beside the system they act on.



EXCEEDANCE	BASELINE ML/D	SCENARIO ML/D	CHANGE
Q1	5,577.8	5,577.8	—
Q5	3,374.8	3,389.4	+0.4%
Q10	2,591.3	2,597.4	+0.2%
Q20	1,789.4	1,816.9	+1.5%
Q30	1,297.8	1,317.8	+1.5%
Q40	1,064.1	1,075.8	+1.1%
Q50	917.4	924.9	+0.8%
Q60	805.1	820.8	+2.0%

Figure 11. Flow at the catchment outlet gauge, baseline against scenario. Example values from a test configuration.

One physical result becomes three answers, without recalculating or double counting.

Reporting the same run at every tier is what makes the co-benefits of an intervention visible to the body that receives them, rather than only to the body that funds it. For every benefit, PRISM records who receives it and who pays, and in this catchment those are frequently different parties, with the one whose consent is needed often being neither.

Recommendations

A systems approach is already taken by Cambridge Water and Anglian Water, through best value planning, strategic environmental assessment and their catchment and integrated water management work. What a coupled model adds is arithmetic: the same judgement, with the interactions between measures calculated rather than assumed, each effect traced to the record it came from, and the whole thing quick enough to re-run while people are still in the room.

In the case presented the additional benefits of peat rewetting are demonstrated and could be taken further together with other catchment measures.

Reporting one result at each stakeholder tier is worth adopting wherever consent is needed. A single run expressed in the decision currencies of each tier lets the same analysis speak to the bodies that plan, fund and regulate; the teams that design, build and facilitate; and the people whose land it happens on.

A clearer route for lowland peat carbon would help a great deal. The Peatland Code has covered lowland fen since Version 2.0 in 2023, with fens of at least 45 centimetres peat depth eligible, but activity remains far more established for upland bog. Making that route easier to use in the fens would let carbon value on lowland peat reach the landowner who changes practice to create it, which is a policy matter rather than a modelling one, and shapes what is deliverable.

The same treatment applies well beyond this catchment. Wherever the benefits of a scheme, its costs and the consent for it sit with different organisations measuring different things, the approach transfers. This is true across the water sector, and equally in transport, energy networks and coastal management. We recommend that the PRISM approach be trialled on case studies in these different sectors.

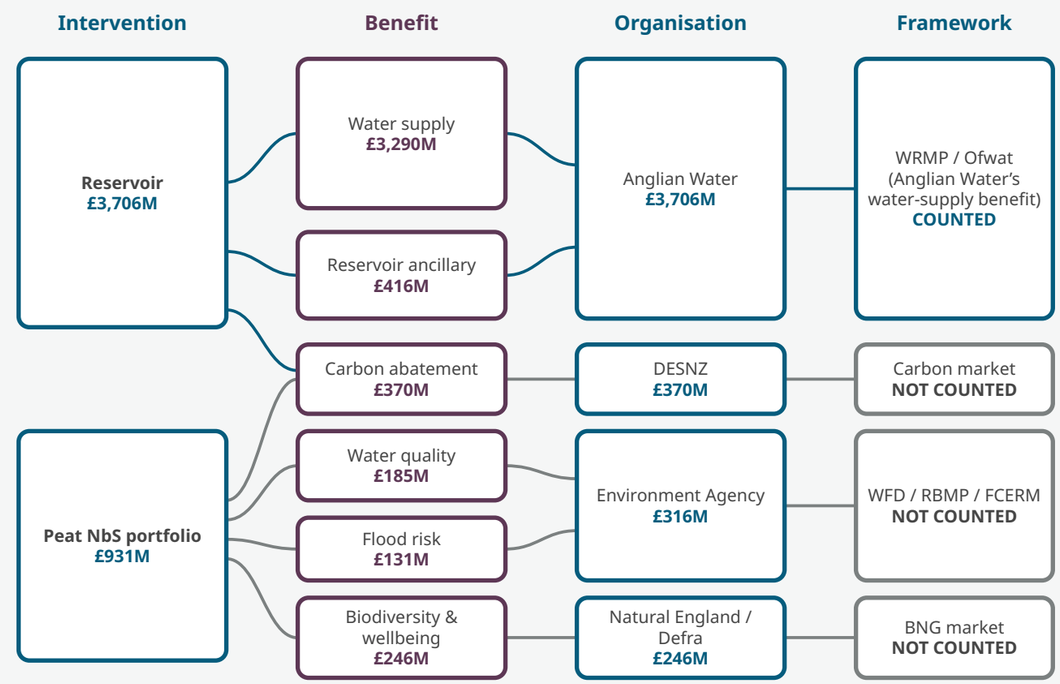
Where else this applies

Nineteen of the 20 national datasets PRISM draws on cover the whole of England, and 15 are openly licensed. Only operating records held by the drainage authority are specific to this Fens catchment. The hydrology, appraisal ledger, three-tier reporting and assurance machinery are not Fens-specific; a new catchment would supply its own drainage layout and candidate measures.

Although this case study has focused on peat rewetting, PRISM can consider many possible measures together, just as Cambridge and Anglian Water's catchment management programme does. Defra's white paper 'A new vision for water' advocates taking a systems approach to the planning of

Figure 12: Governance – who owns each benefit

Illustrative example based on £4.00/m³ strategic water value green book reference case.
NbS – nature-based solutions | WFD – Water Framework Directive | RBMP – river basin management plan | FCERM – flood and coastal erosion risk management | BNG – biodiversity net gain.



water infrastructure and meeting climate change challenges in coming decades. Systems approaches as set out here can be the mechanism to deliver this.

PRISM can also be adapted for non-water sector challenges where the multiple tiers of stakeholders need to coordinate to deliver transition to sustainable infrastructure for example in energy, building services, transport, agriculture and wider circular economy areas.

Because the model records which measures affect each other, the search of more than 2 billion combinations is solved exactly rather than sampled, providing an optimised combination of interventions.

References

Published sources
– Defra (2026). A New Vision for Water, CP 1490.
– Defra Lowland Agricultural Peat Task Force (2023). Final Report.
– Department for Energy Security and Net Zero (2025). Carbon Valuation in UK Policy Appraisal.
– Environment Agency, Natural Resources Wales and Ofwat (2023). Water Resources Planning Guideline.
– Evans, C.D. et al. (2021). Overriding water table control on managed peatland greenhouse gas emissions. Nature 593, 548–552.
– HM Treasury (2022). The Green Book, Annex A6.
– IUCN UK Peatland Programme (2023). Peatland Code Version 2.0.

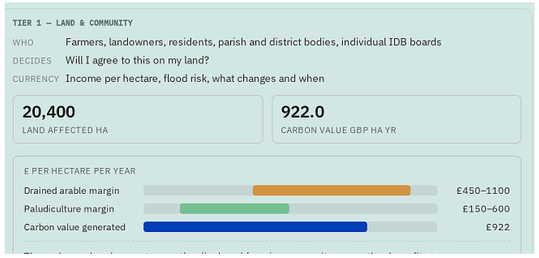


Figure 14. The Tier 1 land and community view in full: what changes on the ground, what it costs the person whose land it is, and the flood question PRISM does not answer at property level. Example values from a test configuration.

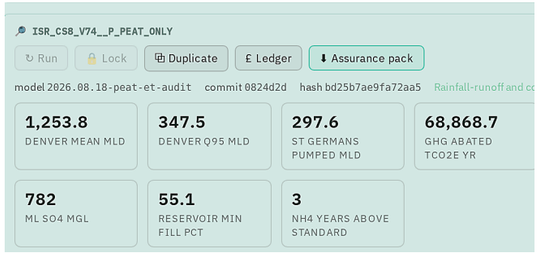


Figure 13. Every result traced to a stored record with its version, its commit, a fingerprint of its inputs and its calibration state.

– Met Office (2025). HadUK-Grid Gridded Climate Observations, 1 km. Centre for Environmental Data Analysis. Open Government Licence v3.
– Mott MacDonald for Anglian Water (2024). Water Resources Management Plan 2024: Environmental Report (Strategic Environmental Assessment, with Habitats Regulations Assessment, Water Framework Directive assessment, Biodiversity Net Gain and Natural Capital assessments).
– National River Flow Archive. Station 33035, Ely Ouse at Denver Complex. UK Centre for Ecology and Hydrology. Open Government Licence v3.
– Natural England (2025). Biodiversity Net Gain market data.
– Ofwat (2024). Case study: Anglian Water and Cambridge Water: Fens Reservoir.
– Water Supply (Water Quality) Regulations 2016, SI 2016/614, Schedule 1.
– Water Resources East (2023). Regional Water Resources Plan for Eastern England.

National datasets

The 20 national datasets PRISM draws on, as recorded in its own dataset register.

– Environment Agency. WFD waterbody classification (Cycle 3). Open Government Licence v3.0.
– Environment Agency. Water Quality Archive (WIMS) determinand series. Open Government Licence v3.0.
– Environment Agency / water companies. Event Duration Monitoring, storm overflow spills. Open Government Licence v3.0.
– Environment Agency / Defra. Designated bathing waters and classifications. Open Government Licence v3.0.
– Environment Agency. Water discharge permits and consented quality limits. Open Government Licence v3.0.
– Environment Agency. Abstraction licences and returns. Open Government Licence v3.0.
– UK Centre for Ecology & Hydrology (NRFA). Gauged daily flow and catchment descriptors. Open Government Licence v3.0.
– Environment Agency / British Geological Survey. Groundwater level and quality monitoring. Open Government Licence v3.0.
– Met Office. UKCP18 regional climate projections. Open Government Licence v3.0 (registration required).
– Met Office. HadUK-Grid 1 km observed climate. Open Government Licence v3.0 (CEDA registration).
– Natural England. England peat and peaty soils extent. Open Government Licence v3.0.
– Natural England. SSSI, SAC, SPA and Ramsar boundaries. Open Government Licence v3.0.
– Natural England. Agricultural Land Classification grades. Open Government Licence v3.0.
– British Geological Survey. BGS 1:50,000 bedrock and superficial geology. BGS Open Data / commercial for derived products.
– Environment Agency. WFD operational catchments and management catchments. Open Government Licence v3.0.
– Environment Agency. Flood Map for Planning and Risk of Flooding from Rivers and Sea. Open Government Licence v3.0.
– Environment Agency. Recorded flood outlines and historic events. Open Government Licence v3.0.
– Office for National Statistics. ONS population, household and IMD statistics. Open Government Licence v3.0.
– Ordnance Survey. AddressBase Premium property points. PSGA / commercial licence.
– Client (water company, IDB, navigation authority). Operator telemetry: pumping records, STW flows, DO, levels. Client-owned, per engagement.

Disclaimer: All values shown in this report are generated solely for illustrative purposes and do not represent published scheme results. The data and evidence used in this case study are drawn from publicly available sources and are cited in the report.

A single run expressed in the decision currencies of each tier lets the same analysis speak to the bodies that plan, fund and regulate; the teams that design, build and facilitate; and the people whose land it happens on.

The evidence base for systems change PRISM

Table 1. PRISM holds a library of 31 intervention measures, organised into nine groups.

WS water supply, **WQ** water quality, **FR** flood risk, **C** carbon, **B** biodiversity and habitat, **A** soil and agriculture, **H** amenity and health

Group	Intervention	Services
Water supply and transfer	Fens Reservoir	WS · B · H
	Managed aquifer recharge	WS
	Aquifer storage and recovery	WS
	Strategic water transfer	WS
Circular water	Demand management and smart metering	WS · C
	Network leakage reduction	WS · C
	Advanced effluent recycling and flow reversal	WS · WQ · C
	Abstraction licence reform †	WS · WQ
Fen and peat management	IDB water table management, raise 10 cm	C · WQ · B · A · FR
	Fen rewetting, arable to reedbed or wet grassland	C · WQ · B · A · FR
	Paludiculture, typha or sphagnum wet crop	C · B · A · WQ
Peatland restoration	Grip and drain blocking †	C · FR · WQ · B
	Sphagnum reintroduction †	C · B
	Bare peat revegetation †	C · WQ · B
In-stream natural flood management	Offline flood storage ponds	FR · WQ · B
	Leaky woody debris dams	FR · WQ · B
	Large woody material introduction	FR · B · WQ
Riparian management	Riparian grass buffer strip	WQ · B · A
	Wildflower riparian buffer	WQ · B · H
Woodland creation	Floodplain wet woodland, carr	FR · C · B · WQ
	Riparian alder and willow corridor	WQ · B · C · FR
	Native broadleaf woodland	C · B · H · WQ
	Ancient woodland restoration, PAWS	B · C · H
	Upland birch-oak woodland †	C · B · FR
Agricultural management	Winter cover crops	WQ · C · A
	No-till and min-till cultivation	C · A · WQ
	Precision nutrient management	WQ · A · C
Highway management	Permeable highway verge restoration	FR · WQ · B
	Highway attenuation pond	FR · WQ · B
	Highway SuDS swale network	FR · WQ · B
	Green bridge and culvert naturalisation	B · H

Table 2. Stakeholder tiers

Tier	Who	What they decide	What they need to see
Tier 3 Policy and funding – answerable for the provision of service	Treasury, Defra, DESNZ, the water regulators, Natural England	Should this be funded, and do the appraisal rules need to change?	Value over the scheme's life, carbon, environmental status
Tier 2 Scheme design and delivery – responsible for delivery	Designers, the water companies, the drainage authorities	How should this be designed, sized and sequenced?	Cost for each unit of water, what it delivers, what could go wrong
Tier 1 Land and community – delivering the service	Farmers, landowners, residents, parish bodies, drainage boards	Would I agree to this on my land?	Income for each hectare, flood risk, what changes and when

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