



A Regenerative Fens

A 2025 report for Future Fens Integrated Adaptation

from



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1. Introduction and summary

The proposition of Future Fens Integrated Adaptation is that the joint actions needed to deliver climate change adaptation in the region could unlock investment and deliver wider socio-economic benefits. Anglian Water and Environment Agency invited North Star Transition to bring its Transition Lab approach to the Fens to take forward the work that had started there.

Phase 1 of Fens Transition Lab, covering four workshops with local stakeholders alongside other engagement, has allowed us to collectively develop a nuanced understanding of the challenges and potential areas of opportunity in the Fens region. From our work in Fens Transition Lab, a set of 5 themes emerged, as well as 5 lenses to consider in delivery of those themes.

The 5 themes are:

- **Theme 1: profitable and resilient agriculture**
- **Theme 2: mid-level infrastructure for water, energy, transport**
- **Theme 3: implementing land use transformation at scale**
- **Theme 4: practical methods to improve quality of water, soil, air and biodiversity**
- **Theme 5: economic networks needed for a regenerative Fens**

To enable transformative and systemic change, and the potential benefit or impacts of delivery, we identified 5 lenses that we can apply to consideration of each theme. Applying these lenses enables us to develop more holistic thinking and avoid siloed solutions. The 5 lenses are:

- Planning and regulation
- Landowner financial capacity to change farming practices
- Flood risk
- A 'matrix' or systemic approach to regional planning for land use
- Heath, wellbeing and social implications of the change

Of course, the underlying assumption in the discussions with stakeholders is that the investments being anticipated in new reservoirs and water management will provide a strong frame for other actions that could take place in the landscape. These investments could also act as a spur for other enabling investments, from public sources as well as private finance.

Fens Transition Lab stakeholders have already generated a wealth of insights into each of these themes and lenses, identifying specific challenges, barriers and opportunities in detail, including ideas for solutions and working examples of solutions from elsewhere. In addition, the stakeholders identified the organizations and individual people that need to be involved in some areas.

It is our recommendation from North Star Transition that this output should be the launch pad of Fens Transition Lab going forwards, knitting together the insights and ideas from stakeholders into areas to focus delivery, and starting to develop action pathways to enable and drive change. Through this process some of the lenses may become specific themes that require their own delivery programme, and other themes and lenses may emerge.

North Star Transition is very appreciative of the support it received from Anglian Water and the Environment Agency for this work.

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2. Fens Transition Lab

A Transition Lab is a process of ‘emergent co-production’ developed by North Star Transition, in partnership with the Climate Action Unit at University College London. A clear picture of the challenges, opportunities, barriers and solutions develops over the course of the transition lab, from the cumulative output from engagement with the stakeholders. While individual stakeholders do not have to be present in every workshop across a transition lab, their collective input enables us to develop a coherent vision and areas of action that stakeholders together recognize as imperative for the development of the region.

When the Future Fens Integrated Adaptation team invited North Star Transition to bring its work to the Fens region, the starting question was this: “What would a regenerative Fens look like? “

There was no pre-agreed definition of the “regenerative” phrase. Instead, our working assumption was based on the idea that the Fens would not have degenerative outcomes, such as a climate emergency, a flooding and water crisis, a biodiversity crisis, a health crisis, and so on.

North Star Transition proposed setting up a first phase of Fens Transition Lab to:

- a) Establish commonly understood objectives for the entire region
- b) Bring together “disconnected allies” from across the region who could bring their individual understanding of the challenge and objectives into a collective setting

The first phase covered four workshops, plus additional engagement with individual stakeholders. The initial stakeholders were drawn from the group that had gathered under the Future Fens Integrated Adaptation umbrella, but this group was added to through individual engagement with stakeholders from outside the water and environment system – the main focus of the participants in Future Fens Integrated Adaptation.

Across the 4 workshops we had attendees from the following sectors: water, statutory bodies, eNGOs and the third sector, consultancies, infrastructure bodies, health, local government, national government, farming (food production), food (food processing and distribution), energy, transport, universities and corporates.

This report has two annexes that provide further detail in two important areas:

- a) The methodology and approach adopted by North Star Transition in creating and implementing a Transition Lab.
- b) The work we started in Phase 1 for the development of a Strategic Plan for Financing Change across the region.

3. Workshop Summaries

We now provide a summary of each of the workshops, and our learnings from them.

Workshop 1: Getting to know each + Sharing ideas for a regenerative Fens

We created the space for a range of different stakeholders to get to know each other, and share their ideas for a regenerative Fens with each other in a constructive way that helps to hear each others perspectives. We captured the ideas that emerged which starts the process towards building a shared vision. The following graphic summarises some of the key ideas that emerged from this workshop.



Workshop 2: present the financing scenario for landscape transformation + asking the question "What's needed on the ground to make this happen?"

North Star Transition presented potential financing scenarios for the Fens, based on the investments being planned around the reservoirs, as well as creating additional investment opportunities in other areas, including farming, energy, transport, health and housing. In the work we carry out in Wye-Usk Transition Lab, we have set overall objectives for the strategic programme to be transformational, locally-owned and investable. We think that these objectives are valid objectives to be used in a Fens programme as well.

Across workshops 1 and 2, we heard that in the Fens in particular, everything is interlinked: landscape, water, agriculture, biodiversity, nature conservation, housing, transport, infrastructure, jobs, skills, and well-being of communities.

We heard that lack of joined-up thinking, silos, everyone working on their own little patch, etc, are challenges that prevent scaling up of useful approaches. We heard that there is a lack of time and space for collaboration.

"The Fens are the canary in the coal mine: we're hitting a lot of issues, and they're all coming together, creating a perfect storm"

In exploring what is needed on the ground to make transformational change happen we identified 5 key recurring themes.

item	Potential interventions that were discussed in Workshop 2
1	Peatland restoration and potential for integrating farming and peatland
2	Moving and storing water through/in the landscape
3	Renewable energy production – potential and challenges
4	The need to upgrade flood defences to protect other investments in the area
5	Moving towards a pro-active planning and regulatory system that supports the transition to a regenerative landscape

Workshop 3: digging deeper into Fens-specific challenges and opportunities

In workshop 3 we presented further ideas on financing models for landscape transformation and dug into the 5 concrete themes that came up repeatedly in Session 2, generating ideas on how to overcome barriers for collaboration.

In workshop 3, we saw that some people in the group have expertise that offers answers to the questions that others have – so collectively we have a lot of wisdom.

We heard that:

- The Fens is a financially and culturally thriving area in terms of agricultural expertise and innovation
- It has many small to mid scale projects that have successfully introduced innovative solutions to water management, peat restoration, biodiversity, renewables and new regenerative crop creation
- There are currently successful and well-coordinated initiatives looking at the landscape-scale needs of the Fens – Fens 2100 etc.
- There is a need for scaling up, integrating, and coordinating
- There is a need for financial capital to invest in scaling up

Workshop 4: Reading back from the previous workshops + exploring 5 key themes

From our analysis of all the material generated through the first three workshops, and from individual engagement, we identified 5 themes that we then took into workshop 4.

Theme 1: profitable and resilient agriculture

- Building on innovative pilots of new paludiculture crops
- Scaling successful paludiculture crops

- Building a successful horticulture industry
- Adapting existing farming practices (crops that won't change)

Theme 2: mid-level infrastructure for water, energy, transport

There is a need in the Fens for new water and energy infrastructure and that there is an opportunity to realise this at the mid-level (for example, between large-scale reservoirs from Anglian Water and individual farm infrastructure):

- Mid-level infrastructure builds community and shared practice such as shared best practice around water management
- Mid-level infrastructure is more financially viable due to scale
- At mid-level scale making evidence-based land use choices of where to put infrastructure is easier

Theme 3: implementing land use transformation at scale

Due to environmental challenges some areas of land may have to be converted away from agricultural use to peat, for flood or biodiversity management

Deciding the areas this may have to happen to should be evidence-based and a component of systemic planning based on a range of needs from farmer profitability, over food security to flood risk for communities

Areas of land converted for peatland restoration, flood management or biodiversity gain are likely to be easier to manage:

- when done at scale
- combined with other land management issues like water needs

Theme 4: practical methods to improve quality of water, soil, air and biodiversity

We heard lots of different ways and methods for improving the way that land / water is managed. Scaling up and normalizing appropriate methods is an important next step for regenerative land management. These methods ranged across:

- Methods that improve water quality
- Methods that restore soil quality
- Methods to recycle water
- Methods of flood management with positive environmental impacts
- Methods that lead to decreased energy usage on farm sites
- Methods that lead to increased biodiversity on any type of land use

Theme 5: economic networks needed for a regenerative Fens

The changes on the ground need to be supported by new economic networks and markets at a regional scale:

- potential for a water market so that farmers and land managers can buy and sell water resources
- potential of a market for linking of renewable energy to new industry development

- building of a strong regenerative supply chain for new regenerative crops e.g paludiculture crops, horticulture

We also found it was helpful to apply five lenses to the main themes:

We then guided the attendees through two facilitated exercises, applying 5 lenses to the 5 themes emerging from workshop 3. These lenses were:

- Planning and regulation
- Farmer and landowner financial capacity to change practices
- Flood risk
- A 'matrix' or systemic approach to regional planning for land use
- Health, wellbeing and social implications of the change

4. Next steps

Fens Transition Lab has brought range of stakeholders together and generated a range of insights and areas of opportunity to tackle the complex challenges faced by the Fens region, as well as the buy in of the stakeholder group.

North Star Transition recommends that this work continues, using the themes and lenses identified by stakeholders. One way to do this would be to develop working groups to tackle barriers that have been identified across a best grouping of themes and lenses. These groups could take forward ideas and solutions that have promise by systematically working through the barriers and issues obstructing change currently.

North Star Transition also recommends putting together a strategic investment programme for financing change which constructs how stakeholder actions could be resourced across multiple financial asset classes and types of funders. In our view, this kind of initiative will need a collaboration across public, philanthropic and private monies. The work we recommend doing should include mapping networks, mapping potential counterparties, identifying interventions, potential commercial opportunities, revenue and business models, and governance structures, working out barriers and identifying leverage points.

Without tying plans and initiatives to the resources needed to make them real, the excellent work that has already been carried out by Future Fens Integrated Adaptation, and the work it could carry out, would be in vain.

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Annex 1: Stakeholder Engagement and Behavioural Science Insights in Phase 1 of the Fens Transition Lab

Introduction

The stakeholder engagement process in the Fens Transition Lab was designed to foster collaboration, surface diverse perspectives, and co-develop innovative solutions for the region's environmental and socio-economic challenges. Developed by North Star Transition in partnership with the Climate Action Unit at University College London (UCL-CAU), the approach integrates insights from behavioural science and neuroscience to ensure effective communication, shared understanding, and systemic thinking.

This annex details the methodology used in stakeholder engagement, the process of the Transition Lab, and the behavioural science tools deployed to enhance collaboration and decision-making. In Fens Transition Lab, we applied a selection of these tools to help us build the Phase 1 process.

Stakeholder Engagement Process

The engagement framework is structured into six iterative steps, ensuring a holistic approach to co-creation and problem-solving:

- **Idea Sharing:** Participants present their ideas for regional transformation while gaining insight into others' challenges and proposed solutions. Structured discussions and facilitated dialogues ensure that all voices are heard and respected.
- **Developing a Shared Language:** Stakeholders begin to articulate their goals and concerns in a common framework, fostering better understanding and alignment. Techniques such as storytelling, metaphor usage, and reframing are used to overcome communication barriers.
- **Idea Refinement:** Stakeholders test and refine their ideas through peer collaboration. Case studies, role-playing exercises, and simulation models are deployed to test the feasibility and scalability of proposed solutions.
- **Systemic Thinking:** Participants integrate their proposals into a broader regional context, understanding how individual ideas connect within a wider system.
- **Influence Mapping:** Stakeholders identify key points of influence within the system using mapping tools to visualize interconnections and leverage opportunities. Power analysis and network mapping help in determining the most strategic interventions.
- **Strategic Planning:** The process culminates in the co-creation of a locally owned and investible strategic plan. Financial modeling, stakeholder accountability frameworks, and governance structures are developed to support long-term implementation.

This process is iterative rather than strictly linear, allowing for continual refinement as new insights emerge. Nevertheless, Figure 1 helps to visualize this process:

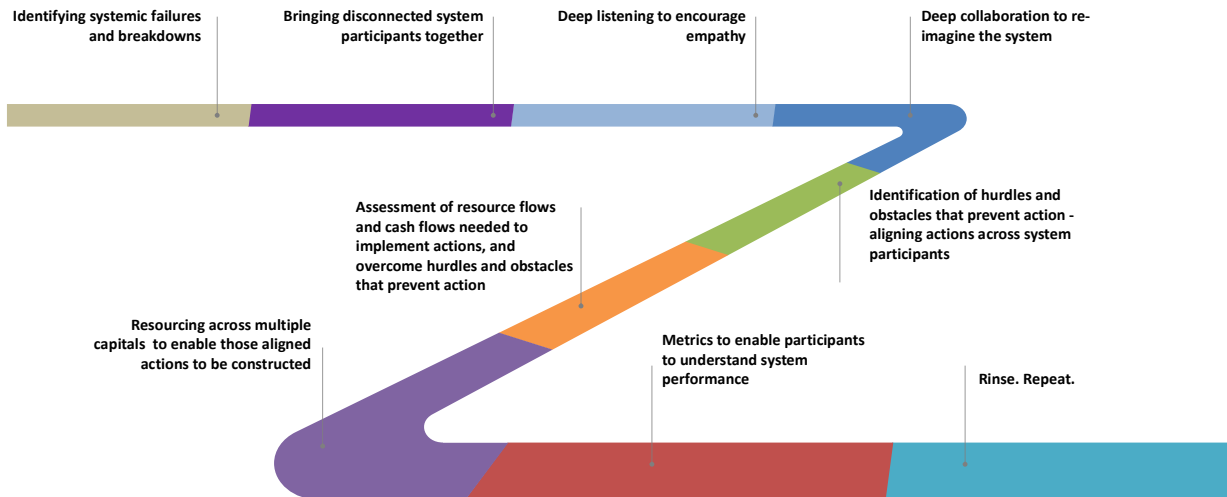


Figure 1: The elements of a Transition Lab from start to finish. © North Star Transition

To complement the Transition Lab journey Figure 1 describes a participant’s journey within the Transition Lab and how their opinions and mindset might develop:

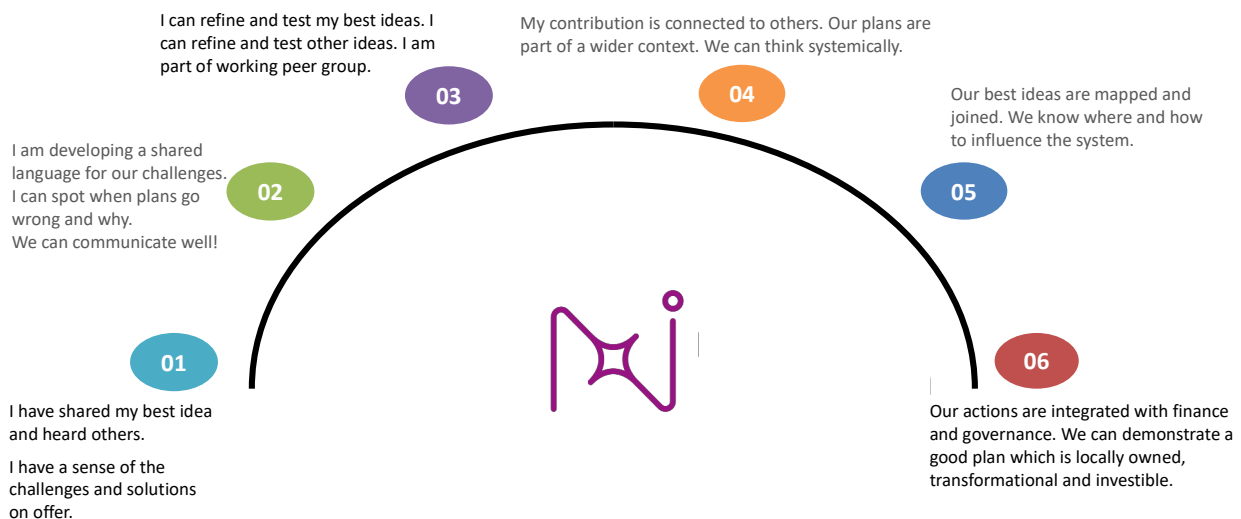


Figure 2: An imagined journey of a Transition Lab participant. © North Star Transition

Methodological Tools and Techniques

North Star Transition employs several behavioural science and neuroscience-informed tools to facilitate engagement and enhance systemic decision-making:

- **Active Sonar:** A continuous listening process to capture stakeholder perspectives and maintain engagement. This method ensures dynamic and evolving dialogue rather than static, one-time feedback.
- **Seven Insights Framework:** A behavioural psychology-based tool addressing language barriers to improve stakeholder communication. Insights include cognitive biases, emotional resonance, and trust-building techniques.
- **Case-Consult Methodology:** A peer-review process that helps validate opportunities for transformative change. This includes structured feedback loops and iterative development cycles.
- **Poking Complex Systems:** A tool that guides stakeholders from siloed thinking toward systemic solutions. Systems thinking workshops and complexity mapping are key components.
- **Wider Lens Perspective:** A method to assess challenges within an integrated framework, ensuring alignment with broader objectives. This incorporates multi-criteria decision analysis and intersectoral collaboration strategies.
- **Transition Lab Canvas:** A structured approach to linking proposed actions with financing and governance, ensuring practical implementation and investment viability. The canvas includes aspects such as stakeholder value proposition, funding pathways, and long-term sustainability metrics.

Each of the sessions of Phase 1 of the Transition Lab employed a number of these tools. In particular, the Seven Insights Framework has been used throughout the construction of Phase 1 of the Fens Transition Lab. This framework underpins the communication and facilitation strategies employed within the Fens Transition Lab, ensuring that discussions are framed in ways that resonate with stakeholders and support productive collaboration.

Conclusion

The stakeholder engagement methodology underpinning Fens Transition Lab represents an innovative approach to collaborative regional transformation. By leveraging behavioural science insights and systemic engagement techniques, the Transition Lab fosters actionable, investible, and locally owned solutions for the future of the Fens.

The next phase of the Transition Lab should focus on refining the identified action pathways, developing investment-focused proposals, and strengthening governance structures to support long-term implementation.

Annex 2: Developing a Strategic Plan for Financing Change in the Fens Transition Lab

Context

North Star Transition proposes the development a strategic investment programme for financing change in the Fens region, building on work undertaken by Anglian Water and its partners. This innovative approach will involve collaboration with Anglian Water, financial institutions, and local stakeholders to create investment programmes aligned with the transformation needs of the Fens.

The programme aims to create a scalable model that attracts investment across multiple financial asset classes while ensuring that stakeholder actions are locally owned. This approach will enable the financing of interventions that balance environmental sustainability, economic development, and social equity.

The Development of a Financing Pathway within Phase 1 of the Fens Transition Lab

Phase 1 of the Fens Transition Lab started the process of examining potential interventions in the Fens within a financial framework. This began by anchoring discussions in the Transition Lab within Anglian Water's two new reservoir projects. These reservoir projects are set to bring billions of pounds of investment to the Fens. The opportunity for interventions alongside and in tandem with the reservoirs has the potential to open conversations with financial institutions who could participate in an investment aiming at both the reservoirs and wider challenges of climate change impacts, biodiversity loss, social inequality and health issues (to name but a few).

Anglian Water had started thinking about how to leverage the reservoirs for these co-benefits already as shown Anglian Water's Gate Two Report for RAPID.¹ Thus, one of the aims of the Transition Lab was to develop this thinking further and start to co-create interventions in light of this background.

Thus, in Workshop 2 of the Transition Lab, North Star Transition introduced a sample investment case scenario as shown in Figure 4.

¹ Anglian Water, Cambridge Water, RAPID, Fens Reservoir, Gate Two Report, November 2022.

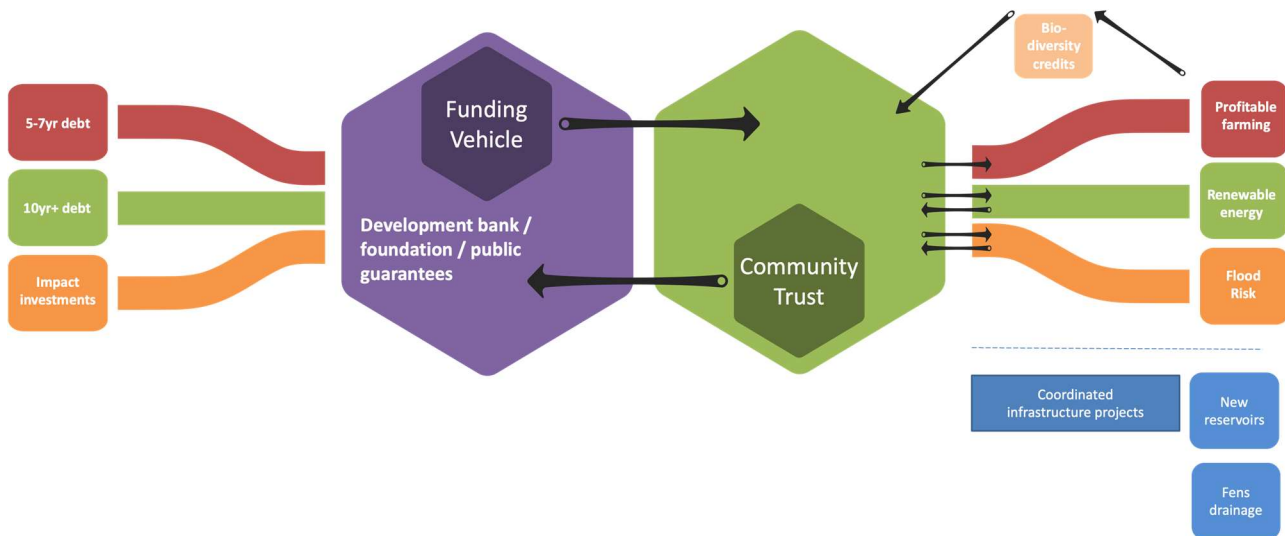


Figure 3: Sample scenario of $\lt; \pounds 1$ billion investment case. © North Star Transition

This financial scenario formed the basis for working out possible areas of interventions within the Fens and enable participants to look beyond financing issues.

Workshop 3 looked at the gaps in sources of investment and how to bridge those gaps. Figure 5 illustrates the various forms of funding and investment available to potential stakeholders. It was noted within the workshop that mainstream investment for environmentally related interventions is often difficult to unlock.

	Public Funding	Philanthropic Funding	Impact Investments	Responsible Investment	Mainstream Investments
Funder / Investor	Government	Foundation, NGOs	Corporates, Venture Capital, Impact Funds	ESG Funds	Banks Pension Funds Insurance Companies
Form of Funding / Investment	Grants, subsidies	Grants	Equity	Concessionary debt	Commercial debt and equity
Funding / Investment Model	Non-revenue generating activities		Unproven / unpredictable business model with strong potential for revenue	Proven business model with revenues	

Figure 4: Different types of investment within the financial landscape. © North Star Transition

In addition to the different types of investment, in Workshop 3, North Star Transition also introduced the Four Levels of Financing as shown in Figures 6 and 7.

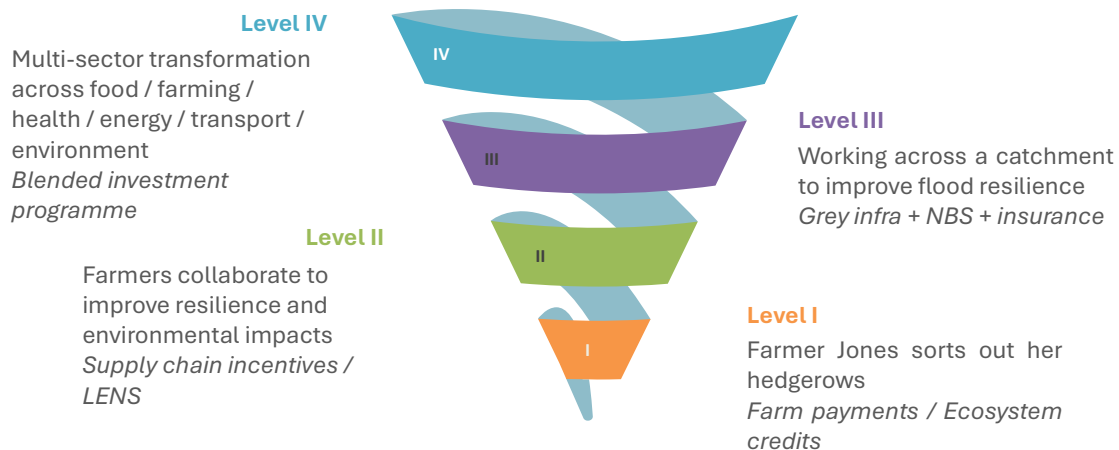


Figure 5: Each level of intervention and scale will attract different forms of financing. Each level is important and is built upon to reach Level 4. © North Star Transition.

	Description	Example	Source of Finance	Estimated Investment
Level 1	Small-scale nature-based solutions involving single actor and single solution	A farmer maintains hedgerows	Subsidies Charities / Foundations Monetization of environmental outcomes (e.g. carbon credits)	£1-£500,000
Level 2	Collaborative work focused on a single outcome	Work to restore connected habitats to enhance nature recovery	Subsidies Charities / Foundations Monetization of environmental outcomes (e.g. carbon credits)	£500,000 - £1 million
Level 3	Collaborative work in a landscape involving multiple stakeholders and projects in ways that create several benefits	Projects across a catchment area to enable better climate adaptation through several nature-based solutions	National Infrastructure Banks Government funding Water Companies	> £1 million
Level 4	Projects which transform landscapes by tackling the root causes of issues	The transition of the farm economic model to diversify incomes to include e.g. energy production	National Infrastructure Banks Government funding Institutional Investors	> £250 million

Figure 6: Overview of potential sources of finance for interventions at each of the Four Levels. The amount of money potentially available increases. © North Star Transition

The Four Levels is an illustration of which interventions attract small to large scale financing for interventions within the Fens Landscape. Currently, most interventions are financed at Levels 1 and 2 – single point source solutions for isolated issues. At North Star Transition, we want to move thinking towards Level 4 to access greater levels of investment.

By designing and implementing more ambitious projects through the Transition Lab which deliver transformational change, we can open the door to more diverse, substantive financing sources. These ambitious projects are not only more likely to attract investors but also provide systemic solutions that address the root causes of climate change, biodiversity loss, and societal challenges.

The identification of the 5 themes from Phase 1 of the Transition Lab, as outlined in the main report, start the journey towards the designing of more ambitious projects to deliver transformational change within the Fens.

It is North Star Transition’s recommendation that the next phase of the Transition Lab start the development of a strategic investment programme to deliver these ambitious projects as outlined below.

Developing a Strategic Investment Programme

The development of a strategic investment programme for the Fens should involve the following key steps and milestones:

- **Collaboration with Anglian Water and Financial Institutions:** Engaging financial institutions interested in opportunities beyond the reservoirs to create diverse investment models. Further engagement is required with Anglian Water’s Treasury team to align the Fens Transition Lab with the fundraising work done for the reservoirs. This includes addressing the requirement for Anglian Water’s reservoir plans to generate co-benefits for the wider landscape.
- **Creating a List of Potential Interventions within the Fens:** The 5 themes should be used to create 5 different stakeholder groups. Workshops with these groups should be held to facilitate the creation of a list of potential interventions within the Fens landscape.
- **Using the Business Model Canvas to Map Interventions:** Business model canvases, as shown in Figure 8, should be used by each of the stakeholder groups in order to map their interventions to identify potential revenue streams, customers and costs. These can then be pulled together to start the creation of a Strategic Investment Programme.











Secret Sauce How is the proposed intervention unique? What differentiates the business model?	Channels to Reach All Stakeholders How do we reach stakeholders with our proposed solution? What communication channels are available?	Proposed Interventions What interventions are needed to solve our stakeholders problems?	Approaches Needed to Solve Their Problems How do we solve our stakeholders' problem?	Their Problems What is the problem facing our target stakeholders?	The Stakeholders Who are our target stakeholders? What are their goals needs and preferences?
					
	Supporters Who or what would support the proposed intervention?	Metrics How would the proposed intervention be measured?	Outcomes What are the outcomes of the proposed intervention?	Costs What are the most significant costs of the business model?	Revenues What are the sources of revenue?
					

Figure 7: Example of an innovation business model canvas.

The process of creating a Strategic Investment Programme will be iterative, involving:

- **Mapping Financial Networks and Counterparties:** Identifying key stakeholders and investment structures already in place to understand the financial landscape.
- **Identifying and Developing Business Models:** Collaborating with stakeholders to create investible interventions that meet both local needs and investor requirements.

- **Aggregating Interventions for Financial Viability:** Ensuring local ownership while making investment opportunities more attractive to institutional investors by bundling smaller projects into larger, investible propositions.
- **Iterative Drafting of Investment Programme:** Engaging stakeholders and financial institutions through multiple stages of consultation to refine and enhance investment viability.
- **Exploring Blended Finance Options:** Investigating the use of mixed funding sources, including grants, public finance, philanthropic capital, and private sector investment.

Conclusion

The development of a Strategic Investment Programme for financing change represents an innovative and unique approach to regional transformation. Through ongoing stakeholder engagement and collaboration with institutional investors, the Fens Transition Lab can build a roadmap for investment that is both sustainable and locally driven. The process can ultimately enable the Fens region to attract and deploy investment capital to drive meaningful, long-term change. This strategic programme for financing change has the potential to serve as a model for other regions facing similar sustainability challenges, offering a replicable blueprint for leveraging investment to drive environmental and socio-economic resilience.