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NEWCASTLE

From Risk to Resilience

Newcastle's Approach to Climate Adaptation

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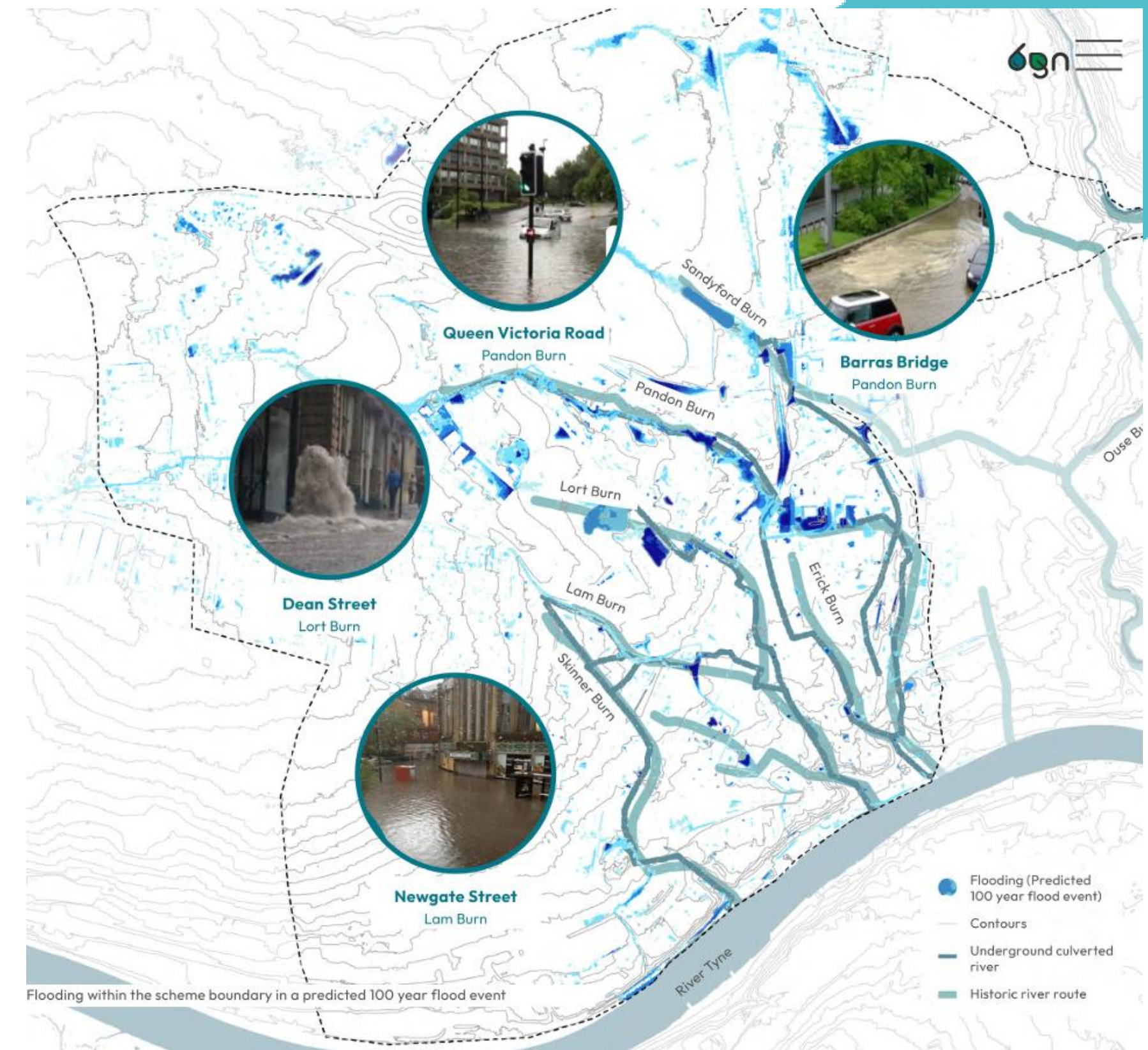
From Risk to Resilience: Newcastle's Approach to Climate Adaptation

- Climate change is already increasing risks to Newcastle's communities, infrastructure, services and economy.
- Flooding is one of the city's most visible risks, but adaptation must also address heat, severe weather, ecosystem degradation and indirect impacts such as food and supply-chain disruption.
- Our aim is to move from responding to individual incidents to building long-term resilience into how the city plans, invests and delivers services.
- Blue Green Newcastle is our flagship example of that approach.



A Decade of Evidence-Led Planning

- Long-term collaboration with the local Environment Agency team and Newcastle University.
- 2015: City Centre Flood Risk Management Strategy supported by Flood Defence Grant in Aid.
- 2020: City Centre Surface Water Management Plan and detailed modelling of flows from the upper catchment.
- Evidence showed the need for a catchment-wide approach, from the high ground of the Town Moor to the River Tyne.
- This work created the technical foundation for Blue Green Newcastle.



Blue Green Newcastle: Designing with Water

- Approved by Cabinet in 2024 as Newcastle's strategic approach to climate adaptation and surface-water risk.
- Uses sustainable drainage, natural flood management and blue-green infrastructure to store, slow and redirect rainwater.
- Goes beyond flood protection by creating opportunities for:
 - biodiversity and nature recovery;
 - improved public spaces and amenity;
 - better air and water quality;
 - health and wellbeing;
 - sustainable growth and regeneration.
- Opportunities extend from storage on the Town Moors to rain gardens, green roofs, green corridors and redesigned public spaces in the urban realm.
- The current programme is developing the evidence and business case for phased delivery.



Partnership Makes Delivery Possible

- The scale of the challenge required a partnership rather than a Council-only project.
- A Memorandum of Understanding brought together:
 - Newcastle City Council;
 - the Environment Agency;
 - Northumbrian Water;
 - the Freemen of Newcastle, as custodians of the Town Moor
- Extensive engagement generated a long list of potential interventions across the city.
- The Environment Agency Collaborative Delivery Framework supported access to specialist consultancy expertise.
- Newcastle University developed a bespoke SuDS optimisation tool to test options against cost and flood-risk reduction.
- The partnership combines statutory responsibilities, land ownership, infrastructure knowledge, academic evidence and funding capacity.



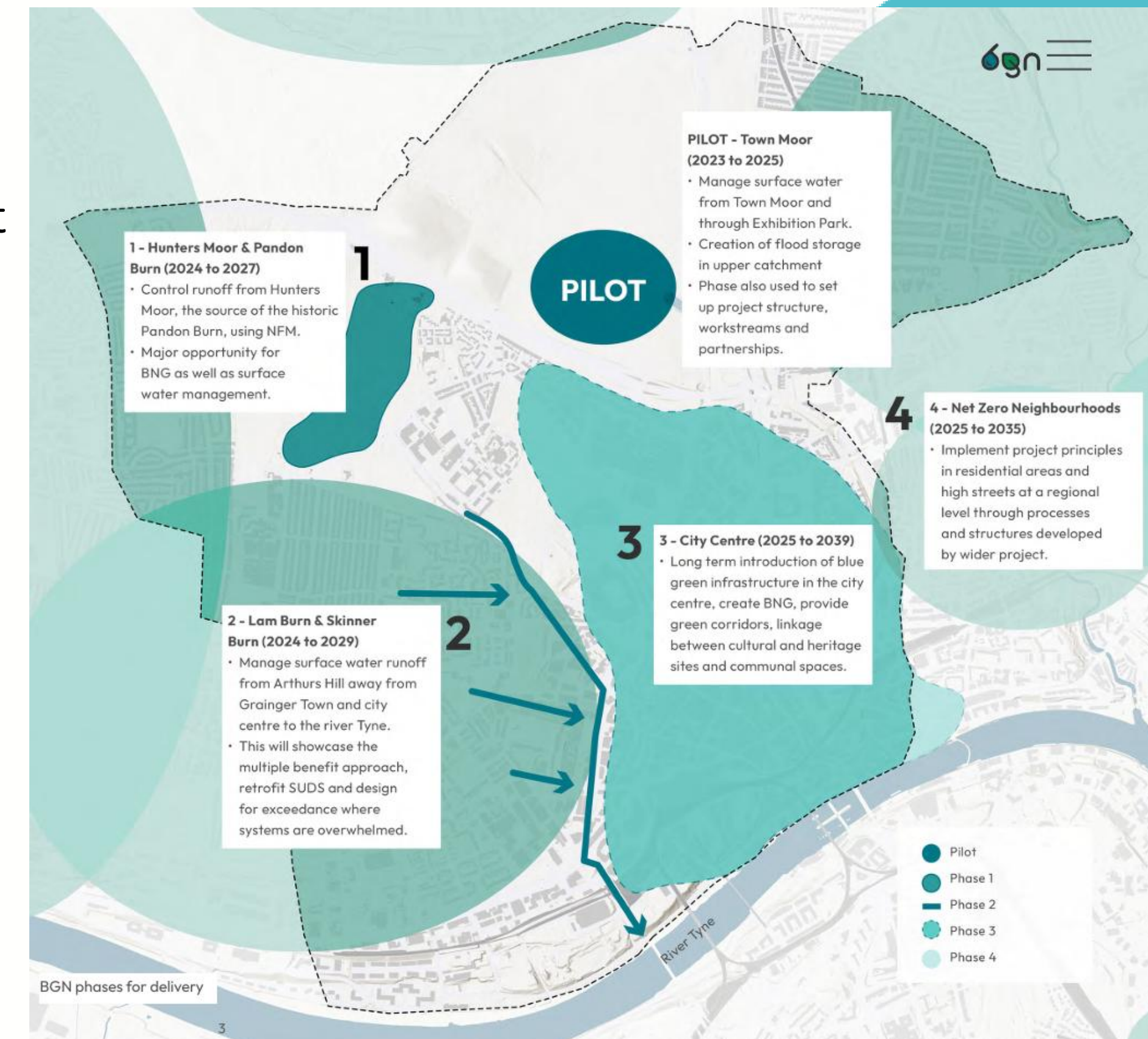
Demonstrating Delivery on the Town Moor

- Completed in 2025 as the first practical demonstration of the wider approach.
- Uses natural flood management to store and slow rainfall before it reaches vulnerable areas.
- Delivered through joint investment from the Environment Agency, the Freeman of Newcastle and Newcastle City Council.
- The scheme includes an attenuation basin, earth bund, controlled drainage and landscaping.
- Demonstrates how flood protection can also support nature, landscape quality and partnership confidence.
- Provides a tangible foundation for the next phases of Blue Green Newcastle.
- The completed scheme includes a 9,000 m³ attenuation basin and associated drainage and landscaping.



Moving from Pilot to Programme

- Funding is in place to complete the programme business case, with further support anticipated for detailed design subject to approval.
- The larger construction programme will require blended finance, not public grant alone.
- Potential sources include:
 - Flood Defence Grant in Aid;
 - water-company investment;
 - developer and Section 106 contributions;
 - carbon and nature finance;
 - investment from organisations that benefit from reduced risk;
 - regional and private-sector funding.
- Further pilot projects are being developed to build the pipeline and demonstrate investable benefits.
- Blue-green infrastructure is being embedded into Council quality-assurance processes, including transport and active-travel projects.
- The forthcoming Newcastle Climate Adaptation Strategy will provide the wider framework for risk, prioritisation, governance and monitoring.



Six Lessons for Local Authorities

- **Start with place-based evidence:** understand catchments, assets, communities and interconnected risks
- **Build the partnership early:** involve risk authorities, utilities, landowners, universities and communities before fixing the solution.
- **Design for multiple benefits:** schemes are more deliverable and investable when they combine resilience, nature, health, public realm and growth.
- **Pilot visibly, then scale:** early delivery builds trust, learning and confidence.
- **Mainstream adaptation:** incorporate resilience into governance, capital programmes, transport, planning and asset decisions.
- **Use the right language:** Sustainability and climate is politicised. Using a different term might get more buy in.

People, place, information, economy



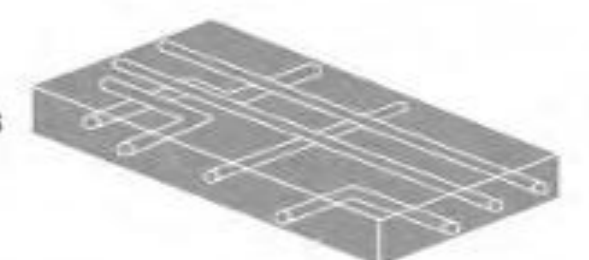
Water sensitive development



Strategic blue-green infrastructure



Underground infrastructure networks



Catchment, land, topography



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Thank you!

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