






Modelling Blue-Green approaches to stormwater management

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Green Recovery: Mansfield Sustainable Flood Resilience



-  Climate resilience using green solutions
-  Reduce flooding
-  Improve river water quality
-  Provide a greener and cleaner community
-  Green job creation



1

Begin with the end in Mind

Rain Garden

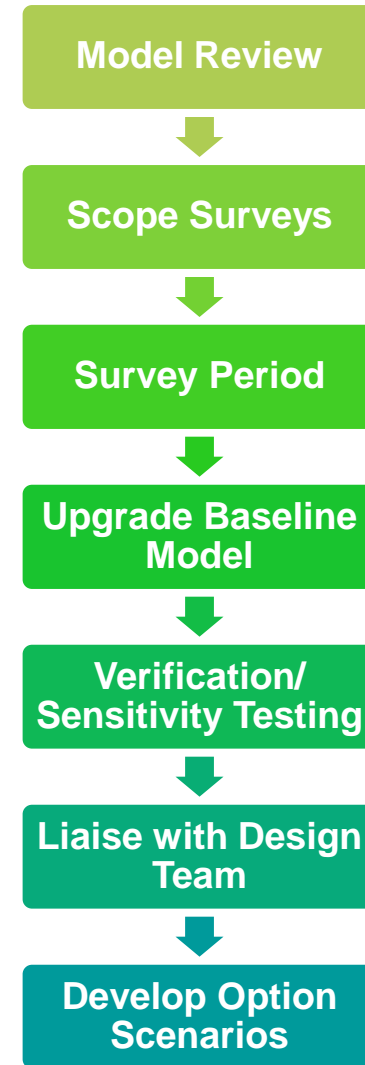
Block Paving to Match Existing

Our Challenge

Project Programme:



A typical project model approach:



Model Strategy

Confidence

DWMP

Baseline upgrade

Interventions

Essential vs Nice to Have

Catchment Strategy

Knowledge Gaps

Model as an asset

Proportionality

Model Type

Programme Pace

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Essential vs Nice to Have

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Interventions

2

Model Strategy

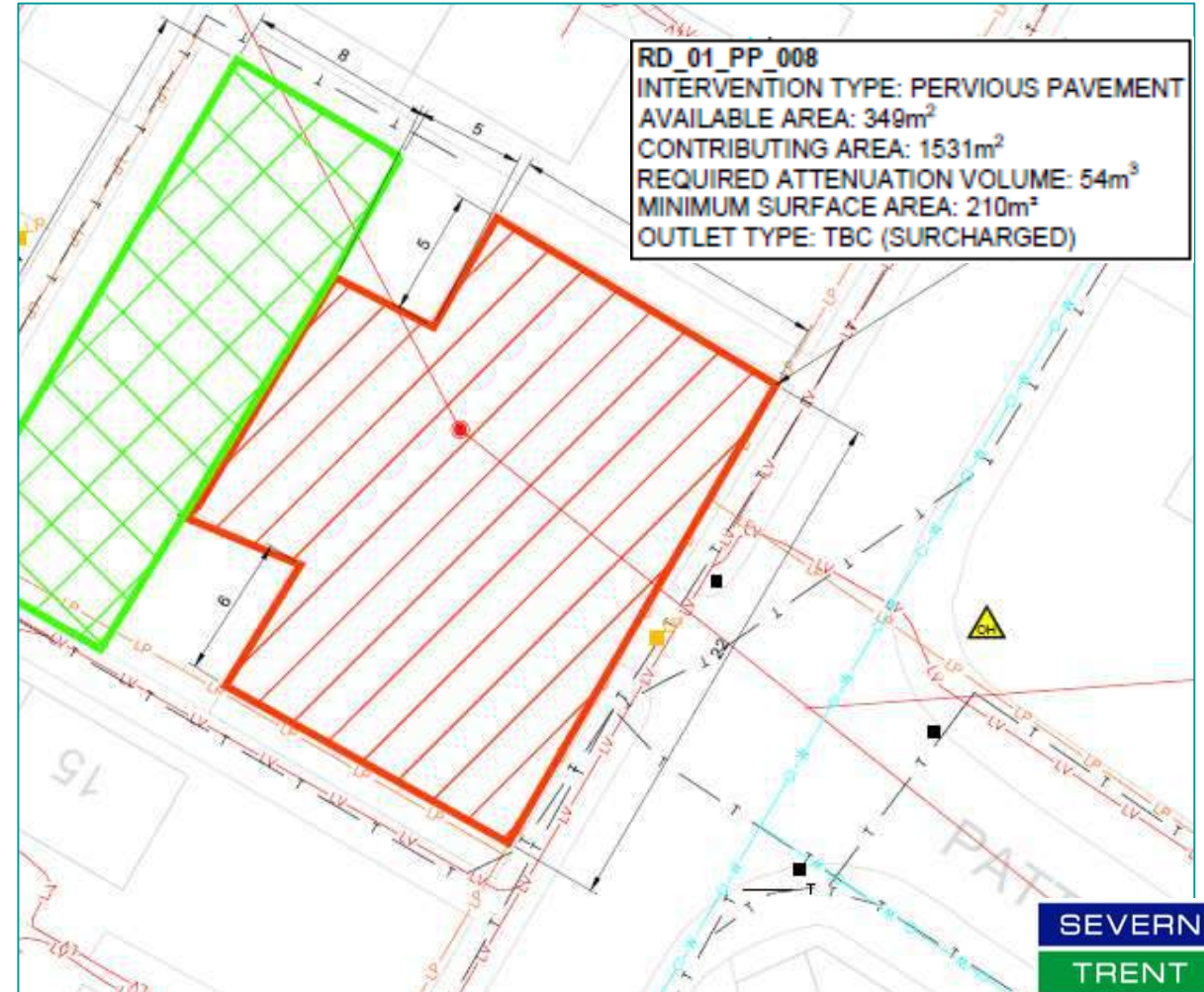
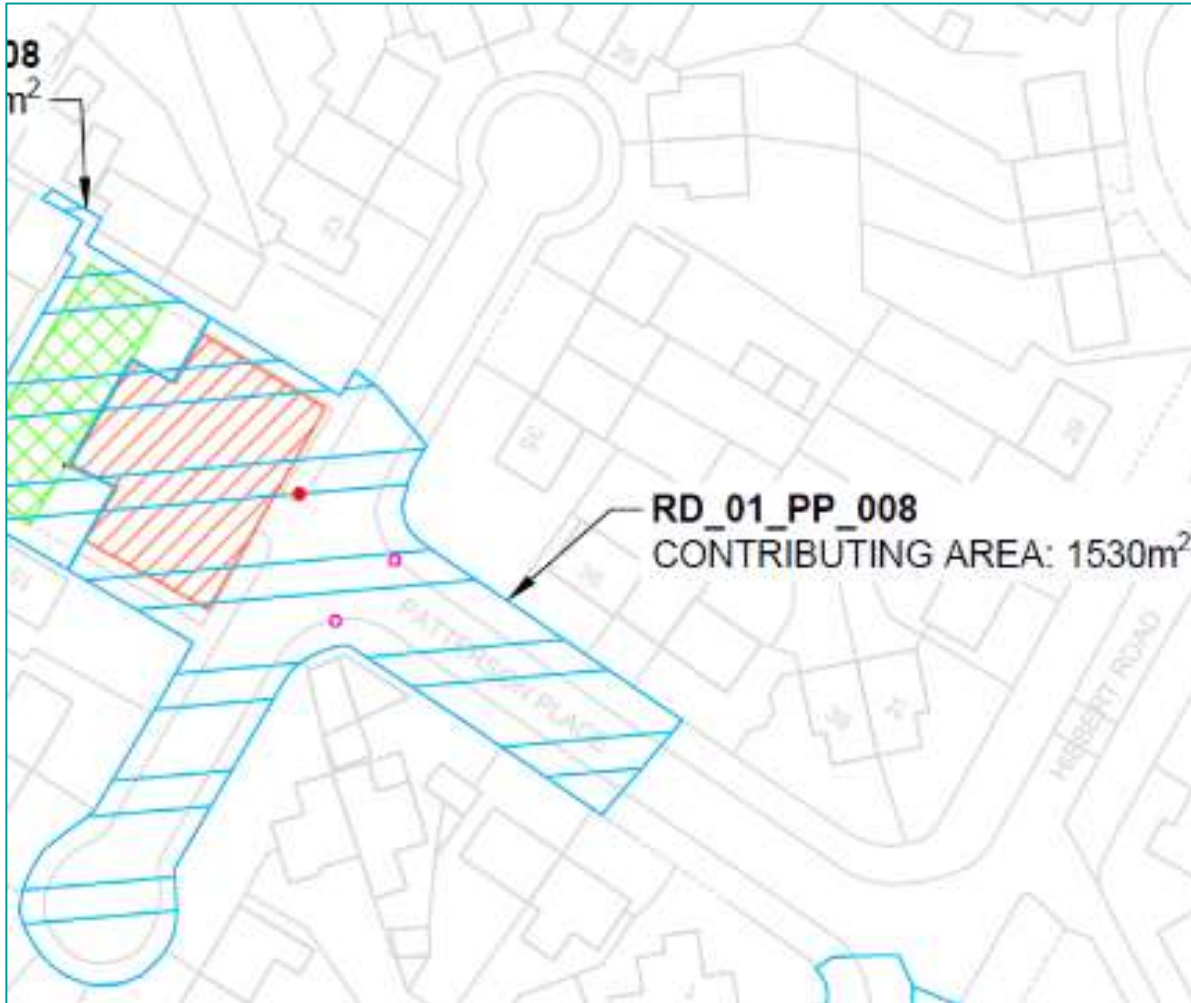
A multi-stranded approach

Delivering a better world

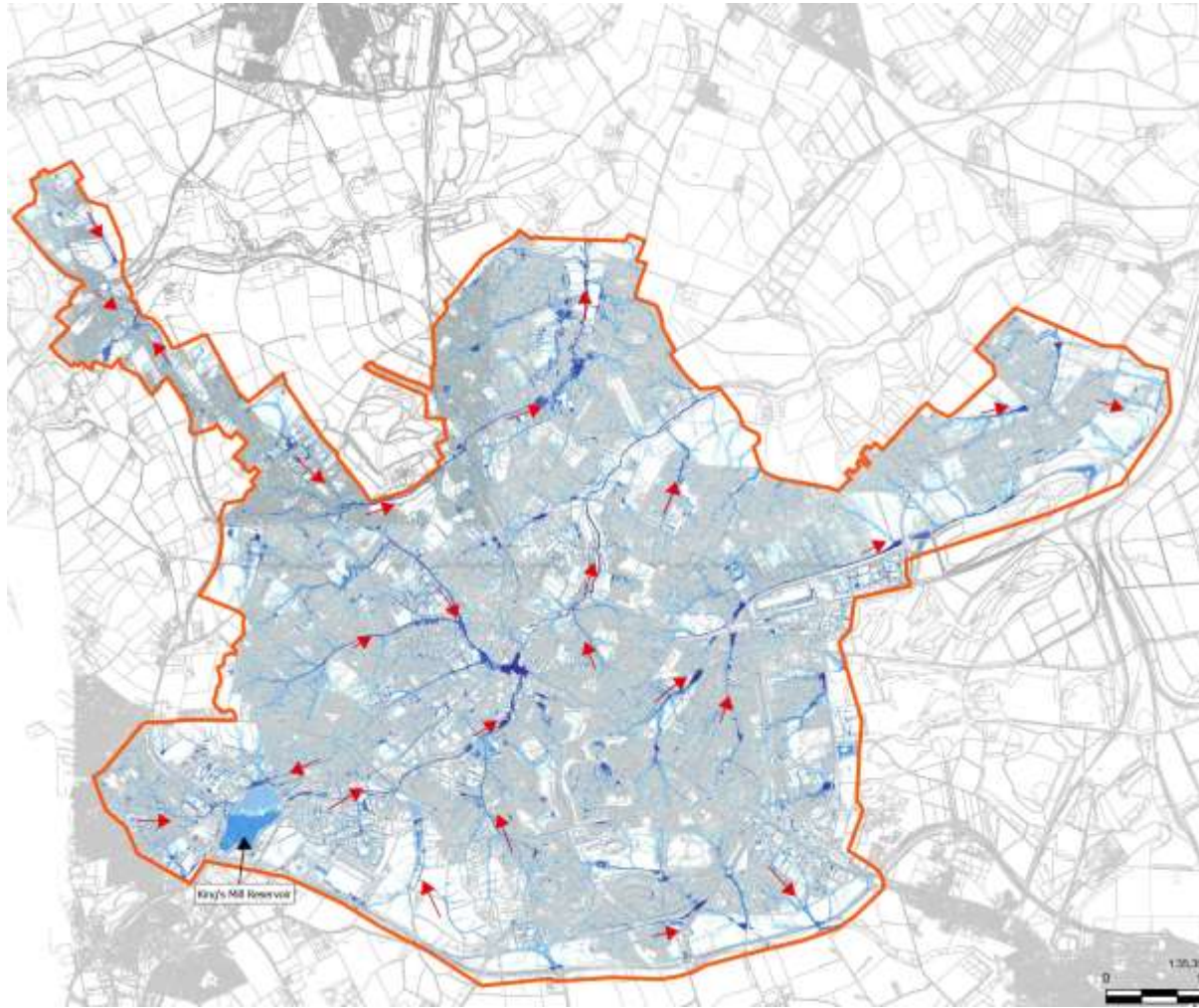
SEVERN
TRENT

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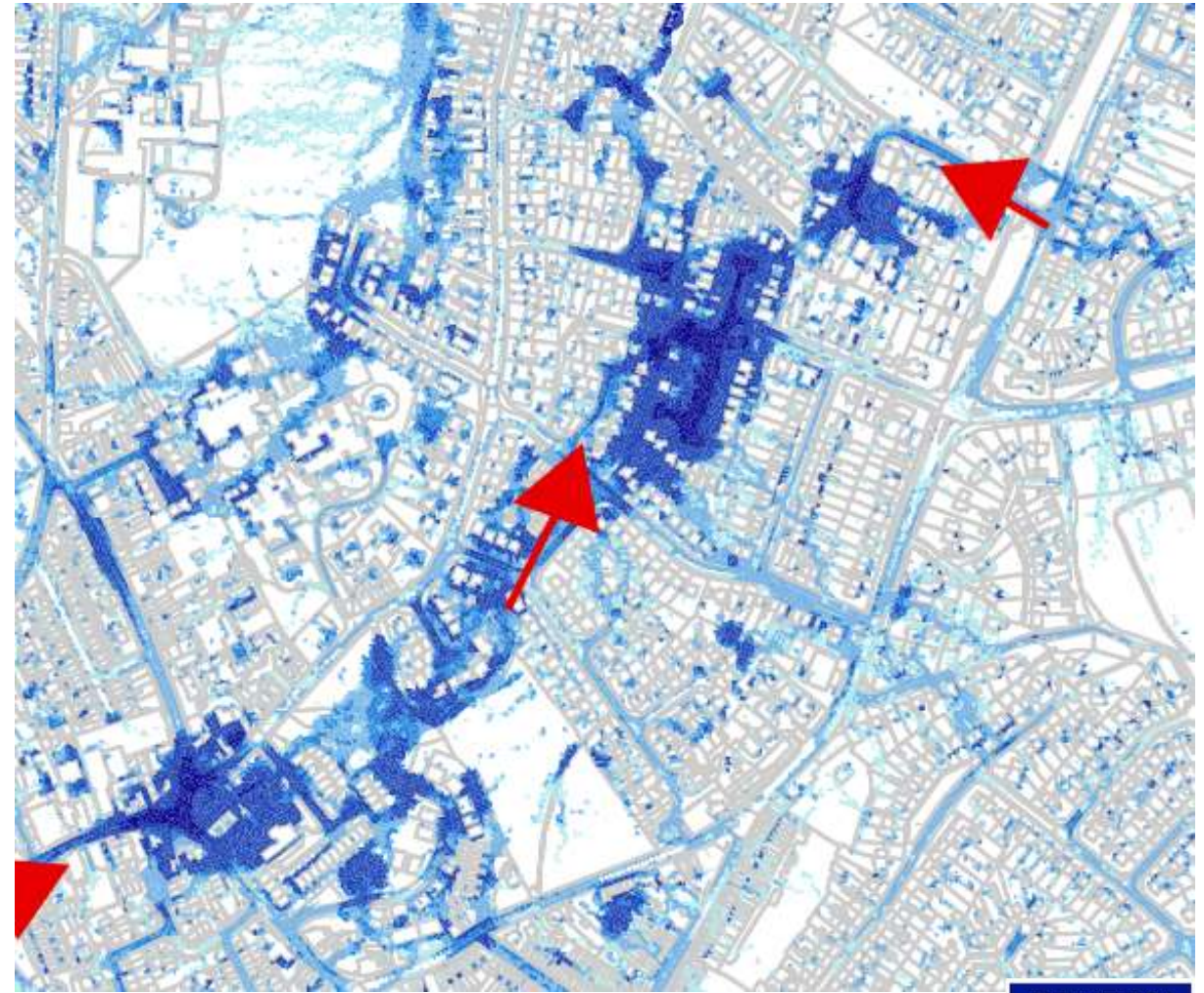
SuDS Volume Calculation tool – proceed at speed



Strand 1: Baseline 2D Direct Rainfall



Catchment Scale



Local Scale

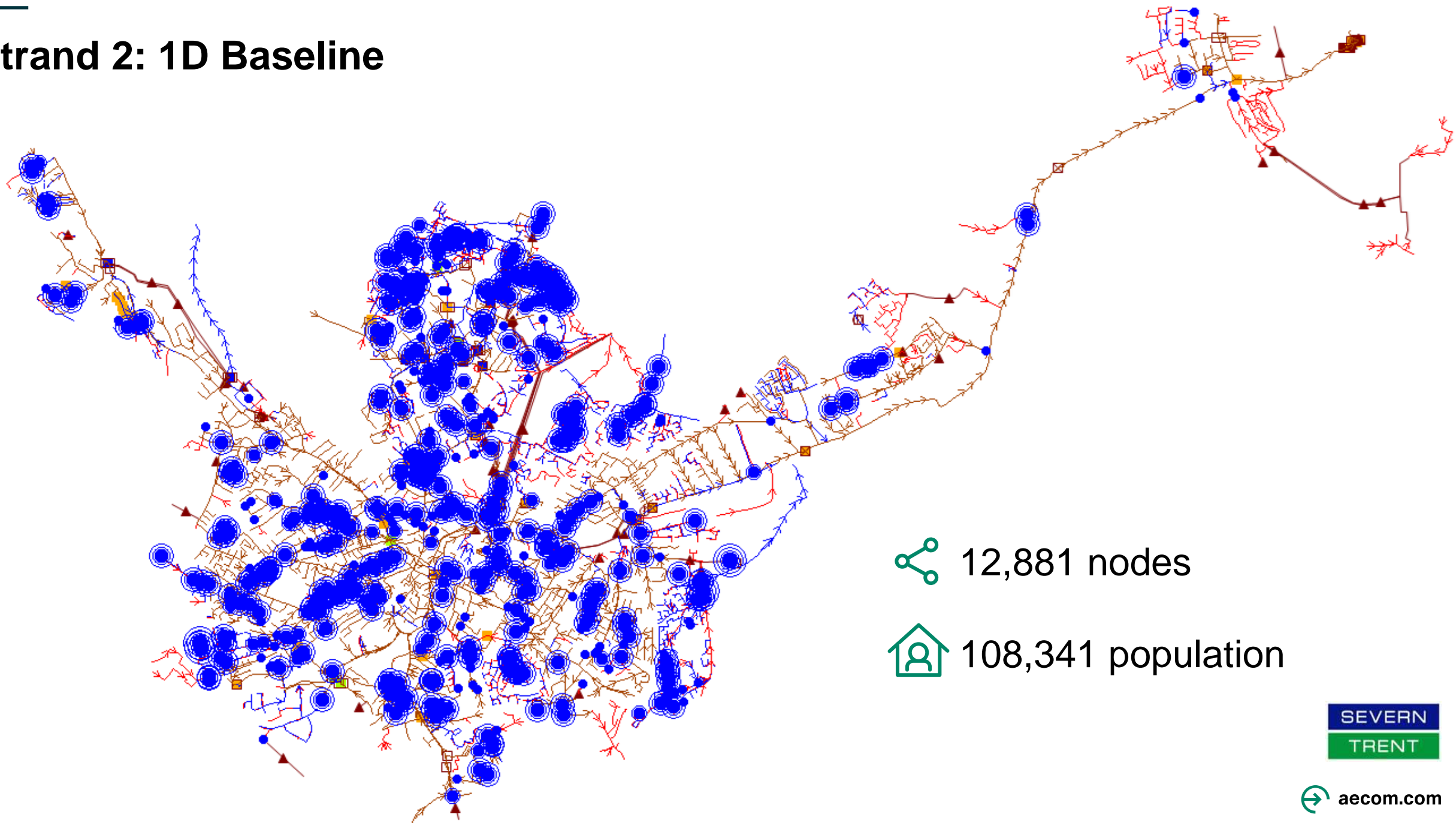
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Eakring Road - Before and After

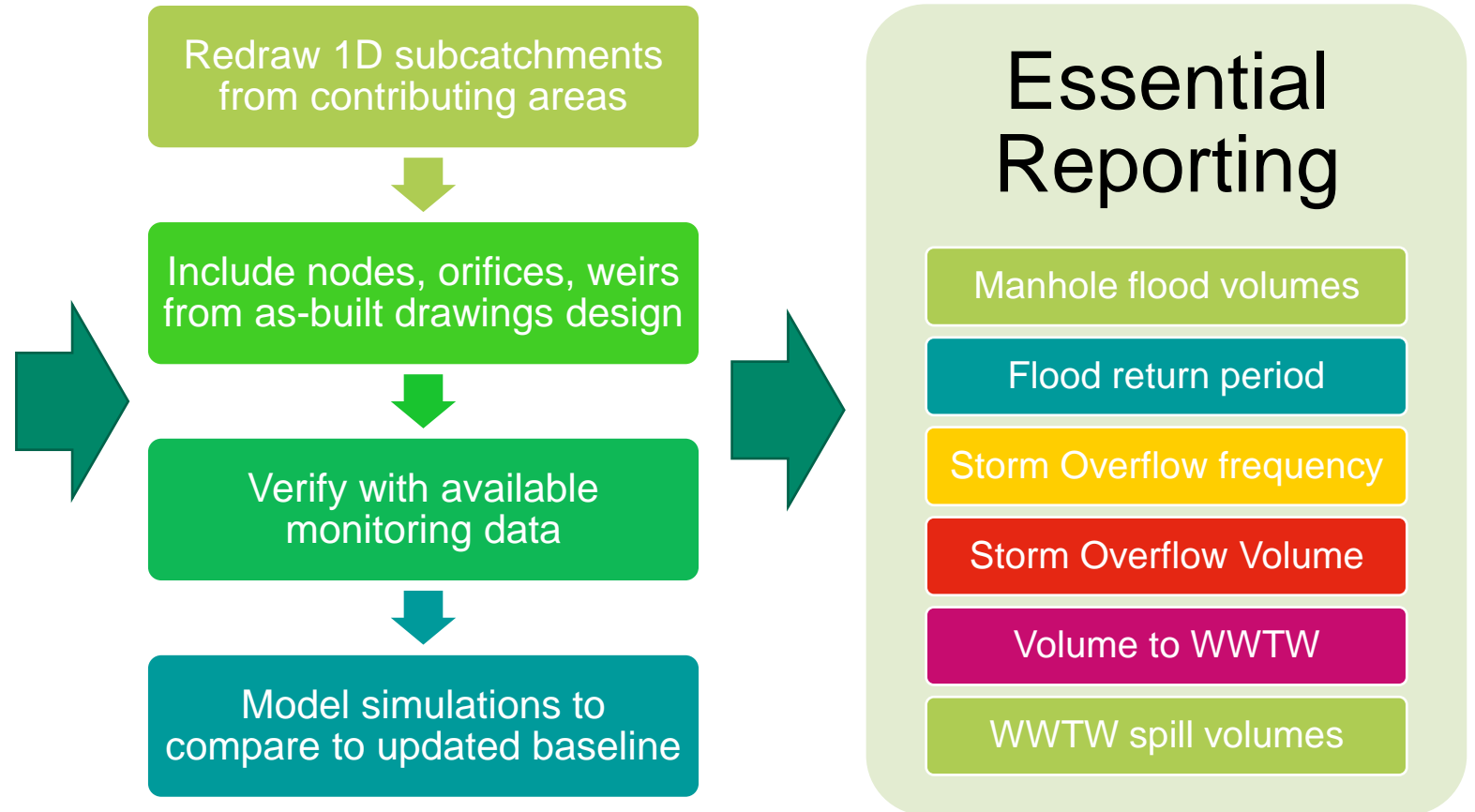
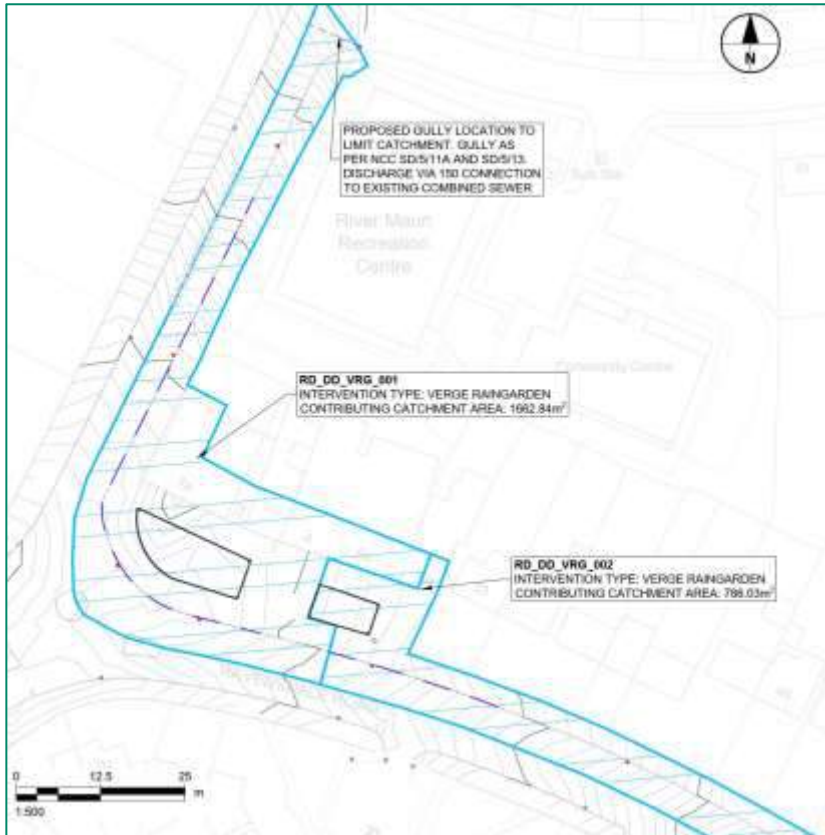
“I had my doubts about the rain garden as to whether it was a good idea and would it work, but after arriving home from work today with this torrential downpour my doubts disappeared as usually my garage gets flooded on very heavy downpours but today, big surprise, the rain garden seems to be doing its job...”



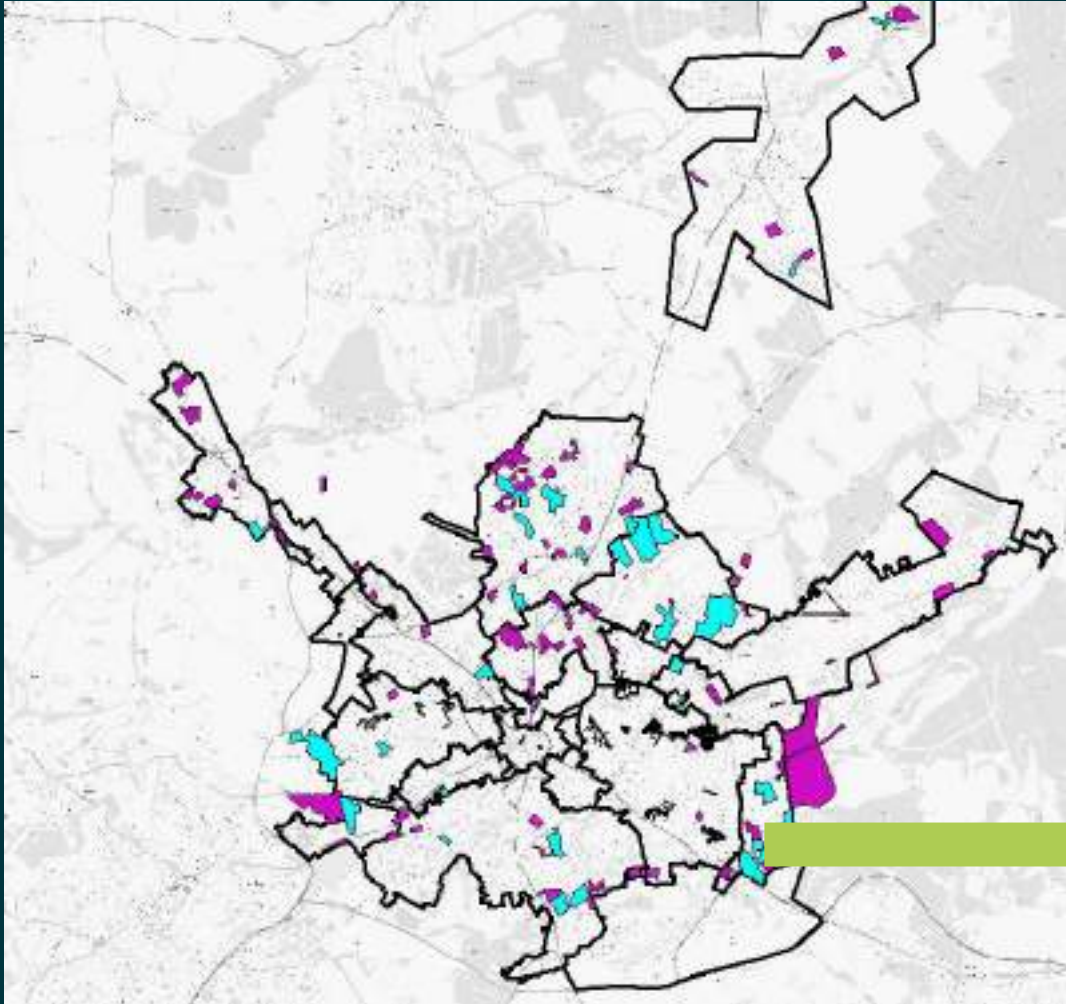
Strand 2: 1D Baseline



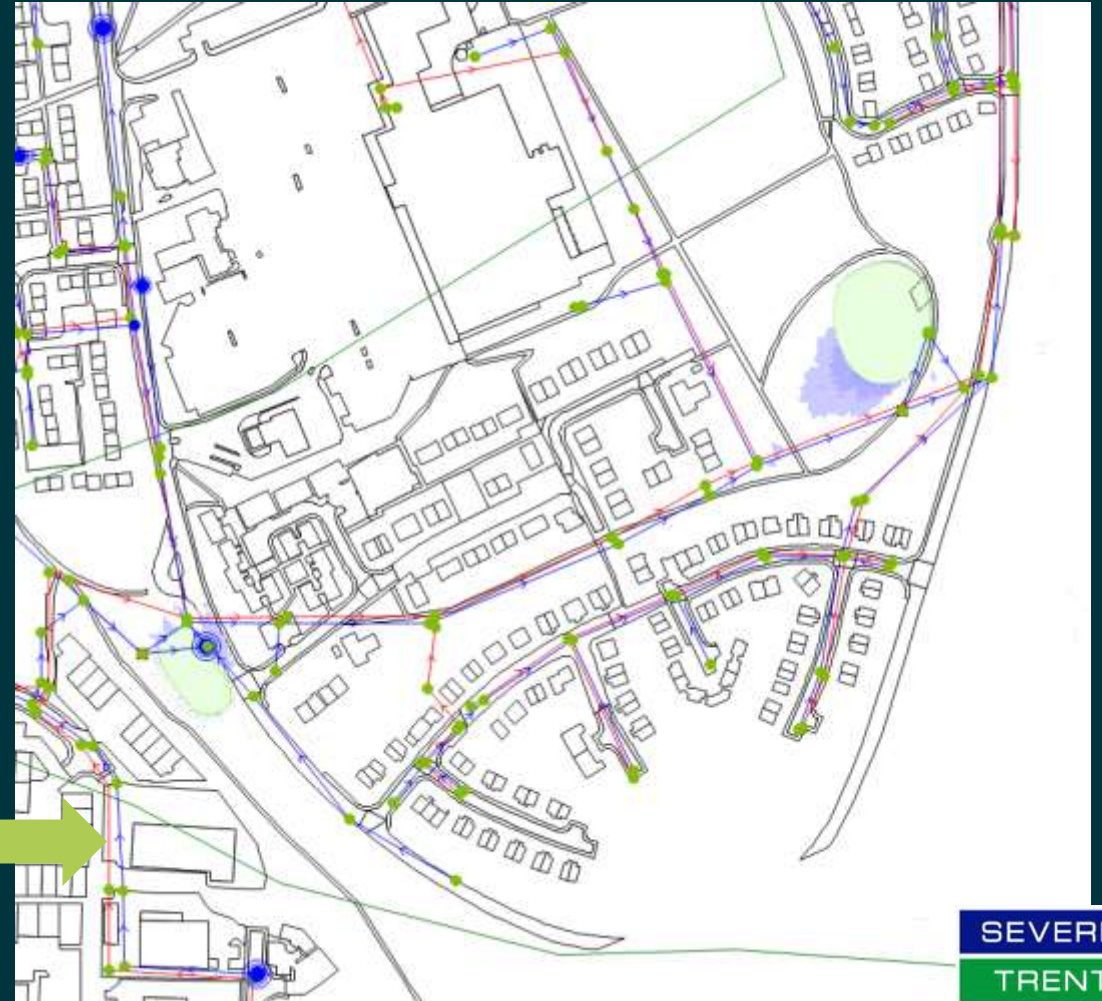
Strand 3: 1D Scheme “Green Recovery Master Scenario”



Strand 4: Detention Basins

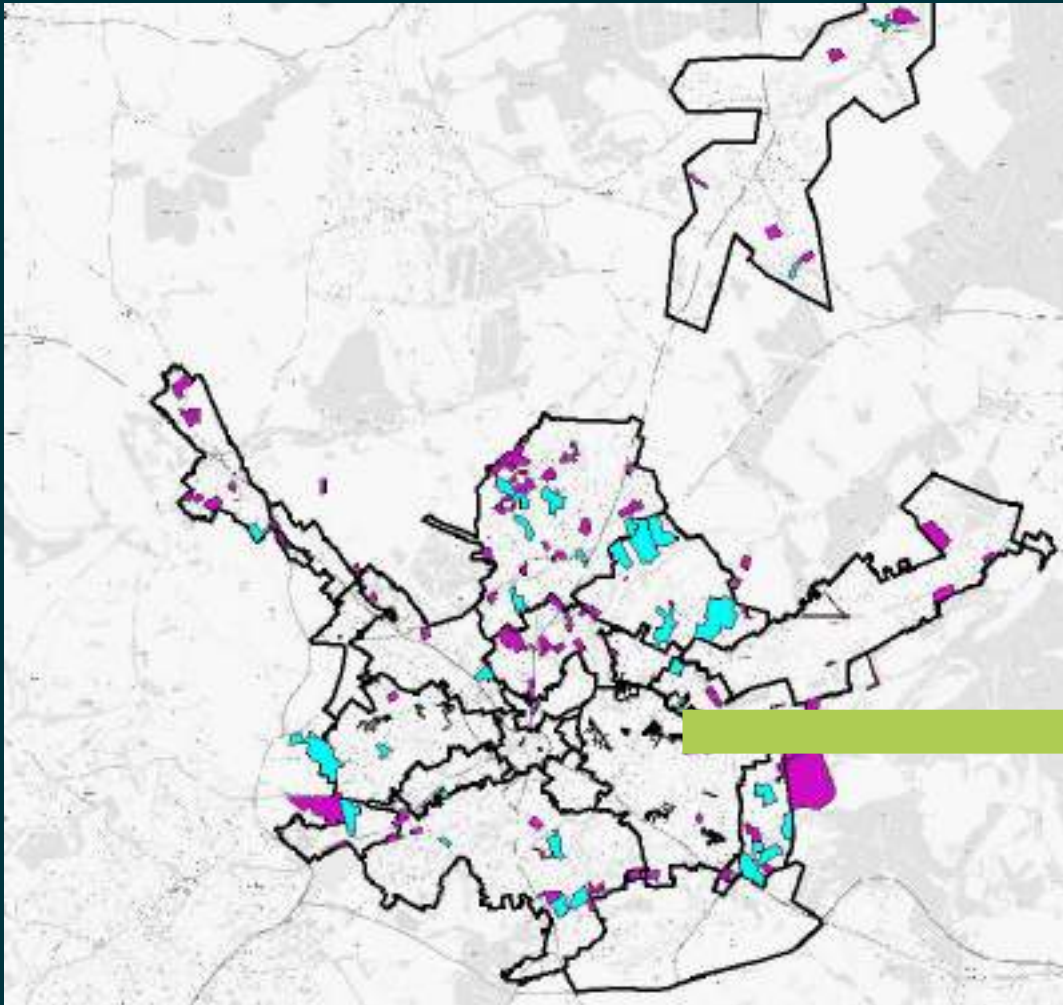


Catchment Strategy

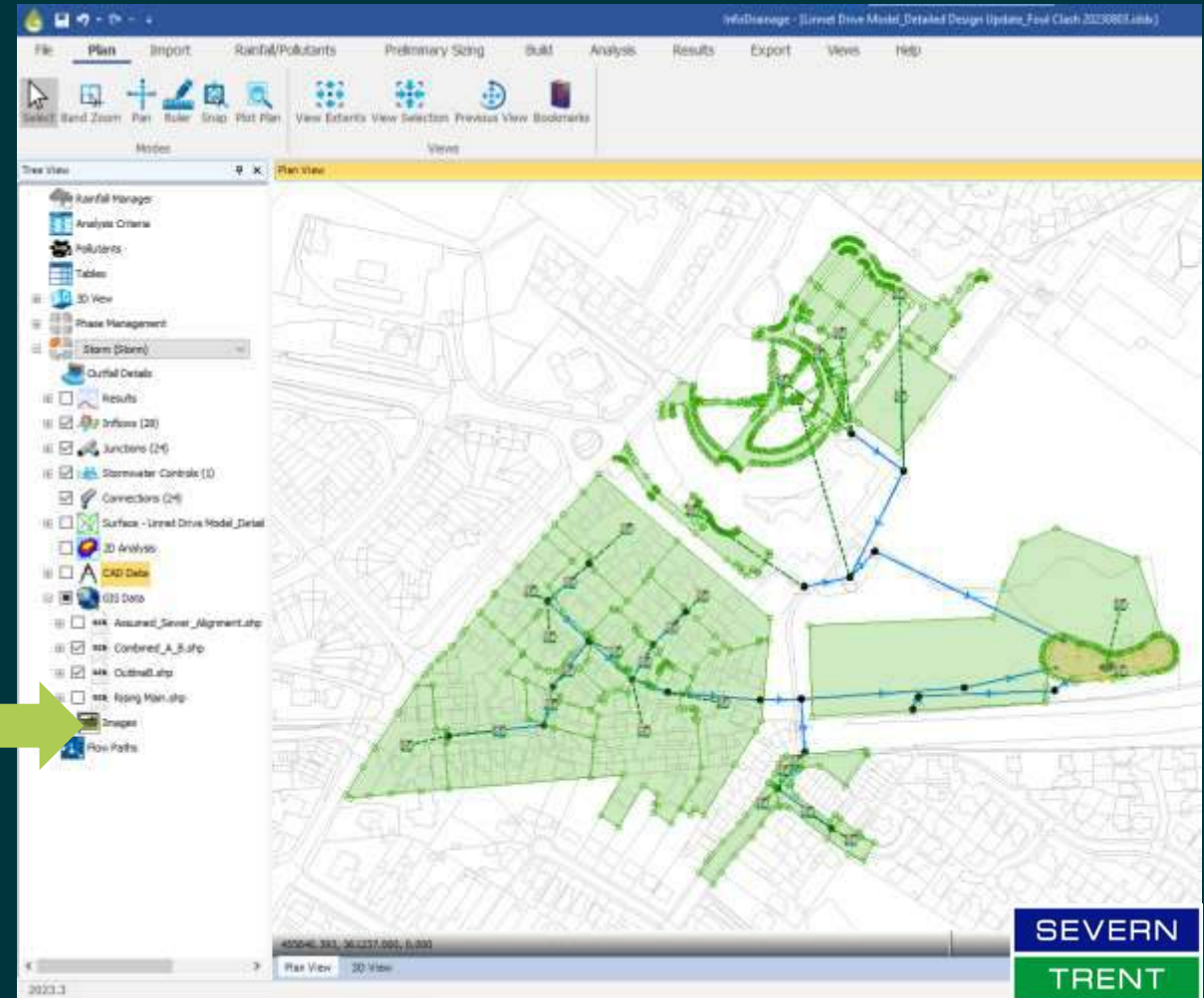


ICM

Strand 4: Detention Basins



Catchment Strategy



InfoDrainage

Strand 4: Linnet Drive Basin

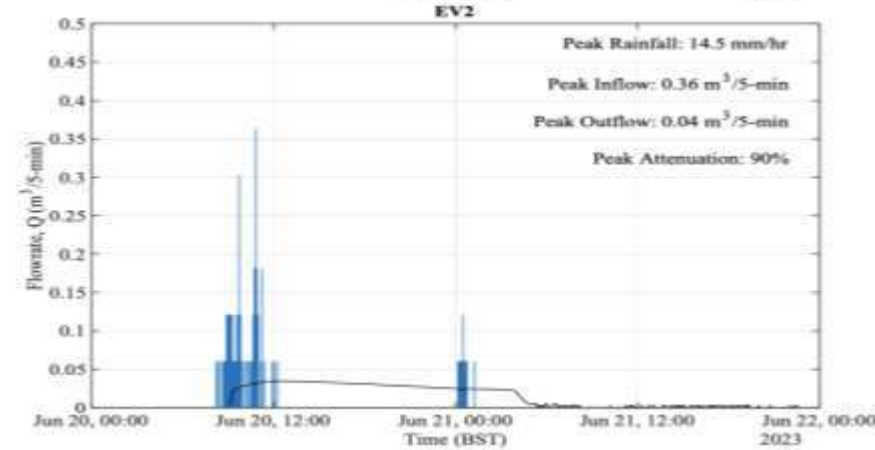
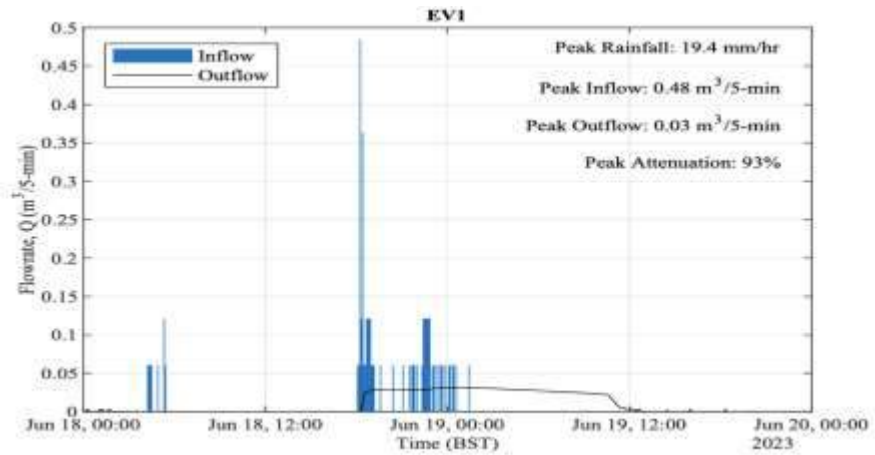


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Strand 6: Monitoring and Evaluation

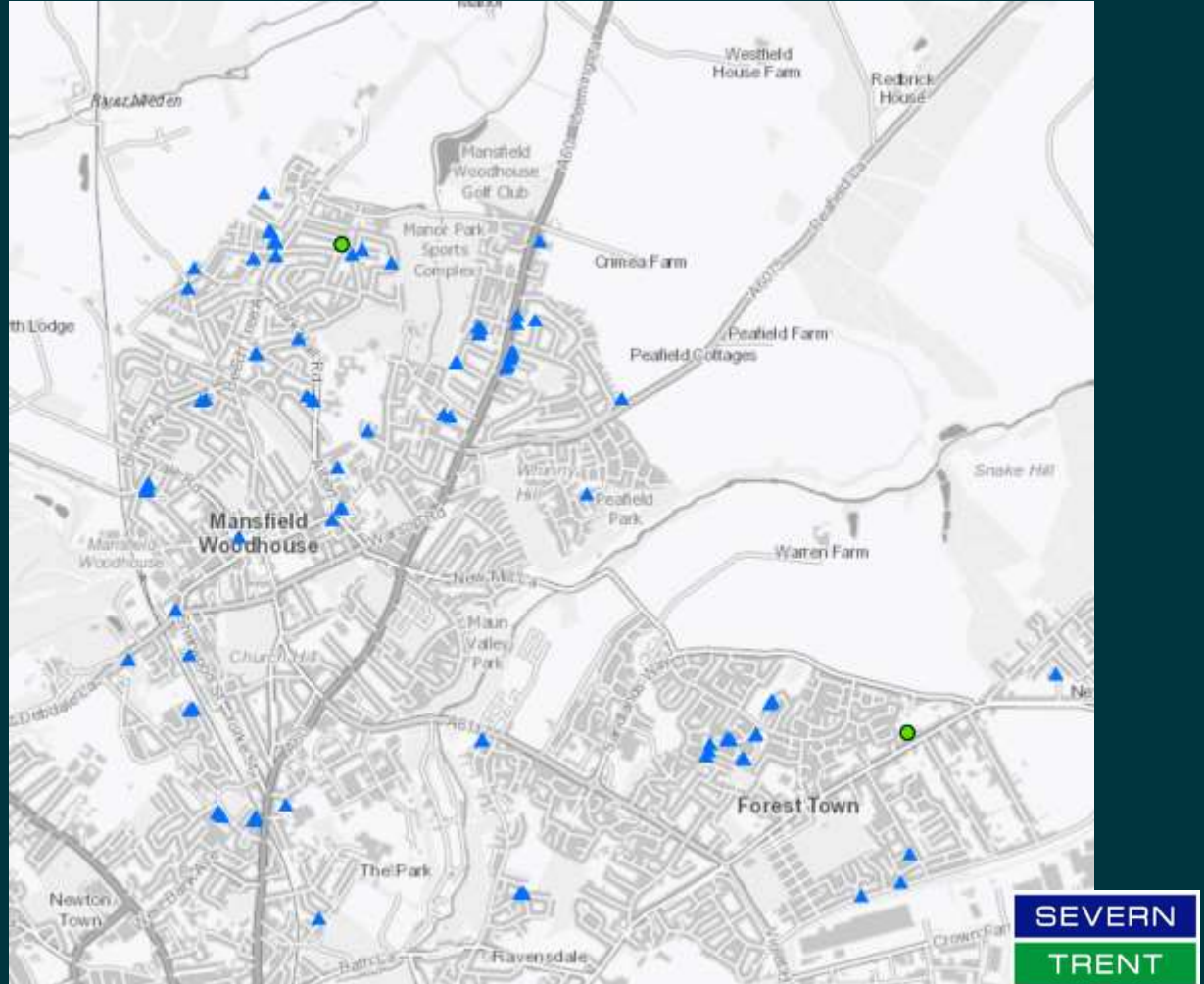


Strand 6: Monitoring and Evaluation



Strand 5: Outline Business Case

- £76million, £9million to be found by Partnership funding - Flood & Coastal Erosion Risk Management Grant in Aid Application
- Working with the Environment Agency to develop technical approach to OBC in line with HM Treasury Green Book
- Strategic modelling to understand properties which may benefit from scheme
- Initial results promising for flood risk and Storm Overflow activations



3

Conclusion

