



Greater Manchester's Sustainable Drainage Design Guide

April 25


Greater Manchester's Sustainable Drainage Design Guide

Streets for All Supplementary Technical Guidance







GREATER
MANCHESTER
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AUTHORITY




Transport for
Greater Manchester



NATURAL
OUR WATER, OUR FUTURE
COURSE



North West
Regional
Flood &
Coastal
Committee



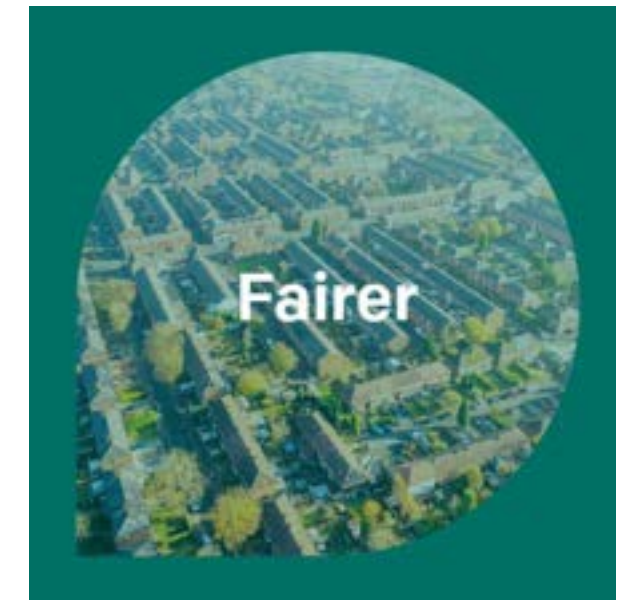
United
Utilities

GMCA GREATER
MANCHESTER
COMBINED
AUTHORITY

The why

Creating a greener, fairer, more prosperous GM

- We need to increase GM's resilience and adapt to the impacts of climate change – the most critical issue is flood risk.
- We need to work together to manage water differently – when both retrofitting built environment, or bringing forward new developments e.g. growth locations.
- We need our streets to be safer, more comfortable places to pass through and spend time in – Streets for **All**
- We need to contribute to creating greener more nature-friendly city-region.



Introduction to the guide

The guide aims to:

- Support the delivery of SuDS at scale that are **buildable, adoptable, maintainable and value for money** in complex urban environments.
 - retrofit (street improvement schemes).
 - new developments.
 - across different scales of projects.
- Greater resilience of highway network – support delivery of the Bee Network.

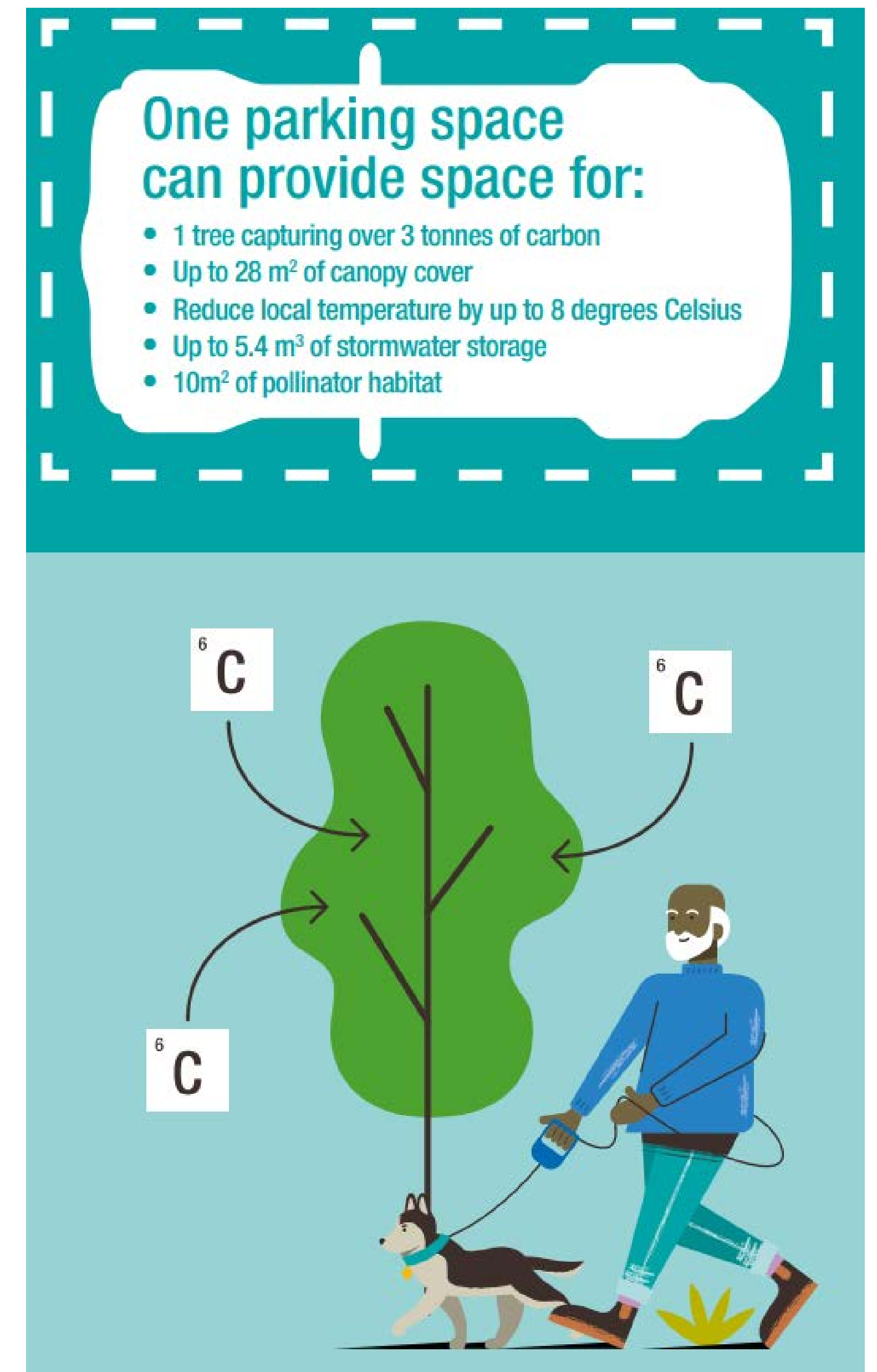


East Ordsall Lane,
Salford

Introduction to the guide

- Provide an agreed approach to designing and delivering SuDS across Greater Manchester, and promote consistency and quality.
- Become a platform for engagement with developers.
- Increase officer's knowledge, skills, and confidence to promote and deliver SuDS.

Better drainage design
=
Better street design



National and local policy context

- National Planning Policy Framework
 - “Policies and decisions should ensure that new streets are tree-lined streets”
 - Delivery of SuDS is often a planning condition.
- Flood and Water Management Act 2010
- GM Five-Year Environment Plan 2025-3030

Greater Manchester Five-Year Environment Plan 2025–2030

To ensure everyone in Greater Manchester has a healthy, low carbon, nature-rich environment in which to live-well, prosper and grow.

Key targets
for 2030/35

18.5

**Natural Environment
and Climate Adaptation**
Increase our tree canopy
cover from 16.5% to 18.5%

National and local policy context

- GM Places for Everyone spatial development strategy
- GM Local Nature Recovery Strategy
 - SuDS contribute to building up the region's Nature Network.
- Part of adopted GM 'Streets for All' family of guidance.
 - Approach supports people-focussed, context-sensitive street design.
 - All about making best use of limited street space and balance competing demands.



Development of the guide

Audience and co-authors

- 10 GM Local Authorities, particularly in their role as Local Highway Authority, Local Planning Authority and Lead Local Flood Authority.
- Transport for Greater Manchester.
- GMCA
- Organisations responsible for managing the water and waste water network.
- Engineering and design consultants supporting scheme design.
- Developers and other land holders and managers.



Kingsway, Stretford

The content

- Tailored to retrofitting SuDS in complex urban environment.
- Provides standard designs and details for SuDS components
 - Scalable and proportionate
 - Using standard materials and components
- Answers common questions that are perceived barriers to delivering SuDS in transport schemes.



Infiltration

“If infiltration testing on site has failed, will the SuDS be able to drain?”



Existing trees

“Will the installation of SuDS affect existing trees?”

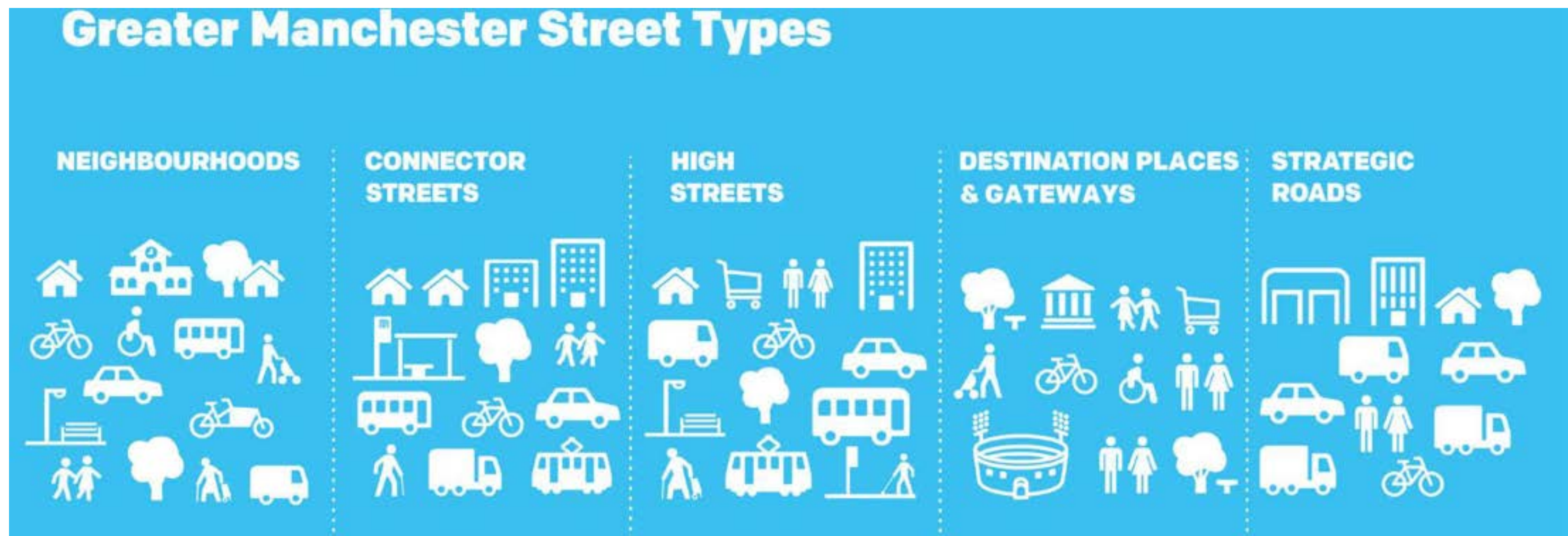


Close proximity to buildings and pavements

“Could SuDS affect the foundations of pavements and buildings because they allow water to drain into the ground?”

The content

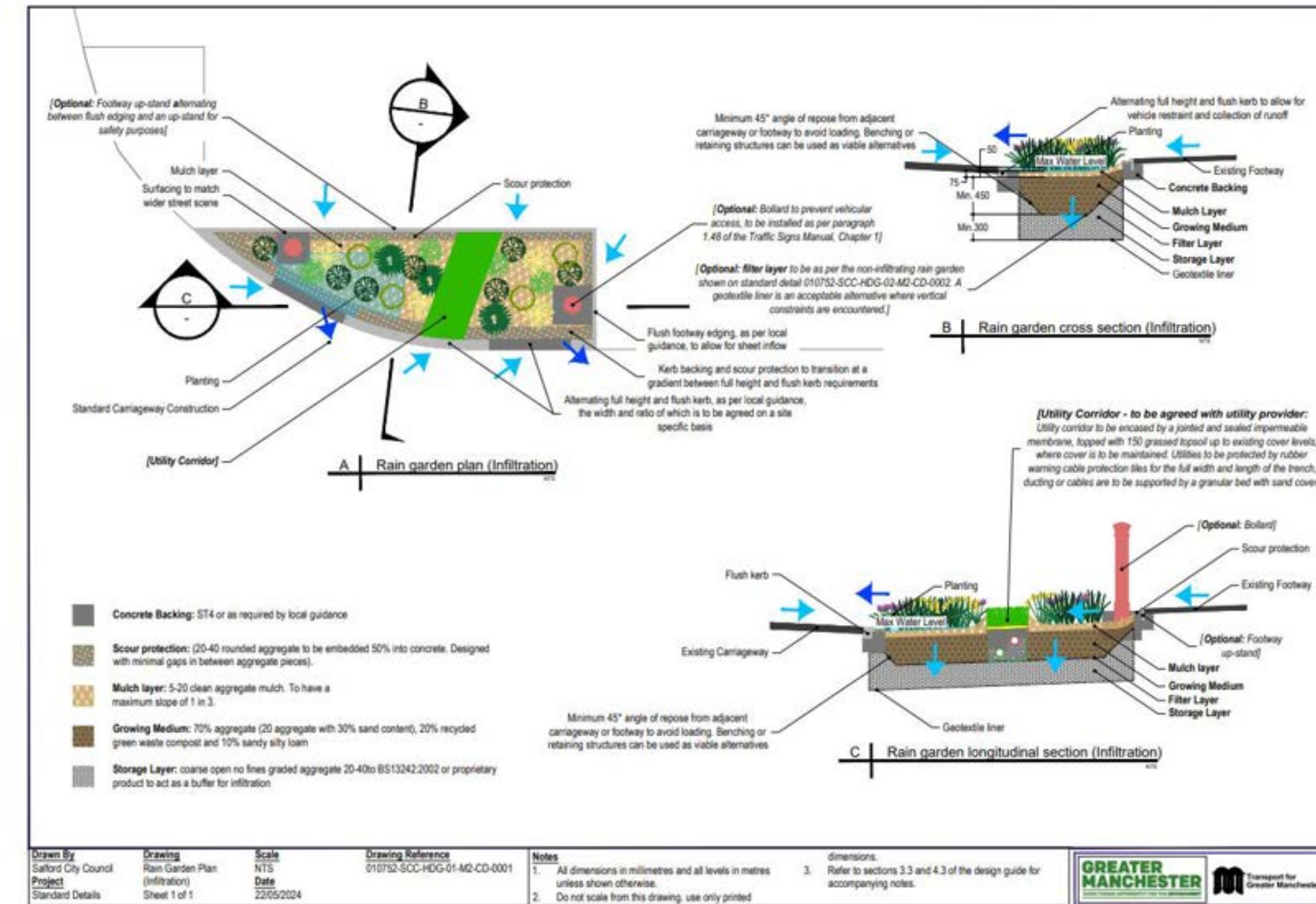
- Set out options for designers to consider across different street types and scenarios.
- For a technical audience – how to calculate attenuation volumes, maintenance costs and schedules, planting schedules etc. all tailored to GM context.



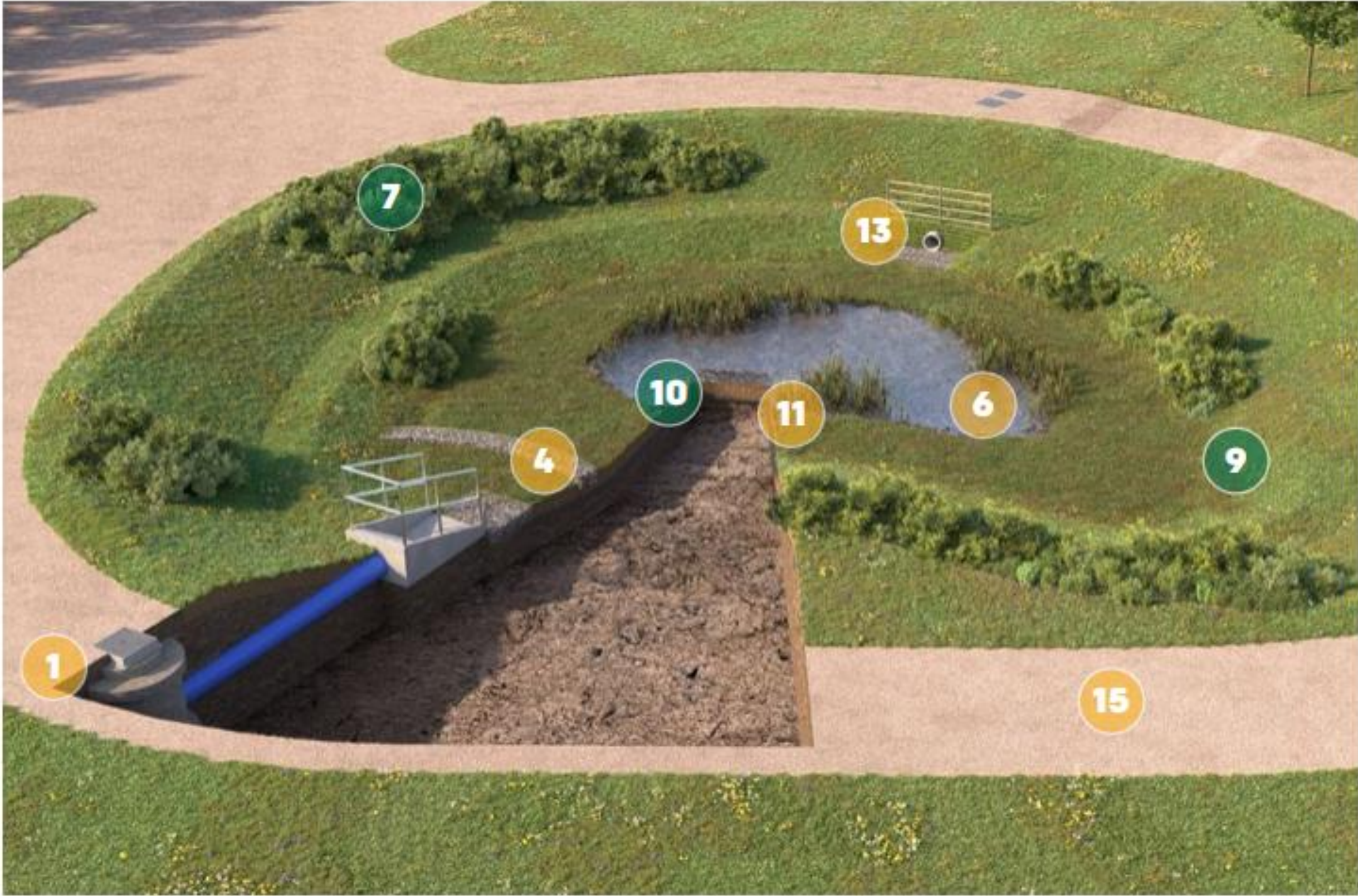
West Street, Oldham

SuDS components

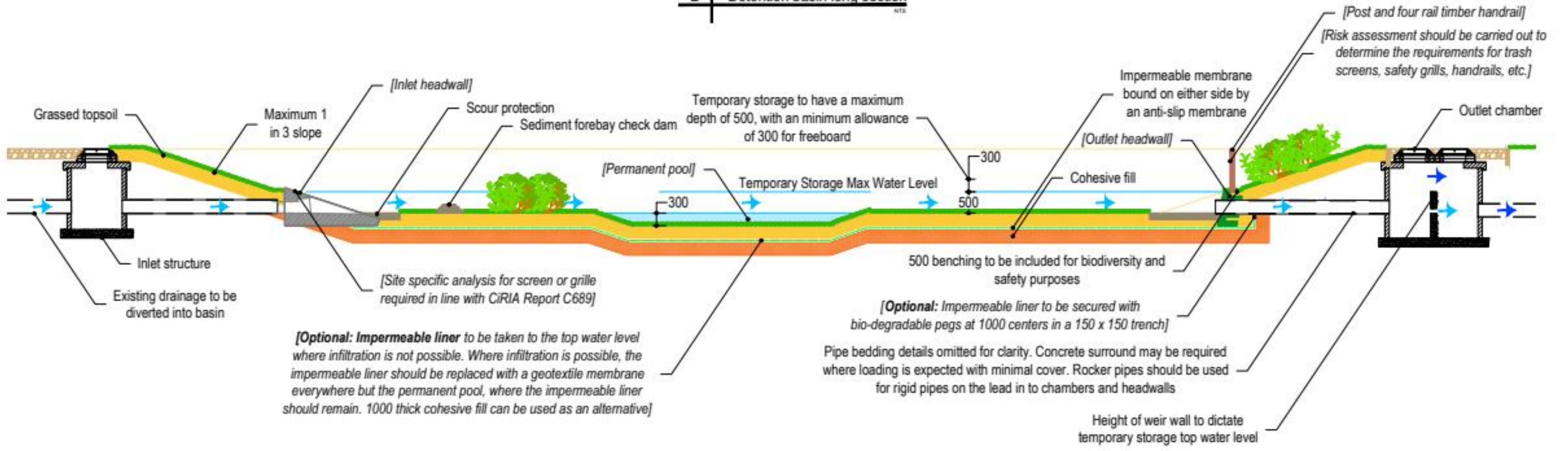
- What is in a SuD – above and below ground technical detail.
- How SuDS link into existing drainage network and how to deal with utilities.
- Standard details can be tailored to context.






Detention basin



B | Detention basin long section



-  **Scour protection:** 150 deep, formed from either: galvanised or plastic coated gabion mattress; or loose riprap, to extend beyond headwall extents
-  **Cohesive Fill:** 300 cohesive fill to protect liner
-  **Grassed topsoil:** 300 sand / low nutrient soil mix

SuDS components – retrofit ideas for GM streets

- Better use of available space across the highway, verges and footway
- Rain gardens take run-off from highway and create buffer between footway and carriageway
- Permeable paving in car parking spaces accommodates EV charger
- Encourages slower driving speeds on quiet Neighbourhood streets

Before



After



Existing street context



Transform the street



SuDS components – retrofit ideas for GM streets

- Better use of available space across the highway, verges (monofunctional) and footway.
- Rain gardens take run-off from highway and cycle track reducing ponding.
- Permeable paving in car parking spaces.
- Street trees create buffer between the highway and space for walking, wheeling and cycling.

Before



After



Existing street context



Transform the street

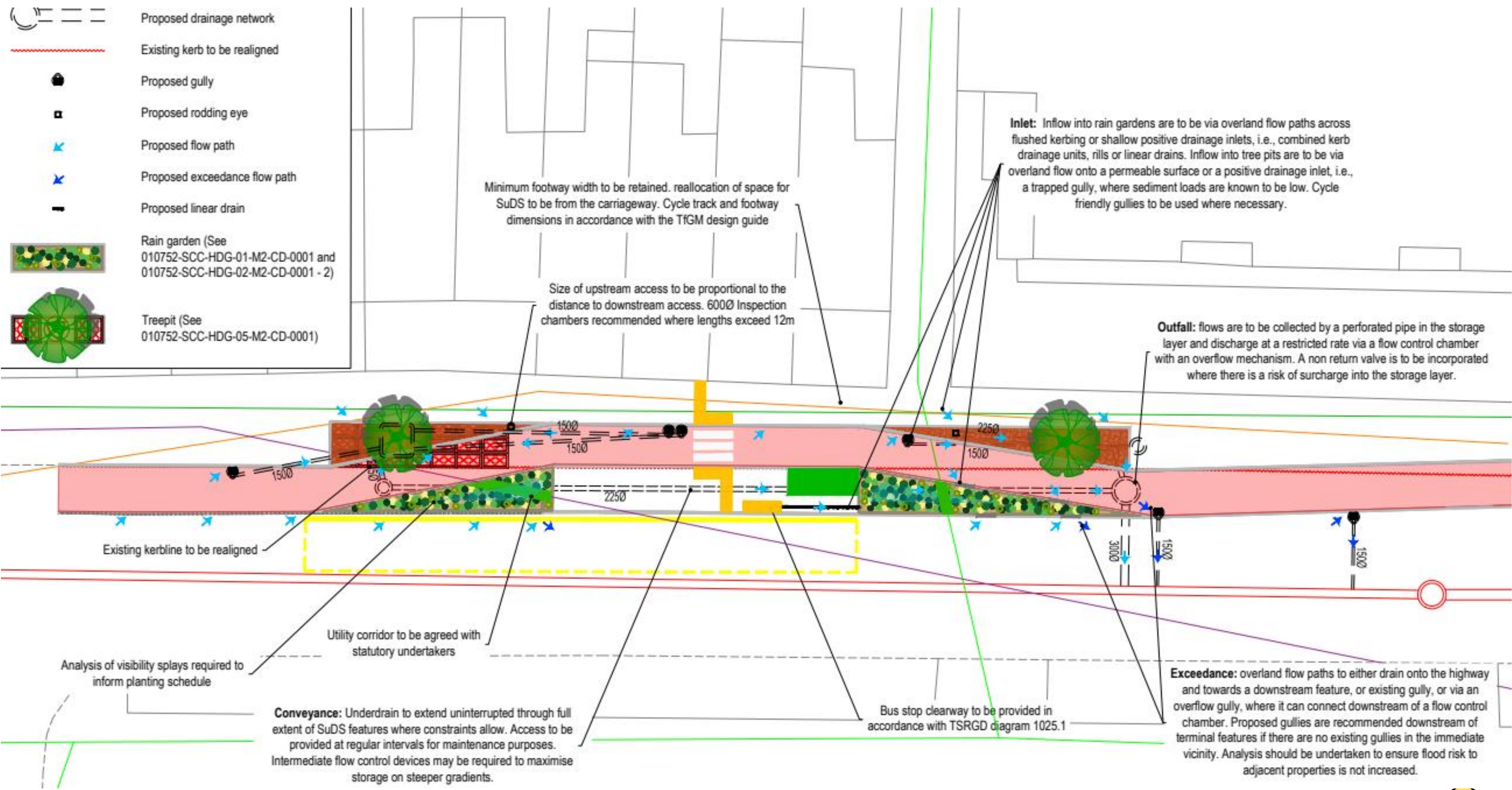


Existing street context



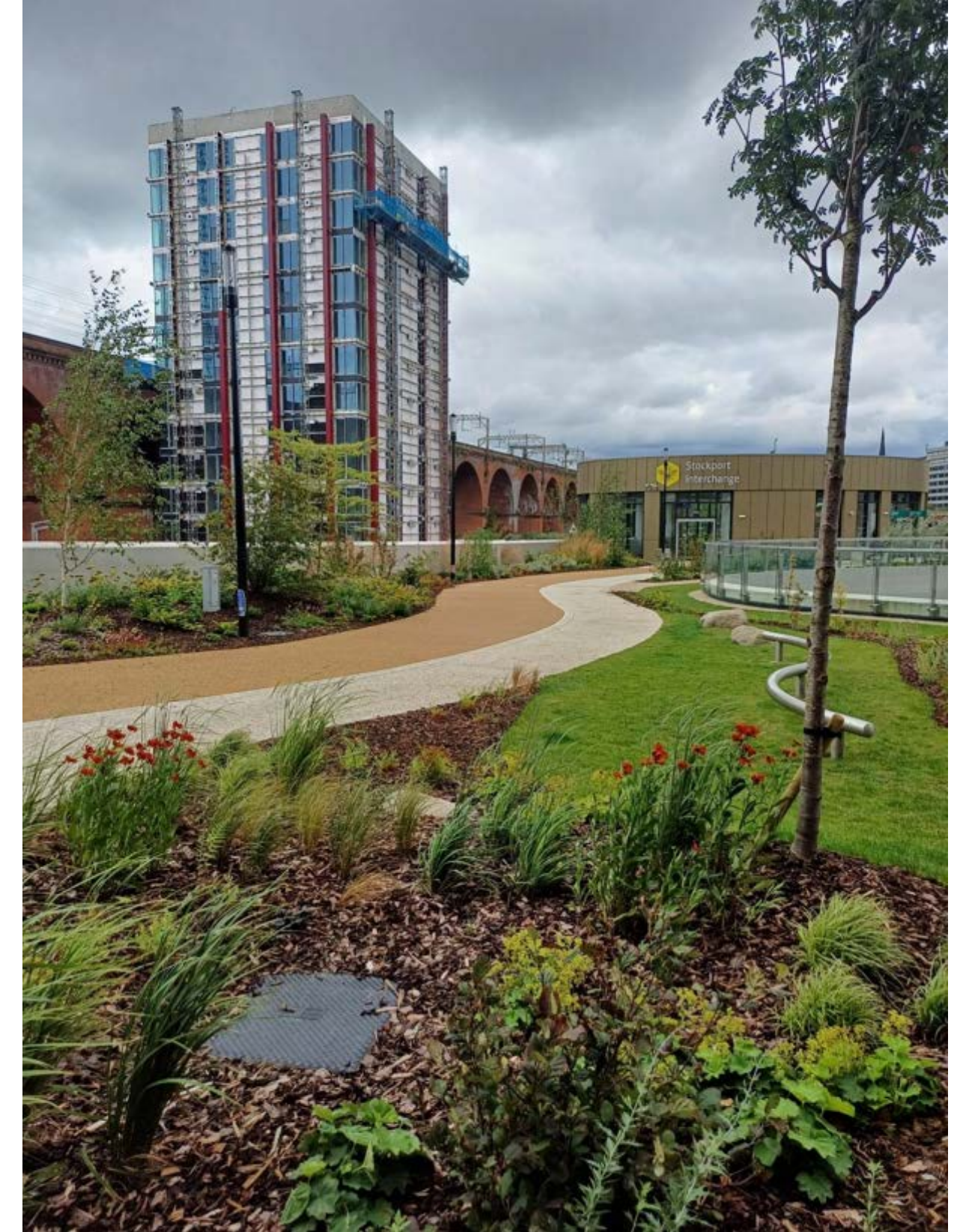
Transform the street





Recap - key messages

- Need to change the way we manage surface water – support transition to SuDS as business as usual.
- Purpose – support delivery of SuDS more widely across highways schemes – clear actions and targets we all need to contribute to.
- Tailored to GM across the board – in the technical advice, in the scope (GM challenges), in those who will use it.
- Grounded in reality - uses real case studies, costs and maintenance advice from those who've delivered in GM.
- Provides GM agreed SuDS components standard details that can be tailored to different streets and spaces.



Podium Park, Stockport Interchange

Thank you

Get in touch!

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Download the guide

www.tfgm.com/strategy/streets-for-all

www.gmgreencity.com/resource-library/

