



Manchester

West Gorton Community Park –The “Sponge” Park–

Completed July 2020
 Designed by BDP and Arup
 Community engagement-Groundwork
 Constructed by ID Verde
 Costs £1.4 million Euro

The West Gorton Community Park is Manchester’s pilot project which aimed to demonstrate how NBS can improve resilience to climate change and enhance bio-diversity whilst having a positive impact of the social, health and well being of residents.

Park design

The redeveloped park is around the size of three football pitches and has three very distinctive zones:

The Woodland zone, which includes lots of new play features such as a large climbing frame:



The Meadow zone has a more naturalistic feel and includes an abundance of meadow and wildflower planting plus lots of picnic benches and seating to encourage relaxation and outdoor socialising:



The Community Plaza zone, which includes a large area of paved open space which can function as a community engagement area for example for pop-up markets and performances, plus there is an area for community fruit and veg growing:



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West Gorton Landscape masterplan (BDP)

Surface water run off reduction

Overall hydrological performance of SUDS features:

- Average volume reduction = 97.6%
- Average peak flow reduction = 98.1%
- Average rainfall run off coefficient = 0.015



Swale filled with rainwater during Storm Christoph 2021 (James Rothwell)

Biodiversity net gain

There have been significant increases in species numbers of trees, shrubs and ground level vegetation. The table below shows the Shannon Index scores for West Gorton Community Park before and after construction.

	Park	Species Count			Outcome
		Jul-18 Baseline	Jul-20 Intervention	Jul-22 Intervention	
Trees	A	6	11	11	+5
	B	2	5	5	+3
	C	4	9	9	+5
Shrubs	A	2	7	7	+5
	B	2	2	2	0
	C	6	4	4	-2
Trees & shrubs	A	8	18	18	+10
	B	4	7	7	+3
	C	10	13	13	+3
Ground-level vegetation	A	25	72	76	+49
	B	27	80	84	+55
	C	20	84	86	+65

West Gorton species count-University of Manchester 2022

Positive economic impact

A forecasted benefit cost ratio of 2.5 over 25 years. The table below shows the Benefit Cost ratio calculations for the West Gorton park based on the total actual costs and forecasted economic gains over 25 years.

Items	Costs & benefits
CAPEX	€ 1,908,553
OPEX	€ 310,674
Total costs	€ 2,219,227
Avoided costs of rainwater treatment	€ 13,921
Increase in residential property prices	€ 1,859,161
Physical health benefits	€ 3,785,773
Total benefits	€ 5,548,589
Net Present Value (NPV)	€ 3,329,362
Benefit-cost ratio (BCR)	2.50

Total costs and benefits, present value EUR 2022 (3% Real discount rate) 25 years-Trinomics, 2022

Park features

The design includes the following NBS features:

- Sustainable Urban Drainage (SUDS)- 3 swales, 2 rain gardens, 1 tree pit
- Bio-diversity-protection of existing mature trees, new orchard trees and fruiting hedgerows, sensory herb garden, raised beds, planted swales, wild-flower meadow
- Social cohesion and health and well being - play equipment, basketball court, picnic benches, plaza

Impact

Monitoring and impact evaluation has been undertaken by the University of Manchester and was based on the EKLIPSE approach originally developed by Raymond et al., (2017). GMCA and Trinomics have carried out an economic impact assessment of the Park. Groundwork were sub-contracted to engage residents in the original design process and post construction they have been working with local stakeholders to develop the friends of West Gorton Community park

Health and well-being improvements

There have been significant increases people using the space to undertake physical activity.

The table below shows the number of people using the park and the activities being undertaken before and after construction.

Indicator	Baseline (2018)	1st follow-up (2020)	2nd follow-up (2021)
Percentage of people observed doing vigorous physical activity in target outdoor spaces	17.1%	25.3%	26.4%
Percentage of people observed doing moderate physical activity in target outdoor spaces	77.9%	81.7%	81.8%
Number of older persons observed walking in target outdoor spaces	21	41	21
Number of adults observed walking in target outdoor spaces	346	472	542
Number of children and teenagers observed walking in target outdoor spaces	126	288	290
Percentage of non-white persons observed walking in target outdoor spaces	26.9%	44.1%	49.5%
Percentage of women and girls persons observed walking in target outdoor spaces	38.9%	41.6%	39.6%

West Gorton physical activity observations-University of Manchester 2022

Community engagement in NBS

There have been significant increases in the social engagement and cohesion in West Gorton.

The table below shows the results of a survey about community engagement and social cohesion before and after construction.

Indicator	Baseline (2018)	Summary of post NBS results (2020)	Summary of post NBS results (2021)
Percentage of people who reported always opportunities to socialise locally	44.6%		54.7%
Percentage of people who reported good organisation of local events	24.8%		36.3%
Percentage of people who believe local community can influence local issues	51.5%		58.3%
Percentage of people interacting with each other in an outdoor space	27.6%	49.1%	42.3%

West Gorton survey results-University of Manchester, 2022



West Gorton residents planting in raise beds (MMC)