2.11 Estimated reduction in peak summer temperature

Project Name: URBAN GreenUP (Grant Agreement no. 730426)

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Reduced peak summer temperature	Climate Resilience
Description and justification	GI-Val is The Mersey Forest's green infrastructure valuation toolkit. The current prototype is free and open source, and can be downloaded under a Creative Commons License from: https://www.merseyforest.org.uk/services/gi-val/. It takes the form of a spreadsheet calculator and a user manual. Tool 1.4 estimates the reduction in peak temperature, a key factor in improving the liveability of urban areas during summer months. An independent assessment of GI Val by the Ecosystems Knowledge Network is available from this link, along with links to other tools: https://ecosystemsknowledge.net/green-infrastructure-valuation-toolkit-gi-val
Definition	Estimated decrease in peak summer temperature experienced as a result of NBS intervention.
Strengths and weaknesses	- Tool developed using English data. - The toolkit remains a prototype and this means there are some green infrastructure benefits for which it cannot calculate a direct financial value. While there is a rich body of evidence that illustrates and demonstrates the different types of benefits deriving from quality green infrastructure, robust valuation techniques do not yet exist for all benefits. Therefore some valuations come with detailed caveats as they are based on limited evidence at this stage. - The toolkit's calculation is designed to be useful for initial, indicative project appraisal, providing a range of figures indicating the potential impact of a green infrastructure intervention or the value of an existing green infrastructure asset. The toolkit does not assess the quality of the design or detailed management requirements of green infrastructure. It does not replace a full cost benefit

	analysis, but it provides a basic valuation at a much lower cost.
	- Valuations such those made with a toolkit or cost benefit analysis also need to be seen as part of a much bigger picture. The valuation should not replace community engagement and local dialogue about what is valued about a place. Calculating economic value of green assets will always be a controversial technique and financial value should only be seen as one factor in decision-making.
	- The reported GVA values include transfers from one organisation to another, which means that although GVA increases for the beneficiaries, it may not increase for the study area as a whole.
Measurement procedure and tool	The toolkit provides a set of calculator tools to help assess an existing green asset or proposed green investment. They are organised under eleven key benefits of green infrastructure:
	Input data for evaluation of reduction in peak summer temperature include the baseline level of green cover in the area under investigation, and the increase in green cover as a result of NBS implementation.
	The toolkit uses standard valuation techniques to assess the potential benefits provided by green infrastructure within a defined project area. These benefits are assessed in terms of the functions that the green infrastructure may perform, support or encourage, depending upon the type of project.
Scale of measurement	Street to district
Data source	
Required data	General information about green infrastructure
Data input type	Numeric data.
Data collection frequency	Individual assessments
Level of expertise required	Technical / Expert
Synergies with other indicators	
Connection with SDGs	SDG3 / SDG11
Opportunities for participatory data collection	Developing the toolkit's next iteration will require wide and sustained collaboration. To facilitate this process, interested parties are invited to pass the toolkit to others who might be able to incorporate it into their work and to

	provide feedback on their experience in using the toolkit, good and bad! Sources of improved evidence Suggestions for improving the tools Ideas for new tools The consortium who led the development of this toolkit has handed over the responsibilities for co-ordinating future work to the Green Infrastructure Value Network (GIVaN). Further information on the network can be found at: www.bit.ly/givaluationtoolkit
Additional information	
References	URBAN GreenUP Deliverable D5.3: City Diagnosis and Monitoring Procedures https://www.urbangreenup.eu/insights/deliverables/d5-3-city-diagnosis-and-monitoring-procedures.kl
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2.12   Maximum surface cooling

Project Name: URBAN GreenUP (Grant Agreement no. 730426)

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Projected maximum surface temperature reduction	Climate Resilience
Description and justification	The surface temperature tool can be used to model the maximum surface temperature expected in a neighbourhood, taking into account the evaporative cooling effect of the vegetation. Since the implementation of