

Could an existing urban centre be retrofitted to incorporate effective levels of Green Infrastructure?



BUS STOP



Figure 1 The Study Area



Key:

-  Area covered by this case study
-  Area covered by the 5 Streets project

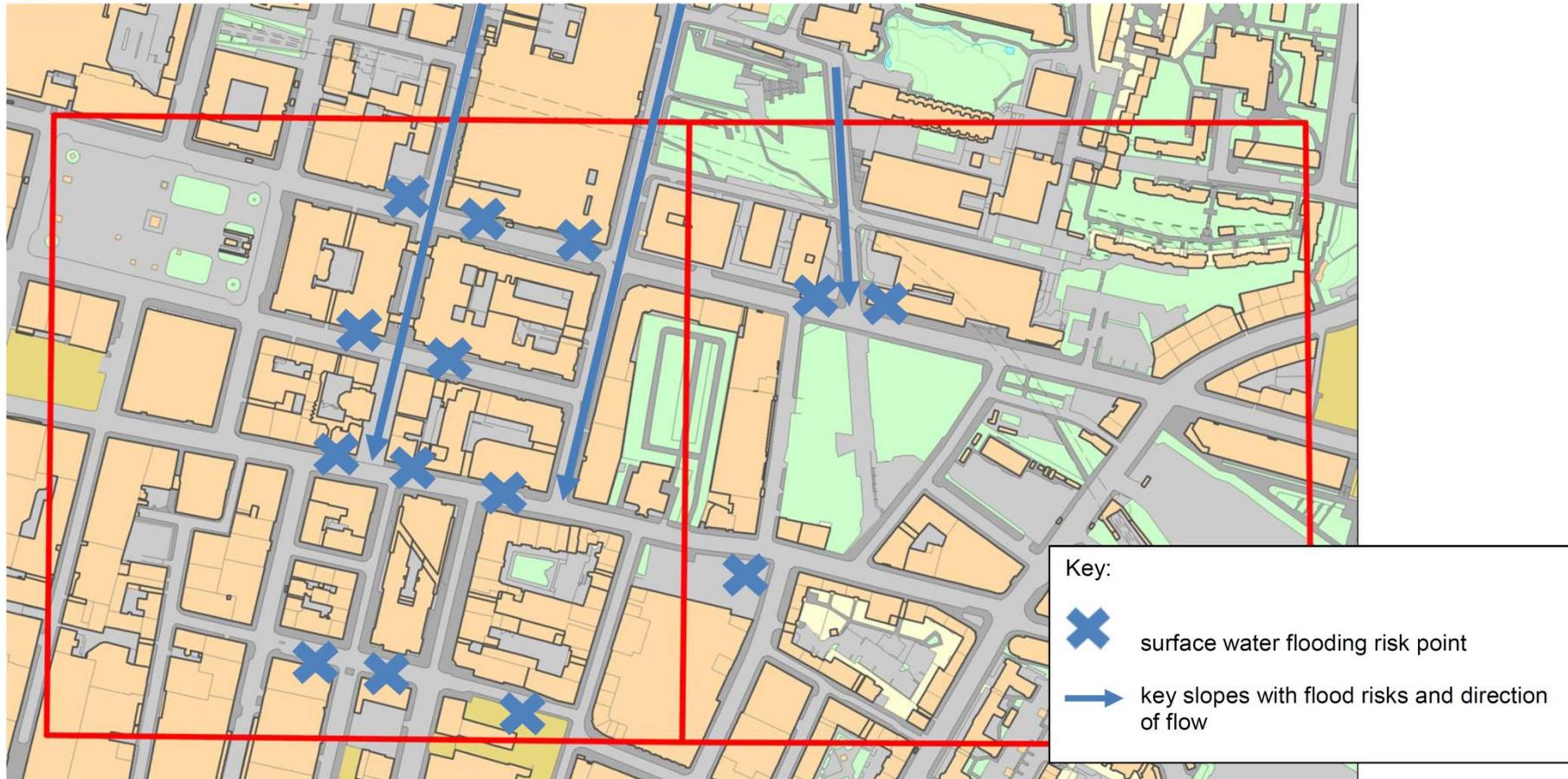




GI requirements for key benefits

- **Reducing overheating** – can we increase green areas by 20%?
- **Surface water management** – can GI be located to intercept, retain, slow and ultimately divert water flows?
- **Place quality** – can GI be integrated with overall urban design priorities for the area?
- **Air quality** – excluded due to lack of modelling data for air flows

Figure 2 Key locations for surface water management



Could GI be incorporated into the existing urban form in sufficient quantities and the right locations to tackle the projected overheating?

Figure 4: Potential green wall and green roof sites

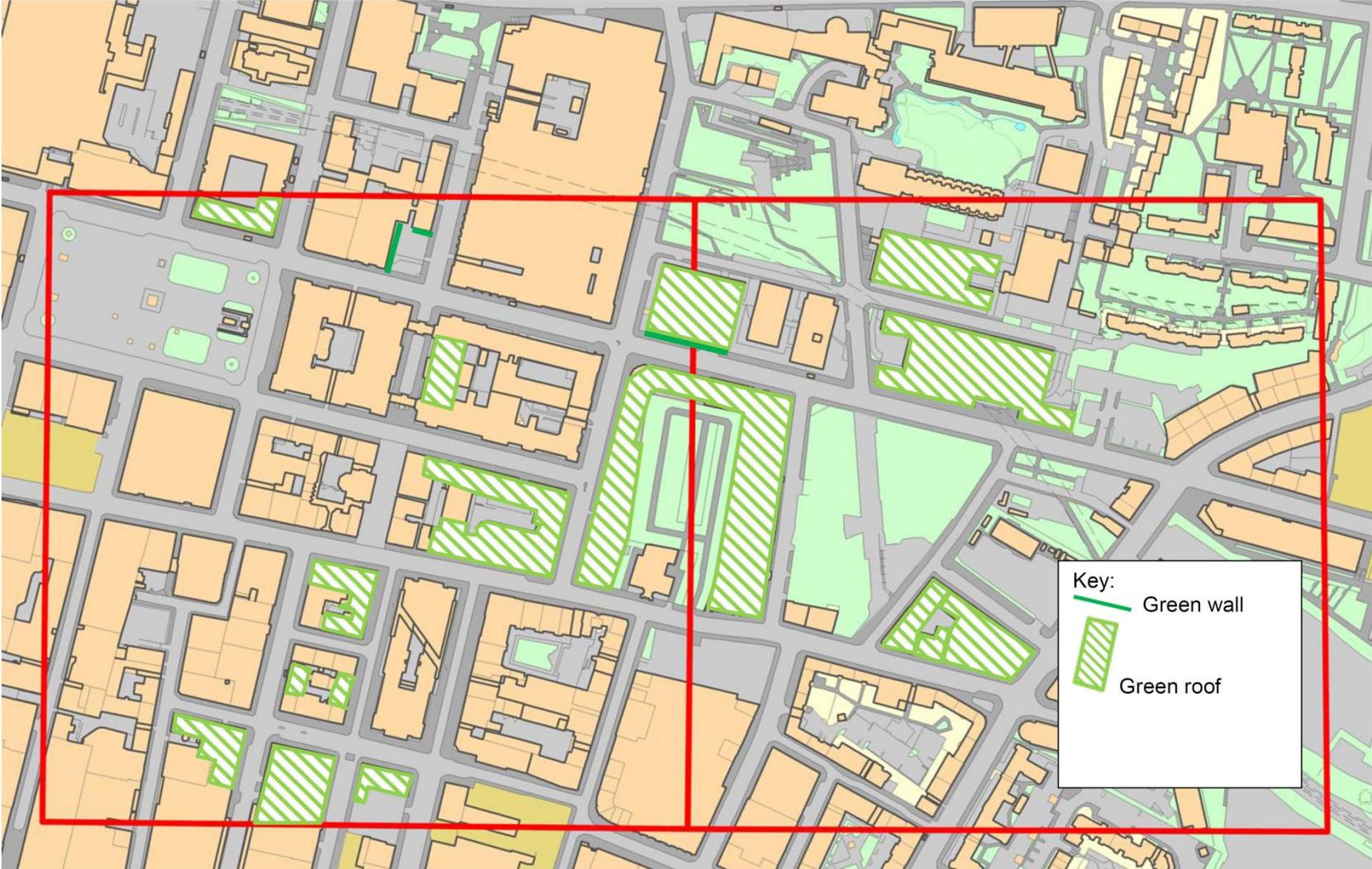
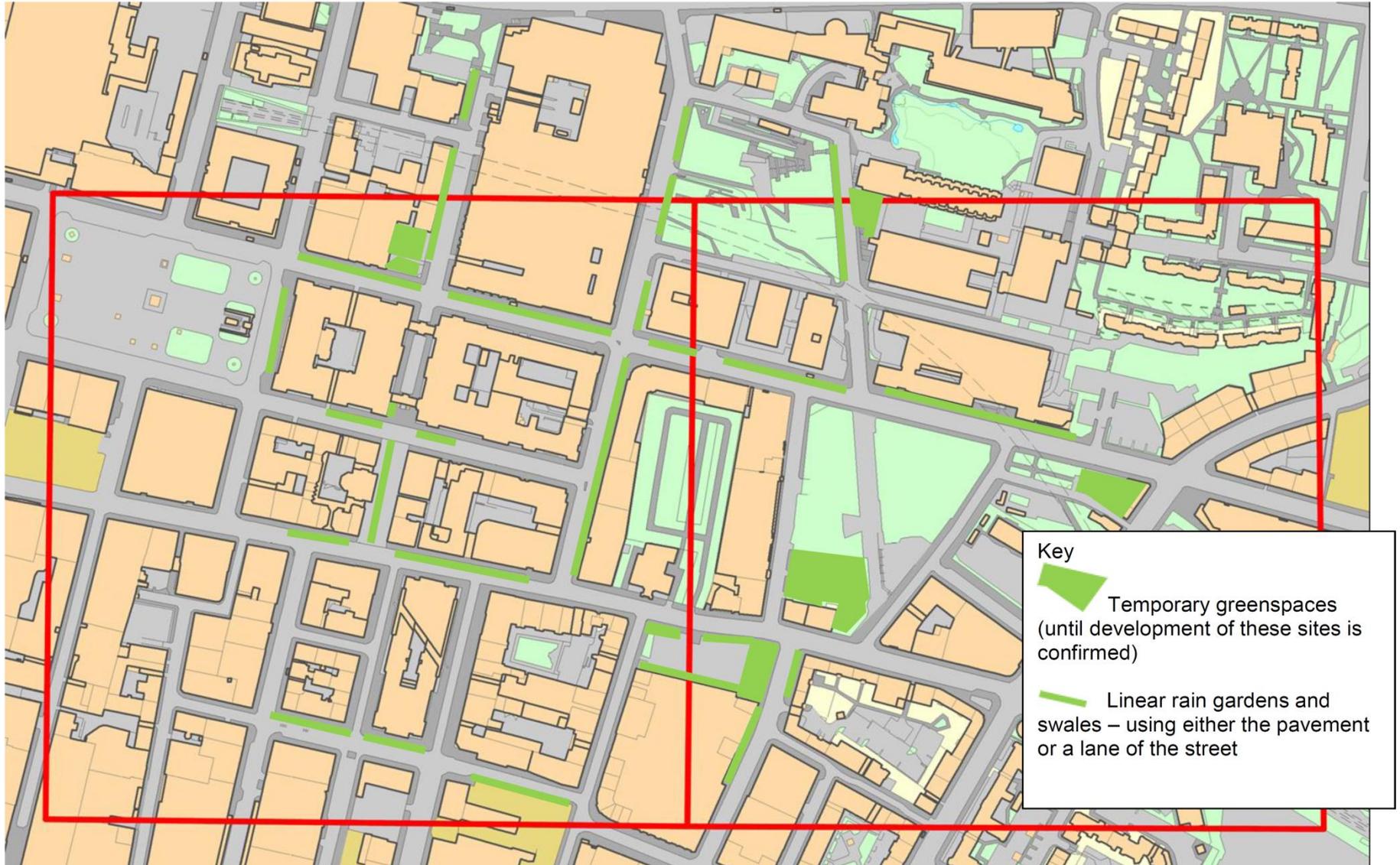


Figure 5: Suggested 'in-street' green infrastructure and temporary space locations





GI combination	Maximum effective area m²	Target level of green cover m²	%required to meet the target
Green roofs, green walls and modular rain gardens and swales	6034	5380	89%
Green roofs, green walls and non-modular rain gardens and swales	7104	5380	76%

Constraints!

Costs?

between £1.9 and £2.5M

a pragmatic approach

- promote green roofs and walls
- seek a doubling of green cover in George Square
- GI in new developments
- rain gardens and swales where possible
- modular where necessary
- focus initially on:
 - surface water management priorities
 - place improvement priorities
 - planned public realm improvement
- create temporary GI on stalled sites

thank you