

The IGNITION Project: Building a Business Case for NBS



GREATER MANCHESTER
DOING THINGS DIFFERENTLY



European Union
European Regional
Development Fund

The financial returns from SuDS

Extreme weather events, such as floods and heatwaves, are an increasingly common part of urban life and are projected to become more frequent and intense as the climate continues to change. Nature-based solutions (NBS) like trees, green spaces and sustainable drainage systems (SuDS) are now being recognised as playing a key role in building resilience to climate change. The real value of NBS comes in the multiple benefits they bring, such as improving air and water quality, increasing biodiversity, capturing carbon and improving public health and wellbeing.



Diagram of a swale

The IGNITION project aims to establish innovative ways to finance and deliver NBS at scale, with an ambition to significantly increase Greater Manchester's urban green infrastructure. To develop a viable business case for investment in nature-based solutions, there are several key challenges that need to be addressed:

- Ability to aggregate a large enough pipeline of sites or projects to create a sizeable investment proposition
- Evidence and understanding of the benefits of NBS projects, associated financial value and the ability to generate income or returns against this
- Development of a robust business model and associated mechanism to manage investment, procurement and maintenance
- Build investor confidence through evidence, pilots and risk reduction
- Ensure clarity around the capital costs, resource requirements, maintenance costs and understand associated economies of scale

To address these challenges, the IGNITION project is developing and interrogating potential funding streams that can deliver a large-scale pipeline of projects, alongside a robust case for investment and an effective mechanism to manage investment, procurement and maintenance.



The first one of these funding streams builds on work previously done in Greater Manchester by **Business in the Community (BITC)** to identify the potential for incentivising the retrofit of SuDS within schools.



Funding Stream 1: Retrofitting SuDS

SuDS are a more natural approach to managing drainage in the built environment, helping to hold back and slow down water flow. They support the natural environment to manage water and help to reduce the risk of flooding, as well as delivering wider co-benefits.

United Utilities, the wholesale water and wastewater management company for the Greater Manchester area, charges non-domestic properties for wastewater services based on the area of hardstanding, such as buildings and car parks, on their site that drains into the sewer system. By incorporating SuDS into these sites, landowners can reduce their chargeable area, allowing it to drop a charging band.



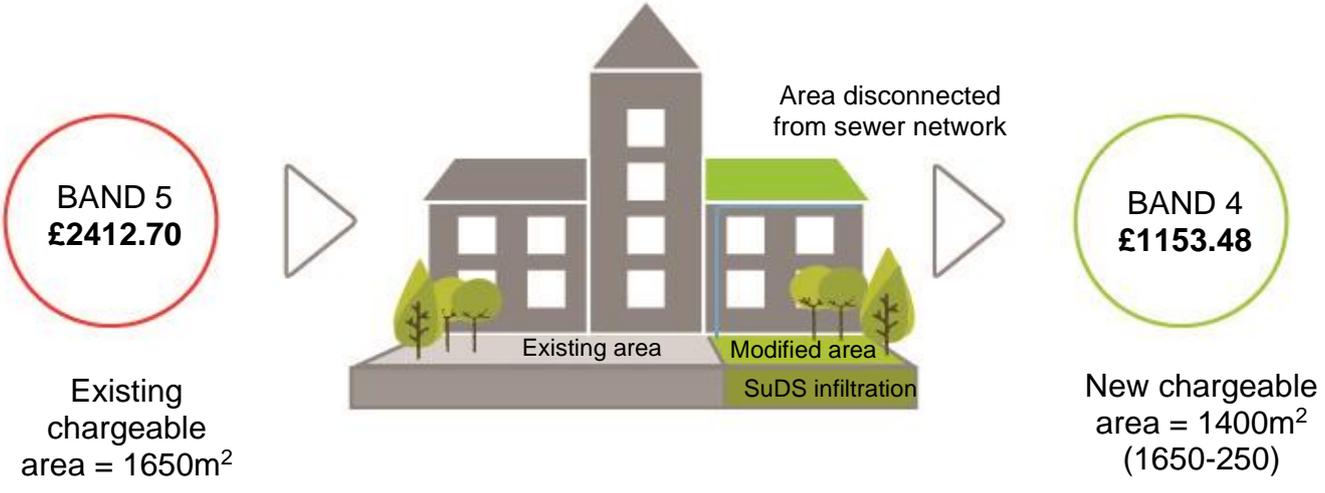
Diagram of an integrated SuDS system





Diagram of SuDS infiltration model and attenuation model

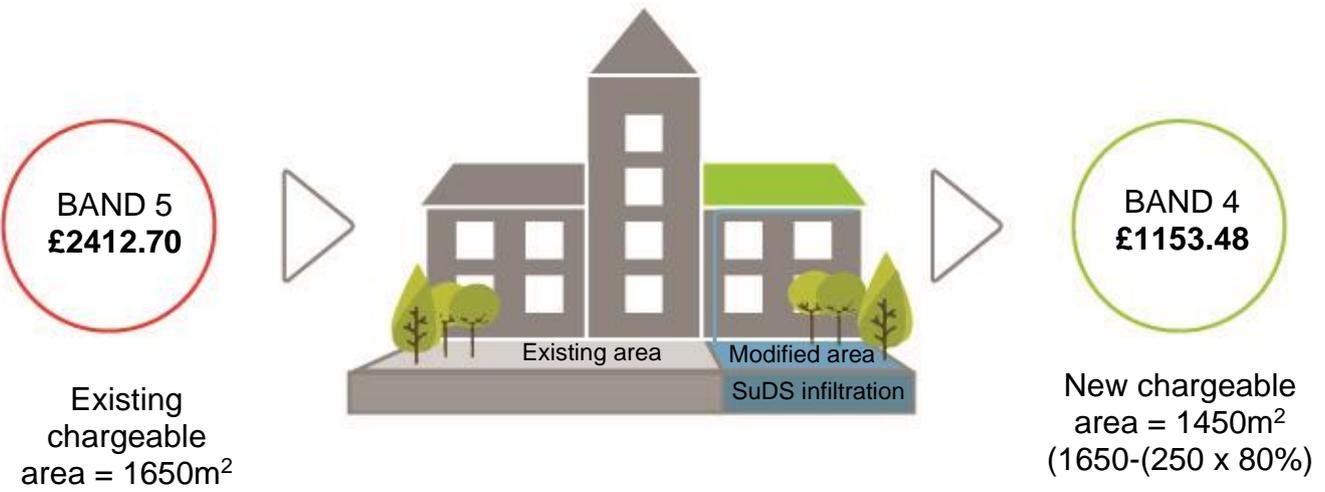
Method A: SuDS infiltration



The annual savings from this move can, over multiple years, be used to recoup the upfront costs of constructing the SuDS. Aggregating savings across a package of sites into a

programme allows for economies of scale (e.g. in design, construction and procurement costs) and the potential to carry out interventions at a higher number of sites.

Method B: SuDS attenuation



Applying this model in Greater Manchester

The IGNITION project has applied this principle to all properties where the wastewater bill is paid for by the Greater Manchester Combined Authority, one of Greater Manchester's 10 local authorities or Greater Manchester Fire and Rescue Service. Working with these landowners enables potential aggregation of a large enough pipeline of sites whilst working with just 11 bill payers. The authorities are also motivated to drive climate resilience forwards, having declared a climate emergency and working towards the Greater Manchester Five-Year Environment Plan. Local authority sites such as libraries, leisure centres and civic buildings are likely to be accessible to the public, ensuring maximum benefit from increased green and blue space.

The data related to the chargeable area, location and current charging band was collated to create an initial portfolio of sites. These sites went through a two-step process to identify a list of sites, assessing the technical and financial viability of each site:

Step 1 - Technical viability

For SuDS to be installed, there needs to be suitable ground conditions. Desk-based feasibility testing was carried out on all the shortlisted sites to identify those where SuDS could be installed and to effectively manage the flow of surface water, disconnecting the necessary area from the wastewater system to drop at least one charging band.

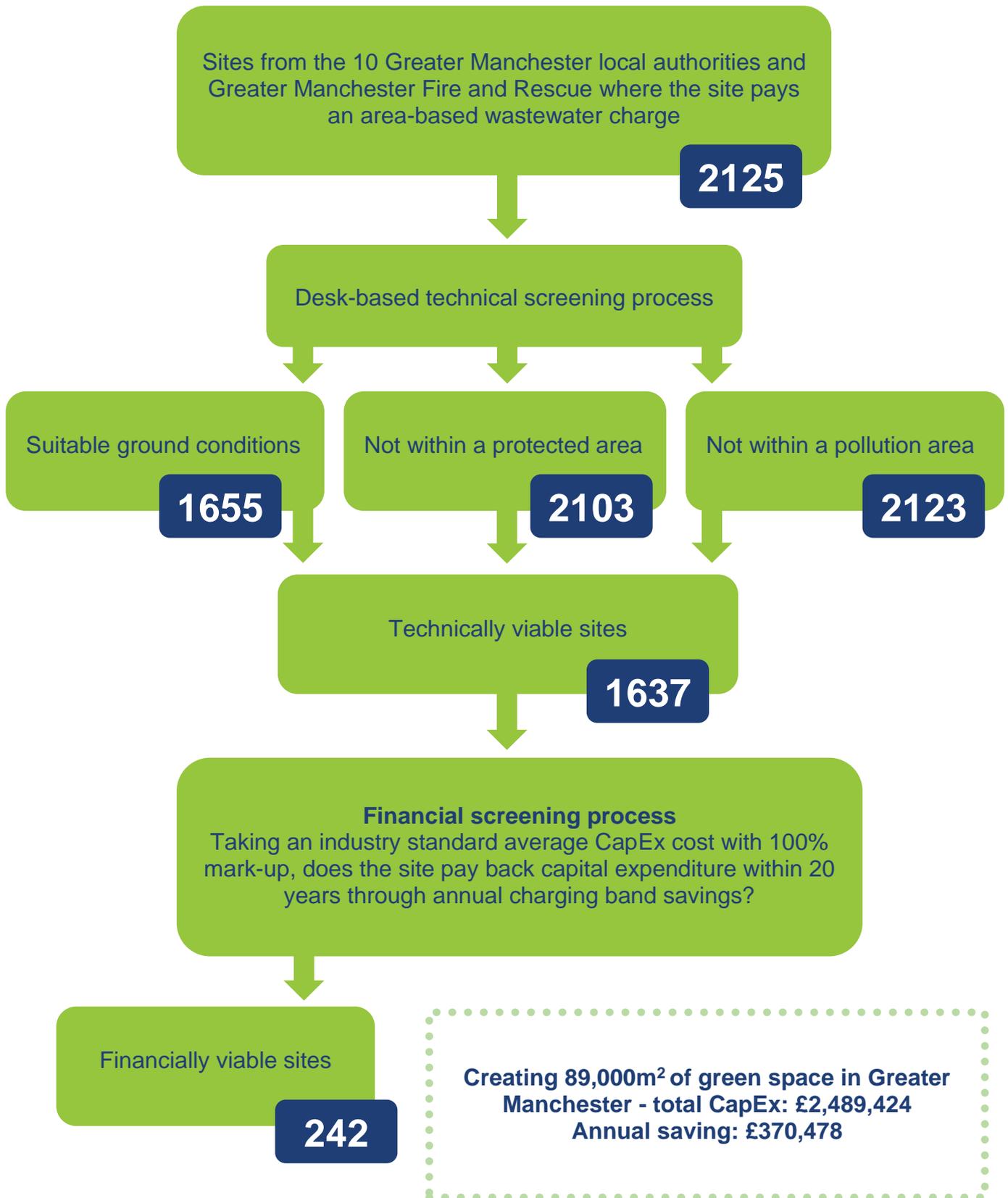
Step 2 – Financial viability

Each site needs to be able to recoup the costs of design, installation and maintenance of SuDS through an annual reduction in waste-water charging. The sites were assessed to identify those that would cover the CapEx costs of SuDS installation over 20 years.



Building the pipeline

The data related to the chargeable area, location and current charging band was collated to create an initial portfolio of sites:



A greener Greater Manchester

The next phase for the IGNITION project is to turn this desk-based model into reality by developing a viable and compelling investment proposition.

Individual on-site visits have been replaced with technical desk-based analysis of these sites due to the impact of the coronavirus pandemic. These remote ground-truthing studies of a large sample of sites will help verify the initial testing, identify the potential for SuDS installation and any limiting factors. At the same time, a deeper financial analysis of designing, building and maintaining SuDS on the sites is being carried out alongside identifying ways of de-risking investment in SuDS within the pipeline of sites. This will inform the development of a robust outline business case for investors.

The potential financing and investment options that would fund the design and installation of SuDS at all viable sites are being considered alongside the necessary practicalities and governance to manage any investment and ensure the ongoing maintenance.

