

NATURE-BASED SOLUTIONS LABS SUMMARY OUTPUT

RETROFIT

WHY RETROFIT NATURE-BASED SOLUTIONS?

The majority of our cities are already constructed. Therefore, focusing on new construction only when introducing Nature-based solutions (NBS) is limited in its effect and scale. To effectively introduce NBS and adapt to a changing climate, retrofit needs to be part of the solution to meet the ambition and scale of NBS required.

WHAT ARE THE CHALLENGES with retrofitting NBS?

Some of the challenges include:

- Limited space availability of existing sites
- Sites compromised by underground services or utilities.
- Issues around land ownership.
- Skills shortage for delivering retrofitted NBS
- Retrofitting can come with increased costs for NBS implementation since it hasn't been planned from the start.

RETROFIT

RECOMMENDATION: Understand conditions and challenges on site

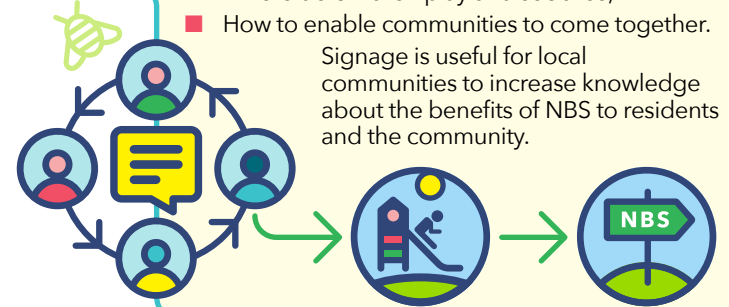
As retrofit projects come with a range of constraints, these should be known as much as possible from the outset. Whether these are spatial constraints, ownership, or restricted budgets, clarity on these matters from the start will greatly facilitate the success of the project.

KEY CONSIDERATION: How can you ensure community engagement with NBS?

Consultation and engagement with the local community, ideally from design stage, is important to create a sense of ownership and engagement. Some things to consider are:

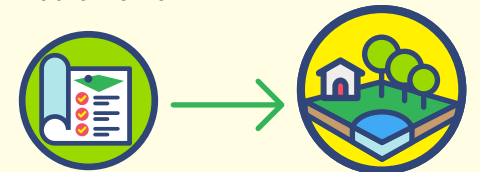
- How do people want to use the space
- Where do children play and socialise,
- How to enable communities to come together.

Signage is useful for local communities to increase knowledge about the benefits of NBS to residents and the community.



KEY CONSIDERATION: The right NBS in the right place

When planning the location for Nature-Based Solutions (NBS), it is crucial to consider their spatial requirements. Trees, for instance, need adequate access to soil to reach their full growth potential. Restricting their roots can stunt their growth and hinder their development. Additionally, the placement of NBS should align with the Local Planning Authorities' green infrastructure plans and local nature recovery strategies. Integrating NBS into a cohesive network enhances connectivity for wildlife, contributing to a more robust habitat network.



KEY CONSIDERATION: How can I demonstrate the benefits for NBS?

NBS can provide many benefits, such as improved air and water quality, noise reduction, or microclimate improvements. Data monitoring of the NBS implemented can help show the benefits provided. The **Living Lab at the University of Salford** provides a retrofit case study of real time data collection for many benefits of NBS. Community involvement is another way of monitoring benefits from NBS. The UrbanGreenUp project provides further guidance and case studies on that. As part of this, Liverpool has published a **data explorer** showcasing benefits of NBS through their projects.

PROGRAMME PARTNERS

BURO HAPPOLD HOARE LEA (HL)

Hydrock Stantec JLL

PROJECT PARTNERS

bam

waterman

NATURE-BASED SOLUTIONS LABS SUMMARY OUTPUT

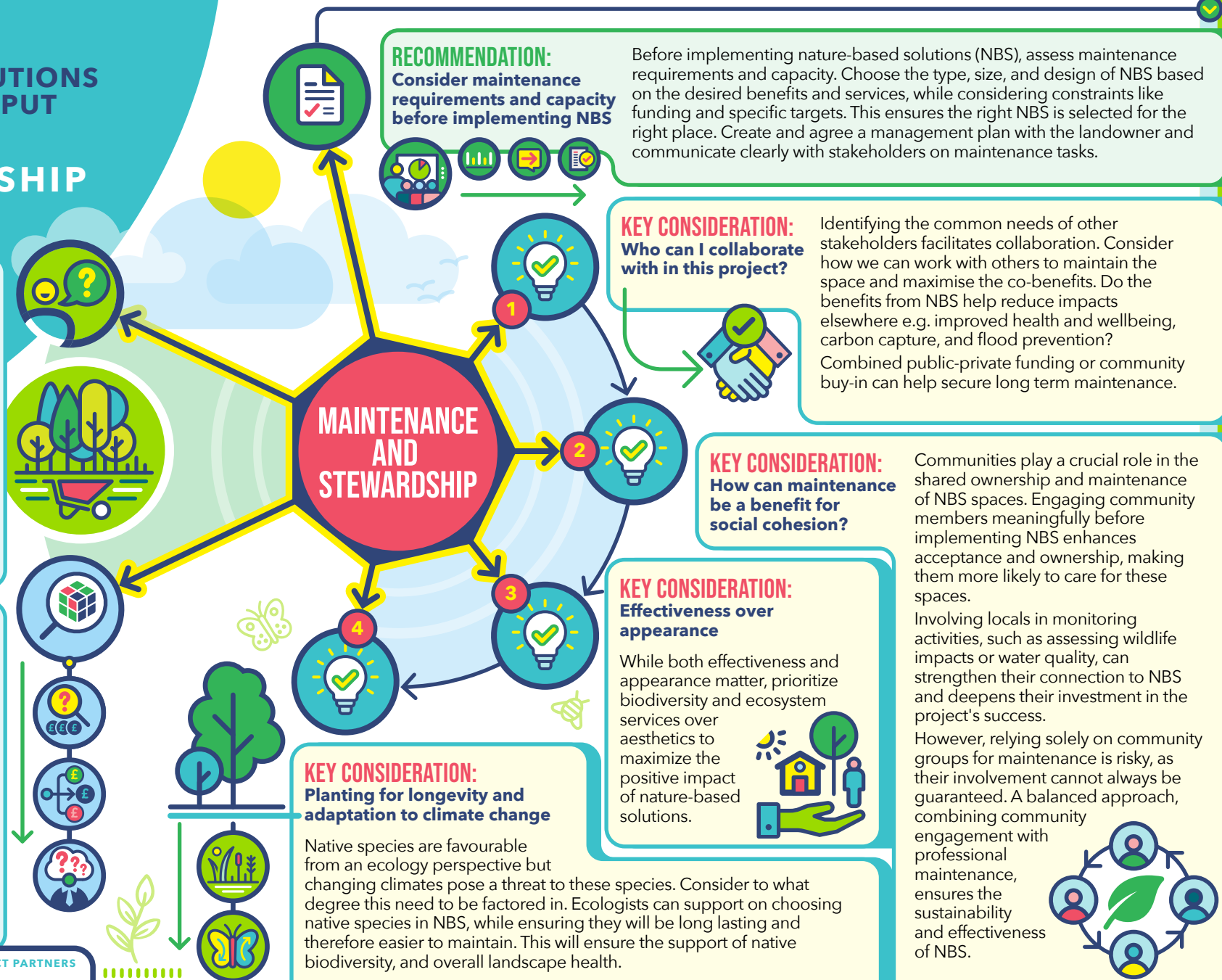
MAINTENANCE AND STEWARDSHIP

WHY IS MAINTENANCE IMPORTANT?

In the built environment we often focus on delivery of projects, with maintenance being an afterthought. Too often this leads to short lifetimes of costly nature-based solutions (NBS) installations. In the case of nature-based solutions we are dealing with living organisms, so extra care is needed to maintaining conditions that help plants to survive and flourish and ensure longevity of NBS and its benefits.

WHAT ARE THE CHALLENGES with NBS maintenance?

- Lack of clarity on future budgets
- Monitoring of efficacy of ecosystem services
- Funding streams
- Lack of clarity on financial responsibility between owners, leaseholder, occupiers and management, among others
- Lack of clarity on management responsibilities for NBS
- Changing or unclear ownership



PROGRAMME PARTNERS



PROJECT PARTNERS

