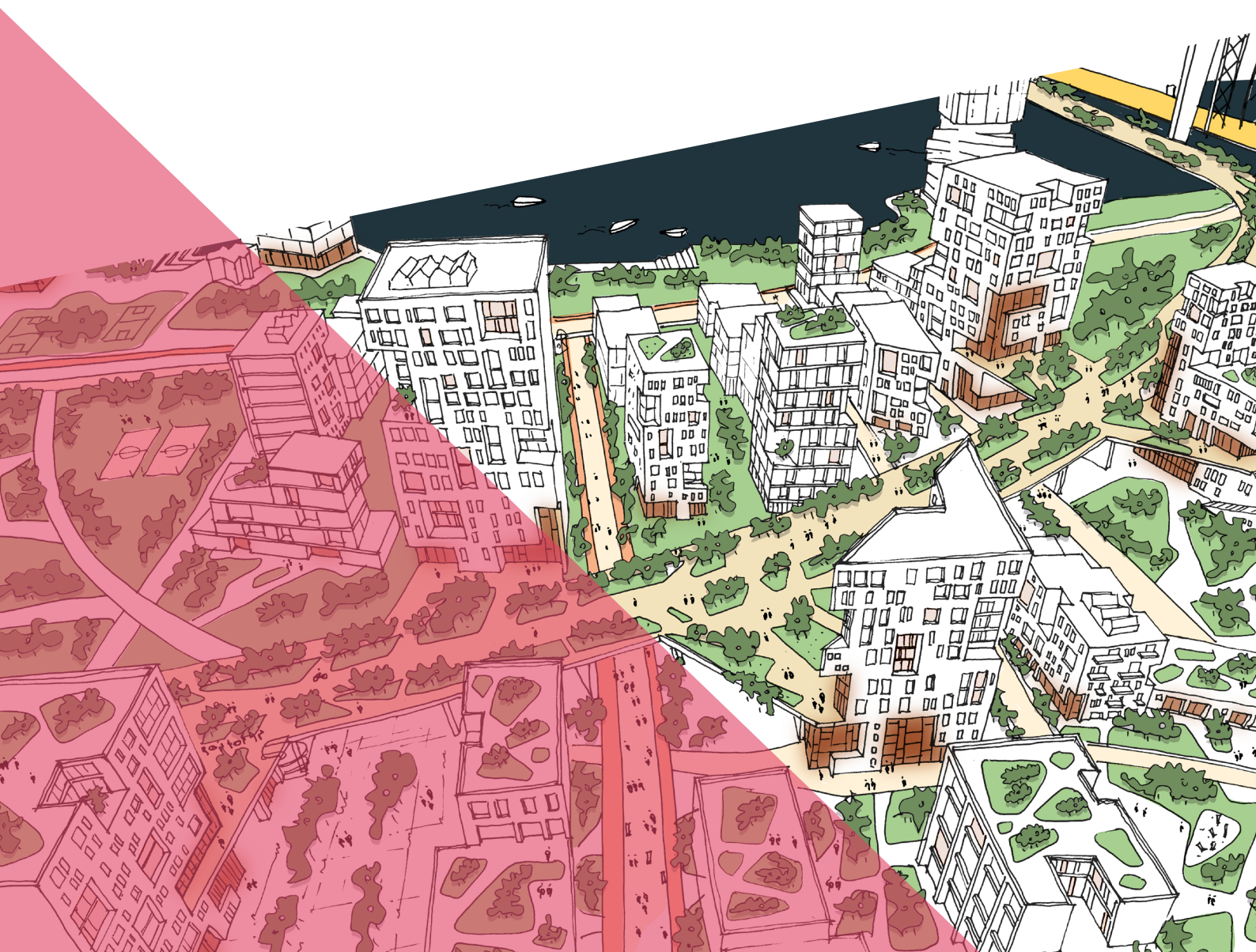
Interreg North Sea Region BEGIN
European Regional Development Fund
EUROPEAN UNION

SOCIAL INNOVATIONS FOR DELIVERING BLUE AND GREEN INFRASTRUCTURE:

Developing a Compelling Business Case

Brief from the Interreg North Sea Region BEGIN project



INTRODUCTION

This brief provides support and guidance in developing an appropriate and tailored business case, or justification for using Blue and Green Infrastructure (BGI) in projects. BGI can, in conjunction with social innovation, deliver and enhance urban areas and living. This brief complements, and should be read alongside, other outputs from the BEGIN programme, including the BEGIN Policy Brief[1].

BACKGROUND TO BEGIN

The Interreg North Sea Region project BEGIN[2] (2017-2021) aims to deliver BGI through Social Innovation. The project is a unique partnership in which ten municipal areas, referred to as cities and six research institutes across the region collaborate to develop BGI solutions and exchange experiences.

The ten cities are developing and implementing innovative BGI approaches of varying scale and function with a focus on improving social outcomes. The BEGIN project helps cities identify, plan, value and deliver multiple benefits from BGI. Likewise, BEGIN supports cities to engage with stakeholders, including citizens, in a creative process that could significantly enhance the liveability of their neighbourhoods.

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1 *Social Innovations for Delivering Blue and Green Infrastructure: Connecting multiple benefits, multiple stakeholders, and multiple disciplines. https://northsearegion.eu/media/14055/begin-policy-brief.pdf*
2 *BEGIN website: https://northsearegion.eu/begin*

Photo: Dordrecht, the Netherlands

WHAT IS BGI?

Blue and Green Infrastructure (BGI) utilises nature-based solutions[3] to provide multi-functional spaces that are strategically planned and managed. These spaces provide a variety of ecological, social, and economic benefits[4,5]. The multi-functionality of BGI facilitates the integration of multiple societal goals, where not only water management is improved but numerous other factors, including public health, biodiversity, place-making and urban regeneration are also supported. For example, a green public square can collect and absorb rainwater that normally might enter a full, or near capacity storm drain system, thus helping to reduce flooding.

The focus on BGI is growing as both climate change and urbanisation impact on the liveability and resilience of our cities. The risk of local floods is increasing and impacts our communities and urban environment because drainage systems are struggling to cope with more frequent and intense rainfall. Other challenges for cities include: the loss of high-quality green space; reduced biodiversity; increased heat stress; increased drought risk, and the need to promote citizens' health and wellbeing. BGI can help to address all of these challenges and provides numerous valuable opportunities compared with traditional grey infrastructure[6], for delivering multiple benefits and engaging people. It integrates water into urban design, city planning, environmental management and public health.

3 *See Nature-Based Solutions Cooperation Manifesto https://platform.think-nature.eu/nbs-manifesto*
4 *EC (2012). The Multifunctionality of Green Infrastructure. Brussels: European Commission (Directorate-General Environment). https://ec.europa.eu/environment/nature/ecosystems/docs/Green_Infrastructure.pdf*
5 *Ashley, R., Gersonius, B., & Horton B. (2020). Managing flooding: from a problem to an opportunity. Philosophical Transactions of the Royal Society A, 378(2168).*
6 *'Grey' infrastructure is a term used to contrast with blue-green. It refers to structural measures like pipes, concrete channels, walls and functional assets like pumping stations. In practice a mix of both grey and blue-green will invariably be required.*

WHAT IS SOCIAL INNOVATION?

Social innovation is the development and implementation of new ideas (products, services and models) to meet social needs and create new social relationships or collaborations[7]. Social innovation is a response to societal challenges, including urban water challenges such as flooding or pollution. This involves regulatory, behavioural and/or cultural changes. In attempts to address socio-technical problems, social innovation can complement or replace technical innovation. The BEGIN project has explored the social innovation required to provide better, multifunctional blue green infrastructure that delivers a range of environmental, social and economic benefits. The social innovation observed in BEGIN entailed working across organisational and disciplinary boundaries, building new collaborative relationships and engaging directly with local communities. A simple example is including community engagement with BGI at the planning and design stage of a scheme.

7 *EC (2013) Guide to Social Innovation. Brussels: European Commission (Directorate-General for Regional Policy). https://ec.europa.eu/regional_policy/en/information/publications/guides/2013/guide-to-social-innovation*

WHAT IS A BGI BUSINESS CASE?

A business case essentially provides the justification for a project or programme. It can demonstrate the value[8] or usefulness of BGI to funding organisations and to other beneficiaries, including local communities and wider society, i.e. the 'audience'. Business cases should be well-structured and clear, setting out the rationale for the intervention. They should include:

- Where we are now - the baseline
- Where we want to get to - the desired outcome
- An assessment of the impacts, both good and bad, of different ways of achieving the desired outcome.
- Relevant supporting evidence presenting the case in a clear and compelling way
- Monitoring and evaluation
- Feedback on outcomes (Figure 1)[9]

The business case is more than just a financial or economic justification and should be developed and designed with the target audience in mind; primarily those with a role in, or impacted by, the decision-making process. For BEGIN, this could be politicians, policy makers, policy officers, engineers, planners, developers, BGI specialists, local authorities, funders, auditors and citizens.

8 *In economic terms, value implies an understanding of the balance between costs and benefits. As such, BGI enhances value where the economic, social and environmental benefits outweigh the costs. Of course, a business case should consider who the costs and benefits accrue to.*
9 *Based on HM Treasury (2018) The Green Book: appraisal and evaluation in central government. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/938046/The_Green_Book_2020.pdf*

Figure 1: What should a business case cover?

There are many different types of business case (Figure 2) and the most appropriate will depend on the purpose, content and organisations involved[10]. Multiple types of business case may be necessary even for one project and the lead organisation will likely take ownership of their development. This should include engaging with and involving the widest range of partners, stakeholders and audiences as possible, both early in, and throughout the process. Many business cases seek to integrate several purposes, most commonly to address climate change needs whilst also delivering better urban spaces[11].

10 *See for example Lawlor, E. 2013. The Pedestrian Pound: The Business Case for Better Streets and Places. London: Living Streets. https://www.livingstreets.org.uk/media/3890/pedestrian-pound-2018.pdf*
11 *See for example Tiwari, R., R. Cervero, and L. Schipper. 2011. Driving CO2 Reduction by Integrating Transport and Urban Design Strategies. Cities 28 (5): 394–405*

Figure 2: The types of business case

There are differences between the types of business case. For example, an economic case focuses on the overall worth or value of a proposal to society, whilst a financial case is more concerned with affordability and funding.

BUSINESS CASES FOR BGI AND BEGIN

Many business cases for BGI arise from diverse project objectives. For example, BEGIN's Bergen and Bradford projects that improve transport and promote active mobility will also bring numerous opportunities for 'mainstreaming' BGI as part of new or modified infrastructure.

In BEGIN, the emphasis is on exploiting the opportunities from social innovation, i.e. looking for new and different ways of delivering BGI that involve communities and people. These can support a 'business case' for new or modified infrastructure by including innovations. Such innovations may originate from enterprises[6] or from professionals, or from educational and other social services traditionally associated with the public sector. For example, the growth of crowd funding for smaller BGI and similar projects, is engaging a wider range of communities and and organisations[12].

12 *More examples are provided in: McQuaid S., Nua. I. (2020). Financing and Business Models Guidebook. Connecting Nature. ISBN Number: 978-1-9161451-9-1. https://connectingnature.eu/financing-and-business-models.*

The use of BGI may require each participant to re-appraise their approach and attitude to accepting, planning, engaging with, and utilising multi-functional BGI. Bringing water infrastructure to the surface from below ground through, for example not using pipes or by opening watercourses can provide new or enhanced green[6] and blue spaces[13]. This potentially engages and benefits many more participants, who can contribute ideas for the acceptability, use, and in some cases, maintenance of these systems.

Managing water and using BGI on the surface means that there are many more BGI related options for delivering change in urban areas. There is, however, a need to ensure that the ideas and views of the public are heard alongside those of professionals, entrepreneurs and other established decision makers. Harnessing social trends can promote social innovation[6]. For example, the growing interest in delivering health and wellbeing outcomes from high quality green space over the last decade or more, have been re-emphasised by the Covid-19 pandemic. This provides an 'open-door' for BGI as a means of supporting the delivery of these outcomes[14].

Perhaps one of the simplest examples of where social innovation can be effective is public parks. How a park is managed can bring significant wider benefits by, for example, preventing runoff of surface water from hard or soft surfaces, helping to reduce downstream flood risk[15]. A park also provides many and varied benefits to nearby residents and visitors, for example for sports and recreation[16]. Social innovation can enhance the value from parks and other green space, and can be an important part of a wider catchment or urban planned approach.

13 *Environment Agency (2020). The social benefits of Blue Space: a systematic review. October. ISBN: 978-1-84911-461-5.*
14 *See for example Carmona M. (2019) Place value: place quality and its impact on health, social, economic and environmental outcomes, Journal of Urban Design, 24:1, 1-48, DOI: 10.1080/13574809.2018.1472523*
15 *Kelly D A., (2016). Impact of paved front gardens on current and future urban flooding. J Flood Risk Management 11 (2018) S434–S443. DOI: 10.1111/jfr3.12231.*
16 *https://www.london.gov.uk/what-we-do/environment/parks-green-spaces-and-biodiversity/green-infrastructure/natural-capital-account-london*

We have identified four recommendations for developing business cases for BGI as shown in Figure 3:

Figure 3: Recommendations for developing business cases for BGI

These recommendations are based on literature and published research, supported by engagement with the BEGIN beneficiaries. The four recommendations are supported with practical advice and backed up with evidence from the BEGIN partners and their pilot projects, with other evidence used where appropriate.

Photo: Pond dipping platform at Aberdeen's Maidencraig Flood Management Wetland Scheme

RECOMMENDATION ONE
Define the vision and expected outcomes

THE CHALLENGE:
To make a compelling case, it is important that there is a shared understanding of, and vision for, what should be achieved.

As well as having a clear strategic objective, it is important to understand the context and drivers for change, which may vary between the different stakeholders in your project. The starting point should be defined, how this may change in the future, and what alternatives are available for moving from the current situation to the desired outcome.

The baseline situation needs to be characterised clearly. Whilst this should obviously take account of the existing situation, it should also consider what is likely to happen in the absence of any intervention, i.e. the 'do nothing' situation. This should encompass population, climatic and social changes[6] such as moves away from motorised transport.

Different options, or scenarios for moving from the existing situation to the desired outcome can then be defined, considered and assessed, taking advantage of the social innovation opportunities that using BGI can bring. This will necessitate listening to a wide group of actors to elicit innovative measures and outcomes at all scales, from a small area to entire cities or catchments. Innovation often involves understanding the needs of stakeholders, and developing and modifying the expected outcomes so that these needs, as well as your own priorities, can be met.

HOW TO DO IT:

It may help to start with the baseline. This can be characterised in terms of:

- Existing land use and BGI -type, extent, quality
- How BGI and other land is currently used, for example for recreation, biodiversity
- How the land use is perceived by different social groups, and
- Other aspects relevant to the project, for example current pollution levels, flood risk, water availability and quality.

It may also be useful to consider the 'traditional' (grey) option[6] and how this would perform regarding the desired vision, to represent what has been done in the past[17].

Depending on the nature of the objective(s), or desired outcome(s), the use of BGI can be explored together with stakeholders, perhaps supported by scenario planning. A broad range of objectives may be relevant to the project, particularly for 'multi-functional' schemes or where the project is part of a wider strategy or masterplan. These could relate to meeting statutory or policy requirements for example in:

- land use planning;
- enhancing health and well-being;
- supporting sustainable housing/economic growth;
- engaging communities;
- reducing flood risk through improved surface water management;
- improving water quality;
- contributing to climate change resilience;
- improving connectivity or enhancing the sustainability of transport links.

Social capital (the networks of relationships among people who live and work in a particular society, enabling that society to function effectively) may be an important objective, and an outcome from the social innovation process. Valuation tools including B£ST and TEEB (Box 1) explicitly show how much social capital an option may provide.

Box 1: Examples of valuation tools

CIRIA's B£ST (Benefits Estimation Tool: Valuing the Benefits of Blue Green Infrastructure) is one tool that has been used by some of the BEGIN City Partners to help identify, assess and value the impacts of BGI.

B£ST is based on a systematic consideration and screening of around 20 different benefits, including flood risk, carbon, recreation, biodiversity and health. It is available from https://www.susdrain.org/resources/best.html

TEEB is a Dutch tool that provides a quick insight into the value of greenery and water in the city. Users can see the effect of different options and compare the value of these in Euros. It is available from http://www.teebstad.nl/

Quantifiable outcome indicators should be considered and may include value for money, enhanced well-being, improved water quality or reduced flood risk.

The different options that could deliver outcomes, in whole or in part, can then be explored. Consideration of the 'do nothing' case is important as the options should be compared against this. It is useful to consider more than one option. The options should be notably different, for example green option, grey option, so that their impacts can be distinguished, compared and considered in dialogue between stakeholders regarding needs and opportunities.

The Covid-19 pandemic has demonstrated the need to plan for the unexpected, the longer term and a different type of resilience[18]. How the delivery of the expected outcomes into the future over the lifetime of the scheme will be sustained needs to be considered carefully. Some options will be more robust than others under a range of possible future scenarios.

For many projects, implementation is likely to be phased or undertaken in stages. The business

17 *'Hamann F., et al. (2020). Valuing the Multiple Benefits of Blue-Green Infrastructure for a Swedish Case Study: Contrasting the Economic Assessment Tools B£ST and TEEB. ASCE J. Sustainable Water Built Environ. 6(4): 05020003. DOI: 10.1061/JSWBAY.0000919 https://ascelibrary.org/doi/abs/10.1061/JSWBAY.0000919.*

18 *'Ashley R M. (2020). Changes in the way we live and value urban spaces. J. Delta Urbanism. Vol 1, No 1 (2020) [Premises]. ISSN: 2666-7851. doi.org/10.7480/jdu.1.2020.5456.*

case should show this clearly, including consideration of the effects of deferring any aspects of the project. This could include reduced up-front capital costs or delayed benefits.

HARNESSING AND EMBEDDING SOCIAL INNOVATION:

Social innovation promotes the widest possible engagement with various stakeholders and actors at the earliest stage of planning BGI. This includes identifying the needs and opportunities for change from the outset. The vision and expected outcomes should be explored, co-developed, and analysed collectively with a wide range of relevant stakeholders. All opportunities, needs and interests should be considered, and potential conflicts identified and mitigated[6]. Societal and environmental aspects of the project should be effectively brought together with the technological capabilities, requirements and economic considerations of responsive options.

ILLUSTRATIVE EXAMPLES

Image courtesy of City of Bergen

CITY OF BERGEN

The city goals and masterplans have been developed with and for citizens, developers, professionals, and networks dealing with urban planning and climate adaptation, and include local and national politicians. The masterplans for the urban development of the city set the scene for the local strategy for the transformation of a former transportation and industrial area (Mindemyren) into a liveable neighbourhood comprising housing, offices, businesses, public space and municipal services. The baseline is to consider change without the BGI vision. Business as Usual for Mindemyren would leave the drainage channel buried and not take advantage of the co-benefits of integrating BGI into the area to achieve many social, environmental and economic outcomes.

Image courtesy of Agneta Dellefors

CITY OF GOTHENBURG

'Rain Goteborg' is an illustration of how Social Innovation can be at the heart of a strategy[19] that includes BGI: *"We always highlight rain from architectural, social, cultural and climate-related perspectives when developing the city's infrastructure"*. As part of the City's 400th anniversary there is an initiative to create social, cultural and ecological meeting places. Residents requested that blueways and greenways should make it easier for people to get around and meet, enabling them to relax, enjoy culture and nature. These green and blue corridors are exploiting the benefits of BGI and fit into the city flood management masterplan – TTÖP, which provides guidelines for urban planning that will make Gothenburg more flood resilient. This is used to address local flooding problems, such as in Brettegatan, where it is proposed to utilise sports pitches as temporary flood storage areas, instead of constructing or enlarging underground drainage.

19 *http://www.goteborg2021.com/en/jubileumsprojekt/rain-gothenburg-2/*

Photo: Gothenburg's Jubilee Park by ©Marie Ulnert

RECOMMENDATION TWO
Identify and assess all relevant impacts

THE CHALLENGE:
How to identify who or what is impacted and how

Each option will have positive and negative impacts in terms of outcomes[20], benefits and costs. Some of these may be small or temporary and therefore have no, or only a marginal impact on the decision. Other impacts relating to the objective of the scheme will be more significant or longer lasting. It is important to consider all potential impacts, even those that may be difficult to measure. Where possible it is important to identify who, or which groups will be impacted. Impacts across the whole life of the scheme even into an uncertain future, including operation and maintenance, should be considered. This will facilitate well-informed, comprehensive business cases and ensure that positive impacts and outcomes are maximised as well as the mitigation of negative impacts and compensation of those adversely impacted.

A comprehensive consideration of impacts also helps to focus the assessment and business case on the most significant impacts. For example, if the main purpose of the business case is to support a funding bid, the impacts relevant to this may be prioritised. There are numerous frameworks available for considering the range of relevant impacts, including ecosystem services, natural capital accounting and social value[21]. Note that some benefits may be secondary to the main objective but should still be considered. For example, surface water management leading to groundwater recharge in drought prone areas.

HOW TO DO IT:

Consider four key questions:

1. What is the resource, good or service under consideration, for example a channelised watercourse that could be re-naturalised?
2. How will the resource, good or service change - how will it be impacted for example, improve or deteriorate relative to the baseline over the life of the scheme?
3. Who needs to be considered, in terms of gains and losses, for example the scheme promoter and/or 'active' or 'passive' visitors, residents, local businesses?
4. How will each of the impacts be assessed, for example in qualitative or quantitative terms, monetised where possible?

Box 2 shows an example of an initial, qualitative assessment *(using B£ST)* of some potential impacts associated with two different options:

- **Option 1:** Do nothing/retain grey infrastructure
- **Option 2:** Retrofit nature-based solutions

20 *'Each option will have different technical outcomes, costs and multiple benefits. Although it is normal to set a technical outcome, like no flooding for a once in 100-year storm, each option will fulfil this to differing degrees and have different costs as well as other benefits.*
21 *See for example https://capitalscoalition.org/*

Box 2: Example qualitative assessment

OPTION 1: *Do nothing*

OPTION 2: *Retrofit NbS*

Main benefits	OPTION 1	OPTION 2
Air quality	-	++
Biodiversity	-	+
Flood risk	-	+
Amenity	--	++

Images courtesy of Don Albrecht; Ireland Albrecht Landscape Architects

HARNESSING AND EMBEDDING SOCIAL INNOVATION:

Social innovation requires an extensive assessment of impacts on the different stakeholders involved, working with them and those affected. Negative impacts should be mitigated where possible and the benefits maximised. Factors to consider may include the required amount of physical space needed and the multifunctional use of spaces. For example, there may be an issue with 'reserving' land to avoid further development in future for landowners and interested parties. By utilising social innovation this can ensure co-creative collaboration, joint working and support the discovery of ways to deliver more social impact than may have initially been planned.

ILLUSTRATIVE EXAMPLES

Image courtesy of City of Antwerp

CITY OF ANTWERP

The BGI project involves de-paving and renewing the entrance zone for Sint-Anneke Plage, Gloriantlaan. This was part of the project to raise one of the banks of the Scheldt river for flood protection against sea level rise.

Potential stakeholders were invited to participate in a design sprint week and residents were subsequently invited to view the results of a professional assessment, enabling all relevant impacts to be shared and the most important identified for further follow-up. The vision of the City Water plan has been applied in this project, and has informed the production of flood hazard maps, heat stress maps, maps on groundwater levels, drought hazard maps and green space planning.

Image courtesy of City of Bradford

CITY OF BRADFORD

The plan to naturalise Bradford Beck through the removal of a dilapidated culvert and the creation of a linear park has been identified as a major co-benefit of a highway renovation scheme. In order to attract funding, structured business plan(s) were required, targeted at funder(s) opportunities. Relevant impacts encompassed improved traffic flows, flood risk reduction, ecological, amenity and health improvements, and economic benefits. Additional improvements created by increasing the length of channel will greatly enhance the value of the green space and provide an asset for future generations.

Image courtesy of London Borough of Enfield

LONDON BOROUGH OF ENFIELD

A Local Flood Risk Management Strategy was developed which provided the opportunity to identify potential projects which could be developed to sustainably manage flood risk across the borough. A categorisation was made which showed what additional benefits would be achieved by each project. Individual projects have been delivered by exploring which additional benefits can be realised and developing appropriate funding models and partnership approaches for each project.

Support has been secured for funding, expertise and delivery from charities, regional and national governance organisations, water and wastewater companies and corporate and social investments. A key component of each project is that it is designed to be appropriately incorporated into the existing character of the surroundings and involve community groups such as friends of parks, schools and environmental interest groups.

Photo: Antwerp's urban living lab by ©FrederikBeyens

RECOMMENDATION THREE
Develop an evidence-based BGI business case

THE CHALLENGE:
The proposed interventions need to be justified

Each business case will be subject to scrutiny, potentially by decision makers or policy makers who may be unfamiliar with the benefits of BGI. It is therefore important to use appropriate, relevant and robust evidence and to provide a clear audit of how it has been assembled, analysed and used. The evidence used will be different in each case, and effort may be needed to collect or source important evidence. Assumptions should be recorded and justified, and evidence used should be tailored to reflect:

- the availability of relevant information;
- the nature and importance of the business case and decision to be made; and
- the type and extent of impacts being assessed.

There may also be a need to provide different business cases, or justifications for different interested parties even for the same scheme.

Numerous support tools, methods and approaches are available, many of which can be used to support quantification of the impacts, such as surveys and hydraulic models. They can provide indicative information about the monetary (for example TEEB and B£ST, Box 1[22]) or other valuations used for the main impacts, which may be particularly important in supporting the business cases.

HOW TO DO IT:

Partners and key stakeholders will be essential in identifying evidence to support the business cases. Working together, it is useful to gather relevant evidence, and to identify the most appropriate methods to use, including any specific models or tools. A proportionate approach should be taken to focus on evidence around those impacts of most significance.

Whilst it may be appropriate to use evidence that you are comfortable with, such as tools and modelling approaches you have used successfully in the past, it is also important to ensure that, given the innovative nature of most BGI schemes, the evidence utilises new ways of thinking, approaches and tools. Remember to record evidence and any assumptions made, particularly where evidence is lacking in clarity or likely to be disputed, so it can be scrutinised later if necessary. Once all impacts have been assessed, they will need to be aggregated across different cost and benefit categories, across relevant impacted populations and over time.

Finally, be explicit about any uncertainties but seek to take account of these where possible. This can be as simple as using ranges of estimates for different impacts, through to sensitivity testing or full multi-criteria or scenario analysis.

22 *Oijstaeijen W van., et al., (2020). Urban green infrastructure: A review on valuation toolkits from an urban planning perspective. J. Environmental Management, 267 (2020) 110603. https://doi.org/10.1016/j.jenvman.2020.110603*

HARNESSING AND EMBEDDING SOCIAL INNOVATION:

Evidence of how BGI is used by communities, groups and interested parties and the benefits received can strengthen business cases. Aspects such as increased activity, better health, inclusion and community strength are particularly important in successful implementation and scalability of BGI business cases[23]. Stakeholder engagement can be used to provide evidence, for example by defining outcome indicators or identifying the extent and use of BGI. This also extends to potential funders. In the Mayesbrook Park case[22], in addition to the flood risk funding agencies, significant funds were provided by an insurance company as well as local enterprises in recognition of the social benefits.

ILLUSTRATIVE EXAMPLES

Image courtesy of Mecanoo.nl

CITY OF DORDRECHT

The plan is to create a City Park, by transforming loosely connected green and sporting areas into a vibrant, urban blue green corridor, from the north to the south of the city. Evidence has been obtained by working together with the National Institute for Public Health and the Environment. The key evidence for the co-benefits have been obtained using the national Green Benefit Planner[24]. This helped quantify: CO2 capture; avoided flood damage; decrease in air pollution; value in health benefits; value in cycling benefits (avoided car accidents); and increase in property prices.

Image courtesy of Kent County Council

COUNTY OF KENT

Two cases of local flood risk management have been assessed and BGI schemes constructed. The key evidence utilised: Community surveys; Hydraulic modelling; B£ST benefits assessment; and sharing this with the communities and listening to feedback. B£ST provided the means to assess costs and benefits. Other impacts included loss of car parking, visual and open space issues and maintenance responsibilities, for which qualitative information was used.

23 *Mayesbrook Park in East London is one of the first examples of application of Ecosystem Services valuation as part of a business case to manage flooding and promote social inclusion. In the business case 93% of the financial benefits were estimated for cultural services (publications.naturalengland.org.uk/file/12352252).*
24 *https://publicwiki.deltares.nl/display/AST/Green+benefits*

RECOMMENDATION FOUR
Communicate clearly

THE CHALLENGE:
Ensuring appropriate communication with relevant stakeholders

The method of communication and the level of detail of information provided is likely to vary depending on the target audience, which could be internal to the organisation and/or external. For example, an economic business case may need to show how the proposal represents the best value to society (Box 3 and Figure 4), whilst a management business case may need more focus on monitoring and evaluation.

Different approaches to presentation can be used, for example reports, infographics, professional publications, booklets, articles, maps, media coverage, community events, presentations and videos. In all cases, it is essential to be transparent and clear, engaging all relevant stakeholders, including funders and communities. Information and outputs should be presented in such a way that they can be easily understood by the intended audience, for example using visual aids.

Box 3: How is value defined?

Value can be reported in terms of the relative scale of benefits and costs. Indicators used to support a business case could include benefit cost ratio (BCR) (the ratio of benefits to costs), net present value (NPV) (benefits minus costs) and the internal rate of return (IRR) (the rate of return needed to ensure NPV is positive).

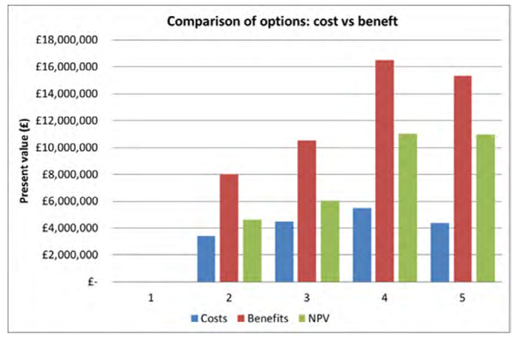

Figure 4: An example of a chart comparing costs, benefits and Net Present Value of different options

HOW TO DO IT:

There is no right, or wrong way of presenting and communicating information. Instead, there are broad principles to follow, including tailoring the message to the audience, being clear, open and honest about the findings of the assessment, and providing opportunities for relevant stakeholders to feedback and contribute to the process, for example by contributing new evidence.

Some stakeholders may need to see clear economic or financial information, for example monetised impacts, key criteria like Net Present Value (NPV), or a representation of how benefits accrue to different project criteria (Figure 5[25]).

25 *Defra et al., (2018). Working with Natural Processes – Evidence Directory. SC150005. Environment Agency UK. https://assets.publishing.service.gov.uk/media/6036c5468fa8f5480a5386e9/Working_with_natural_processes_evidence_directory.pdf*

Other stakeholders may be more amenable to qualitative or descriptive explanations. Both are relevant to, and can inform, the business case. Other aspects to consider in the reporting phase include the treatment of uncertainty, the distribution of costs and benefits, how the project or scheme could be funded and will be maintained over time.

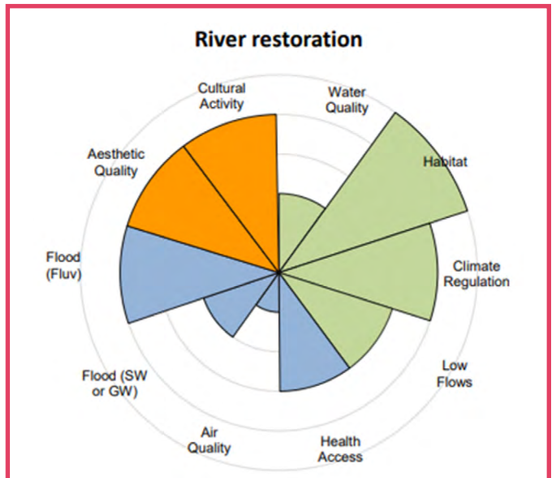

Figure 5: Example of a benefit wheel demonstrating the multiple benefits of a river restoration project

HARNESSING AND EMBEDDING SOCIAL INNOVATION:

Social innovation in reporting and communication can include innovative ways to share good news, and success, for example using social and traditional media, community groups and local champions. Involvement should include as wide a group of citizens and stakeholders as possible and should ensure continuity of activities. People can be the best ambassadors in this context. This is especially the case if they have also been involved with the collection of information, data and values in the early stages of developing the business case. A participatory approach does not only improve the quality of the results but also can create a shared ownership of the results, allowing for more cooperation and less resistance during the implementation of the BGI.

ILLUSTRATIVE EXAMPLES

Image courtesy of City of Hamburg

CITY OF HAMBURG

The Falkengraben Project is a flood protection/water quality improvement scheme in a small catchment. It is aimed at a number of key stakeholders: district authorities, nature conservation groups, water authorities, and city planners. Developing the appropriate form of communication with and between these stakeholders has been important. This required engagement with administrative water professionals as well as the district administration board. Evidence through state-of-the-art hydraulic analysis of the scheme is key to its acceptance, whilst building and maintaining internal knowledge is seen as highly beneficial.

Image courtesy of City of Aberdeen

CITY OF ABERDEEN

The scheme includes the construction of a safe walking and cycling route to school from a housing development at Maidencraig to Hazlehead Academy and Primary schools. This is a flood risk reduction scheme using BGI in line with the planning conditions which form part of the Maidencraig housing development. The engagement needed to address the specific requirements of the regulatory and funding standards included consultation with SUSTRANS[26], the developer (and part-funder) and the local authority. The outputs also needed to demonstrate compliance with the North East Local Flood Risk Management Plan and local planning policy.

At the beginning of the project, Aberdeen City Council formed a working group involving several external organisations. Meetings were held monthly and a broad range of knowledge and experience was shared.

Image Courtesy of the City of Ghent

CITY OF GHENT

Climate change adaptation is one of Ghent's priorities. Ghent aims to prepare for and adjust to expected effects of climate change (extreme heat periods, heavy downpours, long-lasting droughts, sea level rise) to ensure that by 2030, Ghent is climate-robust.

For this, the city is working on the realisation of 8 green climate axes that connect the outer city with the inner city. These are ecological and recreational connections between the rural area and the city centre. They bring green spaces to the densely built urban areas, providing cooling and ventilation, mitigating urban heat stress, helping prevent drought and flooding. The green axes have an important role as nature connections (fauna and flora). They also provide a continuous and comfortable bicycle and pedestrian path between the city centre and rural areas.

26 *The UK charity dedicated to making walking and cycling easier and better: https://www.sustrans.org.uk/*

SUMMARY

Although the multiple benefits BGI can bring are becoming more understood, even within the general population, valuing these benefits in financial or economic terms has only been undertaken relatively recently. Including this valuation in business cases can provide cities and BGI proponents with vital evidence to help engage and persuade decision makers and professionals, as well as communities that blue and green infrastructure is the best option for enhancing urban spaces. Although developing business cases and justifications often requires a significant amount of work in understanding the physical performance and translating these into the widest range of benefits, it is part of the essential social innovation process necessary for ensuring that the best possible options are selected for enhancing our urban areas.

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ACKNOWLEDGEMENTS

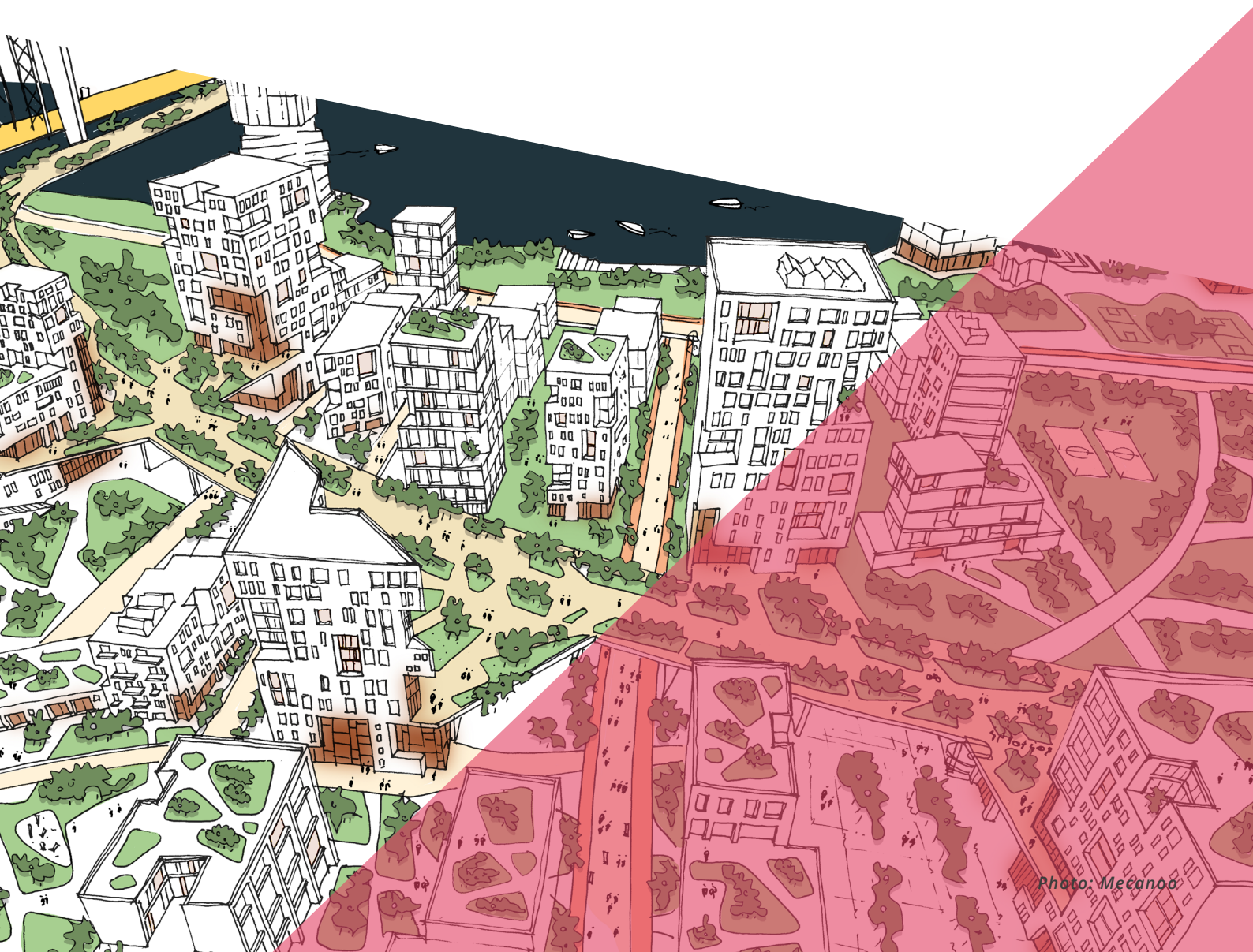
We would also like to thank the BEGIN city partners for their input particularly during the online meetings in October 2020 and March 2021.

THE BEGIN PARTNERSHIP

Belgium: City of Antwerp; City of Ghent
Germany: Agency for Roads Bridges and Waters, Hamburg; Hamburg University of Technology
The Netherlands: City of Dordrecht; IHE Delft; Erasmus University Rotterdam
Norway: City of Bergen
Sweden: City of Gothenburg
United Kingdom: Construction Industry Research Information Association (CIRIA); City of Bradford Metropolitan District Council; Kent County Council; Aberdeen City Council; Enfield City Council; Royal College of Arts; University of Sheffield

REFERENCE THIS DOCUMENT

Horton, B., Ashley, R., Shaffer, P., Walker, L., van Herk, S. (2021) *Social Innovations for Delivering Blue and Green Infrastructure: Developing a Compelling Business Case.*



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