Environmental Impact Assessment [version 1.0]

Extension of We Can Make area of operation	
Project stage and type: ☐ Initial Idea Mandate ☐ Outline Business Case ☒ Full Business Case	
☐ Policy ☐ Strategy ☐ Function ☐ Service ☒ Other [please state]	☐ New ☐ Changing ☒ Already exists / review
Directorate: Growth and Regeneration	**Lead Officer name:** Louise Davidson
Service Area: Housing Delivery	**Lead Officer role:** Head of Housing Delivery

Step 1: What do we want to do?

The purpose of this Environmental Impact Assessment is to help you develop your proposal in a way that is compliant with the council's policies and supports the council's strategic objectives under the One City Climate Strategy, the One City Ecological Emergency Strategy and the latest Corporate Strategy.

This assessment should be started at the beginning of the project proposal process by someone with a good knowledge of the project, the service area that will deliver it, and sufficient influence over the proposal to make changes as needed.

It is good practice to take a team approach to completing the Environmental Impact Assessment. See further guidance on completing this document. Please email environmental.performance@bristol.gov.uk early for advice and feedback.

1.1 What are the aims and objectives/purpose of this proposal?

Briefly explain the purpose of the proposal and why it is needed. Please use plain English, avoiding jargon and acronyms.

The proposal seeks approval to apply to the Secretary of State to request an extension of the area of operation of the We Can Make project to cover all of the wards in South Bristol. This will enable more opportunities for community-led development of sustainable affordable homes on under-used Council house garden land, building on existing community support networks.

1.2 Will the proposal have an environmental impact?

Could the proposal have either a positive or negative effects for the environment now or in the future? If 'No' explain why you are sure there will be no environmental impact, then skip steps 2-3 and request review by sending this form to environmental.performance@bristol.gov.uk

If 'Yes' complete the rest of this assessment.

☒ **Yes** ☐ **No** [please select]

1.3 If the proposal is part of an options appraisal, has the environmental impact of each option been assessed and included in the recommendation-making process?

If 'Yes' please ensure that the details of the environmental impacts of each option are made clear in the pros and cons section of the project management options appraisal document.

☐ **Yes** ☐ **No** ☒ **Not applicable** [please select]

If 'No' explain why environmental impacts have not been considered as part of the options appraisal process.

Step 2: What kinds of environmental impacts might the project have?

Analysis of impacts must be rigorous. Please demonstrate your analysis of any impacts of the proposal in this section, referring to evidence you have gathered. See detailed guidance documents for advice on identifying potential impacts.

Does the proposal create any benefits for the environment, or have any adverse impacts?

Outline any potential benefits of the proposal and how they can be maximised. Identify how the proposal will support our corporate environmental objectives and the wider One City Climate and Ecological Emergency strategies.

Consider how the proposal creates environmental impacts in the following categories, both now and in the future. **Reasonable efforts should be made to quantify stated benefit or adverse impacts wherever possible.**

Where the proposal is likely to have a beneficial impact, consider what actions would enhance those impacts. Where the proposal is likely to have a harmful impact, consider whether actions would mitigate these impacts.

Enhancements or mitigation actions are only required when there is a likely impact identified. Remember that where enhancements or mitigation actions are listed, they should be assigned to staff and appropriately resourced.

GENERAL COMMENTS (highlight any potential issues that might impact all or many categories)		
ENV1 Carbon neutral: Emissions of climate changing gases BCC has committed to achieving net zero emissions for its direct activities by 2025, and to support the city in achieving net zero by 2030. Will the proposal involve transport, or the use of energy in buildings? Will the proposal involve the purchase of goods or services? If the answer is yes to either of these questions, there will be a carbon impact. Consider the scale and timeframe of the impact, particularly if the proposal	**Benefits**	The aim is to develop additional affordable homes on under-used Council-owned plots of land in existing urban residential neighbourhoods. Houses will be developed by 'We Can Make' and not BCC. This type of 'soft densification' infill development enables adaptation of existing housing stock to add resilience, increase density, and make efficient use of existing urban infrastructure (roads, services etc). It thereby provides an alternative to more carbon intensive new build on greenfield sites.
	Enhancing actions	A design code has been developed with Bristol City Council Design team input to ensure the design quality and suitability of the developments for constrained urban garden plots. The developments will be subject to BCC planning policies relating to heat hierarchy, reducing emissions and waste and encouraging sustainable transport. The production of components and construction approach and the design of the units is intended to be more sustainable and less impactful on the environment than traditional construction methods.
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**

will lead to ongoing emissions beyond the 2025 and 2030 target dates. Further guidance ☐ **No impact**	**Adverse impacts**	There will be a carbon impact during production of pre-fabricated components for the buildings, from construction processes and over the life time of the dwellings once in use.
	Mitigating actions	Energy efficiency: The dwellings have been designed to exceed Building Regulations requirements (Part L1A 2013) and to maximise energy and CO2 reduction through demand reduction measures including a combination of passive design measures (e.g. building design and efficient building fabric) and building services such as – Decentralised Mechanical Extract Ventilation (dMEV), low energy LED fittings throughout. Renewables and heating: There will be a 20.53% saving on typical energy use per home through the use of solar electricity generation and heating using air source heat pumps. This equates to 1.9 tonnes per annum. Solar generation will be reduced if panels are shaded at certain times of day. Embodied emissions: There will be a 50% reduction in embodied emissions for MMC modules than for typical construction materials. Initial embodied carbon analysis shows that incorporation of bio-based materials within the MMC system means the construction of the homes will be carbon negative (more carbon is sequestered than emitted) Travel: Prefabricated units are constructed locally reducing the need for long distance transport of materials. Once in use the provision of bike sheds and EV charging facilities are designed to encourage zero carbon transport.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
ENV2 Ecological recovery: Wildlife and habitats BCC has committed to 30% of its land being managed for nature and to halve its use of pesticides by 2030. Consider how your proposal can support increased space for nature, reduced use of pesticides, reduce pollution to waterways, and reduce consumption of products that undermine ecosystems around the world. If your proposal will directly lead to a reduction in habitat within Bristol, then consider how your proposed	**Benefits**	The use of existing under used garden land for housing makes best use of existing developed land and reduces the need to develop on greenfield sites or sites that are currently providing habitat for wildlife and bio diversity.
	Enhancing actions	Development of the micro-sites includes landscape and planting of micro-site and host home to enhance wildlife habitats and support biodiversity. This includes bio-diverse planting, bin and bike stores with green roofs, and wildlife supporting kits including bug hotels, hedgehog homes, and sensors to remind people to water thirsty plants. The aim is both to create new homes that make space for nature, improve existing gardens, and build people's connection and confidence to engage with nature through training, and community events.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	

mitigation can lead to a biodiversity net gain. Be sure to refer to quantifiable changes wherever possible. Further guidance ☐ **No impact**	**Adverse impacts**	Existing gardens will be developed which could impact wildlife and bio diversity of those gardens.
	Mitigating actions	The new dwellings and host home will have garden space retained and the aim is to facilitate more effective management of the remaining garden space. Garden areas will be improved and appropriate species of plants provided as well as green roofs to bin/bike stores. Development will be subject to BCC planning policies relating to ecological assessment of proposed development, wildlife preservation and bio diversity.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
ENV3 A cleaner, low-waste city: Consumption of resources and generation of waste Consider what resources will be used as a result of the proposal, how they can be minimised or swapped for less impactful ones, where they will be sourced from, and what will happen to any waste generated Further guidance ☐ **No impact**	**Benefits**	The project promotes reuse of existing land rather than development on new sites. Waste reduction is an important principle of the We Can Make project both in terms of the construction approach and use of the dwellings.
	Enhancing actions	On site use of MMC will reduce on site waste and pollution during construction process. Engagement with neighbours, adequate sound insulation of new homes, shorter construction times and compliance with Considerate Constructor guidance will minimise the risk of noise or dust nuisance.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
	Adverse impacts	Construction processes create waste and consume resources. Additional homes also have potential to contribute to waste and consumption of materials.
	Mitigating actions	The prefabricated units will be produced locally in the We Can Make factory, reducing construction waste from traditional build. The proximity of the sites to the host homes will be an important driver to minimise construction waste and disruption. Recycling facilities will be provided and waste reduction encouraged for residents.
	Persistence of effects: ☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**	
ENV4 Climate resilience: Bristol's resilience to the effects of climate change Bristol's climate is already changing, and increasingly	**Benefits**	The project provides an alternative to the impact of new build development on greenfield sites and makes use of existing sites where the risks of flooding are better understood.

frequent instances of extreme weather will become more likely over time. Consider how the proposal will perform during periods of extreme weather (particularly heat and flooding). Consider if the proposal will reduce or increase risk to people and assets during extreme weather events. Further guidance ☐ **No impact**	**Enhancing actions**	Whilst it does remove some garden land the provision of green roofs on bin/bike stores and suitable planting aims to enhance the garden spaces and improve drainage.
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**
	Adverse impacts	By increasing density of development there is potential that the project increases the burden on existing drainage infrastructure and the likelihood of surface water flooding. Tight proximity of host home to new dwelling may impact shading and increase potential for over heating.
	Mitigating actions	These aspects will be considered through the development management process. Design features and local understanding of existing impacts of sunlight/shading/surface water will aid design to maximise benefits and minimise risks. The modular micro-homes units are designed to make it easy to clip on shade canopies where needed. Permeable surfaces for parking areas and green roofs to bike/bin stores will reduce surface water run-off. Use heat mapping software (Keep Bristol Cool) to help inform planning process.
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**
Statutory duty: **Prevention of Pollution to air, water, or land** Consider how the proposal will change the likelihood of pollution occurring to air, water, or land and what steps will be taken to prevent pollution occurring. Further guidance ☐ **No impact**	**Benefits**	The homes will be developed to connect into existing services and production of components will take place locally.
	Enhancing actions	By localising the construction process the transport emissions will be greatly reduced.
	Persistence of effects:	☒ **1 year or less** ☐ **1 – 5 years** ☐ **5+ years**
	Adverse impacts	The homes will require foundations which may disturb contaminated soils. The homes will also increase the amount of impermeable area impacting surface run-off
	Mitigating actions	The homes will be designed to be light-weight and use low-cement foundations where possible. This will minimise the amount of excavation required reducing the long-term impact on the soil. On-site water management techniques will be employed where possible such as water butts and attenuation tanks.
	Persistence of effects:	☐ **1 year or less** ☐ **1 – 5 years** ☒ **5+ years**

Step 3: Action Plan

Use this section summarise and assign responsibility for any actions you have identified to improve data, enhance beneficial, or mitigate negative impacts. Actions identified in section two can be grouped together if named responsibility is under the same person.

This action plan should be updated at each stage of the project. Please be aware that the Sustainable City and Climate Change Service may use this action plan as an audit checklist during the project's implementation or operation.

Enhancing / mitigating action required	Responsible Officer	Timescale
The developments will be subject to BCC planning policies relating to heat hierarchy, reducing emissions and waste and encouraging sustainable transport.		As projects progress
A design code has been developed with Bristol City Council Design team input to ensure the design quality and suitability of the developments for constrained urban garden plots.		As projects progress

Step 4: Review

The Sustainable City and Climate Change Service need at least five working days to comment and feedback on your impact assessment. Assessments should only be marked as reviewed when they provide sufficient information for decision-makers on the environmental impact of the proposal.

Please seek feedback and review by emailing environmental.performance@bristol.gov.uk before final submission of your decision pathway documentation[1].

Where impacts identified in this assessment are deemed significant, they will be summarised here by the Sustainable City and Climate Change Service and must be included in the 'evidence base' section of the decision pathway cover sheet.

Summary of significant beneficial impacts and opportunities to support the Climate, Ecological and Corporate Strategies (ENV1,2,3,4):
There will be long term beneficial impacts through the development of sustainable homes by We Can Make, planning policy and design guides will be used during the planning process to ensure the contractor deliver the sustainability standards they have set and to mitigate the short term negative impacts of construction.
Summary of significant adverse impacts and how they can be mitigated:
See above

Environmental Performance Team Reviewer: Nicola Hares – Environmental Performance Senior Officer	**Submitting author:** Bryony Stevens – Enabling Manager CLH Delivery
Date: 10/01/2024	**Date:** 11/01/24

[1] Review by the Sustainable City and Climate Change Service confirms there is sufficient analysis for decision makers to consider the likely environmental impacts at this stage. This is not an endorsement or approval of the proposal.