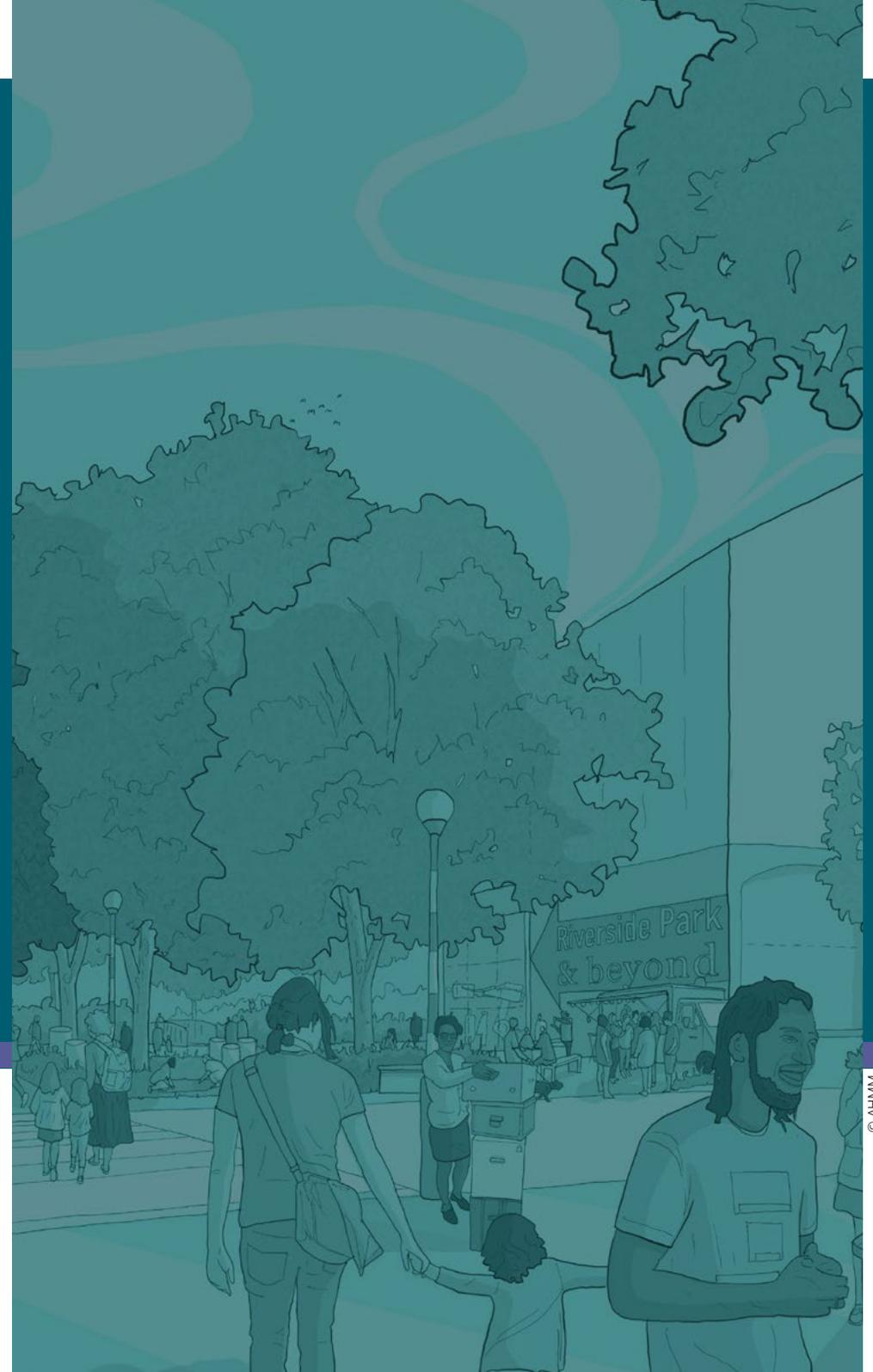




Frome Gateway

Health Impact Assessment

October 2023



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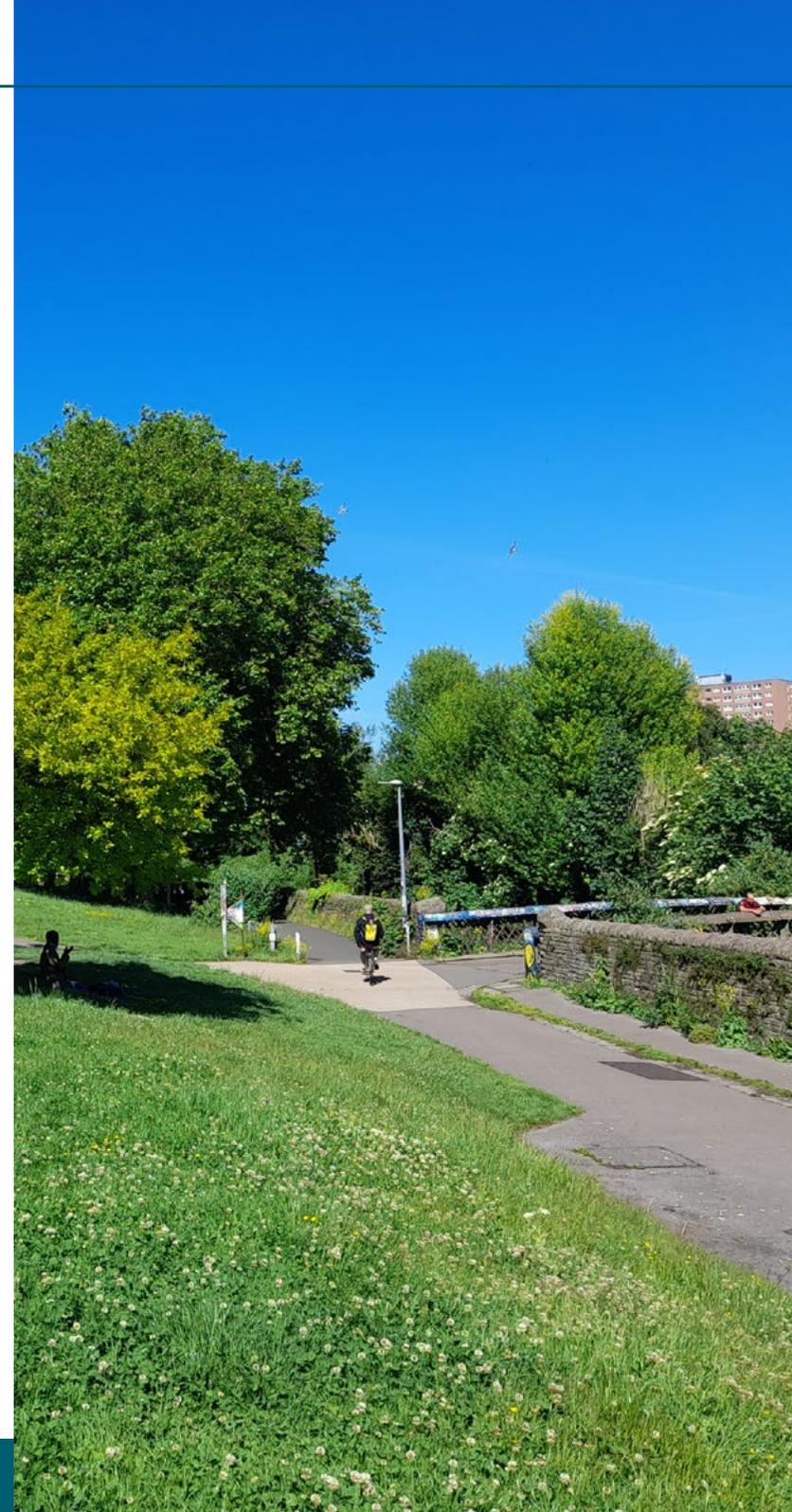
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1. Introduction



1. Introduction

1.1. The Frome Gateway Regeneration Project

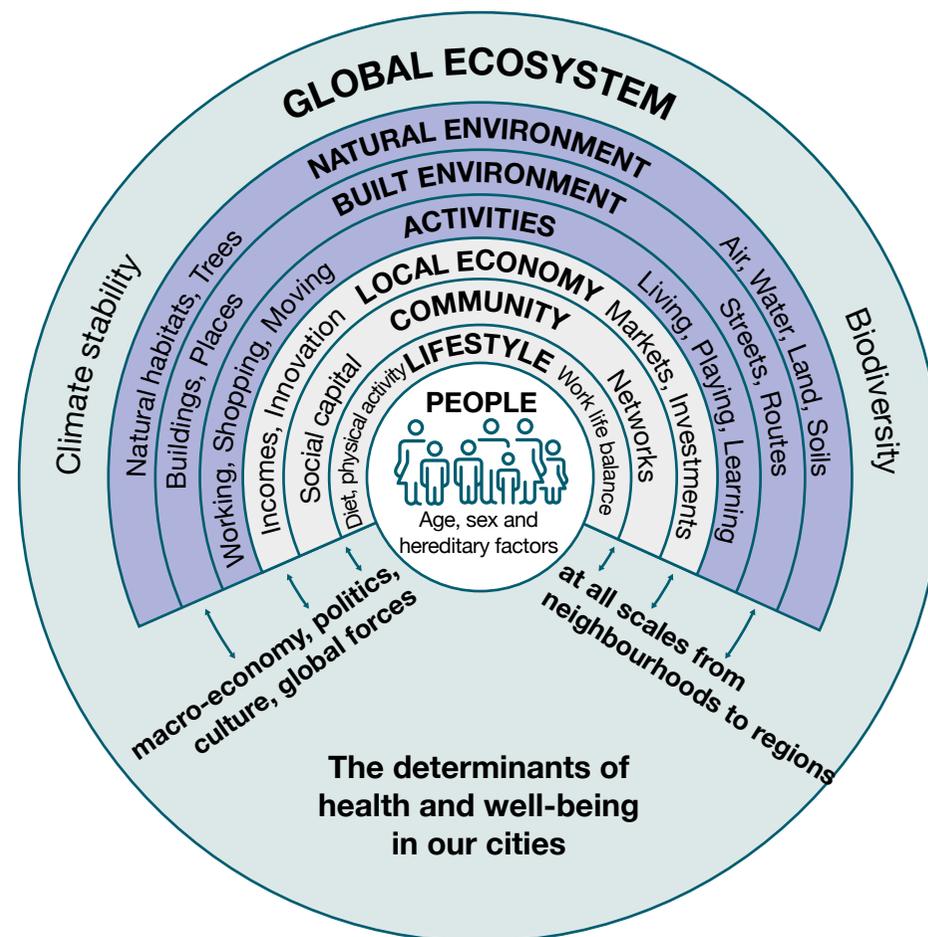
Bristol City Council (BCC) had produced a regeneration framework to set out a long-term vision and strategy for change in the area known as Frome Gateway in St Jude's. The ambition is to create new homes, jobs and public spaces that better meet the needs of the city and the local community.

BCC aspire for Frome Gateway to be a healthy and sustainable community which supports the health and wellbeing of existing local and future residents. This Health Impact Assessment (HIA) has been developed alongside the Frome Gateway regeneration framework to inform the regeneration initiatives for the Frome Gateway area in St Jude's, Bristol, to support positive health and wellbeing outcomes to the local community. It covers 11 built environment categories associated with health and wellbeing.

1.2. Health, wellbeing and the built environment

A range of personal, social, economic and environmental factors can influence health and wellbeing. These are known as the wider determinants of health, which go beyond access to healthcare, and involve issues including the built environment, housing, social connectedness, employment, income levels and access to greenspaces. These can be seen in Figure 1.

Figure 1: The Health Map Barton & Grant (2006) developed from a concept by Dahlgren and Whitehead (1991)



Frome Gateway will provide around 1,000 new homes for over 2,000 new residents, while the existing surrounding population is approximately 8,500 (within 300m of the regeneration area). Homes, workspaces, community, retail and leisure facilities, walking and cycling routes, green infrastructure and public realm enhancements can all influence health and wellbeing of people living, working, visiting and travelling through the area.

1.3. Purpose of the Health Impact Assessment

The purpose of this HIA is:

1. To distil public health priorities for the Frome Gateway area and make recommendations to help maximise positive health and wellbeing outcomes and minimise negative impacts. This should help to target investment and interventions.
2. To enable BCC to communicate the anticipated health and wellbeing impacts of the Frome Gateway regeneration framework.
3. To foster information sharing, transparency and collaborative working to support multiple stakeholders working towards improving the health and wellbeing of the community.
4. To directly inform site-specific HIAs (during the planning application process, for example).
5. To establish an evidence base and baseline understanding of the health and wellbeing of the existing Frome Gateway community to allow change over time to be understood.

1.4. Who is this for and how will/should it be used?

BCC is only one of many stakeholders who will drive change at Frome Gateway and is only one of around 30 landowners in the area. This HIA has been produced to enable all stakeholders to consider the health and wellbeing outcomes associated with a wide range of regeneration initiatives such as but not limited to:

- Bristol City Council teams
- Landowners, developers and their agents ('applicants')
- Built environment professionals (such as architectural and urban design teams)
- Businesses
- Community organisations
- Infrastructure providers



The HIA has resulted in recommendations for planning applications, and these should be considered by applicants and BCC during the planning process, alongside Bristol Local Plan policies. Emerging Local Plan Policy DS5 Frome Gateway should be read alongside this HIA. Other key policies in the emerging Local Plan are included within relevant sections of this HIA, and many issues are also included within emerging local plan policy DPM1: Delivering well-designed, inclusive places, and Policy HW2B: Health and development.

Important issues associated with the local context are outlined in Section 2, including demographic information, the socio-economic context, and the local health context.

The findings from the HIA process can be found in Section 3. This outlines important issues to be considered; how the framework is responding to promote healthy environments; requirements and expectations of applicants bringing forward planning applications for future development in Frome Gateway; and other strategic recommendations and actions that would maximise health and wellbeing benefits.

The findings from the social infrastructure assessment are contained within Section 4. This includes assessment of need for GP surgeries, schools, community spaces and greenspaces in and around the Frome Gateway area.

1.5 The HIA process

An initial desk based HIA was conducted in 2021, alongside work to compile a baseline analysis and understanding of the Frome Gateway area. This was based on the HUDU framework¹ and identified issues for consideration during development of the regeneration framework.

Health and wellbeing issues were considered throughout the development of the regeneration framework, as an iterative process, and this HIA reflects on the consultation version of the Frome Gateway regeneration framework. Contextual information (set out in Section 2) has informed the HIA, alongside site visits and engagement activities (see Statement of Community Involvement). Information from the HUDU framework document has been adapted and included in the HIA tables shown in section 3. It is based on 11 categories which are associated with health and wellbeing:

1. Housing design and affordability
2. Access to health and social care services and other social infrastructure
3. Access to open space and nature
4. Air quality, noise and neighbourhood amenity
5. Accessibility and active travel
6. Crime reduction and community safety
7. Access to healthy food
8. Access to work and training
9. Social cohesion and inclusive design
10. Minimising the use of resources
11. Climate change



The HIA was developed with BCC's Regeneration team, with support from BCC Public Health and the TRUUD research project (a five-year research project about healthy urban development, led by the University of Bristol, which involves Frome Gateway as a case study)². As part of the TRUUD collaboration, the Frome Gateway regeneration project has been used to pilot a new health economic impact tool: the HAUS (Health Appraisal of Urban Systems) model³. This evaluates some of the health economic costs and benefits of proposed development. It is based on academic evidence (a series of systematic reviews) and local demographic data, assuming 8,526 people live within 300m of the Frome Gateway area. It incorporates additional data from a residents' survey that the TRUUD research project conducted in 2021 with over 100 residents living near to the Frome Gateway area ('The Live Local Study'). Additional costs and benefits may also be relevant that were unable to be included in the HAUS model.

¹ HUDU Planning for Health Rapid Health Impact Assessment Tool, 2019, NHS London Health Urban Development Unit, 4th ed.

² For more information about the TRUUD project see <https://truud.ac.uk>

³ Eaton., E., Hunt, A., Black, D. 2023. Developing and testing an environmental economics approach to the valuation and application of urban health externalities, *Frontiers in Public Health*, 11, doi:10.3389/fpubh.2023.1070200

2. Context

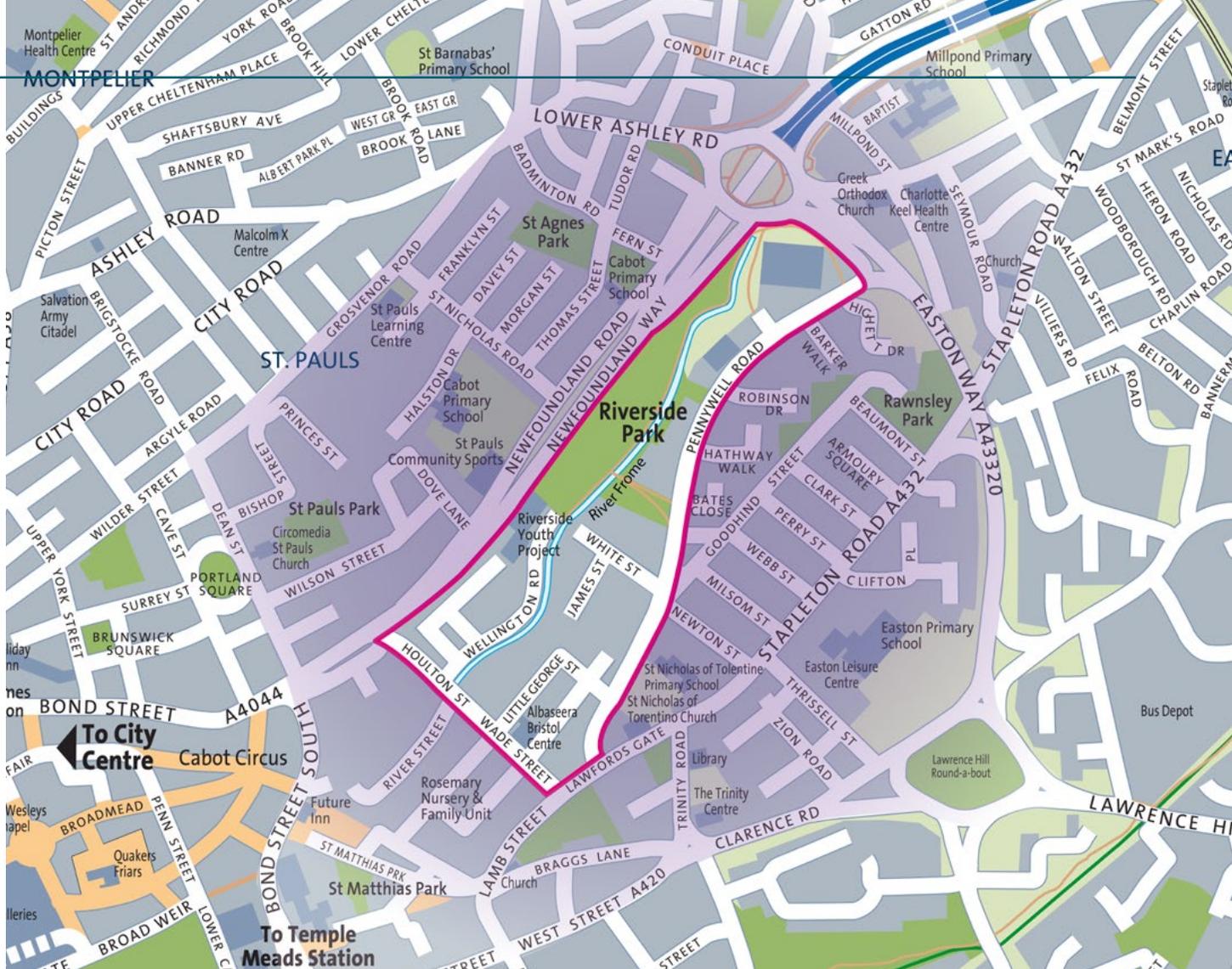


2. Context

Frome Gateway is an area of 14.7Ha in the Lawrence Hill ward in east Bristol, adjacent to Bristol City Centre.

A range of business uses primarily make up the existing land uses in the area, with industrial and warehousing uses accounting for the majority (75%) of existing employment floorspace.

The area also includes several community and cultural organisations, and a small amount of housing. Riverside Park, Peel Street Open Space and the River Frome make up the key natural assets. Frome Gateway is surrounded by densely populated residential and commercial areas including Old Market, St Paul's, Easton and Bristol City Centre.



Frome Gateway Regeneration Area

Core Regeneration Area

This area will see significant change as land is brought forward for redevelopment. The Regeneration Framework will outline design and development proposals within this area and guide the future delivery of new and improved homes, jobs, public and green spaces, and infrastructure.

Wider area of local context

The area surrounding the core regeneration area will not be subject to these development proposals, however it is important to consider how any development works with and are connected into the surrounding area.

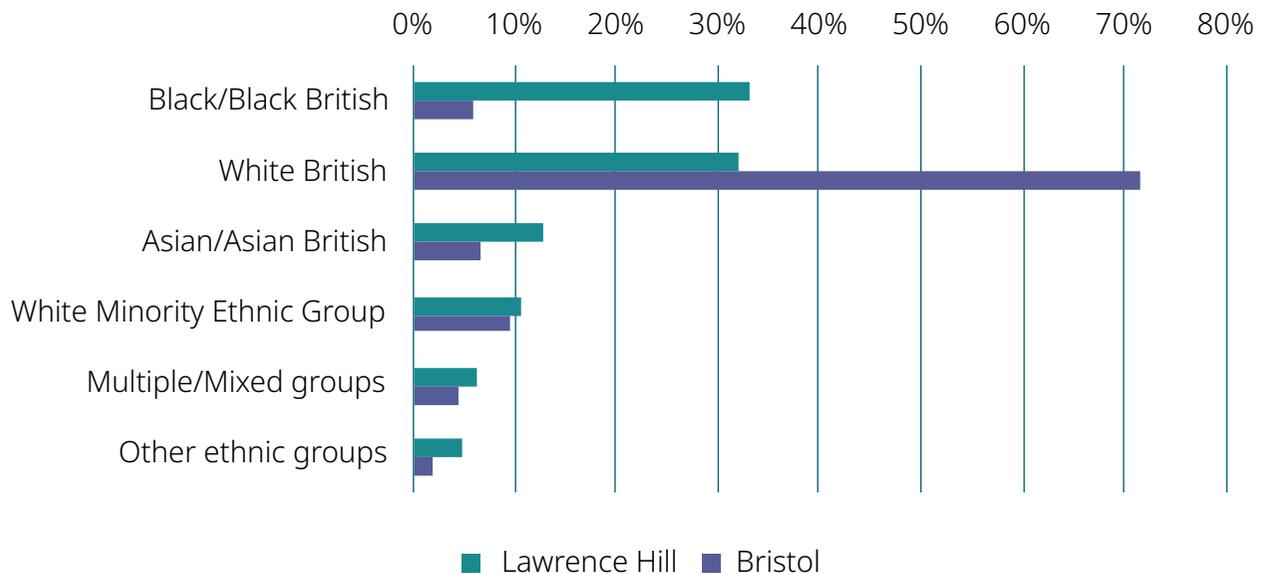


2.1. Demographics

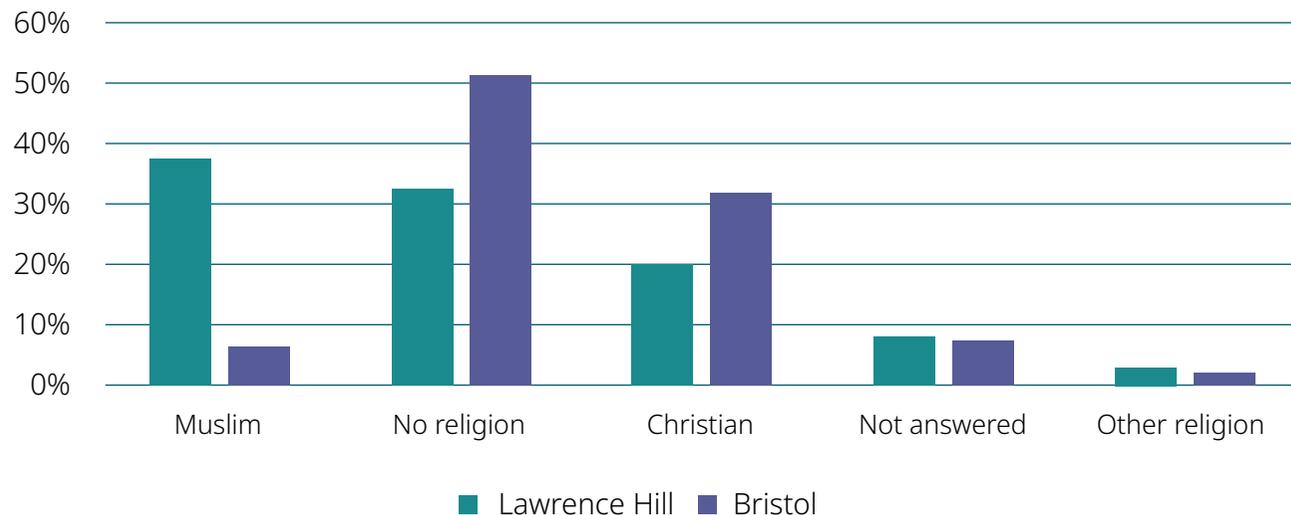
Lawrence Hill ward, where Frome Gateway is located, is highly ethnically and linguistically diverse, with a higher proportion of younger people than the city average. The main language is not English for 23.4% of people in Lawrence Hill (10.1% in Bristol overall) (Census 2021)



Ethnicity in Lawrence Hill compared to Bristol overall⁴



Religion in Lawrence Hill compared to Bristol overall⁴



⁴ Census 2021

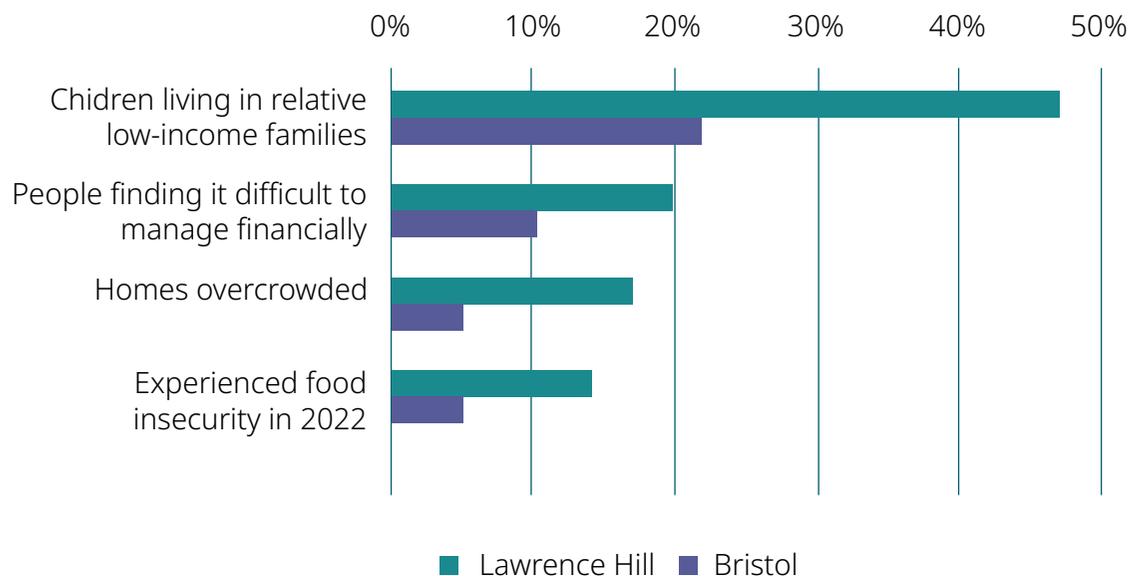
2.2. Socio-economic context

Lawrence Hill ward is one of the three most deprived wards in Bristol. St Jude's Lower Super Output Area (LSOA) is in one of the 6% most deprived areas in the country (Index of Multiple Deprivation, 2019).

Income levels are relatively low, and many low-income households are families with children. Housing affordability is a problem and most people live in rented homes: 44% in social rented and 32% in private rented (Census, 2021).



Measures of disadvantage in Lawrence Hill compared to Bristol overall⁵



All crimes in Lawrence Hill 2022/23⁶



Bristol average 2022/23

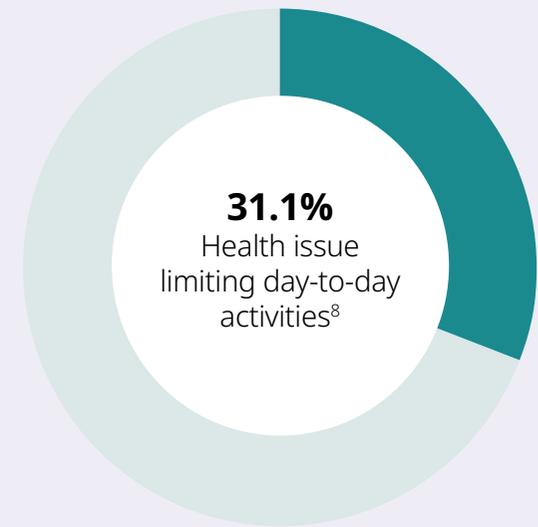
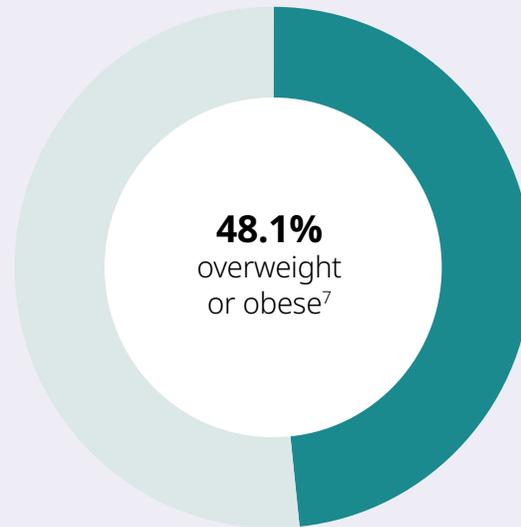


⁵ Children living in relative low-income families: Background information and methodology: Children in low income families: local area statistics - GOV.UK (www.gov.uk); People finding it difficult to manage financially: BCC Quality of Life, 2022; Homes overcrowded: Census 2021; Experienced food insecurity in 2022: BCC Quality of Life, 2022; Claiming unemployment-related benefits: Avon and Somerset Police, 2023

2.3 Health context

There are significant physical and mental health and wellbeing issues in the local area. Premature mortality is significantly higher than the city average: 600 premature deaths per 100,000 population in Lawrence Hill, compared to 378 per 100,000 in Bristol overall (Public Health Knowledge Service, Bristol City Council, 2018-2020). Life expectancy for males is almost 5 years less than the city average (Public Health Knowledge Service, Bristol City Council, 2018 - 2020).

- 80.5% of Lawrence Hill residents report being in good health (similar to Bristol overall) (QoL 2022)
- 10.8% are inactive (similar to Bristol average) (QoL 2022)
- 58.8% do enough regular exercise each week (similar to Bristol average) (QoL 2022)
- 56% play sports at least once per week (46% in Bristol overall) (QoL, 2022).
- 53% participate in cultural activities each month (compared to 43% for Bristol overall) (QoL, 2022).
- 37.9% eat at least five portions of fruit or vegetables per day (compared to 48.3% in Bristol overall) (QoL 2022).



Percentage of Lawrence Hill residents satisfied with life compared to in Bristol overall⁹



⁷ Quality of Life, 2022 (47.5% in Bristol overall)

⁸ Illness or health condition which limits day-to-day activities at least a little: Quality of Life, 2022 (29.4% in Bristol overall)

⁹ Quality of Life, 2022 (46.3% Lawrence Hill; 62.4% Bristol overall)

3. Health Impact Assessment



3

3. Health Impact Assessment

The estimated overall societal value of health benefits of change in this area being guided by a regeneration framework over the lifetime of the project (around 15 years) are estimated to be in the region of £80-£100 million, compared to an unmanaged approach where a regeneration framework is not used to guide and shape long-term change (HAUS tool¹⁰).

Since development can significantly impact on health and wellbeing, particularly on deprived local communities, planning applications should be accompanied by site-specific HIAs¹¹. Applicants should engage with BCC Public Health at an early stage to enable collaboration and information sharing to maximise positive health and wellbeing outcomes and minimise negative ones.



¹⁰ For more details about the health economic modelling see Eaton et al., 2023, Developing and testing an environmental economics approach to the valuation and application of urban health externalities, *Frontiers*, <https://doi.org/10.3389/fpubh.2023.1070200>

¹¹ Emerging local plan policy HW2B: Health and development

3.1 Housing design and affordability

Why is this important?

Accessible and adaptable homes are important for older and disabled people to live in the community. Currently, 12% of households on the housing register have a need for accessible and adaptable housing.

Design quality can make a significant difference to everyday quality and enjoyment of life. Good design is needed through layout and orientation, and homes should meet internal space standards, to ensure homes are adapted to the impacts of climate change such as overheating.

Homes should be highly energy efficient to reduce risk of fuel poverty and health issues associated with cold homes, as well as reduce climate impacts. Adequate heating, ventilation, safety, quality of materials and avoidance of hazards such as dust and pests are important for health & wellbeing. Homes with balconies and private open spaces can help improve quality of life and reduce mental health issues, and may support higher levels of physical activity.

Prolonged exposure to housing costs above 30% of income can have a negative impact on mental health, increasing risk of mental disorders.

Local context:

Affordable family homes are a community priority since many local people live in private rented accommodation with intergenerational living arrangements and overcrowding. Lawrence Hill ward has the highest proportion of overcrowded homes in Bristol¹².

Measures of suitable housing in Lawrence Hill compared to Bristol overall¹³



Key emerging local plan policies:

Policy AH1: Affordable housing provision; Policy H4: Housing type and mix; Policy H8: Older people’s and other specialised needs housing; Policy BTR1: Build to Rent housing; Policy H9: Accessible homes; Policy NZC4: Adaptation to a changing climate; Policy DC1: Liveability in residential development including space standards, aspect and private outdoor space.

How the framework is responding:

- Facilitating mixed-use regeneration to help bring forward around 1,000 new homes.
- Emphasises the need for high-quality, affordable homes which meet local needs (such as a higher proportion of larger family units).
- Signposts to BCC’s Urban Living SPD to champion design quality and safeguard liveability.

Estimated health economic impact:

N/A since not included in HAUS model.

¹² Census 2021

¹³ Overcrowded homes: Census 2021; Satisfied with current accommodation: Quality of Life, 2022

Requirements for developers:

a. Accessible and adaptable homes:

- ✓ New homes to be accessible and adaptable. At least 10% of new homes should be wheelchair accessible, or easily adaptable for wheelchair users, in line with emerging local plan policy H9: Accessible homes.

b. Good design through layout and orientation, meeting internal space standards:

- ✓ Align with national and local planning policy and guidance (such as the Urban Living SPD and agreed local design guides/codes) in order to design and deliver well-designed, accessible and sustainable homes which integrate communal and recreational areas as needed.
- ✓ Avoid overheating and ensure adequate access to daylight by creating dual aspect apartments with opening windows that allow for through breezes and avoiding excessive glazing that risks excessive summer solar gain.
- ✓ Integrate adaptation for a changing climate.
- ✓ Provide private outdoor space, including balconies.

c. Range of housing types and sizes, including affordable housing responding to local housing needs:

- ✓ Provide a sufficient range of housing tenures, types and sizes to meet local housing needs, including affordable housing. The mix should include: for new affordable homes, 30% 3-bedroom homes and 10% 4-bedroom homes; for all other new homes, 25% homes with 3 or more bedrooms.

- ✓ Applicants should engage with BCC Housing as early as possible and seek to deliver a greater proportion of larger family accommodation to meet unmet demand and subsequent overcrowding in Lawrence Hill.

d. Homes that are highly energy efficient

- ✓ Use of appropriate construction methods, including for noise insulation and energy-efficiency.

Other strategic recommendations and actions:

- A Local Lettings Policy should be explored and adopted if appropriate to do so to help ensure the local community are able to access new housing options which are delivered at Frome Gateway.



3.2 Access to health and social care services and other social infrastructure

Why is this important?

Social infrastructure, including schools, community, leisure centres and places of worship, play a key role for socially cohesive and vibrant communities which can support the health and wellbeing of local people. Education provision improves self-esteem, job opportunities and learning capability.

Regeneration at Frome Gateway is expected to bring an additional 2,000 residents to the area.

It's important that growth and regeneration is matched by increased capacity of supporting social infrastructure so that the community have adequate access to healthcare services and spaces where they can be active, learn and be together. Insufficient local social infrastructure can result in unnecessary extra travel which can harm the environment and reduce opportunities for social cohesion.

Local context:

There is a range of existing social infrastructure provision in the Frome Gateway area (see Section 4)

Sufficient healthcare and education services are a local concern which has been raised throughout the public engagement programme that has supported development of the regeneration framework.

Key emerging local plan policies:

Policy CF1: Provision of community facilities.

How the framework is responding:

- The framework is encouraging the provision of commercial and community space across the ground floor of new development, which provides the opportunity to accommodate social infrastructure.
- The framework notes the importance of community spaces and assets that already exist in the regeneration area, and the expectation that these will be supported to remain and grow in the area to ensure they are able to better meet the needs of the community.

Estimated health economic impact:

N/A since not included in HAUS model.

Measures of health and wellbeing in Lawrence Hill compared to Bristol overall¹⁴



Requirements for developers:

a. Social infrastructure (not health and social care services)

✔ Work with local community groups and organisations to provide opportunities to accommodate them in development proposals, including safe social spaces for children and young people (e.g. youth centres or sports facilities) and also for older people. Engage with BCC Regeneration from an early stage because they may be able to help link new space being made available through development with those who need space.

✔ Design and use proposals for community spaces should be developed in collaboration with the community to ensure they meet their needs.

b. Health and social care services

✔ Communicate development plans with BCC who will engage with the Integrated Care Board to help them plan for future health service provision.

c. Shared community use and co-location of services

✔ Commercial and community spaces across the ground floor of new development should be designed to be flexible and adaptable so that they can be repurposed and re-used beyond their original use.

Other strategic recommendations and actions:

- BCC and developers should support local community groups based in the Frome Gateway area with re-location and/or remaining in the area to support the growing population as the area changes, to meet community needs.
- BCC should engage with the Integrated Care Board to help them plan for future health service provision.
- Opportunities for the co—location of local services should be explored, which may bring benefits associated with sharing resources, reduced building/management costs and collaboration. This may also be more beneficial for local communities if they are able to access multiple services in the same place.



3.3 Access to open space and nature

Why is this important?

Attractive and convenient open/green spaces can increase physical activity levels and reduce risks of heart disease, stroke, diabetes and other ill-health. Increases in greenness can reduce risk of premature mortality and diseases such as mouth and throat cancer, as well as obesity in children. Improving the quality and safety of greenspaces can improve wellbeing for new and existing residents in neighbouring areas, particularly older adults.

Green spaces that are of poor quality, not maintained, feel unsafe, or are inaccessible to all will discourage physical activity and social interaction. Women may be more likely than men to feel less safe outdoors, particularly after dark.

Natural spaces and tree cover provide areas of shade and help reduce local temperatures which will become increasingly important with the effects of climate change. They can also help to improve air quality in urban areas by acting as barriers between people and a source of pollution and

increasing dispersion of pollution by disrupting airflow. Planting, including green roofs, can also contribute towards the mental wellbeing of residents.

Biodiversity is important for planetary health, which affects public health.

Local context:

Public engagement has demonstrated the value of existing green spaces (Riverside Park and Peel Street Open Space) to the local community, which provide spaces for recreation and relaxation, benefiting physical and mental health. The health benefits are also important for people living outside of the Frome Gateway area.

The River Frome is a valuable natural asset which is currently relatively hidden within a deep walled channel. Improvements to the river channel could improve opportunities for relaxation and moments of serenity which may improve mental health and wellbeing. Attracting more park users, through increasing quality and functionality can improve safety. Given the area has an existing open space deficiency, particularly of informal and natural spaces, the existing green and blue spaces should be retained and enhanced to improve their quality and local value.

A growing population, particularly an increase in children and young people will require a range of formal and informal play spaces and equipment.

Measures of park use and satisfaction in Lawrence Hill compared to Bristol overall¹⁵



Key emerging local plan policies:

Policy BG1: Green Infrastructure and biodiversity in new development; Policy BG2: Nature Conservation and Recovery; Policy BG3: Achieving Biodiversity Gains; Policy BG4: Trees; Policy BG5: Biodiversity and access to Bristol's waterways; Policy GI A: Open Space for Recreation.

How the framework is responding:

The framework incorporates the need for the quality of green/open spaces in the regeneration area to be improved to better meet the needs of the community, including through the incorporation of play spaces and sport facilities. The regeneration framework refers to the Urban Living SPD which sets out guidance on provision for play spaces.

Alongside the protection and enhancement of existing green spaces, the framework sets out an aspiration to create a new network of 'pocket parks' and incidental green spaces through development offsets and re-allocating portions of existing highways to maximise opportunities for greening across the regeneration area (totalling to circa 1 ha of new public green space).

The proposed river restoration project will enhance the ecological and recreational quality of the river corridor and create new opportunities to dwell and enjoy the riverside – enhancing this as a wildlife corridor and public amenity.

Provision of circa 1,000 new homes, alongside a range of workspaces and community spaces, will increase the overall amount of people living in the area which will increase the use of green spaces and therefore improve the sense of safety. This is supported by maximising opportunities for 'natural surveillance' over and 'active frontages' facing onto green spaces and streets.

Improving connections throughout the area will help to re-connect surrounding communities to local green spaces, including through new at-grade crossings and bridges across the River Frome, as well as improved walking and cycling routes throughout the area.

The regeneration framework requires enhancements to green infrastructure and biodiversity including through reference to Natural England's Urban Greening Factor Standard and Biodiversity Net Gain (BNG).

Improvements to the quality and biodiversity value of Riverside Park, Peel Street Open Space, the River Frome corridor and wider street greening provides ample opportunity to enhance biodiversity across the regeneration area.

The regeneration area and draft framework has been subject to a West of England Centre for Inclusive Living (WECIL) Accessibility Audit, which should inform proposals and future workstreams.

Estimated health economic impact:

Improvements to the quality and quantity of green space could bring £30 million additional benefits. Provision of additional green space through a single unit, rather than dispersed across the site, may bring further reductions of risk of diabetes, to a value of £21 million.



Requirements for developers:

a. Quality of existing open and natural spaces

- ✓ Development in the Frome Gateway area should make contributions to increase the quality of existing open and natural spaces, as deemed appropriate through the planning process.

b. New open or natural spaces

- ✓ New open and natural spaces should be provided as part of development as set out in the framework to increase the overall greenness of the area e.g. through development offsets.

c. Play spaces for children and young people

- ✓ In line with the Urban Living SPD, applicants seeking planning permission should integrate play spaces as part of their proposed schemes, as appropriate. Applicants are encouraged to liaise with BCC and the community to ensure these are designed to meet local need.

d. Safe and accessible greenspaces for all

- ✓ Sites that border green spaces should consider and integrate ways to maximise safety and inclusivity of green spaces through their design and development proposals (e.g. natural surveillance).

Public realm improvements for existing and new streets to incorporate green infrastructure.

e. Management and maintenance of new open spaces

- ✓ Ensure sustainable management and maintenance of new greenspaces

f. Maintaining or enhancing biodiversity

- ✓ All design and development proposals in the area should seek to protect and enhance biodiversity.

Other strategic recommendations and actions:

- New greenspace should be accessible for all including the wider community (not just residents of new or individual development). Engagement with the wider area is needed to ensure that local people feel that new greenspace is inclusive to avoid negative gentrification impacts.
- The community should be supported to take on management, maintenance and ownership of local green spaces, as appropriate. For example, this may involve establishing a Friends of Riverside Park group to support community uses, including food growing.
- Consider opportunities to integrate play spaces with other related health and environmental programmes such as food growing and increasing biodiversity.
- Sustainable and long-term management and maintenance of green spaces is required to ensure the benefits and value of these spaces are not degraded over time. Innovative and alternative funding mechanisms and arrangements should be explored to safeguard this in the context challenging public sector finances.
- The community should be invited to help shape detailed design proposals for green and open space to ensure they are designed to meet local needs. This should ensure inclusivity by involving a diverse range of community representatives and take account of un-represented views (e.g. play space for girls) and bespoke cultural norms which may be applicable. Safety and accessibility should be key design objectives.
- Ensure that the findings and recommendations of the WECIL Accessibility Audit are integrated into design and delivery briefs as appropriate.

3.4 Air quality, noise and neighbourhood amenity

Why is this important?

Air pollution is associated with premature mortality and diseases such as stroke, cancers, heart conditions and chronic lung disease (chronic bronchitis or emphysema). Respiratory illness, such as asthma, is particularly problematic for children under two years old. Adequate ventilation is needed for good indoor air quality.

The health and wellbeing impacts of noise can be significant and may be associated with loss of cognitive function in older adults, as well as sleep disturbance, cardiovascular and psychophysiological effects. Noise has a relatively localised effect, but high levels of traffic related noise can almost double risk of depression in men and increase the risk of mental health problems for children.

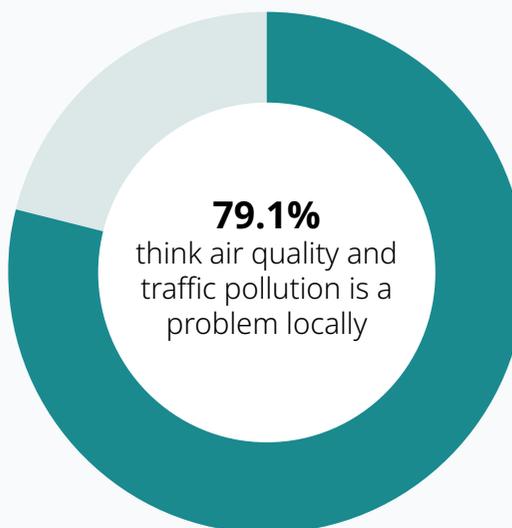
Construction risks exposure to land contamination, deterioration in air quality and nuisance from noise, dust, vibration and odours.

Local context:

The road network in the vicinity of Frome Gateway, particularly from Newfoundland Way, can have negative air quality and noise impacts. This will impact on residents moving into the area. Additional road traffic and congestion generated by new development can further increase air pollution and noise.

There are existing commercial activities, including live music venues, in the area which may also create noise.

Frome Gateway is surrounded by a residential area, as well as sensitive areas such as public open space and St Nicholas of Tolentine Primary School.



Key emerging local plan policies:

Policy SSE3: Supporting Bristol's evening, night-time and culture economy; Policy HW1: Pollution control and water quality; Policy HW2: Air quality; Policy HW1A: Noise; Policy HW1B: Contaminated land.

How the framework is responding:

- Advocating no/low car development (given its inner-city location and high accessibility to public transport).
- Prioritising sustainable and active means of travel.
- Incorporating the requirement for a new Energy Centre to fuel a District Heating Network which will generate heat without impacting on local air quality. Having a centralised energy centre plan also reduces the number of noise sources compared to multiple building-specific energy systems, making control measures easier to implement.
- Incorporating the requirement for enhanced greening and tree planting across the whole regeneration area, with a focus on using green infrastructure to act as a barrier between pollution sources and people.

- Seeking the overall reduction of industrial employment space and consolidation of industrial activities to the north of the regeneration area. This will reduce noise from industrial activity (and associated vehicles such as HGVs) across the area when compared to the existing levels (although the residential area adjacent to the proposed 'Industrial Quarter' in the north of the regeneration area may not realise these benefits).
- Supporting the further integration of community and cultural uses which may result in a greater number of noise-generating uses (such as night-time venues), compared to the existing.
- The integration of circa 1,000 new homes across the regeneration area will increase the likelihood of noise complaints associated with the remaining industrial activities and/or cultural uses such as night-time venues.
- The regeneration framework should integrate opportunities for noise attenuation alongside Newfoundland Way and Easton Way.
- Locations that are more sensitive to noise and air pollution, where residents will require additional protection from harm, are identified within the regeneration framework.

Estimated health economic impact:

Current levels of air quality potentially increase the risk of premature mortality by around 6%. This could result in 1,700 premature life years lost for people living nearby, and result in health costs of £175 million.



Requirements for developers:

a. Construction impacts, such as dust, noise, vibration and odours

✓ Minimise the impact of construction on the local community as much as possible. Construction Management Plans to be agreed to minimise the impact of construction on local residents and businesses, particularly hours of working and construction traffic movements.

✓ Ensure adequate sustainable and active travel facilities (such as secure cycle storage) are integrated into development proposals to make it easy and attractive for new occupants (residential and commercial) to opt for active travel options (and work with BCC to agree Travel Plans to support and enable active and sustainable travel).

opening windows. Where active cooling is required this should be minimised by also using passive means: demonstrate that the development could meet comfort requirements without active cooling if the useability issues were not present.

b. Air pollution

✓ Maximise the separation distance of sensitive uses from the main sources of pollution, which are Newfoundland Way and Easton Way. Use good design and appropriate location and orientation of residential units to lessen air pollution impacts.

c. Noise pollution

✓ Use good design and appropriate location and orientation of residential units to lessen noise impacts.

✓ Use green infrastructure to act as barriers between Newfoundland Way and Easton Way and proposed sensitive uses and throughout development proposals to improve air quality and attenuate noise.

✓ Undertake due diligence and incorporate adequate noise attenuation as part of development and design proposals (e.g. where adjacent to Newfoundland Way, Easton Way, industrial uses and/or night-time venues).

✓ Where homes are proposed in locations with high levels of external air pollution these should be provided with alternative ventilation that allows a comfortable internal temperature to be maintained year-round without opening windows.

✓ Ensure development adheres to the 'Agent of Change' principle to ensure that new development does not adversely impact the viability of existing noise-generating uses (such as night-time venues).

✓ Ensure adequate ventilation and generous communal and circulation spaces for indoor air quality.

✓ Where homes are proposed in locations with high levels of external noise these should be provided with acoustically attenuated ventilation or sufficient mechanical ventilation that allows a comfortable internal temperature to be maintained year-round without

Other strategic recommendations and actions:

- Reduce traffic along Pennywell Road.
- Explore and integrate city-wide policies and initiatives to reduce pollution and noise from transport (such as increased investment in public transport, improved walking and cycling networks, and encourage last mile delivery, for example) in the emerging local plan and Joint Local Transport Plan.
- Align with the regeneration framework and planning policy and guidance to deliver low/no car development and support the provision of active and sustainable travel infrastructure to and within the Framework area.
- Explore how options such as Low Traffic Neighbourhood status might be used to help to deliver the ambitions of the regeneration framework.
- Ensure adequate provisions are made to minimise air pollution and noise from the proposed new Energy Centre at Frome Gateway on surrounding residents and businesses.

3.5 Accessibility, active travel and road safety

Why is this important?

Increasing safe and accessible walking and cycling infrastructure to encourage more everyday walking, wheeling and cycling journeys can increase levels of physical activity and reduce associated physical and mental health risks, such as reductions in risk of diabetes and mental health problems. This includes permeability, segregated routes and secure cycle parking. Behaviour change requires good-quality local infrastructure and environments, improving connectivity and safety to encourage active travel modes, including public transport, alongside restrictions on car use.

Improving road safety for non-motorised transport should reduce road traffic injuries, particularly for children. Reducing severance from busy roads can also improve accessibility of services and amenities.

Lack of overlooking, natural surveillance and lighting can reduce safety, and perceptions of safety, which limits active travel.

The Healthy Streets indicators, shown in Figure 2, highlight important issues that influence accessible and active travel.



Figure 2: Ten Healthy Streets indicators¹⁷

Local context:

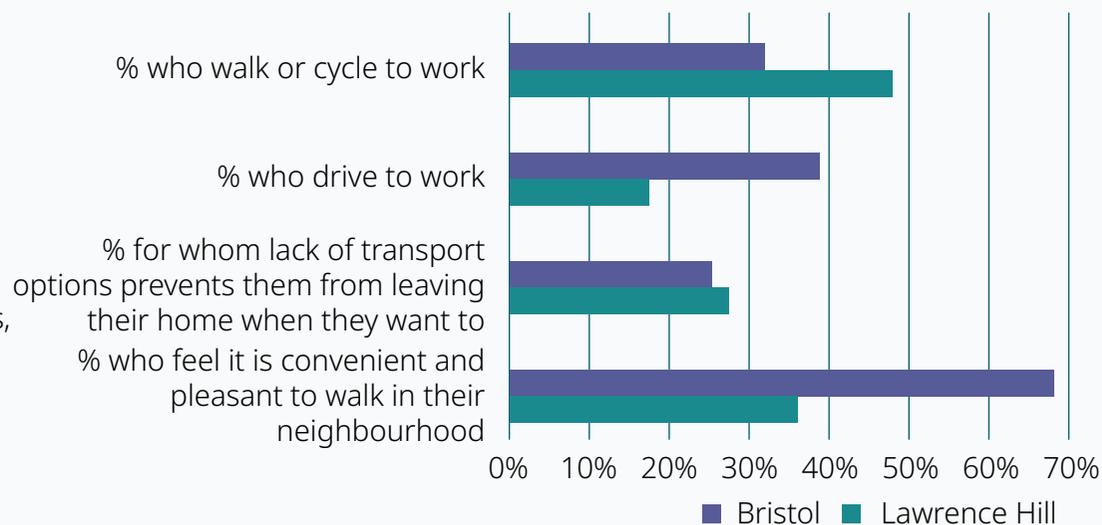
Historic urban planning decisions have prioritised vehicles over pedestrians in this area, in part due to the area being primarily a Principal Industrial and Warehousing Area. This has contributed to community severance and a poor pedestrian environment.

Given its edge of city centre location and levels of public transport accessibility, Frome Gateway has the potential for significantly better sustainable and active travel infrastructure. There are relatively low levels of car ownership locally (almost half of households in Lawrence Hill do not have access to a car or van) and higher proportions of people walk or cycle to work than the Bristol average (Census, 2021). Residents' parking scheme and limited paid for on-street are already present.

Riverside Park and Peel Street Open Space are well used active travel routes, however, there can be conflict between pedestrians and cyclists on shared routes and at key locations such as where Peel Street bridge meets the existing cycle lane. Pennywell Road is currently a poor-quality pedestrian environment: wide, with high vehicle volumes and speeds, no controlled

crossings (including no crossing places near to St Nicholas of Tolentine School) and lacking in street trees which can exacerbate heat island effects during hot weather.

Transport measures in Lawrence Hill compared to Bristol overall¹⁸



¹⁸ Quality of Life, 2022 (70.1% in Bristol overall)
¹⁷ <https://content.tfl.gov.uk/guide-to-the-healthy-streets-indicators.pdf>

Key emerging local plan policies:

Policy BG7: The St. Paul's Green Link; Policy T1: Development and transport policies; Policy T2: Transport infrastructure improvements; Policy T3A: Transport development management; Policy T6: Active travel routes.

How the framework is responding:

The transport and movement plans in the regeneration framework are premised on prioritising walking and cycling, and creating more attractive, people-centred streets. This includes proposed traffic calming measures on Pennywell Road and Wade Street and enhanced accessibility of public transport connections.

The regeneration framework also sets out intention to improve connections throughout the area to help to re-connect surrounding communities to local green spaces, including through new at-grade crossings and bridges across the River Frome as well as improved walking and cycling routes throughout the area.

The regeneration framework is premised on no/low-car parking provision as part of new development. This is to support and encourage the use of active modes of transport and public transport systems. The amount of car parking to be provided alongside individual development will be determined on a case-by-case basis as per planning policy.

Estimated health economic impact:

Improved active travel routes could reduce premature mortality by around 10%. Walkability improvements could provide £23 million in health benefits by increasing activity and reducing risk of conditions such as diabetes and weight gain. It could reduce mental health problems, including risk of depression by almost 70% for men over 65. New cycling infrastructure may increase the number of cyclists by over 60% and reduce risk of injuries for cyclists.

Road traffic accidents relating to high vehicle volume and speeds could be reduced by 60%. These traffic calming measures may also lead to a 9-12% reduced risk of noise attributable diabetes, premature mortality and poor mental health for adults and children (HAUS model).



Requirements for developers:

a. Prioritise and encourage walking and cycling

✓ Residential and commercial properties should provide secure and easily accessible cycle storage spaces; Commercial units should also provide facilities such as lockers, showers and drying areas for cyclists.

✓ Detailed design proposals for public realm and highways schemes should ensure these prioritise active and sustainable travel, ensuring safety and inclusivity are key design objectives (e.g. safe and well-lit walking routes and entrances in open sight lines i.e. avoiding entrances located at the back of buildings).

✓ Developments should be permeable and provide high quality access within and between sites to encourage walking and cycling as a first choice of transport.

b. Traffic management and calming measures to help reduce and minimise road injuries

✓ Detailed design proposals for public realm and highways schemes should ensure they prioritise active and sustainable travel, ensuring safety and inclusivity are key design objectives, in line with BCC's Transport Development Guidance .

c. Well connected to public transport, local services and facilities

✓ Where development plots lie alongside or are adjacent to key movement routes to/from public transport nodes and connections, they should ensure an adequate design response to support the safe, legible and pleasant use of these routes.

d. Reduce car use

✓ Align with planning policy regarding car parking provision for low car development.

✓ Support modal shift by integrating high-quality amenities and infrastructure as needed (e.g. cycle storage, showers, etc) as well as Travel Plans to encourage new occupants to increase active travel.

Other strategic recommendations and actions:

- Improving connections to existing bus stops and transport connections should be explored and integrated into site-wide public realm design proposals. Provide new stops and explore the possibility of a new metro bus stop on Newfoundland Way to enhance public transport accessibility for St Jude's and St Paul's communities as per BCC's City Centre Framework.
- BCC should encourage discussions with bus providers and West of England Combined Authority to ensure adequate provision of bus services to accommodate growth in the area.
- Detailed design proposals for public realm and highways schemes should ensure these prioritise active and sustainable travel, ensuring safety and inclusivity are key design objectives.
- Public realm and highways schemes should avoid excessive on-street parking (residents' parking scheme and limited paid for on-street already present).

3.6 Crime reduction and community safety

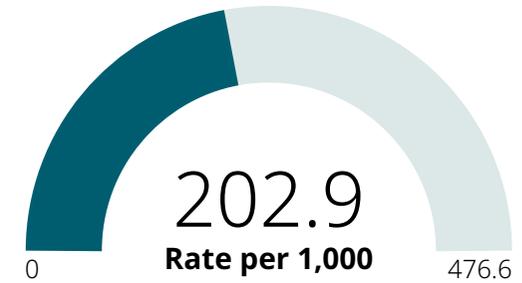
Why is this important?

Poor urban design can impact negatively on community safety, particularly under-used, isolated spaces without natural surveillance, and barriers such as roads. Lack of overlooking and lighting can reduce safety, and perceptions of safety. Where the local pedestrian environment is intimidating and inconvenient, people are more likely to use cars or go out less. This reduces social interaction and increases the potential for crime. Fear of crime that results in people leaving the house less can affect general health, increase isolation, and is associated with loss of cognitive function in older adults. Perceptions of crime are also associated with weight gain and poor mental health.

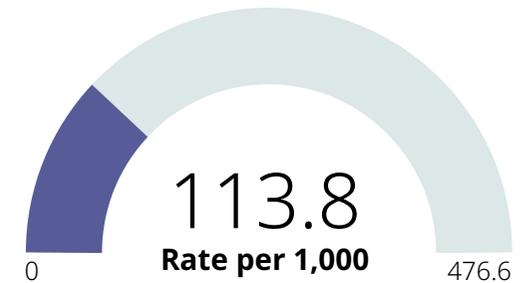
Neighbourhood regeneration can result in significant improvements in how people rate their general health.

While a 24 hour, or 'evening' economy, can increase perceptions of safety through a greater amount of activity and natural surveillance, it can also generate anti-social behaviour and disturbance, and can facilitate crime and exploitation of children and young people. It may also intimidate or isolate young people living in the community.

All crimes in Lawrence Hill 2022/23²⁰



Bristol average 2022/23



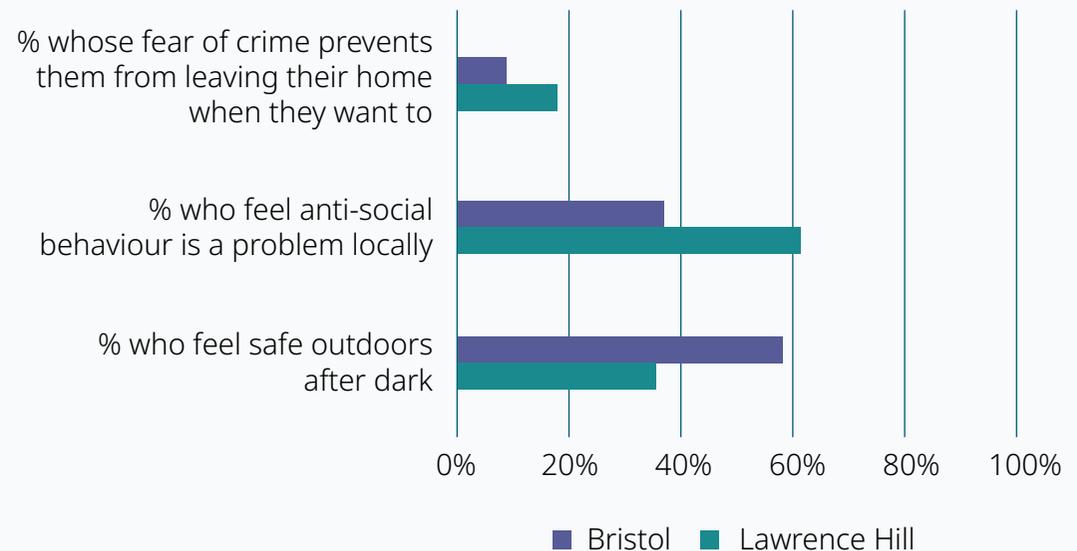
Local context:

There is a high level of concern about anti-social behaviour and crime in the area. There are problems with littering, fly tipping and graffiti tagging, which can make the area feel less safe and uncared for. Riverside Park is fairly isolated which deters people from using the space for much more than passing through, particularly at night, despite this being a key movement route between St Jude's and St Paul's.

There are local community organisations that provide spaces and activities for young people which contribute to reducing anti-social behaviour in the community.

BCC's Drug and Alcohol Strategy for Bristol (2021-2025) highlights the importance of planning and design to create public places and spaces which support healthy behaviours and reduce harms.

Crime and safety measures for Lawrence Hill compared to Bristol overall²¹



²⁰ Avon and Somerset Police

²¹ Quality of Life, 2022

Key emerging local plan policies:

Policy T3A: Transport development management; Policy DC1: Liveability in residential development including space standards, aspect and private outdoor space.

How the framework is responding:

- Provision of circa 1,000 new homes, alongside a range of workspaces and community spaces, will increase the overall amount of people living in the area and create more 'natural surveillance' and feelings of safety through a greater amount and range of activity.
- The regeneration framework highlights the importance of the community organisations and spaces and the expectation that new development will seek to help these remain in the area and grow their reach into the community.
- Improving connections throughout the area to help to re-connect surrounding communities and make streets safer, more attractive and well-used.
- Creating vibrant ground floor and street activity by requiring that ground floor spaces are used for commercial, community and cultural uses. This will maximise opportunities for 'natural surveillance' and 'active frontages' across the ground floor of new development facing onto green spaces and streets.

- The regeneration framework signposts to the Urban Living SPD which provides guidance on relevant safety issues.
- The regeneration framework has been informed by a community and stakeholder engagement programme. See Statement of Community Involvement for details.
- The regeneration framework highlights the need to cater for a variety of needs and involve a broad range of stakeholders into the design process to ensure they are inclusive and relevant.

Estimated health economic impact:

Improvements in perceptions of crime may be worth £0.5 million in weight gain and mental health impacts. Enhanced safety may reduce attributable cases of poor mental health and functional loss by 55% (HAUS model).



Requirements for developers:

a. Designing out crime

- ✓ Ensure natural surveillance of streets and public spaces is integrated into development proposals, including use of sensitive lighting.
- ✓ Schemes should comply with 'Secured By Design' and design out opportunities for antisocial behaviour, such as providing a consistent and continuous building line. Liaise with the police to get advice as required.

b. Engagement and consultation with the local community and voluntary sector

- ✓ Engage with local communities to foster a sense of ownership and empowerment and differentiate between needs of different groups.

Other strategic recommendations and actions:

- The engagement programme undertaken to inform the production of the regeneration framework should be continued post-completion and direct attention to specific areas of focus (such as a public realm scheme, or planning applications), as appropriate. Opportunities for community involvement in the design process should be maximised as per the Scope of Community Influence.

3.7 Access to healthy food

Why is this important?

Access to healthy and affordable food, community food growing and availability of supermarkets within walking distance are associated with health benefits from increased fruit and vegetable intake.

A relatively high ratio of fast-food stores to healthy food outlets can have a negative impact

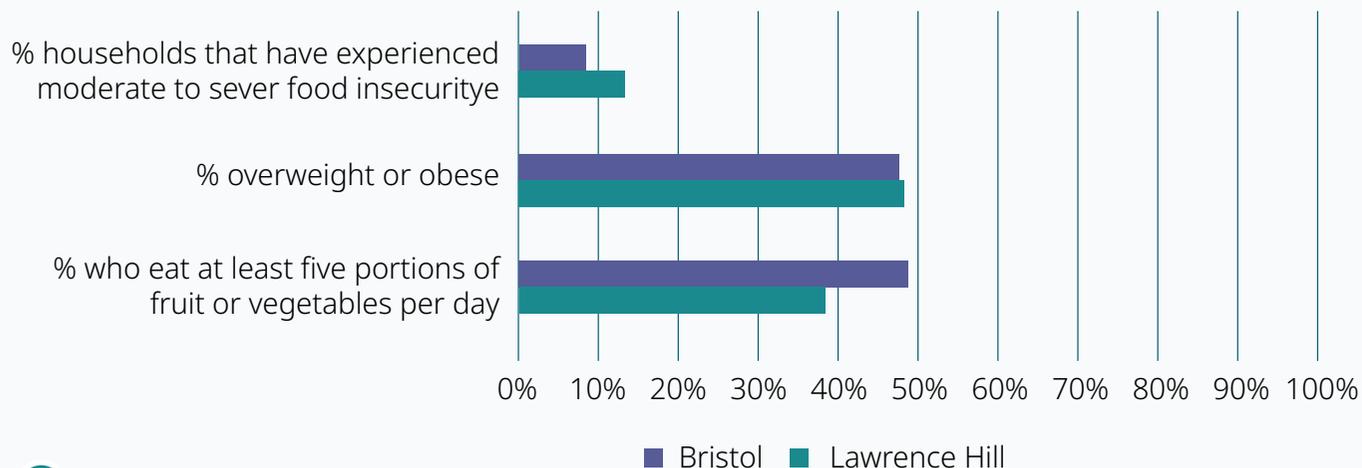
on outcomes such as obesity, diabetes and weight gain, whereas opportunities to grow and purchase healthy food can change eating behaviours and improve physical and mental health. Low-income families and older people are least able to eat well due to lack of access to nutritious food, and more likely to consume food that is high in salt, oil, energy-dense fat and sugar.

Local context:

The One City Food Equality Strategy sets out that “food equality exists when all people, at all times, have access to nutritious, affordable and appropriate food according to their social, cultural and dietary needs”. A core theme is fair and equitable access to food that is appropriate for their dietary needs, is culturally appropriate, and affordable. BCC has a hot food takeaway policy which aims to restrict over-concentration of hot food outlets.

There are local centres nearby, such as Stapleton Road, with a relatively broad range of shops. Lidl is around 15 min walk away and Tesco Extra is 5 min drive. However, during engagement events some people expressed the view that food shops are too far away.

Food related measures for Lawrence Hill compared to Bristol overall²²



Key emerging local plan policies:

Policy HW3: Takeaways; Policy FS1: The provision of allotments; Policy FS2: Provision of food growing space in new developments.

How the framework is responding:

- The regeneration framework includes aspirations for new and improved green spaces across the regeneration area and surrounding area which could include the provision of spaces for local food growing.
- The regeneration framework sets out the vision for community and commercial space across the ground floor of new development, which provides the opportunity for new services and businesses to improve the local food environment. However, it is outside of the remit of the regeneration framework to direct the specific use of these spaces. In response to this HIA and feedback from the community the regeneration framework sets out a number of health and well-being related recommendations, including the provision of affordable food stores to increase the availability of fresh food.

Estimated health economic impact:

A new supermarket with affordable, healthy food has the potential to reduce around £1.7 million in health costs.

Requirements for developers:

a. Local food growing

- ✓ Consider opportunities to integrate local food growing spaces as part of new development or in new greenspaces, including edible planting.

b. Availability and range of food stores

- ✓ The ground floors of new development uses should be designed to be flexible and adaptable so that they can be repurposed and re-used for a range of uses, including different types of food stores.

c. Avoidance of over-concentration of hot food takeaways

- ✓ Avoid new hot food takeaways in the area due their links with obesity.

Other strategic recommendations and actions:

- Through the marketing and letting of commercial ground floor spaces created through new development, developers and letting agents are encouraged to be mindful of how different uses influence the local food environment and consider prioritising uses that will positively influence the local food environment by providing health and affordable food choices.
- Opportunities for local food growing should be considered as part of detailed design and delivery of new/improved greens spaces in the area (which should encourage community management and ownership). Bristol Good Food 2030 framework is being developed which builds on Bristol's Gold Sustainable Food City Status, and links in with the Parks and Green Spaces Strategy, Allotments strategy and One City Food Equality Strategy.
- Support community parks/gardening group/s to form to lead on the delivery of local food growing spaces to ensure they are shaped by local needs.
- Consider how public spaces and/or meanwhile uses could be curated to support the establishment of events such as a regular fruit and veg market to help trial and test new ideas which could be more permanently accommodated in long-term regeneration plans.



3.8 Access to work and training

Why is this important?

Policies and strategies that encourage and support accessible local employment and skills training can improve the health and wellbeing of local communities, including apprenticeships, by providing pathways to sustainable employment. This can reduce mental health issues associated with insecure and/or low-paid employment, and enable healthier lifestyle choices.

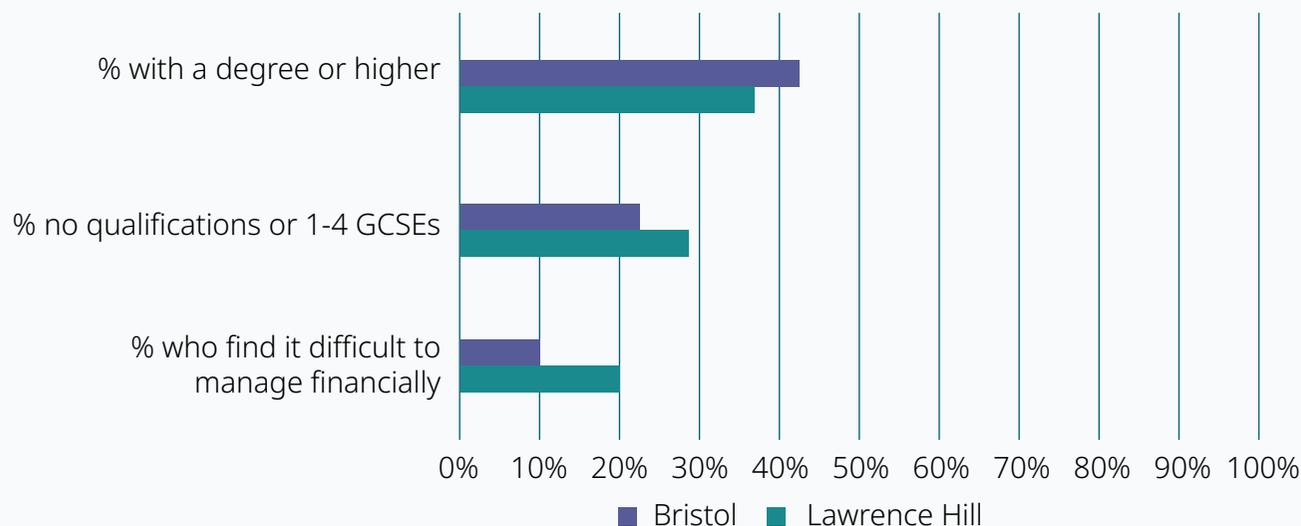
Provision of affordable childcare can enable parents to take advantage of training and employment opportunities which they otherwise might not be able to pursue.

Shorter journeys to work can support active travel and reduce emissions from transport which reduce the public health issues associated with poor air quality.

Local context:

The LSOAs covering the Frome Gateway area are in the first and second most deprived IMD deciles for employment.

Measures of education and income in Lawrence Hill compared to Bristol overall²³



Key emerging local plan policies:

Policy E1: Inclusive economic development; Policy E6A: New workspace within mixed use development; Policy E6: Affordable workspace.

How the framework is responding:

- The regeneration framework includes the re-provision of commercial space across the regeneration area. This is being informed by the emerging Frome Gateway Inclusive Economy Strategy which is premised on diversification and consolidation of employment uses to maximise opportunities for skills, training and employment for local people.

Estimated health economic impact:

N/A since not included in HAUS model.

²³ % who find it difficult to manage financially: Quality of Life, 2022; No qualifications or 1-4 GCSEs: Census 2021; Degree or higher: Census 2021

Requirements for developers:

a. Local employment and training opportunities

- ✓ Ensure the re-provision of employment space in development proposals, as per the regeneration framework.
- ✓ Work in collaboration with BCC and businesses to maximise opportunities for local employment, skills and training, including through the planning application process as per the Building Bristol programme.
- ✓ Follow BCC's emerging Local Plan 'Agent of Change' Principle to ensure new residential development does not impact the viability of existing nearby businesses (such as night-time venues).

b. Childcare facilities

- ✓ Consider childcare facilities as a ground floor use.

c. Affordable workspace for local businesses

- ✓ Work with BCC to include the provision of affordable workspace as appropriate.
- ✓ Engage further with local groups to ensure workspace requirements that support their objectives are included.

Other strategic recommendations and actions:

- Further engagement with specific groups should be undertaken to ensure employment and training opportunities are tailored to local needs (e.g. women, young people, and those whose first language is not English).
- Consider how affordable workspaces can be integrated into new commercial spaces.
- Ensure opportunities for training and apprenticeships are secured through the planning application process as per the Building Bristol programme.



3.9 Social cohesion and inclusive design

Why is this important?

Social cohesion can be undermined by insensitive development, poor design and lack of integration of new and existing resident communities. Community cohesion can be affected by severance from major roads and rivers.

Inclusive environments welcome all people, including children, young people, older and disabled people. Creating age-friendly and dementia-friendly environments can allow people to live independently for longer. Greater involvement by communities in designing

neighbourhoods can improve sense of belonging. This can ensure that new public open spaces are inclusive and support mixing between new and existing communities.

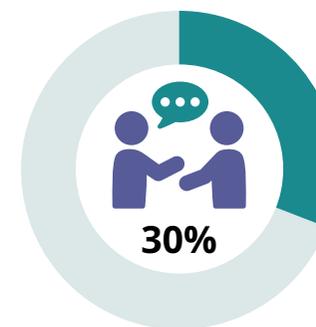
Large schemes may disrupt familiar walking routes or create a barrier to movement which affects cohesion.

A diverse range of local employment opportunities (paid and unpaid) can improve both social cohesion and mental wellbeing.

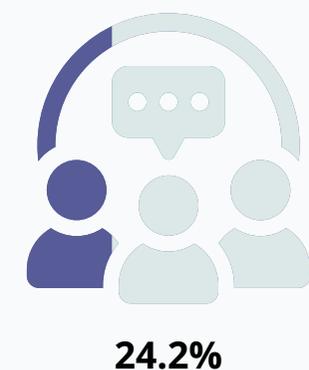
Intergenerational mixing can improve community cohesion.

Local context:

The Frome Gateway area is demographically diverse with almost 6 in 10 people identifying as coming from a Black, Asian or minority ethnic group. There are multiple community groups in the area which may support social cohesion. The top countries of birth outside of the UK are Somalia and Jamaica, followed by Pakistan in Lawrence Hill and Poland in neighbouring Ashley Ward.



English is not the main language for 30% of the population in Lawrence Hill²⁴



Key emerging local plan policies:

Policy E1: Inclusive economic development;
Policy E6A: New workspace within mixed use development;
Policy E6: Affordable workspace.

How the framework is responding:

- The regeneration framework has been informed by an early stage HIA, other data and evidence, and community engagement including through a consideration of health and well-being.
- The regeneration framework sets out intention to improve connections throughout the area to help to re-connect surrounding communities to local green spaces, including through new at-grade crossings of Newfoundland Way and bridges across the River Frome, as well as improved walking and cycling routes throughout the area to encourage social interactions.
- The regeneration framework includes aspiration for community spaces to be provided as part of new development, which can build community capacity, including new/improved green/open spaces. Existing community facilities have been identified and BCC is working to support groups.

- The regeneration framework sets out an aspiration for mixed-use regeneration including commercial and employment space, community spaces and cultural spaces across the ground floor. The regeneration framework also sets out the importance of mixed and balanced communities.

Estimated health economic impact:

N/A since not included in HAUS model.



Requirements for developers:

a. Considering health inequalities by addressing local needs through community engagement

- ✓ Build upon the engagement approach taken to date and ensure communities are meaningfully involved from an early stage in design and development proposals to ensure health inequalities are considered from the outset and throughout. This will include involvement of children, young people, residents, families, businesses, faith groups and community organisations. Community involvement should be done through multiple different approaches, including online and in person, with consideration of English being an additional language.

- ✓ Build upon the findings of this HIA and proactively aim to respond to it in individual programmes and projects.

b. Connection with existing communities

- ✓ Explicitly consider how proposals support community cohesion and capacity and social integration (and meaningfully involve communities in this). This will be particularly important as the area changes and accommodates a mix of new and existing communities.

- ✓ Support community organisations that are at risk of displacement (through redevelopment) to remain and grow their reach into the community as the area changes.

- ✓ Design and development briefs for public realm, highways, green/ open spaces and community spaces should include supporting community cohesion and social integration as key design objectives.

c. Mix of uses and a range of community facilities for the voluntary and community sectors

- ✓ Integrate a mix of uses in individual development schemes.

- ✓ Support community organisations that are at risk of displacement (through redevelopment) to remain and grow their reach into the community as the area changes.

d. Inclusive and age-friendly design

- ✓ Liaise with BCC to integrate ways of supporting intergeneration living.

Other strategic recommendations and actions:

- Wider placemaking initiatives should be utilised to celebrate local character, heritage and distinctiveness and provide opportunities to bring people together for shared experiences. This could include wayfinding and public art projects, events and cultural programmes, or meanwhile uses that provide space for communities to trial and test new ideas, for example.



3.10 Minimising the use of resources

Why is this important?

Reusing brownfield sites, rather than expanding development on greenfield land, can provide environmental benefits which go on to support public health. Increasing densities in locations with good access to services and amenities reduces the need to travel, supports public transport and/or enables active travel, with associated health and wellbeing benefits.

Reusing materials and reducing the environmental impact of construction will also benefit health and wellbeing through reducing climate impacts. Avoidance of environmental health impacts of materials is important and hazardous material must be disposed of safely.

Local context:

The Frome Gateway regeneration area is comprised of brownfield sites.



Key emerging local plan policies:

Policy UL1: Effective and efficient use of land; Policy NZC3: Embodied carbon, materials and circular economy; Policy DC4: Recycling and refuse provision in new development.

How the framework is responding:

- The regeneration framework is premised on the regeneration of brownfield land. In accordance with the Urban Living SPD, higher density development is being promoted at Frome Gateway to ensure the efficient use of land.

Estimated health economic impact:

N/A since not included in HAUS model.

Requirements for developers:

a. Making best use of existing land

- ✓ Work with BCC teams to bring forward the efficient and high-quality re-use of land at Frome Gateway in accordance with the Urban Living SPD and national and local planning policy. Building at higher densities can require higher quality in order to safeguard the health and wellbeing of future residents.

b. Sustainable design and construction techniques

- ✓ Undertake adequate due diligence on possible risks, and positively plan for the sustainable and safe re-use and/or disposal of construction material and waste in accordance with BCC planning policy. This should be in accordance with relevant local plan policies and sustainability guidance (e.g. Climate Change and Sustainability Practice Note).

Other strategic recommendations and actions:

- Public and business education/promotion on how to minimise use of resources.

3.11 Climate change

Why is this important?

Climate change is resulting in more extreme weather events, including higher summer temperatures and more rainfall over shorter periods of time. This increases risks of flooding and overheating and increased premature mortality for older adults. People with the poorest health, and from poorer socio-economic groups, are likely to be hit hardest by the impacts of climate change as they have less capacity to adapt their environment to its impacts.

New buildings should be adequately insulated, to reduce energy costs and avoid fuel poverty and cold homes in winter and overheating in summer (both of which can contribute to excess winter and summer deaths), without excessive glazing.

Greater shading and planting can reduce heat island effects. Consideration of the microclimate is needed to ensure buildings are suitable for their environment.

Flood risk is a major concern for climate change and severe/extreme weather events. Safe escape during present day and climate change events is needed for developments in at risk areas. Flooding of homes, and subsequent evacuation, can severely impact on the health of residents, including PTSD, limitations to usual activities, and chronic pain for three years after the event. Suitable design of developments, including provision of green infrastructure and Sustainable Drainage Systems (SuDS), can mitigate some of the impacts of flooding and not increase existing flood risk to the site from the development.

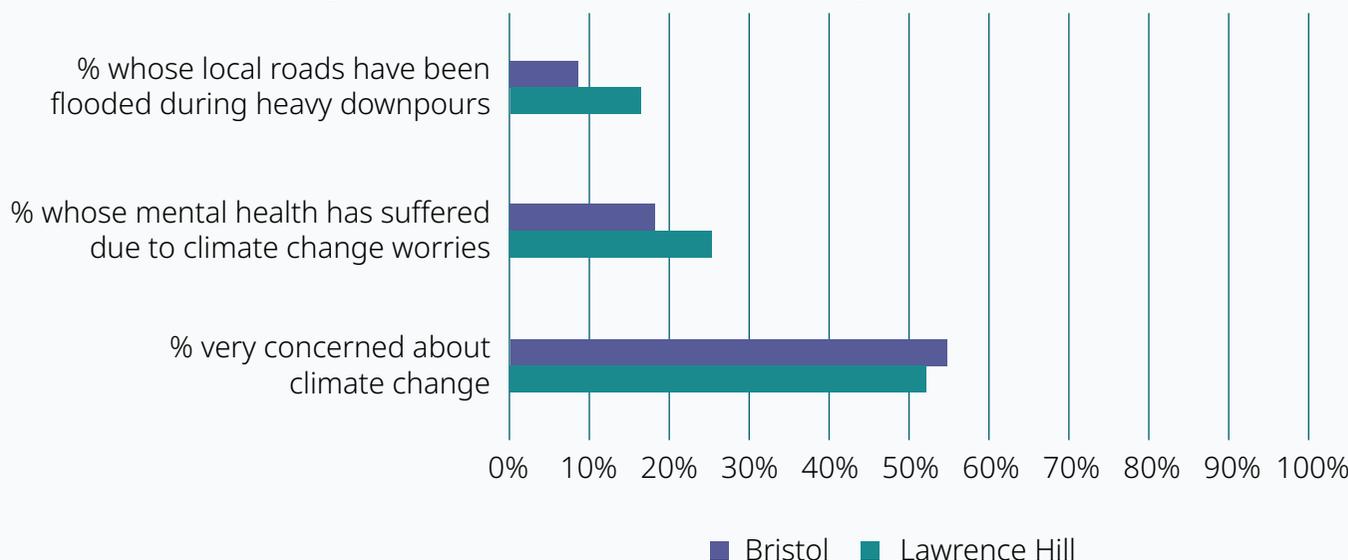
Green infrastructure can also support climate resilience, from new public greenspaces improving urban heat island effects and enhanced parks and green spaces providing places of respite for the surrounding population in hot weather. Tree lined streets can provide shade for comfortable movement.

Lower carbon footprints can be achieved by using sustainable materials, reducing the overall energy demand of buildings through passive design principles and ensuring buildings are energy efficient, and meeting remaining energy needs with renewable energy. This also has the additional benefit of limiting further climate change.

Local context:

The Keep Bristol Cool Framework and mapping tool show that the area is within the 10% most vulnerable to urban heat within the city²⁵. Key factors affecting this vulnerability are deprivation, air pollution from surrounding roads, the amount of nearby green infrastructure, and overcrowding of homes.

Climate change measures in Lawrence Hill compared to Bristol overall²⁶



²⁵ See Keep Bristol Cool map: [Keep Bristol Cool mapping tool \(arcgis.com\)](https://www.arcgis.com)

²⁶ Quality of Life, 2022

Key emerging local plan policies:

Policy BG4: Trees; Policy NZC1: Climate change, sustainable design and construction; Policy NZC2: Net zero carbon development – operational carbon; Policy NZC4: Adaptation to a changing climate; NZC5: Renewable energy and energy efficiency; Policy FR1: Flood risk and water management.

How the framework is responding:

A new District Heating Network is proposed to provide low-carbon heating for new development plots within the whole Frome Gateway Regeneration area (and surrounding areas). This will require the build of a new Energy Centre at Frome Gateway. Building specific energy sources are outside of the remit of the regeneration framework and will be determined through the planning application process.

Public realm strategy in the framework sets out key design principles to ensure resilient design, reducing overheating and avoiding increased risk of flooding. This includes through street greening, SuDS and park improvements, supported by use of Urban Greening Factor.

The regeneration framework sets out the importance of integrating measures and/or approaches to increase the sustainability of buildings and build climate resilience across buildings and public spaces.

The regeneration framework has been informed by technical analysis of flood risk and engagement with the Environment Agency. It sets out guidance on flood risk mitigation including flood resilience measures. It also incorporates the need for sustainable drainage systems throughout the regeneration area.

Estimated health economic impact:

Avoiding risk of flooding can save around £1.67 million in risk of PTSD, depression and anxiety (HAUS model).



Requirements for developers:

a. Energy efficiency

✓ Buildings should be highly energy efficient and aim to achieve the energy efficiency targets of the NZC2 policy of the updated Local Plan.

✓ Development sites should use Natural England's Urban Greening Factor standard to demonstrate that they have incorporated sufficient green infrastructure. This green infrastructure can reduce the local urban heat island effect. Landscape designs should include shaded areas for building occupants.

b. Renewable energy

✓ Ensure connection to the Frome Gateway District heating Network is factored into design and development proposals.

✓ Maximise the provision of renewable energy as part of the energy mix of new development schemes.

✓ Detailed design and development proposals for public realm, highways and green/open space schemes should ambitiously incorporate sustainable design and climate resilience/adaptation as key design objectives.

✓ Residents to be advised on the operation of renewables, such as heat pumps, to ensure optimum/effective usage.

d. Sustainable drainage

✓ Ensure no increase in flood risk as a result of the development on surrounding communities.

c. Buildings and public spaces designed to respond to winter and summer temperatures

✓ Planning applications should align with national and local planning policy and guidance (such as the Urban Living SPD and Local Plan climate change policies) in order to design and deliver well-designed and sustainable homes which are energy efficient and integrate adaptation to a changing climate. It should be demonstrated that homes do not overheat under future climatic conditions and designs to mitigate overheating should be fully integrated with noise and air quality requirements.

✓ Include SuDS within development sites, street greening and open spaces.

Other strategic recommendations and actions:

- Deliver the Frome Gateway District Heating Network and associated Energy Centre. This should be fuelled by renewable energy.



4. Social Infrastructure Assessment



4. Social Infrastructure Assessment

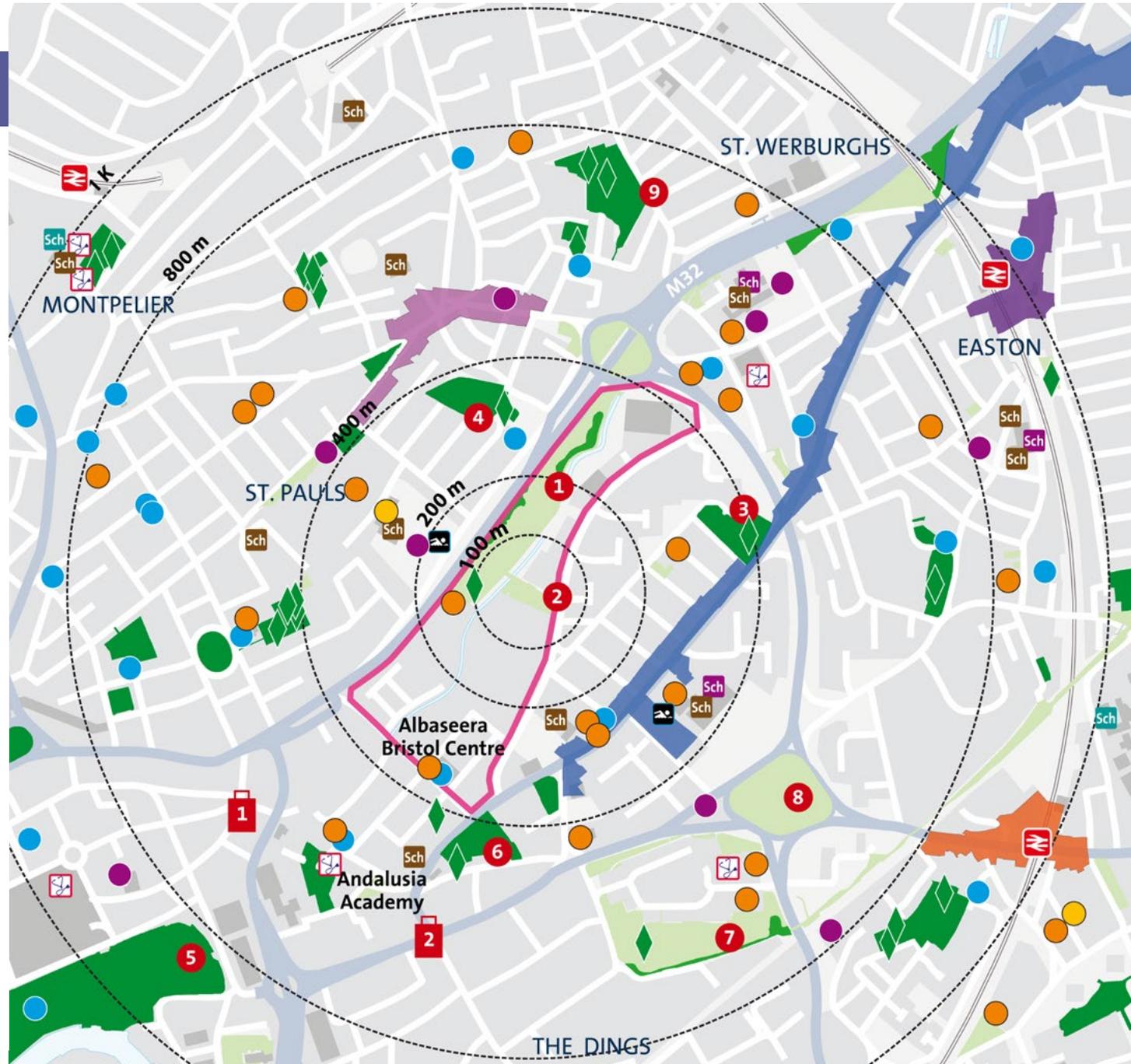
This section summarises the existing social infrastructure in and around the Frome Gateway regeneration area and outlines additional capacity requirements and recommendations to meet community needs.

Key

	Early Years		Formal green space
	Primary Schools		Natural green space
	Secondary Schools		Informal green space
	GP		Children's play area
	Leisure Centre		Riverside Park
	Community services/Centres/Halls		Peel Street
	Leisure facilities-Libraries, museums, Galleries, Theatres etc		Rawnsley Park
	Place of worship		St Agnes Park and St Paul's adventure playground
	Nursery/Crèche		Castle Park
	Rail Station		George Jones Park
	Frome Gateway		Newtown Park
			Lawrence Hill Roundabout
			Mina Road Park

Centres		
	Stapleton Road 5mins	2mins
	St Marks Road 20mins	6mins
	Lawrence Hill 15mins	5mins
	Lower Ashley Road 12mins	4mins
	Cabot Circus 13mins	4mins
	Old Market 12mins	4mins

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Summary of existing capacity / context*		Additional capacity required as a result of Frome Gateway Regeneration and/or recommended actions
GP Surgeries	Two GP surgeries within 800m, 10 min walk; Seven GP surgeries within 1.7km (22 min walk)	With a larger population there will likely be a need for more GPs and other healthcare provision locally. However, this does not necessarily require new surgery space since there are local surgeries nearby which may have the capacity to increase the number of GPs within existing practices. BCC should liaise with the Integrated Care Board to ensure they are aware of regeneration plans so that they can plan for population growth in the area.
Primary Schools	Three primary schools within 450m, 6 min walk; Six primary schools within 1.2km (15 min walk). Some of the local primary schools expanded the number of classes in recent years, however, the local primary school age population has since reduced and there is now excess classroom capacity.	There does not appear to be a need to provide additional primary schools in the area.
Secondary Schools	Currently in the area of first priority for Fairfield High School (2km, 26min walk) and Oasis Academy Temple Quarter (initially in temporary accommodation and permanently at Silverthorn Lane, due 2025, 1.7km, 21min walk).	There does not appear to be a need to provide additional secondary schools in the area.
Nursery Schools	Two nursery schools 700m away, 8-9 min walk, and one 1.3km away, 17min walk.	Additional affordable childcare provision is recommended.
Community spaces	There are various community spaces, including a mosque, youth club and a community gym. Other social, events and recreational indoor spaces in the Frome Gateway area include a coffee shop, a pub, arts and performance spaces, dance studio and martial arts centre. There are multiple mosques and churches nearby. Some of these are used as spaces for the wider community. St Paul's Learning centre is 500m, 6 min walk.	Community engagement sessions for the regeneration framework have highlighted the importance of providing spaces to accommodate community groups. New commercial and community space delivered at Frome Gateway should be used to help build the capacity and reach of community organisations and groups.

Summary of existing capacity / context*		Additional capacity required as a result of Frome Gateway Regeneration and/or recommended actions
Green spaces and allotments	<p>Riverside Park and Peel Street open space are within the Frome Gateway area. They are relatively low-quality spaces with reports of anti-social behaviour.</p> <p>The area has an open space deficiency: currently 10.1 sqm per person (population 52,725 and 53 hectares of open space). Bristol Green Spaces Strategy standard is 18 sqm per person; Central area average is 12.1sqm per person. Additional population will reduce the space per person further.</p> <p>The nearest allotments are 1.3km, 17 min walk.</p>	<p>Opportunities to increase the amount of the green space in the area should be explored and delivered if feasible.</p> <p>The quality of existing green spaces should be improved to enhance their public health, recreation and biodiversity value. Green space enhancement should aim to provide multiple benefits, such as community growing space, play facilities and space for wildlife.</p>
Play facilities and youth spaces	<p>Neither Riverside Park nor Peel Street open space include children's play equipment but there is a Multi-Use Games Area (MUGA)/ basketball court which is in need of investment. There are two equipped play parks within 500m.</p>	<p>Provision of incidental play spaces are recommended, as well as improvement to the MUGA.</p> <p>Opportunities to enhance (where needed) children's play facilities in the local area should be explored,</p>
Leisure centres	<p>Two leisure centres nearby: 200m, 3 min walk and 500m, 6 min walk.</p>	<p>No additional leisure centres required.</p>
Libraries	<p>Two libraries within 850m, 8 min walk</p>	<p>No additional libraries required.</p>

* Distances/times from Peel Street bridge, at the centre of Frome Gateway.



5. Appendix A



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5. Appendix A: Anticipated public health impact of the Frome Gateway regeneration framework

Background

Bristol City Council is a partner of the TRUUD (‘Tackling Root causes Upstream of Unhealthy Urban Development’) project, a 5-year research programme (Oct 2019 – Sept 2024) seeking to understand how prevention of Non-Communicable Diseases, such as cancers, diabetes, respiratory illness and mental ill health (including those linked to air pollution, and the climate and ecological emergencies) might be fully considered in decision-making for new urban environments.

The Frome Gateway project has been involved in developing a health economic modelling tool called HAUS (‘Health Appraisal for Urban Systems’) which values the health impacts, in monetary terms, of changes to the environment. This includes welfare costs of illness for healthcare, loss of productivity, formal and informal care, and monetising disutility or pain and suffering associated with disease²⁷.



Health impacts of the framework

Measures within the regeneration framework approach bring considerable additional value to the health potential of the site (Table 1 and Figure 1), including mitigating existing risks (compared with a baseline reflecting an unmanaged approach to development of the area):

- Road traffic accidents relating to high vehicle volume and speeds could be reduced by 60%.
- These traffic calming measures may also lead to a 9-12% reduced risk of noise attributable diabetes, premature mortality and poor mental health for adults and children.
- Enhanced safety may reduce attributable cases of poor mental health and functional loss by 55%.
- Risk of flooding reduces, saving around £1.67 million in risk of PTSD, depression and anxiety.

The combined estimated societal value of health benefits from this approach over the lifetime of the project are expected to be between £80-£100 million compared to an unmanaged approach.

The regeneration framework also brings additional benefits through improvements to public realm, including improving opportunities for active travel and enhanced green spaces. These measures are expected to encourage activity and wellbeing and reduce risk of diabetes, depression and weight gain.

Some health risks remain the same in the modelling, particularly air pollution, food environment and deprivation levels. There may be changes to these elements from measures contained within the regeneration framework which have not been estimated. For example, there can be health benefits from inclusion of an affordable healthy food shop.

²⁷ Details about the HAUS methods are included in Eaton, E., Hunt, A., Black, D. 2023. Developing and testing an environmental economics approach to the valuation and application of urban health externalities, *Frontiers*, 11. <https://doi.org/10.3389/fpubh.2023.1070200>

Table 1 below describes the estimated value of attributable changes to health in the baseline (an unmanaged approach to development) and in the regeneration framework. Two versions of framework health impacts are presented: 1 includes new pocket parks across the areas; 2 includes an additional single larger area of greenspace, which would provide £21 million additional benefits.

Table 1: Summary of estimated value of health outcomes over 25 years

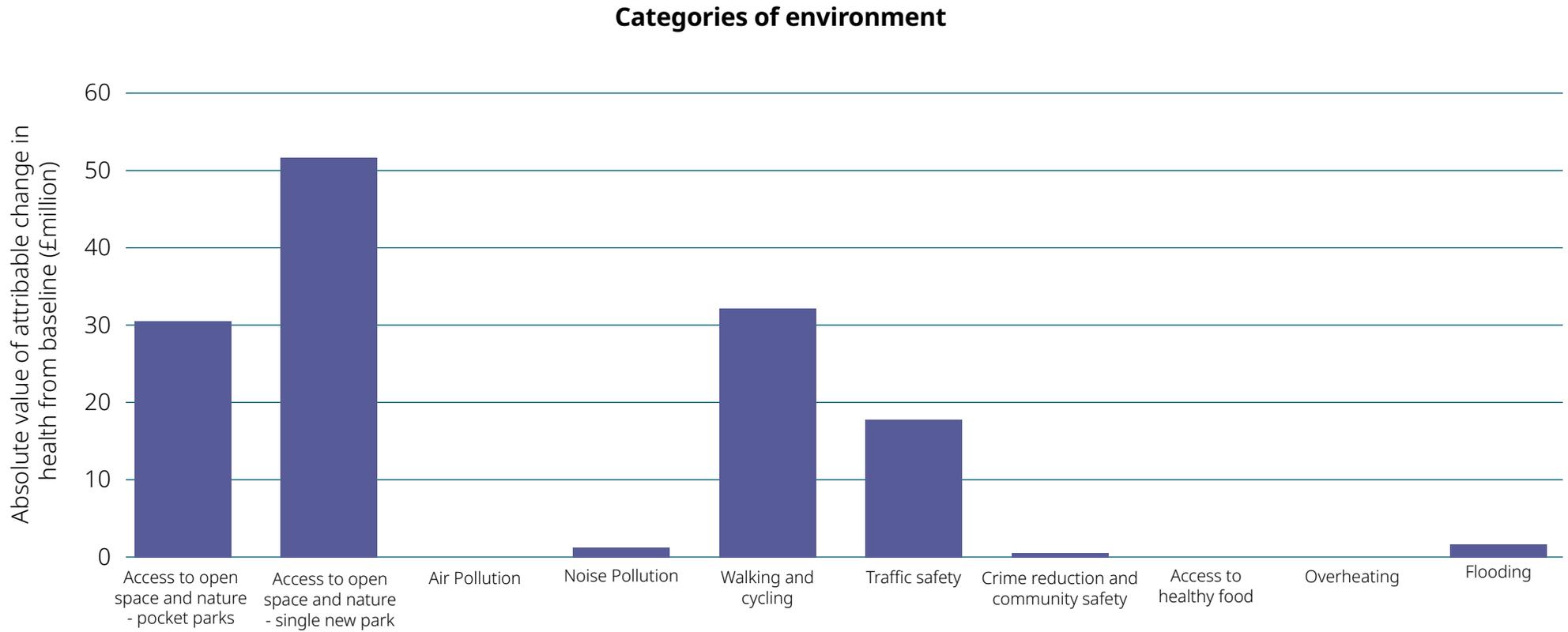
Environmental Category	Value of attributable health outcomes over project lifetime (£millions)		
	Baseline	Regeneration framework (1): small pocket parks	Regeneration framework (2): additional new large park
Access to open space and nature	-24.15	-54.90	-75.88
Air Pollution	175.38	175.38	175.38
Noise Pollution	11.37	10.23	10.23
Walking and cycling	0.00	-32.42	-32.42
Traffic safety	17.93	-10.89	-10.89
Crime reduction and community safety	20.35	20.30	20.30
Access to healthy food	-0.42	-0.42	-0.42
Overheating	1.29	1.29	1.29
Flooding	1.67	0.00	0.00
Adjusted total	203.41	108.57	87.59
Net Present Social Value (NPSV)	137.16	73.92	58.36
Net change from baseline		-83.95	-104.93
Net Present Social Value of change		-63.24	-78.80

 Negative values indicate reductions in health costs.
 Positive values indicate potential additional health costs.

Values in Million £2023, NPSV (Net present social value of health changes) adjusted for 3.5% discount rate.

Relates to 8,526 people within 300m of the Frome Gateway regeneration area.

Figure 1: Monetary value of expected net gains in health from the Frome Gateway regeneration framework, compared to the baseline (an unmanaged approach to development)





Tackling Root causes upstream of Unhealthy Urban Development (TRUUD) is a research project, based at the University of Bristol, looking at how urban centres can be planned to reduce health inequalities. It brings together experts from academia, industry and government to recommend and create new tools and processes for healthier cities. The project counts the cost of poor health, works with communities to communicate the issues they face and maps out the decision-making process in creating urban centres and includes two active case-studies in Bristol and Manchester. TRUUD is funded by the UK Prevention Research Partnership (UKPRP).

