

Medway Local Plan Health Topic paper

June 2025

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Medway Health and Wellbeing Topic Paper - April 2025

1. Role and Purpose

This Topic Paper is to provide a background to health and wellbeing for Medway residents including the inequalities faced within the local population. It will present evidence on how planning policy and development can improve Health and Wellbeing and reduce health inequalities by building the foundations for a local plan and providing context for the policies that sit within it.

This Topic Paper looks at current national and local guidance with regards to health and planning. There are a multitude of factors that can impact on health and wellbeing, however this Topic Paper focuses on those areas where planning policies can have an influence. Medway faces a number of health challenges and inequalities in which planning and place making has an important role to play.

This Topic Paper sets out the relevant guidance for each particular topic and identifies the relevant issues that the Local Plan needs to address.

2. Introduction and background

Health is a complex entity with many influencing factors. Health is far wider than just medical and physiological inputs and the access of healthcare infrastructure, while important, it encompasses wider elements. In 1992 the wider detriments to health were defined and planning was seen to have a major impact on living and working conditions.



Figure 1: the Dahlgren and Whitehead model of the main determinants of health

National planning policy acknowledges the link between planning and health through health's inclusion within the social element of sustainable development. Particularly national policy and guidance promote the need for policy to aid creating healthy lifestyles and developing relevant health infrastructure. People's lifestyle and environment affect their health and wellbeing and planning can shape many of factors that influence these areas (see Figure 2). Planning is vital in shaping how areas change and develop, and it is clear in the Local Plan it is a priority to address health inequalities whilst improving health and wellbeing. The policies within the local plan matters for the health of its people.

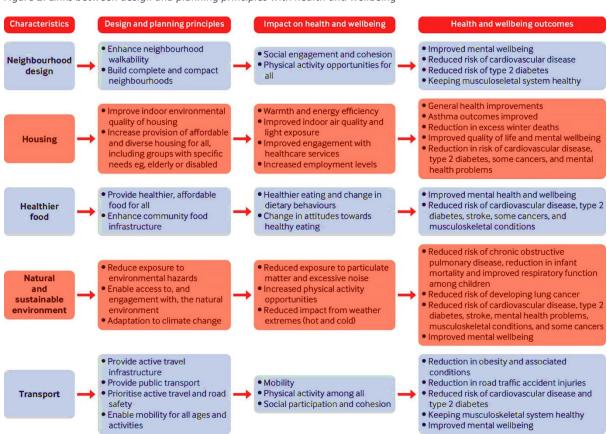


Figure 2: Links between design and planning principles with health and wellbeing

Medway Council is committed to reducing health inequalities, increasing life expectancy, and improving the quality of life of those who live and work here. This will be realised by addressing the social determinants of health, focusing on the prevention of ill health, and ensuring the local environment and infrastructure empowers people to make choices that benefit their physical, mental, and emotional health.

Medway is relatively deprived being in the bottom 30% of local authorities as measured by the Index of Multiple Deprivation. More than 40% of residents live in the bottom three most deprived deciles. The major weaknesses are crime, skills, education, and training. These weaknesses lead to poor health and social isolation.

Medway performs poorly against key public health outcomes in life expectancy and causes of death as a result of inequalities. Male life expectancy is below the national average, and there are pockets of marked health issues in some neighbourhoods. Across the authority life

expectancy differs by 7 years between the wards with the highest and lowest levels of deprivation.

Lifestyle issues including smoking, obesity and alcohol are key contributors to high mortality rates. The top two causes of premature death in Medway are cancer and cardiovascular disease. Cardiovascular disease is severely affected by lifestyle choices and influenced by the environment in which people find themselves. Avoiding these in the first place, through encouraging lifestyle change, we can prevent the majority of deaths occurring due to these diseases.

3. Topic paper scope

Health and Wellbeing are broad terms that can mean different things to different people. This paper defines health as a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity. Mental health related wellbeing is defined as a state in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to her or his community. Health and wellbeing are influenced by a range of factors, termed the 'wider determinants of health.' The focus of this paper is on community health and wellbeing and not on occupational health and safety. The terms 'health,' 'population health' and 'health and wellbeing' are used interchangeably.

Other area topic papers and planning policy documents have been reviewed to determine the elements of health and wellbeing that are in scope for this Medway Topic Paper. Priority has been given to key health and wellbeing issues that are most influenceable during the planning policy and application process. The following themes are covered in further detail and include related sub themes and health issues.

- 1. Active sustainable transport
- 2. Green and blue infrastructure
- 3. Healthy weight environment
- 4. Built environment.
- 5. Community facilities
- 6. Housing and accommodation
- 7. Air Quality
- 8. Social Health

4. Legislative and policy context

National Planning Policy Framework (NPPF) 2024 includes the following health related statements that frame planning policy and planning determinations.

2. Achieving Sustainable Development

Paragraph 8b: to support strong, vibrant and healthy communities, by ensuring that
a sufficient number and range of homes can be provided to meet the needs of
present and future generations; and by fostering well-designed, beautiful and safe
places, with accessible services and open spaces that reflect current and future
needs and support communities' health, social and cultural well-being;

5. Delivering a sufficient supply of homes

- Paragraph 63: Within this context of establishing need, the size, type and tenure of housing needed for different groups in the community should be assessed and reflected in planning policies. These groups should include (but are not limited to) those who require affordable housing (including Social Rent); families with children; looked after children; older people (including those who require retirement housing, housing with-care and care homes); students; people with disabilities; service families; travellers; people who rent their homes and people wishing to commission or build their own homes
- Paragraph 64: Where a need for affordable housing is identified, planning policies should specify the type of affordable housing required (including the minimum proportion of Social Rent homes required)

8. Promoting healthy and safe communities

- Paragraph 96: Planning policies and decisions should aim to achieve healthy, inclusive and safe places which promote social interaction; are safe and accessible, and enable and support healthy lives
- Paragraph 97: Local planning authorities should refuse applications for hot food takeaways and fast-food outlets:
 - a) within walking distance of schools and other places where children and young people congregate, unless the location is within a designated town centre; or
 - in locations where there is evidence that a concentration of such uses is having an adverse impact on local health, pollution or anti-socialbehaviour.
- Paragraph 98: To provide the social, recreational and cultural facilities and services the community needs, planning policies and decisions should:
 - a) plan positively for the provision and use of shared spaces, community facilities...and other local services to enhance the sustainability of communities and residential environments;
 - b) take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community;
 - c) guard against the unnecessary loss of valued facilities and services, particularly where this would reduce the community's ability to meet its day-to-day needs;

- e) ensure an integrated approach to considering the location of housing, economic uses and community facilities and services.
- Paragraph 103: Access to a network of high-quality open spaces and opportunities
 for sport and physical activity is important for the health and well-being of
 communities.... Planning policies should be based on robust and up-to-date
 assessments of the need for open space, sport and recreation facilities...and
 opportunities for new provision. Information gained from the assessments should be
 used to determine what open space, sport and recreational provision is needed,
 which plans should then seek to accommodate.
- Paragraph 104: Existing open space, sports and recreational buildings and land, including playing fields and formal play spaces, should not be built on unless:
 - a) an assessment has been undertaken which has clearly shown the open space, buildings or land to be surplus to requirements; or
 - the loss resulting from the proposed development would be replaced by equivalent or better provision in terms of quantity and quality in a suitable location; or
 - c) the development is for alternative sports and recreational provision, the benefits of which clearly outweigh the loss of the current or former use.

9. Promoting sustainable transport

- Paragraph 109. Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve:
 - e) identifying and pursuing opportunities to promote walking, cycling and public transport use; and
- Paragraph 111. Planning policies should:
 - d) provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);

Medway's Joint Local Health and Wellbeing Strategy (2024-2028) aims to improve health and wellbeing for everyone living, working, and studying in Medway. For this vision to be fulfilled, four themes were identified. The bullet points represent the most relevant priorities within each theme that can be influenced through the planning, design and building process.

1. Healthier, longer lives for everyone:

- Focus on improving overall health and increasing life expectancy.
- Addressing health inequalities across different communities.

2. Reduce poverty and inequality:

- Tackling the root causes of poverty.
- Reducing social and economic inequalities that impact health.

3. Safe, connected, and sustainable places:

- Creating environments that support health and wellbeing.
- Ensuring safety and sustainability in local communities.

4. Connected communities and cohesive services:

- Promoting social connections and community cohesion.
- Enhancing the integration and accessibility of health and social care services

One Medway Council Plan 2024-2028, aims to be a place where residents enjoy great opportunities for employment and quality of life, leading healthy, independent lives with accessible support. The vision includes creating a sustainable future, emphasising inclusivity, collaboration, and community engagement to drive social and economic improvements. Within the plans priorities are the following related to planning and health and wellbeing:

Priority 3: Enjoying clean, green, safe and connected communities

- Create child-friendly communities which ensure all people in Medway will feel safe and live free from harm and abuse.
- Provide improved opportunities to walk, cycle, use public transport and electric vehicles, reducing carbon emissions and improving air quality.
- Engage Medway's residents in ensuring Medway is clean and well maintained. Protect and enhance Medway's river, green spaces and environmental assets as a means of effectively tackling climate change.

Priority 4: Improving health and wellbeing for all

- Empowering people to achieve good health and wellbeing through prevention, with access to local activities and services that will enable and support them to lead independent, active and healthy lifestyles.
- Work collaboratively to grow participation year on year in recreational play, sport and physical activity as a means of promoting improved physical and mental health and wellbeing.
- Work in partnership with communities and organisations to address the issues that negatively affect health and wellbeing, making sure everyone has the opportunity to live long, healthy lives.

Priority 5: Living in good-quality, affordable homes

- Increase the supply of good quality, energy efficient and sustainable homes that reflect the needs of the communities in Medway
- Implement a Local Plan which reflects the needs of the communities in Medway, supporting a transition to a low-carbon future promoting affordable, energy efficient and sustainable homes.
- Engage with communities to identify ways to improve streets, parks and local surroundings which create vibrant places to live and enhance the quality of people's lives.
- Ensure the council's housing stock is good quality, efficient, free from damp and mould and tenants are at the heart of decision making

The Marmot Review 2010 Fair Society, Healthy Lives (Marmot, 2010) and subsequent Marmot Review 10 Years On (Marmot et al., 2020). Medway is working towards becoming a Marmot Place and will adopt the principals set out by Marmot, to reduce, prevent and tackle health inequalities. These are drawn from the review which focuses on addressing health inequalities in England by targeting the social determinants of health. The key points outlined in the review relevant to planning healthier places:

- Design: The Marmot Review emphasises creating environments that promote social interaction and community cohesion. This includes improving public spaces, enhancing walkability, and developing compact neighbourhoods with diverse land uses and local amenities.
- **Housing**: Improving housing quality is crucial for health. The report highlights the need for energy-efficient homes, refurbishment of existing housing, addressing fuel poverty, and increasing the provision of affordable and diverse housing options.
- **Food**: Access to healthy food is essential. The Marmot Review supports initiatives that make healthier food more accessible, such as community gardens and allotments, which can also foster social connections.
- Natural Environment: Protecting and improving the natural environment is vital for health. The report underscores the importance of green spaces for physical and mental well-being, improving air quality, and mitigating the effects of climate change, including flooding.
- **Transport**: Promoting active travel, such as walking and cycling, is a key recommendation. The Marmot Review advocates for infrastructure that supports active travel and reduces pollution, including separate cycling and pedestrian paths and traffic calming measures.

The Marmot Principals to be embedded in Medway:

- 1. Give every child the best start in life
- 2. Enable all children, young people, and adults to maximise their capabilities and have control over their lives
- 3. Ensure healthy standard of living for all
- 4. Create fair employment and good work for all
- 5. Create and develop healthy and sustainable places and communities
- 6. Strengthen the role and impact of ill health prevention
- 7. Tackle racism, discrimination, and their outcomes
- 8. Pursue environmental sustainability & health equity

Public Health England: Spatial Planning for Health 2017 has the following aspects of planning healthier places highlighted:

- Design improving social interactions via public realm improvements, enhanced 'walkability', 'complete and compact' neighbourhoods with diverse land uses, greater residential densities and provision of local amenities.
- Housing improvements to housing can be via energy efficiency, refurbishment, addressing fuel poverty, increased provision of affordable and diverse housing, and housing for specific needs.
- Food making healthier food more accessible, enabling gardening in an allotment or community garden.

- Natural environment protecting the natural environment, improving air quality, accessing, and engaging with the natural environment and the cooling effect of green space. Flooding and the risk of flooding can have a physical and mental impact.
- Transport active travel can increase physical activity as well as reduce pollution levels. Encourages separate cycling and pedestrian infrastructure and traffic calming.

The State of the Union –Reuniting Public Health with Planning in Promoting Healthy Communities 2019 sets out 15 recommendations to support the effectiveness of collaboration between planning, public health and health care sectors. It considers the relationship between the sectors emphasising the importance of preventing ill health and the need to collaborate to create communities in which it is easier to live a healthy life.

Putting Health into Place 2019 is the final published conclusion in a series of four publications which reviewed and 10 Principles for healthy place-making following a review of ten sites across the country that were developed as part of the Healthy New Towns programme. The Principles of Putting Health into Place demonstrate the value in healthy place making and the importance of building health and wellbeing into developments and tackling inequalities. The additional three publications provide greater information and detail on implementing the principals.

Kent and Medway Interim Integrated Care Strategy 2022 has been developed, and Medway Council is part of the newly formed Integrated Care System which is a partnership of organisations that come together to plan and deliver joined up health and care services to improve the lives of people across Kent and Medway. An Integrated Care Strategy has been produced by NHS Kent and Medway, Kent County Council and Medway Council, supported by district councils, Healthwatch organisations and the voluntary sector. It looks at how health and care colleagues from the NHS and local councils can work together to make improvements. The strategy also makes heavy reference to creating healthy environment and communities as opposed to just focusing on healthcare and treatment services. The chapters outlined below, and the bullet points represent areas can be influenced through the planning, design and building process.

Chapter 2: We will give children the best start in life and work to make sure they are not disadvantaged by where they live or their background and are free from fear or discrimination.

- The need to take a holistic and family-centred approach. Integrated support for families must include a wide offer that spans housing, communities, health, education, social care and the voluntary sector.
- In tackling childhood obesity our built environment also has a role to play e.g., access to green spaces and safe walking and cycling routes to schools.

Chapter 3: Tackling inequalities and wider social determinants of health.

- Everyone who lives in Kent and Medway should have access to a decent, safe, secure, warm and affordable home.
- Encourage housing that is designed with health and wellbeing built in, promoting healthy lifestyles, and responding to the impacts of climate change and changes to the way we all live and work.

- Partners will work together to plan housing development and regeneration in a way that improves quality of life for new and existing communities.
- Support everyone to be able to access open spaces including at parks, at the coast, and via safe walking and cycling routes.
- Protecting and enhancing our environment is a priority across the system. There are clear health and wellbeing benefits to reducing carbon emissions, improving air quality and managing the impacts of climate change.

Chapter 4: We will help people to manage their own health and wellbeing and be proactive partners in their care so they can live happy, independent and fulfilling lives; adding years to life and life to years.

 Empowering people to maintain good physical and mental health and well-being as they age.

Chapter 6: We will ensure that when people need hospital services, most are available from people's nearest hospital; whilst providing centres of excellence for specialist care where that improves quality, safety and sustainability.

• Providing quality healthcare as close to home as possible

Chapter 9: We will provide system leadership and make the most of our collective Resources

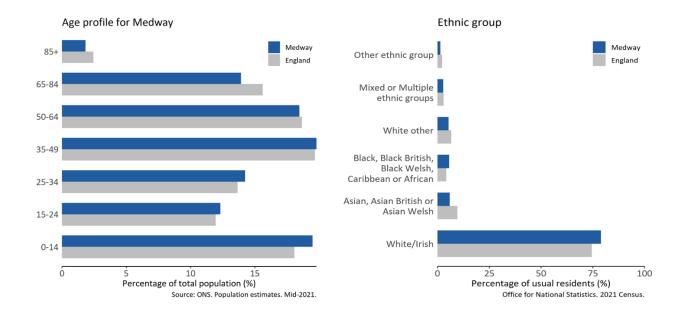
- Looking at how we use our buildings and land, e.g., ensuring that all green spaces across the ICS footprint are utilised fully for the benefits of biodiversity, the welfare of our staff and the people of Kent and Medway
- Reduce our environmental impact and support growth in the local green economy.

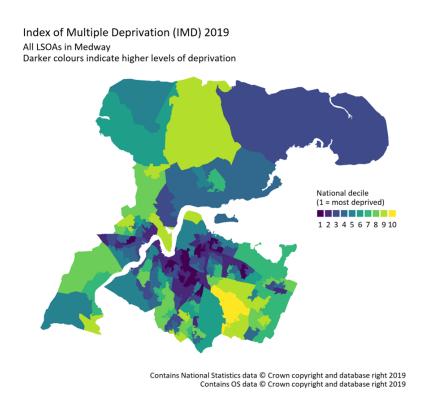
These priorities compliment those of the Medway Joint Health and Wellbeing Strategy prioritising children, supporting vulnerable residents, improving access to services and reducing health inequalities.

8. Medway Population Health statistics

Medway Council collaborates with partners to produce a Joint Strategic Needs Assessment which contains over 30 specific chapters, grouped into the 5 themes of the Medway Joint Health and Wellbeing Strategy, as well as other supporting information. The aim of the Medway health and wellbeing profile is to provide an overview of the current health and wellbeing needs of Medway's residents. The people and place section provides contextual information about the population characteristics. A RAG rating (red, amber, green) has been applied to the indicators to show how well an area is performing compared to a benchmark (usually England).

An individual's age, ethnicity and income level can have a major influence on their health status. Overall Medway has a younger population, a slightly lower ethnic minority population and higher deprivation level than the England average.





The Medway Profile within the Joint Strategic Needs Assessment provides a full breakdown of child health, lifestyles, health service access, long term condition, later life and health inequalities statistics. The health profile is regularly updated as new data is released by official sources. A detailed health and wellbeing survey was completed in 2022, with a large representative group of residents surveyed with the aim to provide within Medway estimates (ward and Primary Care Network level) of key health states and risk factors.

The health profile identifies health outcomes where Medway performs better, worse or similar to the England average. This includes the following indicators.

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Indicator	Compared	Slide
General fertility rate	Higher	12
MMR one dose (2 yrs)	Worse	13
DTaP/IPV/Hib/HepB vaccine (2 yrs)	Similar	14
A&E attendances (0-4 yrs)	Worse	15
Year 6: Prevalence of excess weight	Worse	16
Admissions for asthma (<19 yrs)	Similar	17
Admissions for self-harm (10-24 yrs)	Worse	18
Smoking prevalence	Higher	20
Obesity prevalence	Higher	21
Alcohol admissions	Better	22
Depression prevalence	Higher	23
Severe mental illness prevalence	Lower	24
Cervical screening	Higher	32
Breast cancer screening	Lower	33
Bowel cancer screening	Lower	34
Cancer prevalence	Lower	35
Deaths from cancer	Worse	36
Hypertension prevalence	Higher	38
Coronary heart disease prevalence	Lower	39
Deaths from coronary heart disease	Similar	40

Indicator	Compared	Slide
Stroke prevalence	Lower	41
Deaths from stroke	Better	42
Heart failure prevalence	Similar	43
Atrial fibrillation prevalence	Lower	44
Deaths from circulatory disease	Similar	45
Diabetes prevalence	Higher	47
Chronic kidney disease prevalence	Similar	49
Asthma prevalence	Lower	51
COPD prevalence	Similar	52
Deaths from respiratory diseases	Worse	53
Epilepsy prevalence	Higher	55
ACSC admissions	Worse	56
Deaths from all causes	Worse	58
Dementia prevalence	Lower	60
Emergency admissions for falls	Better	61
Emergency admissions for hip fractures	Similar	62
Life expectancy (male)	Worse	64
Life expectancy (female)	Worse	65
Unemployment	Worse	67
Access to hospital	Better	68

Indicator	Compared	Slide
Access to secondary school	Similar	69
Access to garden space	Similar	70
Access to public green space	Better	71

9. Health Impact Assessment

Medway Council commissioned a Health Impact Assessment (HIA) which was completed between February and April 2020. This reviewed draft local plan policies and draft local site plans. This independent report was commissioned by Medway Council Public Health team to consider the potential effects the draft policies and site plans would have on population health and wellbeing.

The key recommendations of the HIA included:

- sustainability tests should seek win-win opportunities for sustainable design and construction to also be healthy design and construction.
- Create designs, facilities, spaces, and access that are inclusive of different life stages.
- Create dwelling mixes appropriate to current and future community needs.
- Create community facilities that encourage access by minority or hard to reach community groups and are accessible for both new communities and existing communities.
- Improve plot sizes where appropriate, including outdoor space for physical activity, play, wellbeing and growing food.
- Use buffer zones, between land categories or use classes, to reduce the potential for adverse proximity related disturbance, emissions, and amenity effects on neighbouring sensitive land uses.
- Create employment areas where on-site and off-site improvements to pedestrian and cycle routes enable employees and customers from surrounding communities to commute using active travel.
- Create communities where local services and community facilities are accessible to residents including surgeries, pharmacies, good quality open-spaces (green space) and appropriate social, leisure and physical activity opportunities.
- Set expectations for use of an HIA checklist to inform a shared understanding of the potential for likely significant population health effects.

- Set expectations that where development falls within the requirements of Environmental Impact Assessment the wider determinants of health should be appropriately scoped and assessed within that process, including engagement with the council's public health team.
- Where developer contributions are made for off-site provisions (e.g., infrastructure levy) ensure these improvements are delivered with sufficient lead time for capacity to be increased ahead of occupation or operation.
- Avoid trade-offs between housing density and features of housing quality that affect health.

Next steps will include producing a HIA Protocol and Guidance document to support developments and the Local Plan. This will be available in 2025/26.

10. Health and Wellbeing Topics

1. Active Sustainable Travel

Medway's Local Plan 2041 emphasises the importance of active travel in promoting health and wellbeing. The plan advocates for creating accessible environments that encourage physical activity, such as walking and cycling, which are crucial for improving public health outcomes. By facilitating access to local employment, amenities, and community facilities through active travel, the plan supports the objective of helping people lead healthier lives and strengthening communities. The foundation principle of Active Design, "activity for all," underscores the need for environments that support physical activity equitably across all ages, ethnicities, genders, and abilities, fostering long-term active habits and behaviours.

Active transport, such as walking and cycling, offers substantial health benefits across various geographical contexts. Increased physical activity during active travel outweighs the negative effects of exposure to motorised traffic and air pollution (Mueller et al., 2015). Active transport to work or school is linked to improved cardiovascular health and lower body weight, with evidence strength ranging from weak (mental health and cancer), moderate (body weight), to strong (cardiovascular health) (Xu et al., 2013). High-quality public transport provision is associated with higher levels of active travel among children (Public Health England, 2017).

The World Health Organisation's Global Status Report on Physical Activity 2022 highlights that active travel reduces the risk of dying from cancer by 40% and heart disease by 52%, and lowers the risk of developing these conditions by 46% and 45%, respectively.

Neighbourhood characteristics, such as proximity and mix of land uses, pedestrian connectivity, aesthetics, interesting scenery, and traffic and personal safety, are important correlates of physical activity (Health Place, 2010). Safety measures, including lighting and separated infrastructure for pedestrians, cyclists, and motorised vehicles, as well as safe public places to socialise, positively impact physical activity levels (Salvo et al., 2018). Street connectivity and nearby destinations support transportation-related physical activity (Salvo et al., 2018).

Employment sites connected by active and public transportation improve cardiovascular fitness, weight status, and reduce pollution and carbon footprint (Public Health England, 2017). Air pollution is associated with adverse health outcomes such as asthma, COPD, stroke (Orellano et al., 2017), and emerging evidence links it to diabetes, obesity, cognitive decline, dementia (Peters et al., 2019), depression (Gu et al., 2019), and various adverse birth outcomes (Royal College of Physicians, 2019).

What can planning do?

- Ensure travel plans are an intrinsic requirement for new developments providing safe, convenient, inclusive access for pedestrians and cyclists, securing the facilitation of active travel as part of planning design and layout for each new development (Policy T27)
- Encourage new developments (and retrofits) to maximise opportunities for active travel with appropriate infrastructure such as cycle lanes and cycle parking (Policy T27)
- Ensure the local planning strategy and policies encourage more people to use public and active transport modes supporting behaviour change marketing and promotion to ensure people understand the benefits of using alternative modes to cars. (Policy T27)
- Ensure developments are more sustainable and planned in such a way that reduces the need to travel ensuring local amenities are within easy reach. (Policy T27)
- Ensure the local planning strategy and planning policies demonstrate how maximising active travel can benefit health, the economy, and the environment. (Policy T27)
- Ensuring access to services and public transport is accessible and in place within the appropriate phasing at new developments. (Policy T27)
- Advocating provision of safe pedestrian paths and cycleways across the Medway Towns, particularly near schools, care facilities and town centres including appropriate lighting, CCTV and security of pedestrians and cyclists. (Policy T27)
- Promote the design of new developments to include Active Design principles, enhancing the quality and accessibility of walking, wheeling, and cycling routes. (Policy T27)
- Support development that provides opportunities for healthy lifestyles and contributes to the creation of healthier communities.
- Ensure there is good connectivity and permeability that supports active travel and provides a
 clear user hierarchy for pedestrians, cycles, public transport before cars, ensuring streets and
 spaces within new developments are not overly car dominated particularly in residential
 developments (Policy T1)

2. Green and blue infrastructure

The scientific literature indicates that access to recreational infrastructure, such as parks and playgrounds, is associated with reduced risk of obesity among adolescents and increased physical activity (Public Health England, 2017). Evidence suggests that living near green spaces, such as parks and other open spaces, can improve health regardless of social class (Public Health England, 2017). Access to nearby parks and natural settings is associated with improved mental health, reduced anxiety, physical health, and healthy weight among children (Health Place, 2010). For adults, evidence suggests that green areas are associated with lower levels of depression symptoms, and access to parks or green areas nearby has a protective effect against depression (Rautio et al., 2017). Safety in relation to lighting and separated infrastructure for pedestrians, cyclists, and motorized vehicles, as well as the availability of safe public places to socialise, have a positive impact on the level of physical activity (Salvo et al., 2018).

Well-planned green space also has wider effects, including reducing the heat island effect (which can protect vulnerable people from heat stress), reducing skin damage due to tree shading, lowering the risk of flooding and related psychological distress, reducing noise, and reducing air pollution (Interreg Europe, 2024). The Medway Green and Blue Infrastructure Framework emphasises the importance of integrating green spaces into urban planning to enhance climate resilience, improve air quality, and support biodiversity (Medway Council, 2025). Recent statistics highlight that living near green and blue infrastructure (GBI) can increase physical activity rates, reduce childhood obesity, and slow health declines in the elderly. Improved cooling and air quality from urban GBI can reduce morbidity (CAPE, 2023). Additionally, access to green spaces has been shown to reduce mortality rates by up to 12% and improve mental health outcomes, including a 15% reduction in depression symptoms (WHO, 2023).

Research has found that people keep exercising longer in natural surroundings, and this effect is particularly marked in children. Children who have easy access to safe green spaces (parks, playgrounds, kick-about areas) are more likely to be physically active than those who are not so close. Establishing physical activity patterns in early years can set a precedent for the rest of a person's life. Further, when children are engaged in physical activity, it can encourage the wider family to get involved in activities too, bringing intergenerational benefits through activity that extends beyond the children to parents, grandparents, and a wider circle of family and friends (Frontiers, 2024). Blue infrastructure, which includes water-based elements such as rivers, lakes, ponds, and canals, plays a crucial role in enhancing health and wellbeing. Access to blue spaces has been associated with numerous health benefits, including improved mental health, reduced stress, and increased physical activity. Studies have shown that proximity to water bodies can lead to lower levels of anxiety and depression, as well as promote relaxation and social interaction (BlueHealth, 2020). Additionally, blue infrastructure contributes to ecological sustainability by supporting aquatic biodiversity and improving water management, which can mitigate urban heat island effects and reduce flood risks (Sustainably Forward, 2025).

The planning system can support access to blue infrastructure by integrating water management solutions into urban design. This involves creating multifunctional spaces

that combine green and blue elements, ensuring that water bodies are accessible and safe for public use. Planning policies should prioritise the development of blue-green corridors that connect various water features, enhancing connectivity and accessibility. Furthermore, urban planners can utilise Planning Support Systems (PSS) to facilitate the implementation of blue-green infrastructure, addressing challenges such as multi-objective planning and collaborative processes (OpenResearch Amsterdam, 2025).

By incorporating blue infrastructure into urban planning, cities can foster healthier, more resilient communities. New developments should provide appropriate, well-designed green space as an attractive and accessible setting that enhances the built form while also providing a high-quality resource for people to utilise. Consideration will be required as to how the open space relates to any adjacent residential uses, whereby measures may need to be taken to minimise disturbance from noise, but such proximity also maximises the opportunity for natural surveillance, positively impacting the perception of the area being safe (Natural England, 2025).

At its largest scale, the principles of green infrastructure can be used to create multifunctioning parks incorporating biodiversity priority habitats, river corridors, ecological networks, and routes to connect these spaces. Even at the smallest scale of provision, early consideration of green infrastructure can enhance the opportunity for improved health and wellbeing outcomes (EPA, 2024).

What can planning do?

- Promote active and healthy lifestyles through the design of new developments, including applying Active Design principles, improving the green and blue infrastructure network, enhancing the quality and accessibility of play and recreation opportunities, expanding the network of attractive walking, wheeling, and cycling routes, and public transport (Policy T27).
- Support good mental health by tackling deprivation, promoting social interaction through the design of high-quality public spaces and places, and improving access to nature and green spaces (Policy T27).
- Development should increase the availability of allotments and private and communal gardens for exercise, recreation, and healthy locally produced food (Policy T27).
- Ensure provision of new open space meets the quality, quantity and accessibility standards set out in Policy DM21.
- Green spaces should be designed for the wellbeing of people and wildlife, promoting public health and strengthening networks for nature (Policy S1).
- Provide resilience to the impacts of climate change in the design of development using multi-functional green infrastructure to enhance biodiversity, manage flood risk, address overheating and promote local food production (Policy S1).
- Ensure the delivery of green space as part of a development is not seen simply as providing an area free of development.
- Use green infrastructure principles to create multi-functioning parks incorporating biodiversity priority habitats, river corridors, ecological networks, and providing routes to connect these spaces.
- Consider green infrastructure early in the development process to enhance opportunities for improved health and wellbeing outcomes
- Increase the use of appropriate green infrastructure, ensuring that green infrastructure is built in the right places and is accessible for everyone whether play areas for all ages, walking and cycling networks, or places to sit.
- Ensure existing communities and older developments which may struggle to access green infrastructure or open space are considered within new developments and that health inequalities are addressed.
- Ensure new developments prioritise green and blue infrastructure and opportunities within early phases of the development.
- Ensure resident views are sought and carried through to the final design and implementation of all outdoor recreation spaces in new and existing developments.
- Ensure where traditional outdoor recreation spaces are limited by space, creative solutions are sourced to ensure access to green spaces is possible even in urban areas.

3. Healthy weight environment

Obesity is a public health crisis. Unless current trends improve, it is estimated 70% of adults in England will be overweight or obese by 2034 (Public Health England, 2015) and one in ten will develop type 2 diabetes. The implications of these projections are daunting: obesity on this scale is not only a threat to the mental and physical health of millions of individuals, but a burden on overstretched services, with potentially profound social and economic consequences. Frontiers Economic, 2023, estimated the cost to the NHS at £19 billion with a further £16 billion lost to the economy through loss of productivity.

A healthy-weight environment promotes physical activity of all sorts and ensures that sustainable transport and active travel is built into everyone's daily life. It helps people to access and choose healthier goods (such as food and drink) and services (such as healthcare) that support the choice of a balanced diet, leading an active lifestyle and maintaining a healthy weight.

Development should require the creation of environments that support physically active lives, by building physical activity opportunities into new developments, for example by providing essential facilities and shops within walking distance or easily accessible by cycling or public transport. In addition, the provision of sufficient formal sports pitches, playgrounds and other spaces for informal play, and allotments and local food growing spaces will contribute to increasing physical activity levels.

Food deserts have been described as areas where people experience physical and economic barriers to accessing healthy food. Everyone should have access to healthy foods such as fresh fruit and vegetables, however, this is not always the case, and a food desert can quickly develop. A 2024 systemic review of the food environment and obesity found that Food outlets which sell mostly unhealthy and ultra-processed foods were associated with higher levels of obesity, while fruit and vegetable availability and supermarket accessibility, which enable healthier food access, were related to lower levels of obesity (Pinder, E, et al, 2024)

It is recommended that residents should not have to walk any more than 500m to a shop that sells healthy foods. Food deserts can be a problem for residents with mobility issues, non-vehicle households and those with a low income. There are also wider local issues such as the negative effects that food deserts have on other local outlets, the appearance of the streetscape, public transport and increased pressures due to poor public health with the biggest cost of food deserts thought to be the medical costs of a poor diet (Harper Adams University, 2007)

Fast food outlets represent a popular, cheap convenient service. Some hot food takeaways offer 'energy-dense' or 'fast food' with high levels of fat, sugar and salt which are linked to obesity and related health conditions including cardiovascular disease, type 2 diabetes, stroke, and some cancers (Keeble, et al., 2019). Regular consuming of takeaway food is linked to excess weight and living in an area with higher levels of takeaway food outlets is linked to higher consumption of takeaway food (van Erpecum, 2022).

Childhood obesity is one of the biggest health problems this country faces. Nearly a quarter of children in England are obese or overweight by the time they start primary school aged five, and this rises to one third by the time they leave aged 11. Of particular concern is the effect of fast-food consumption on children's diets and eating behaviour as significant health problems related to obesity start to develop at primary school age; behaviour established in early life has been shown to track into adulthood. Food availability and accessibility are both key features of an 'obesogenic' environment where the widespread availability of fast food and an environment that promotes sedentary behaviour is of concern (NHS London Healthy Urban Development Unit, 2013). With 40% of children leaving primary school overweight or obese in Medway, shaping our food environment is important to supporting healthier lifestyles.

Research has shown that increased exposure and opportunity to buy fast food results in increased consumption (Burgoine et al, 2014). Research also indicates (Wijga et al, 2010) that obese children are more likely to be ill, be absent from school due to illness, experience health-related limitations and require more medical care than normal weight children. Furthermore, overweight and obese children are more likely to become obese adults, and have a higher risk of morbidity, disability and premature mortality in adulthood. Both the Chartered Institute for Environmental Health (Chartered Institute of Environmental Health, 2010) and Department of Health (Department of Health, 2008) advise that local authorities should limit the opening of new outlets, particularly in sensitive areas such as around schools.

What can planning do?

- Ensure local planning strategy and policies restrict the number of new hotfood takeaway outlets, using local planning powers to limit access to hot-food takeaways close to high-risk settings and where an overconcentration already exists. (Policy T27)
- Ensure new developments are planned with Active Design concepts at the forefront ensuring that physical activity is 'designed in' as plans for development in existing and new settlements take shape. (Policy T27)
- Ensure developments promote and provide a range of healthy eating options and foods wherever possible. (Policy T27)
- Ensure policies recognise and give significant weight to the benefits of sport and physical activity protecting existing provision and encouraging proposals for new or enhanced provisions and ensure new developments do not prejudice the use of existing provision.
- Ensure significant developer contributions are mandatory to create a healthy eating environment and increase physical activity levels in all appropriate applications.

4. Built environment.

The scientific literature indicates that health inequalities arise from a complex interaction of factors such as housing, income, education, social isolation, and disability. Lower subjective social status is linked to higher odds of coronary artery disease, hypertension, diabetes, and dyslipidaemia. Efficient and effective primary healthcare systems rely on accessibility and availability (Ansell et al., 2017). Mobility and social participation can be enhanced by proximity to resources and recreational facilities, social support, having a car or driver's license, public transportation, and neighbourhood security (Levasseur et al., 2015). Communities with diverse housing types, mixed land use, increased housing density, development directed toward existing communities, and access to natural spaces show increased walking and physical activity among residents (Durand et al., 2011). However, perceived crime rates can negatively affect the use of green spaces, regardless of actual crime rates (Mancus and Campbell, 2018).

The built environment significantly influences health and wellbeing. Well-designed neighbourhoods with accessible parks, walking paths, and recreational facilities promote active lifestyles, reducing chronic diseases like obesity and cardiovascular conditions (CDC, 2025). Safe and affordable housing, coupled with efficient public transport systems, can mitigate social isolation and improve access to essential services, enhancing health outcomes (Healthy People 2030, 2025). Environmental sustainability initiatives, such as green spaces and pollution control, contribute to healthier living conditions. Integrating health considerations into urban planning can support healthier behaviours and reduce health inequalities, fostering a resilient and thriving community (Local Government Association, 2024).

What can planning do?

- Ensure the local planning strategy and policies acknowledge and promote the health and wellbeing benefits of good design in developments. (Policy T27)
- Ensure the local planning strategy and policies adopt a holistic perspective on the wider neighbourhood, ensuring that new developments and schemes wherever possible deliver health and wellbeing benefits to existing communities, including community integration with accessible routes between old and new. (Policy T27)
- Ensure local planning strategy and policies focus upon prevention, reducing and delaying demand for health services by enabling people to be independent for longer in their own home and meeting their changing needs. (Policy T27)
- Ensure developments embrace new technologies which improve health and wellbeing outcomes. (Policy T27)
- Ensure effectively designed pedestrianised streets, prioritising the role of streets as
 'places' providing pedestrian routes that are safe, well lit, overlooked, welcoming, and
 well maintained. (Policy T27)
- Ensure infrastructure in new communities is designed to meet the needs of the
 community now and in the future to ensure flexibility is afforded to the type of
 infrastructure and services people may need in time. The Five Ways to Wellbeing model
 approach should be considered at an early stage which considers what service and
 infrastructure provision might look like for different generations/diverse ethnic group
 within the community e.g., age, disability, sex, gender reassignment, race, religion or
 belief, sexual orientation, marriage and civil partnership, pregnancy, and maternity.
 (Policy T27)
- Ensure buildings, spaces, and transport are inclusive and accessible regardless of disability status. E.g., Dementia pathways (Policy T27)
- Supporting healthier and more active lifestyles by designing health and wellbeing into
 place and producing designs and layouts for accessible and adaptable homes (ensuring
 homes are suitable for lifetime living). (Policy T1)
- The proposal respects the amenity of neighbouring uses through consideration of light levels, overshadowing, overlooking, loss of privacy, visual intrusion, appropriately designed car parking and ensuring minimal impact so that development does not result in or is exposed to excessive noise, vibration, fumes or light pollution. (Policy T1)

5. Community facilities

Social infrastructure encompasses a diverse range of services and facilities that cater to community needs for education, health, social support, recreation, cultural expression, social interaction, and community development. Effective planning and provision of social infrastructure are crucial for fostering healthy and sustainable communities, ensuring that population growth is supported by a network of accessible, affordable, and responsive facilities and services. Investment in social infrastructure is vital for the health, wellbeing, and economic prosperity of communities. Planning should consider the broader needs of the area and aim to address both existing and projected requirements. New facilities can attract surrounding residents into a new area, promoting integration and reducing physical and social barriers.

Environmental conditions, including built, natural, and social contexts, significantly influence older adult health and activity participation. Factors such as pollution levels, traffic conditions, accessibility and suitability of services and facilities, socio-economic conditions, aesthetics, pedestrian infrastructure, community life, exposure to antisocial behaviour, social network participation, environmental degradation, exposure to natural settings, and familiarity with the local environment play a role (Annear et al., 2012). Individuals with functional limitations or bodily impairments often face disadvantages in social participation. Social isolation or lack of close social ties is linked to poor health and increased mortality risk, especially for those with physical disabilities (Tough et al., 2017). Discrimination, including age, disability, and sexuality discrimination, is associated with health inequalities (Alvarez-Galvez and Salvador-Carulla, 2010). Ethnic minority patients in the UK may encounter additional barriers in accessing healthcare services due to cultural, language, and healthcare service knowledge factors (Alhomoud et al., 2013).

Community facilities such as community halls, libraries, museums, and art galleries provide spaces for community events, education, and leisure activities. Participation in the arts and access to diverse arts opportunities can significantly improve health outcomes. Engaging in the arts promotes disease prevention and enhances wellbeing through social interaction, aiding recovery from ill health and better management of health conditions. Growth in small businesses, including those in the arts and culture sector, contributes to improved health outcomes, as education, occupation, and income are key determinants of health and wellbeing (Institute of Health Equity, 2010). Protecting community facilities that serve as bases for such activities is essential for supporting the health and wellbeing of residents.

What can planning do?

- Create inclusive, well-connected centres and neighbourhoods where services and facilities are co-located, including for older people and those with different abilities (Policy T27).
- Support good mental health by tackling deprivation, promoting social interaction through the design of high-quality public spaces and places, and improving access to nature and green spaces (Policy T27).
- Improve and create better access to education, training, and employment, and promoting a stronger local economy (Policy T27).
- Major development must ensure that primary health care facilities provided are of an appropriate scale in relation to the proposal and meet the needs of residents. These facilities must be located alongside other community services and facilities to foster a sense of community, improve accessibility, promote sustainable travel, and enable combined trips (Policy T27).
- Establish healthy communities and well-balanced neighbourhoods that encourage social interaction and inclusive environments that create a sense of belonging (Policy T1).
- Provide community and cultural facilities in new developments. Large scale
 residential developments will be required to provide community facilities to
 meet the needs of new residents and integration with existing communities
 where possible (Policy T29).
- New community and cultural facilities should be located within or near the community they are intended to serve and should be appropriately located to support sustainable travel by being accessible to users by walking, cycling and public transport (Policy T29).
- Ensure all applications and developments have sufficient infrastructure capacity to support proposal (Policy S24)
- Development is phased to reflect the timely delivery of infrastructure to serve and support future occupants and users. Providing the spaces and places which promote and encourage social interaction and meaningful connection (Policy S24).
- Ensure community facilities are well connected to other community facilities, public transport services, open space, recreation facilities, and employment and education opportunities.
- Ensure corresponding services are relevant to local people and can be flexible enough to respond to changing needs.

6. Housing and accommodation

The quality of the built environment, especially housing, is related to a wide variety of health outcomes. Recent studies continue to support these findings, emphasising the significant impact of housing quality on general health, mental health, and wellbeing. Poor housing conditions, including structural deficiencies, mold exposure, and inadequate heating, are associated with adverse health outcomes such as asthma, cardiovascular disease, and respiratory illnesses (Johns Hopkins School of Nursing, 2025). Housing quality also influences mental health, with poor conditions linked to higher rates of anxiety and depression (Rana, Kent, & Page, 2025).

Substandard housing is associated with increased mortality rates and fall-related injuries among older adults (Tanner et al., 2013). Housing that is affordable to heat and appropriately sized can improve diet, privacy, household and family relationships, and opportunities for leisure and studying (Thomson et al., 2013).

Housing inequalities disproportionately affect low-income families, older adults, and individuals with chronic conditions. These groups are more likely to experience adverse health outcomes due to poor housing conditions (Braubach et al., 2011). Migrant and refugee populations in high-income countries also face significant health challenges related to housing inequalities (Rana, Kent, & Page, 2025).

Inadequate housing can lead to adverse child health and developmental outcomes. Overcrowding and poor ventilation are consistently associated with respiratory illnesses and developmental delays (Pillas et al., 2014).

The lack of affordable housing within a community can contribute to family residential instability, forcing families to move frequently, live in overcrowded conditions, or experience periods of homelessness (Annear, 2012). Housing affordability challenges are linked with poor mental health outcomes such as depression and psychological distress (Rana, Kent, & Page, 2025).

Built, natural, and social contexts are important influences on older adult health and activity participation. Poor neighbourhood conditions, such as high crime rates and abandoned buildings, negatively impact residents' wellbeing (Johns Hopkins School of Nursing, 2025).

Local authorities must adhere to statutory guidance on social housing allocations, ensuring eligibility and qualification criteria are met (Ministry of Housing, Communities and Local Government, 2024).

What can planning do?

- Support healthier and more active lifestyles by designing health and wellbeing
 into place and producing designs and layouts for accessible and adaptable
 homes (ensuring homes are suitable for lifetime living) (Policy T1).
- Deliver a sufficient range of sustainable housing options are provided to adequately meet the needs of a growing and changing population (Policy T2).
- All developments in Medway of 10 or more residential units (net) will require the delivery of affordable housing (Policy T3).
- Meet the requirements set out in Policy DM5.
- Increase provision of affordable housing for vulnerable groups and people with specific needs
- Ensure local planning strategy and policies improve standards of new build housing, adopting standards that support the development of high quality, healthy, energy efficient homes that are fit for purpose now and reflects the trajectories for population growth.

7. Air Quality

Air pollution continues to be a major public health concern in the UK. According to the Department for Environment, Food & Rural Affairs (DEFRA), air pollution is the largest environmental risk to public health, with long-term exposure linked to chronic conditions such as cardiovascular and respiratory diseases, as well as lung cancer (DEFRA, 2023). Air pollution can cause heart disease, strokes, lung disease, and some cancers. It remains one of the largest environmental risks to people's health in the UK, affecting individuals throughout their lives. Children and older adults are particularly vulnerable (Public Health England, 2018). In Medway, it is estimated that there are 89 deaths each year attributable to air pollution (Medway Council, 2025).

Professor Chris Whitty, the Chief Medical Officer for England, highlighted in his 2022 annual report the significant role of planning in reducing the concentration of pollutants locally and promoting health (Whitty, 2022). The UK government's Clean Air Strategy outlines measures to reduce air pollution and its impacts on public health. Key actions include promoting the uptake of low emission vehicles, investing in clean public transport, and redesigning urban areas to reduce exposure to pollutants (DEFRA, 2023). Local authorities are encouraged to integrate air quality considerations into their planning processes to ensure new developments contribute to improved air quality (DEFRA, 2023). Medway Council's Air Quality Planning Guidance provides specific advice for developers to ensure that new developments do not adversely impact air quality. This includes requirements for air quality assessments and mitigation measures where necessary (Medway Council, 2025).

What can planning do?

- All major size development and proposed development within, or development close to an AQMA should take account of the Medway Council Air Quality Planning Guidance screening checklist (Policy DM3).
- Ensure local planning strategy and policies contribute to improving air quality and carbon reduction targets and the transition to a low carbon economy.
- Ensure local planning strategy and policies support the step change in the uptake of low emission vehicles by ensuring an effective EV charging infrastructure.
- Encouraging the increase in low emission fuelled and electric cars, lorries, and buses.
- Encourage investment in clean public transport, as well as foot and cycle paths to improve health.
- Discourage highly polluting vehicles from entering populated areas.

8. <u>Social Health</u>

Social health is a critical component of overall wellbeing, encompassing the quality and quantity of our relationships with others which are essential for mental and physical health. Studies have shown that people with poor social interactions are more likely to experience adverse health outcomes, including a higher risk of premature death (Holt-Lunstad et al., 2010). Social relationships significantly impact mental health, physical health, and mortality risk. For instance, individuals with strong social connections tend to have lower rates of anxiety and depression, better cardiovascular health, and enhanced immune function (Umberson & Montez, 2010). Even if one maintains a healthy diet, gets adequate sleep, and exercises regularly, the absence of social connections can still detract from overall health (Berkman & Glass, 2000). With an ageing population and the increased awareness of mental health issues, the importance of social health has become more prominent. Research has proven that good social wellness has both physical and mental benefits, contributing to a higher quality of life (White et al., 2024).

Social isolation and loneliness do not only harm individuals; they also negatively impact entire communities and societies. The lack of social connections can lead to increased healthcare costs, reduced productivity, and higher rates of mental health issues (Cacioppo & Cacioppo, 2018). Long-term loneliness is as harmful as obesity or smoking 15 cigarettes a day, and it increases the risk of death by 26% (Marmalade Trust, 2023). In Medway, 24.3% of residents reported feeling isolated often or some of the time. This was more likely to be experienced by residents in concentrated urban areas, older adults and adults who rent (Medway Council, 2023). Therefore, fostering social health is not just beneficial for individuals but also for the broader community.

Planning developments play a crucial role in enhancing social health and wellbeing by creating environments that promote social interaction and community cohesion. Public spaces such as parks, community centres, and recreational facilities should be designed to

encourage social interaction. These spaces provide opportunities for residents to engage in activities together, fostering a sense of community and belonging (Gehl, 2010). Mixed-use developments that combine residential, commercial, and recreational spaces can enhance social health by creating vibrant, walkable neighbourhoods. These areas facilitate daily interactions among residents, promoting social connections and reducing isolation (Grant, 2002).

Ensuring that community facilities are accessible to all residents, including those with disabilities, is essential for promoting social health. Facilities such as libraries, sports centres, and cultural venues should be well-connected to public transport and integrated into the community (Public Health England, 2017). Active transport options, such as walking and cycling paths, can encourage residents to engage in physical activity while interacting with others. These pathways should be safe, well-lit, and connected to key destinations within the community (Mueller et al., 2015).

What can planning do?

- Support good mental health by tackling deprivation, promoting social
 interaction through the design of high-quality public spaces and places, and
 improving access to nature and green spaces (Policy T27). Create inclusive,
 well-connected centres and neighbourhoods where services and facilities are
 co-located, including for older people and those with different abilities (Policy
 T27).
- Major development must ensure that primary health care facilities provided are of an appropriate scale in relation to the proposal and meet the needs of residents. These facilities must be located alongside other community services and facilities to foster a sense of community, improve accessibility, promote sustainable travel, and enable combined trips (Policy T27).
- Establish healthy communities and well-balanced neighbourhoods that encourage social interaction and inclusive environments that create a sense of belonging (Policy T1).
- The inclusion, design and thoughtful use of shared spaces in housing developments may be used to create an environment which is supportive of social connection and encourage more incidental encounters (Policy T1).
- The development of specialist residential accommodation for older people, including care homes, nursing homes; and other specialist and supported forms of housing for those with particular needs is easily accessible to public transport, shops, local services, community facilities and social networks for residents, carers and visitors (Policy T4).

References

Alhomoud F, et al (2013). Medicine use and medicine-related problems experienced by ethnic minority patients in the United Kingdom: a review. The International journal of pharmacy practice 2013; 21(5): 277-87.

Aliet, Y. (2025). Planning support systems for implementing blue-green infrastructure. OpenResearch Amsterdam. [online] Available at: https://openresearch.amsterdam/en/page/120631/planning-support-systems-for-implementing-blue-green-infrastructure [Accessed 22 May 2025].

Alvarez-Galvez J and Salvador-Carulla L (2010) Perceived discrimination and self-rated health in Europe: evidence from the European Social Survey (2010). PLoS One 2013; 8(9): e74252.

Anderson LM, et al. (2003) Providing affordable family housing and reducing residential segregation by income. A systematic review. Am J Prev Med; 24(3 Suppl): 47-67.

Annear, M., Keeling, S., Wilkinson, T., Cushman, G., Gidlow, B. and Hopkins, H. (2012). Environmental influences on healthy and active ageing: a systematic review. Ageing & Society, 34(4), pp.590–622. [online] Available at: https://doi.org/10.1017/S0144686X1200116X [Accessed 22 May 2025].

Ansell, D., Crispo, J.A.G., Simard, B. and Bjerre, L.M. (2017) 'Interventions to reduce wait times for primary care appointments: a systematic review', BMC Health Services Research, 17(1), p. 295.

Ben Cave Associates Ltd (2020) Medway Local Plan Health Impact Assessment

Berkman, L.F. and Glass, T. (2000). Social integration, social networks, social support and health. In: L.F. Berkman and I. Kawachi, eds., Social Epidemiology. New York: Oxford University Press, pp.137–173.

BlueHealth. (2020). Benefits of Blue Spaces. [online] Available at: https://bluehealth2020.eu/resources/bluebenefits/ [Accessed 22 May 2025].

Braubach, M., Jacobs, D.E. and Ormandy, D. (2011). Environmental burden of disease associated with inadequate housing: A method guide to the quantification of health effects of selected housing risks in the WHO European Region. Copenhagen: WHO Regional Office for Europe. [online] Available at: https://iris.who.int/handle/10665/344853 [Accessed 22 May 2025].

Burgoine T, et al (2014) Associations between exposure to takeaway food outlets, takeaway food consumption, and body weight in Cambridgeshire, UK: population based, cross sectional study. British Medical Journal; 348: g1464. http://www.bmj.com/content/348/bmj.g1464

Byck GR, et al (2015) Effect of housing relocation and neighbourhood environment on adolescent mental and behavioural health. Journal of child psychology and psychiatry, and allied disciplines; 56(11): 1185-93.

Cacioppo, J.T. and Cacioppo, S. (2018). The growing problem of loneliness. The Lancet, 391(10119), p.426. [online] Available at: https://doi.org/10.1016/S0140-6736(18)30142-9 [Accessed 22 May 2025].

Centers for Disease Control and Prevention (CDC) (2025) Healthy Places: Built Environment and Health. Atlanta: CDC.

Chartered Institute of Environmental Health (2010) Policy briefing note – fast food outlets

Department for Environment, Food & Rural Affairs (DEFRA). (2023). The air quality strategy for England. [online] Available at: https://www.gov.uk/government/publications/the-air-quality-strategy-for-england [Accessed 22 May 2025].

Department of Health (2008) Healthy weight, healthy lives

Douglas M, et al. (2003) Health Impact Assessment of housing improvements: a guide. Glasgow: Public Health Institute of Scotland. ISBN 1-904196-13-6. 2003.

Durand CP, et al (2011) A Systematic Review of Built Environment Factors Related to Physical Activity and Obesity Risk: Implications for Smart Growth Urban Planning. Obesity reviews: an official journal of the International Association for the Study of Obesity; 12(501): e173-e82.

EPA. (2024). Green Infrastructure and Health. [online] Available at: https://www.epa.gov/green-infrastructure [Accessed 22 May 2025].

Fisk WJ, et al (2010) Association of residential dampness and mold with respiratory tract infections and bronchitis: a meta-analysis. EnvironHealth 2010; 9: 72.

Gehl, J. (2010). Cities for People. Washington, DC: Island Press.

Grant, J. (2002). Mixed use in theory and practice: Canadian experience with implementing a planning principle. Journal of the American Planning Association, 68(1), pp.71–84.

Gu, X., Zhang, X., Wang, T., Zhang, Y., Chen, H. and Chen, G. (2019). Exposure to air pollution and risk of depression: A systematic review and meta-analysis of observational studies. Environmental Research, 170, pp.274–281.

Health & Place. (2010). Neighbourhood environment and physical activity: A review. Health & Place, 16(4), pp.703–724.

Health Place (2010) Characteristics of urban parks associated with park use and physical activity: a review of qualitative research.; 16(4): 712-26.

Holt-Lunstad, J., Smith, T.B. and Layton, J.B. (2010). Social relationships and mortality risk: A meta-analytic review. PLoS Medicine, 7(7), p.e1000316. [online] Available at: https://doi.org/10.1371/journal.pmed.1000316 [Accessed 22 May 2025].

Institute of Health Equity. (2010). Fair Society, Healthy Lives: The Marmot Review. [online] Available at: https://www.instituteofhealthequity.org/resources-reports/fair-society-healthy-lives-themarmot-review [Accessed 22 May 2025].

Interreg Europe. (2024). GIFT - Green Infrastructure for Forest and Trees. [online] Available at: https://www.interregeurope.eu/gift [Accessed 22 May 2025].

Johns Hopkins School of Nursing. (2025). Hopkins Housing & Health Collaborative. [online] Available at: https://nursing.jhu.edu/hopkins-housing-and-health-collaborative/ [Accessed 22 May 2025].

Joint health and Wellbeing Strategy 2018-2023

https://www.medway.gov.uk/downloads/file/3710/joint_health_and_wellbeing_strategy_2018_to_2023

Kang, Y. and Guo, Z. (2025). Connecting urban green and blue spaces with children's health: A bibliometric analysis. Frontiers in Psychology, 16. [online] Available at: https://www.frontiersin.org/articles/10.3389/fpsyg.2025.1560467/full [Accessed 22 May 2025].

Kent and Medway Integrated Care System (2022) Kent and Medway Interim Integrated Care Strategy. Kent: NHS Kent and Medway, Kent County Council and Medway Council. Available at: https://www.kmhealthandcare.uk/about-us/vision-and-priorities/kent-and-medway-integrated-care-strategy (Accessed: 22 May 2025).

Kirby, M. and Scott, A.J. (2023). Green Blue Infrastructure Impacts on Health and Wellbeing: A Rapid Evidence Assessment. CAPE: University College London. [online] Available at: https://doi.org/10.17605/OSF.IO/C2XUM [Accessed 22 May 2025].

Levasseur, M., Richard, L., Gauvin, L. and Raymond, É. (2015) 'Importance of proximity to resources, social support, transportation and neighbourhood security for mobility and social participation in older adults: results from a scoping study', BMC Public Health, 15, p. 503.

Local Government Association (2024) Integrating Health into Urban Planning: A Guide for Local Authorities. London: LGA.

Mancus, G.C. and Campbell, J. (2018) 'Integrative review of the intersection of green space and neighborhood violence', Journal of Nursing Scholarship, 50(2), pp. 117–125.

Marmalade Trust. (2023). Loneliness facts and statistics. [online] Available at: https://www.marmaladetrust.org/loneliness-facts-and-statistics [Accessed 22 May 2025].

Marmot, M., Allen, J., Boyce, T., Goldblatt, P. and Morrison, J. (2020) Health equity in England: The Marmot Review 10 years on. London: Institute of Health Equity. Available at: https://www.health.org.uk/publications/reports/the-marmot-review-10-years-on (Accessed: 22 May 2025).

Marmot, M. (2010) Fair society, healthy lives: The Marmot Review – Strategic review of health inequalities in England post-2010. London: The Marmot Review. Available at: https://www.gov.uk/research-for-development-outputs/fair-society-healthy-lives-the-marmot-review-strategic-review-of-health-inequalities-in-england-post-2010 (Accessed: 22 May 2025).

Medway Council. (2024). Medway Local Plan 2041. [online] Available at: https://www.medway.gov.uk/info/200542/medway_local_plan_2041 [Accessed 22 May 2025].

Medway Council. (2025). Air quality in Medway. [online] Available at: https://www.medway.gov.uk/info/200140/environment_health_and_safety/416/air_quality [Acc essed 22 May 2025].

Medway Council. (2025). Medway Green and Blue Infrastructure Framework. [online] Available at: https://www.medway.gov.uk/downloads/file/6279/medway_green_and_blue_infrastructure_framework [Accessed 22 May 2025].

Medway Council. (2025). Medway's Air Quality Planning Guidance. [online] Available at: https://www.medway.gov.uk/downloads/file/2147/medways_air_quality_planning_guidance [Ac cessed 22 May 2025].

Medway Council (2024) Joint Local Health and Wellbeing Strategy 2024 to 2028. Medway: Medway Council. Available

at: https://www.medway.gov.uk/downloads/file/3710/joint_local_health_and_wellbeing_strategy_ 2024_to_2028 (Accessed: 22 May 2025).

Medway Council (2024) One Medway Council Plan 2024–2028. Medway: Medway Council. Available at: https://www.medway.gov.uk/download/downloads/id/8705/one_medway_council_plan.pdf (Ac cessed: 22 May 2025).

Ministry of Housing, Communities and Local Government. (2024). Consultation on Reforms to Social Housing Allocations. [online] Available at: https://consult.communities.gov.uk/social-housing-allocations/social-housing-allocations-reform-consultation/ [Accessed 22 May 2025].

Ministry of Housing, Communities and Local Government (2024) National Planning Policy Framework. London: Ministry of Housing, Communities and Local Government. Available at: https://www.gov.uk/guidance/national-planning-policy-framework (Accessed: 22 May 2025).

Mueller, N., Rojas-Rueda, D., Cole-Hunter, T., de Nazelle, A., Dons, E., Gerike, R., Götschi, T., Int Panis, L., Kahlmeier, S. and Nieuwenhuijsen, M.J. (2015). Health impact assessment of active transportation: A systematic review. Preventive Medicine, 76, pp.103–114.

NHS England (2019) Putting health into place: Executive summary. London: NHS England. Available at: https://www.england.nhs.uk/publication/putting-health-into-place-executive-summary (Accessed: 22 May 2025).

Natural England. (2025). Green Infrastructure Guidance for Urban Planning. [online] Available at: https://www.gov.uk/government/publications/green-infrastructure-framework-principles [Accessed 22 May 2025].

Orellano, P., et al (2017). Effect of outdoor air pollution on asthma exacerbations in children and adults: Systematic review and multilevel meta-analysis. PLOS ONE, 12(3), p.e0174050.

Peters, R et al (2019). Air pollution and dementia: A systematic review. Journal of Alzheimer's Disease, 70(s1), pp.S145–S163.

Pillas D, et al (2014) Social inequalities in early childhood health and development: a European-wide systematic review. Pediatric research; 76(5): 418-24.

Pineda E, Stockton J, Scholes S, et al. Food environment and obesity: a systematic review and metaanalysis. BMJ Nutrition, Prevention & Health 2024;0:e000663. doi:10.1136/bmjnph-2023-000663

Public Health England. (2017). Spatial planning for health: evidence review. [online] Available at: https://www.gov.uk/government/publications/spatial-planning-for-health-evidence-review [Accessed 22 May 2025].

Public Health England. (2017). Working Together to Promote Active Travel: A briefing for local authorities. [online] Available at: https://www.gov.uk/government/publications/active-travel-a-briefing-for-local-authorities [Accessed 22 May 2025].

Public Health England. (2018). Health matters: air pollution. [online] Available at: https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution [Accessed 22 May 2025].

Rana, K., Kent, J.L. and Page, A. (2025). Housing inequalities and health outcomes among migrant and refugee populations in high-income countries: a mixed-methods systematic review. BMC Public Health, 25, Article 22186. [online] Available

at: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-025-22186-5 [Accessed 22 May 2025].

Rautio N, et al (2017) Living environment and its relationship to depressive mood: A systematic review. International Journal of Social Psychiatry; 64(1): 92-103.

Rautio, N., Filatova, S., Lehtiniemi, H. and Miettunen, J. (2017). Living environment and its relationship to depressive mood: A systematic review. University of Oulu. [online] Available at: https://oulurepo.oulu.fi/bitstream/handle/10024/23292/nbnfi-fe2018091135444.pdf [Accessed 22 May 2025].

Royal College of Physicians (2003) The mental health of students in higher education. 2003.

Royal College of Physicians. (2019). Every breath we take: The lifelong impact of air pollution. [online] Available at: https://www.rcplondon.ac.uk/projects/outputs/every-breath-we-take-lifelong-impact-air-pollution [Accessed 22 May 2025].

Ryman FVM, et al (2018) Health Effects of the Relocation of Patients With Dementia: A Scoping Review to Inform Medical and Policy Decision-Making. Gerontologist.

Salvo, D., et al (2018). Neighbourhood built environment influences on physical activity among adults: A systematized review of qualitative evidence. International Journal of Environmental Research and Public Health, 15(5), p.897.

Stewart J and Bourn C 2013). The environmental health practitioner: new evidence-based roles in housing, public health and well-being. Perspect Public Health 2013; 133(6): 325-9.

Sustainably Forward. (2025). What Is Blue Infrastructure? [online] Available at: https://sustainablyforward.com/what-is-blue-infrastructure/ [Accessed 22 May 2025].

Tanner LM, et al (2013). Socioeconomic and behavioural risk factors for adverse winter health and social outcomes in economically developed countries: a systematic review of quantitative observational studies. J Epidemiol Community Health; 67(12): 1061-7.

Thomson H, et al (2013) Housing improvements for health and associated socio-economic outcomes. Cochrane Database SystRev 2013; 2: CD008657.

Tough H, et al (2017) Social relationships, mental health and wellbeing in physical disability: a systematic review. BMC Public Health; 17(1): 414.

Tough, H., Siegrist, J. and Fekete, C. (2017). Social relationships, mental health and wellbeing in physical disability: a systematic review. BMC Public Health, 17, p.414. [online] Available at: https://bmcpublichealth.biomedcentral.com/articles/10.1186/s12889-017-4308-6 [Accessed 22 May 2025].

Town and Country Planning Association (TCPA) (2019) The State of the Union: Reuniting health with planning in promoting healthy communities. London: TCPA. Available at: https://www.tcpa.org.uk/resources/the-state-of-the-union-reuniting-health-with-planning-in-promoting-healthy-communities (Accessed: 22 May 2025).

U.S. Department of Health and Human Services (2025) Healthy People 2030. Washington, DC: Office of Disease Prevention and Health Promotion.

Umberson, D. and Montez, J.K. (2010). Social relationships and health: A flashpoint for health policy. Journal of Health and Social Behavior, 51(S), pp.S54–S66. [online] Available at: https://doi.org/10.1177/0022146510383501 [Accessed 22 May 2025].

White, J., Morozink Boylan, J. and Boehm, J.K. (2024). Social structural differences in qualitative perspectives on well-being. Applied Research in Quality of Life, 19, pp.2633–2647. [online] Available at: https://link.springer.com/article/10.1007/s11482-024-10344-7 [Accessed 22 May 2025].

Whitty, C. (2022). Chief Medical Officer's annual report 2022: air pollution. [online] Department of Health and Social Care. Available at: https://www.gov.uk/government/publications/chief-medical-officers-annual-report-2022-air-pollution [Accessed 22 May 2025].

Wijga A, et al (2010) Comorbidities of obesity in school children: a cross-sectional study in the PIAMA birth cohort. BMC Public Health; 10(1):184.

http://www.noo.org.uk/NOO_about_obesity/obesity_and_health/health_risk_child

World Health Organization. (2022). Global Status Report on Physical Activity 2022. [online] Available at: https://www.who.int/publications/i/item/9789240064191 [Accessed 22 May 2025].

World Health Organization. (2023). Green and Blue Spaces and Mental Health: New Evidence and Perspectives for Action. [online] Available

at: https://apps.who.int/iris/bitstream/handle/10665/342931/9789289055666-eng.pdf [Accessed 22 May 2025].

Xu, H., et al (2013). The relationships between active transport to work or school and health-related fitness: A systematic review. Asia-Pacific Journal of Public Health, 25(4), pp.298–315.



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