

Active Design



CREATING ACTIVE ENVIRONMENTS
THROUGH PLANNING AND DESIGN

Supported by



Foreword

The design of the places and spaces in which we live, work and play can have a significant impact on how physically active we are—either encouraging people to be more active, or by designing out the need or ability to be active.

The latest evidence shows that, while more than 60% of adults in England are active every week, there are still more than one in four adults doing less than 30 minutes of activity in that same period. People in the UK are around 20% less active now than in the 1960's.

We know that this inactivity affects groups unequally, with women, people from ethnically diverse communities, people living in more deprived areas, people with disabilities, and people with long-term health conditions less likely to be active.

This is important given that being active has multiple physical and mental health benefits, whereas inactivity increases the risk of developing chronic health conditions.

Active Design aims to create places and spaces which encourage people to move more, with more opportunities for everyone to increase their activity levels and lead healthier lives. We can provide people with choices in how they get active, to ensure activity is enjoyable and to make it easier for people to incorporate activity into their daily lives.



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This includes creating options for children's play, outdoor leisure and anything else that provides people with choices in how they get active. Active Design incorporates active travel options too and enacting this guidance could help increase transport choice for all, reduce the number of car journeys required and give people more choice in how they travel during their day, enhancing the independence of many, from young to old. Active Design can help families save money, tackle climate change and even contribute to local authorities achieving their decarbonisation commitments.

With these points in mind, Sport England, Active Travel England and the Department of Health and Social Care have worked in partnership to produce an updated version of the Active Design Guidance.

It outlines ten key principles for Active Design and provides useful case studies to illustrate how these principles can be successfully implemented in a variety of contexts.

It has been developed with planners, urban designers and developers in mind but is relevant to anyone involved in delivering and managing the built environment.

We share the view that well-designed places and spaces can have a positive impact on people's physical activity levels and their overall health and wellbeing, both physical and mental.

We hope that through our collaboration on this Active Design Guidance, we will strengthen links between health, urban design and planning and realise the multiple benefits of a more physically active population.

We hope you find this new guidance useful and we look forward to working with you.

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What is Active Design?

Active Design sets out how the design of our environments can help people to lead more physically active and healthy lives. It's about helping to create 'active environments'.

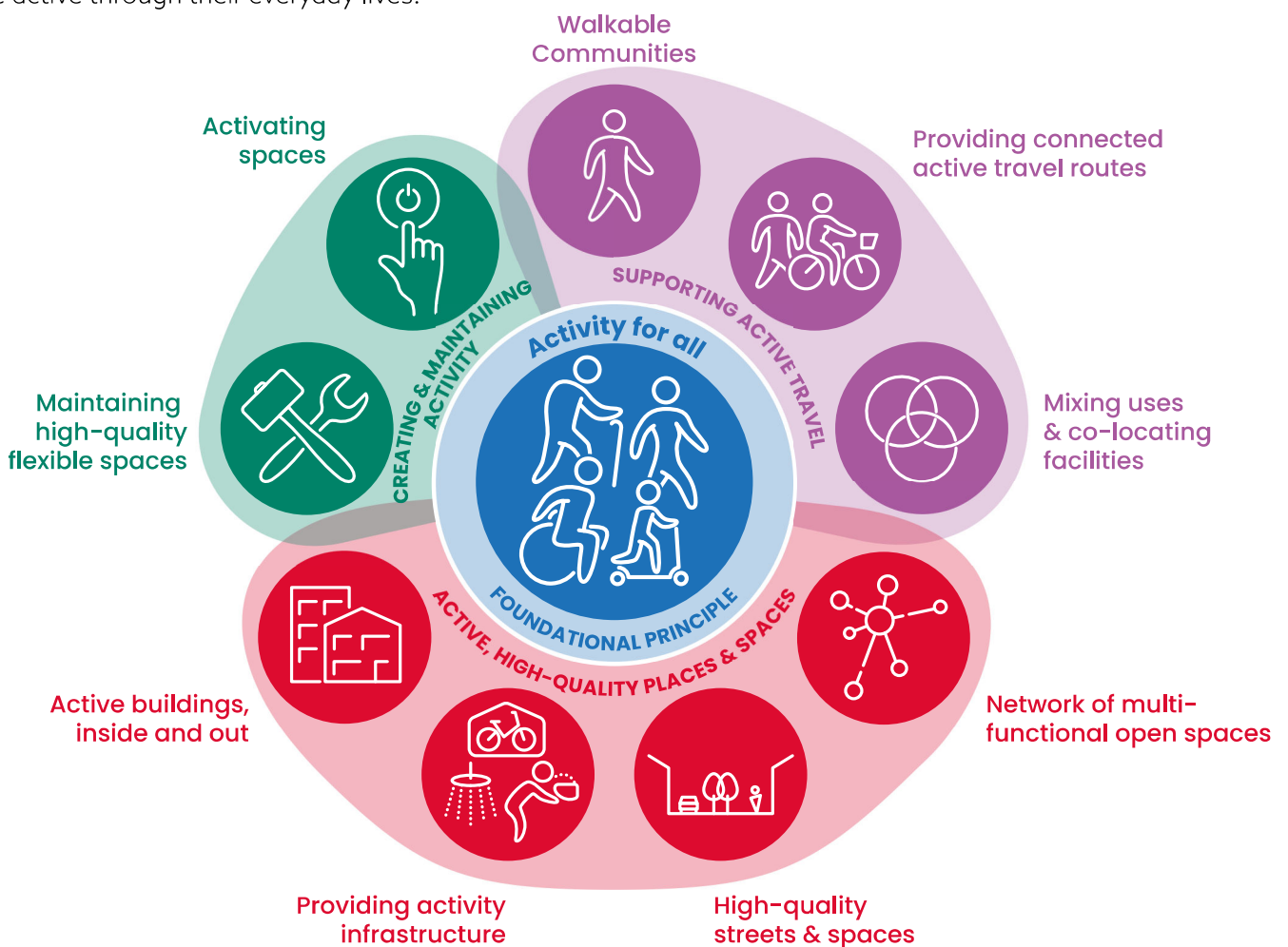
Active environments are the spaces and places for people to be active. They are not just focused on delivering opportunities for sport and formal exercise. They seek to encourage all physical activity—such as active travel, children's play, outdoor leisure and anything else that maximises opportunities for people to be active, as well as sport and exercise. By providing opportunities for physical activity, active environments can help improve the physical and mental health of adults and children.

Where we live, work, travel and play has a major role in shaping our activity choices. By applying Active Design principles to our built and natural environments, we can create active environments that encourage people to be active through their everyday lives.

With a shared belief and commitment to the value that well designed places can have on health and wellbeing, Sport England, Active Travel England and the Office for Health Improvement and Disparities (OHID) have come together to produce this updated version of the Active Design guide.

Through the promotion of the Active Design 'Ten Principles', the guide seeks to help planners, designers and everyone involved in delivering and managing our places to create and maintain active environments.

The Ten Principles of Active Design are:



For each principle, this guide sets out an aim and explanation of how the aim can be achieved through good planning, design and collaboration across related sectors. In addition, a series of illustrated sub-principles provide more in-depth guidance for planners and design practitioners.

To demonstrate and help with the successful implementation of the ten principles, the guide is supported by a suite of resources, including:

- 'Applying the principles': A series of illustrative places and in-depth case study examples, covering a variety of contexts.

- A checklist to assess development proposals against the Ten Principles.
- The Designing for Physical Activity Handbook, which provides specific detailed design advice related to the provision of Active Environments.

It is intended that more resources will be added to the Sport England website over time to create an Active Design library of useful resources.

Applying the Active Design guidance and its principles is consistent with the advice and evidence provided by Active Travel England and the Office for Health Improvement and Disparities.

Active Design

CREATING ACTIVE ENVIRONMENTS THROUGH PLANNING AND DESIGN

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SPORT ENGLAND
Active Travel England
CIPFA, in partnership with the Local Authorities Development Finance Association (LADFA)

ILLUSTRATIVE PLACE 1
Existing Suburban Neighbourhood

Many of the existing suburban neighbourhoods in our towns and cities were built around the car and are not designed to support physically active behaviors. With simple interventions and the engaged support of communities, existing neighbourhoods can be adapted so that people can live physically active, healthier behaviors close to home.

Design Interventions

- 1 Pedestrian-priority street en route to school, with on-street play opportunities.
- 2 Active travel and public transport only traffic allowed through local centre.
- 3 Waymarking and cycle points to connect local centre to existing primary school.
- 4 Segregated cycling and walking space on major road with reduced vehicle space.
- 5 Roadside filters to restrict through traffic, and improve walking and cycling environment.
- 6 Publicly accessible nature reserve and habitat network.
- 7 Community garden and green links established on former in-block garage plots.
- 8 Junction improvements to prioritise and segregate active travel at major intersections.
- 9 Primary school with shared sports facilities for community use.
- 10 Interrelated local centre with residential, retail and community uses with flexible civic space.
- 11 New community park with local leisure and sports facility.
- 12 Active travel and public transport interchange (mobility hub) at local centre.
- 13 Regenerated local industrial estate providing mix of local employment and small retail or commercial spaces.

ACTIVE DESIGN PRINCIPLES IN ACTION:

1 2 3 4 5 6 7 8 9 10

CASE STUDY
Houlton: Large-scale residential-led development

Fact File
Name: Houlton
Location (town, county): Rugby, Warwickshire
Local planning authority: Rugby Borough Council
Date of planning consent/ construction completion: Under construction, first completions in 2018
Case study type: 6,200 home residential-led development on former brownfield site

Houlton is a residential-led development of 6,200 homes, located to the east of Rugby, Warwickshire on the site of the former Rugby Radio Station. Designed to be a complete new community, it includes schools, shops, community facilities, sports pitches and employment space, linked together with an extensive and varied network of green open spaces and active travel networks.

Houlton is being developed by master developer Urban&Civic, who deliver the site infrastructure including open spaces, schools and other key placemaking ingredients. Urban&Civic then sell parcels of land to housebuilders, who develop within this overall framework.

Health, wellbeing and physical activity are considered throughout the design at all scales. The site demonstrates a comprehensive consideration of the principles of Active Design when applied to major new development.

ACTIVE DESIGN PRINCIPLES IN ACTION:

How it happened

- An overarching masterplan set the core structure for the site.
- As a later stage, more detailed design codes are set out for key phases of development, with landscape and open space networks prioritised. This enables flexibility and responsiveness in the detailed design.
- The key infrastructure that supports and enables active and active behaviour is delivered by the master developer Urban&Civic. This supports the long-term investment in the quality and value of the site.
- Development parcels are sold to housebuilders, to be developed in line with the design code for that key phase, which defines clearly how these areas should connect into active travel and green infrastructure networks.

Why is it successful?

- Although only 900 homes have been occupied to date, participation in community activities and usage of physical activity facilities such as allotments, community gardens and the open space network is high, as a proportion of the total population.
- In its early stages, Houlton saw a considerably higher sales rate of homes than the surrounding area, and is now seeing increase sales volumes, reflecting the attractiveness of the new community and its quality of life, driven by the open space network and facilities within easy reach of new residents. Urban&Civic have 14 development sites across England following a similar model.

Lessons learned

- The open space network brings the place together and enables physical activity interventions.
- Having a continuing interest in the site enables Urban&Civic to invest for long-term quality, which in turn leads to faster sales and higher values. Active behaviours, health and walkable communities and opportunities for higher quality of life are a key part of the attraction for potential new residents.
- An ongoing flexible approach to development ensures that decisions can be revisited, adaptations can be made, and new opportunities to improve physical activity, health and wellbeing can be taken in response to changing trends and in consultation with local residents.
- In this case, this approach is being delivered by a private developer but these lessons are applicable to all sites.

THEME 1
Supporting active travel

PRINCIPLE 2
Walkable communities

Facilities for daily essential and recreation should be within easy reach of each other by active travel means, making it more likely that people will make the journey by using active travel modes (defined as Theme 1). Good active travel connections should be provided to extend the range of services that are accessible while remaining physically active.

2.1	Are day-to-day facilities such as schools, shops, community facilities, health centres, open spaces and appropriate sports facilities within 800m of all homes?	
2.1	Has employment provision been included as part of the new community?	
2.2	Are local community facilities to be delivered early in the development programme?	
2.2	Has active travel been given priority over other forms of transport?	
2.2	Has the user's journey been considered throughout the design process?	
2.3	Have flexible user-friendly methods been employed to ensure it is more convenient to use active travel modes than drive?	
2.4	Do active travel connections have good natural and built connections from buildings, to enhance safety?	
2.4	Is the development supported by a residential or employment travel plan?	

PRINCIPLE 3
Providing connected active travel routes

Encourage active travel for all ages and abilities by creating a continuous network of routes connecting places safely and directly. Networks should be easy to use, supported by signage and landmarks to help people find their way.

3.1	Has a network of active travel routes been provided, which connects to permanent features within a development?	
3.1	Does the network connect to existing routes on the site?	
3.1	Have pinch points been effectively identified and a suitable design solution been proposed to allow active travel priority?	
3.2	Have both utility and leisure routes been accommodated?	

Why create active environments?

The places we inhabit can have a considerable effect on our health, behaviour and quality of life. Places that provide opportunities for people to lead physically active lives can positively impact people's physical and mental wellbeing. But the opposite can also be true, where the design of a place creates barriers making it difficult, unpleasant or inconvenient for people to be physically active.

The [UK Chief Medical Officers' Physical Activity Guidelines](#)¹ recommend that:

- most adults should achieve at least 150 minutes of moderately intensive physical activity every week;
- children aged 5–18 should average 60 minutes per day;
- Older adults (65 years and over) should aim to accumulate 150 minutes (two and a half hours) of moderate intensity a week;
- Disabled children and young people should aim for 20 mins of physical activity per day².

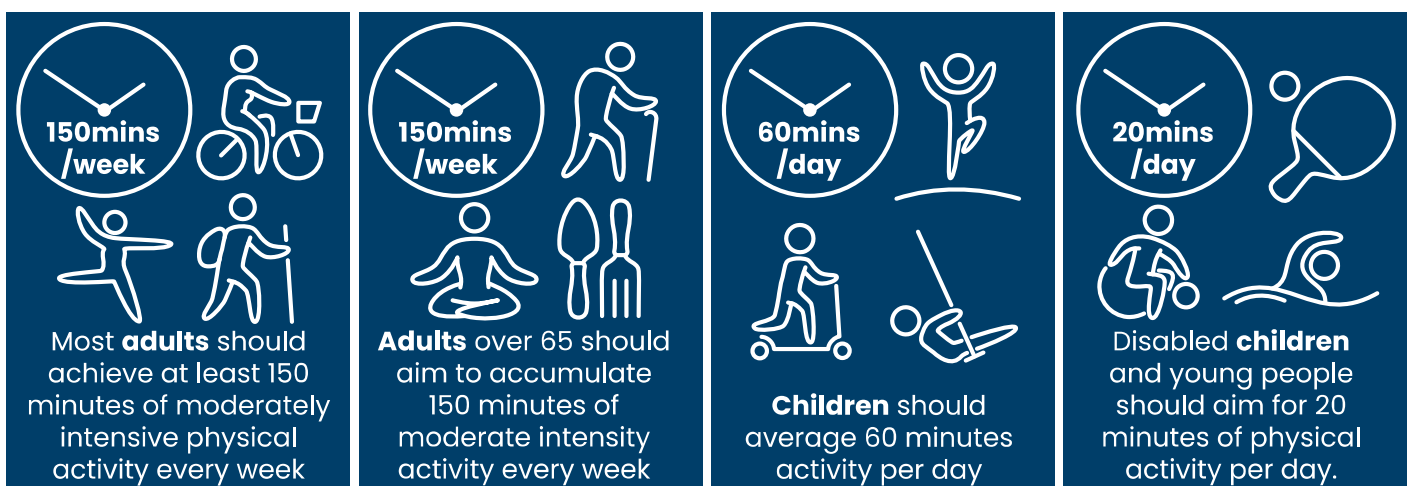
The guidance also presents recommendations on being active during pregnancy, and after giving birth, and for adults with a disability. It also emphasises the role of strength for the development and maintenance of physical function across the life course.

The active environments approach aims to achieve this, so that the places around us can have a positive impact on whether, how, when, and where we are active.

A 2016 study across 14 cities and towns around the world found that those living in what it termed 'activity-friendly neighbourhoods' were physically active for up to 90 minutes more a week than those who lived elsewhere³.

Creating active environments is not singularly about the provision of and access to sporting facilities. The simplest way of exercising daily is getting around by active means (See active travel definition in Theme 1). Walking, cycling or wheeling to or from work, school, a nearby bus stop or train station, a nearby town centre, or any other daily activities we undertake would go a huge way towards meeting daily physical activity targets.

Sadly, too many places make this difficult, either through poor design of the routes to get there, incomplete routes, inadequate facilities upon arrival, or land use patterns which split up different uses leading to longer travel distances. An active environment should make it easy for an individual to be physically active in their day-to-day living.



To support physically active behaviours for the widest variety of groups, the use of well-designed places and spaces should be supported by on-going activation events and programmes. Support from activity champions and effective monitoring, maintenance and management regimes that seek long-term benefits for communities are also essential to maintaining active environments.

The benefits of daily physical activity to the individual are clear. People who are more physically active are typically healthier and suffer fewer of the chronic diseases that are becoming increasingly prevalent as the UK population gets older and more sedentary. Physical and mental health improves, and health services can reduce the costs associated with treating long-term conditions.

The design of our environments has a significant role to play in helping reduce inequalities associated with accessing opportunities to be active. For example, designing spaces for women and girls, designing to reduce barriers for disabled people and designing to help people with long term health conditions become more active, can help to tackle inequalities in physical activity within these groups.

Tackling these inequalities is at the heart of Sport England's [Uniting the Movement](#)⁴ strategy, and this strategy is supported by the [National Physical Activity Framework - 'Everybody Active Every Day'](#)⁵.

The benefits of places that encourage activity go beyond just public health. Compact, walkable, linked communities that are centred around people being active rather than using cars:

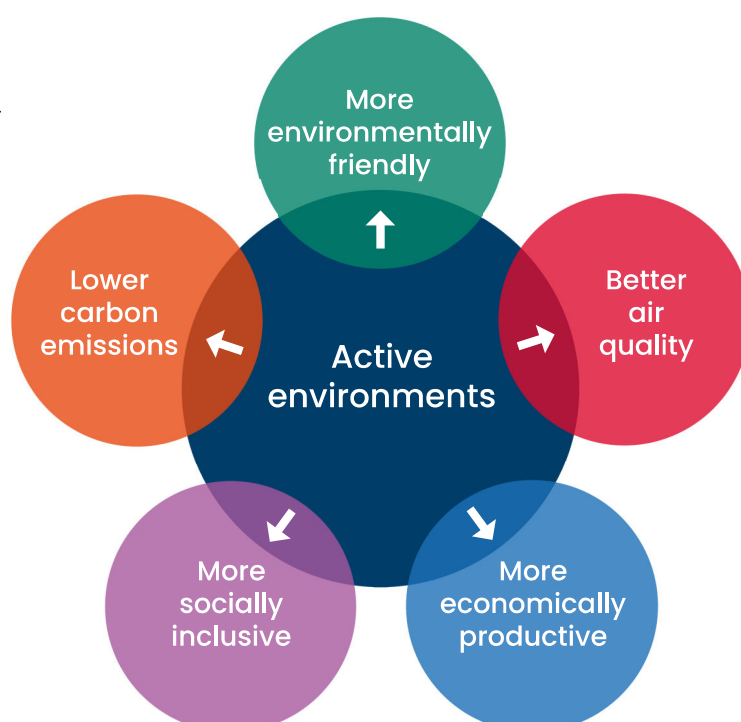
- are more environmentally friendly,
- have lower carbon emissions,
- have better air quality,
- are more socially inclusive,
- are more economically productive.

Designing places that can help people be more active is a positive move for a wide range of current planning and societal priorities.

National planning policy supports and encourages the creation of active environments. Through the National Planning Policy Framework, the National Design Guide and the National Model Design Code, places that prioritise activity, health and the characteristics that underpin active environments are encouraged and recommended.

Department for Transport policy and guidance including Guidance on Local Transport Plans, Circular 1/22: The Strategic Network, Manual for Streets, Local Transport Note (LTN) 1/20 and Inclusive Mobility support and enable interventions in active travel.

Below: The benefits of active environments go beyond public health



How to use Active Design

This new edition of Active Design has been streamlined to support the work of planners, policy makers, designers, developers, public health practitioners and other professional groups working in the design and development of the places around us.

Planners and policy makers can use Active Design to:

- Develop Local Plan and Neighbourhood Plan policies, along with site allocations and other relevant guidance to support physical activity;
- Develop Transport Plans and Local Cycling and Walking Infrastructure Plans (LCWIPs);
- Develop Masterplans, Development Frameworks, Design Briefs and Design Codes for specific developments and site allocations;
- Identify and support key public projects and activation programmes that can deliver physical activity benefits;
- Help support other priorities and agendas for the area, such as improved public health, helping to tackle climate change, or increase biodiversity through new developments;
- Structure and assist pre-application discussions;
- Make decisions on planning applications and planning obligations;
- Continue to monitor and manage places to ensure continued physical activity;
- Engage with health professionals and use the Health Impact Assessments to support planning applications; and,
- Ensure new developments are accessible and enable physical activity for all members of the community.

Designers and developers can use Active Design to:

- Embed physical activity in design proposals from the start, using the Ten Principles;
- Engage with local communities to encourage the co-design of local places and spaces which encourage activity for all;

- Develop Masterplans, Development Frameworks, Design Briefs and Design Codes for specific site allocations and developments;
- Demonstrate clearly how planning applications support Local Plan policies and guidance on health, physical activity and sport;
- Create places that are truly active, healthy and accessible, delivering quality of life benefits to new residents, employees and visitors; and
- Appraise completed developments to feed into reviews of approaches, design codes and future work.

Other professionals and groups can use Active Design to:

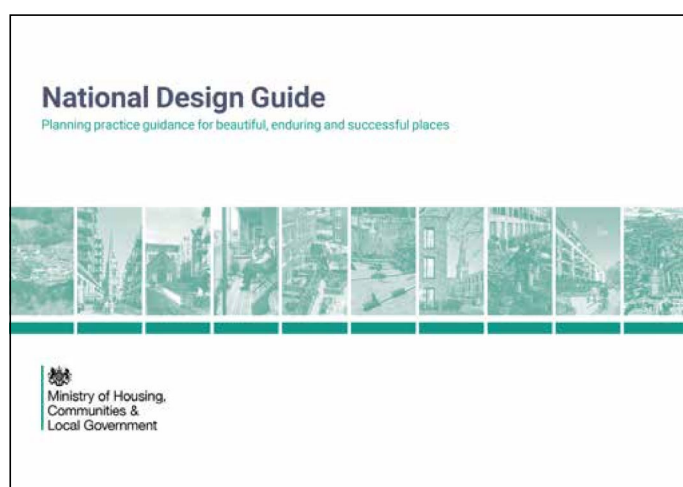
- Inform dialogue with planning colleagues and elected members;
- Prepare or assess Health Impact Assessments, and local health strategies, that address physical activity goals;
- Develop a greater understanding of how planning and design influences physical activity and health outcomes, alongside other guidance⁶;
- Demonstrate how specific aspects of the built and natural environment, such as transport, active travel, landscape and open space provision, along with technical fields such as drainage, heritage and others, can fit into a holistic approach that supports physical activity;
- Engage with Local Plan-making processes to ensure that health and physical activity remain at the top of the agenda; and
- Be effective consultees on planning applications and other proposals, especially those with ongoing benefits or obligations surrounding health and physical activity.

How Active Design relates to other policy areas

Active Design is focused on increasing physical activity throughout the built and natural environment, and particularly focuses on the interventions that planning and design professions can affect. Many of these interventions have cross-over benefits to other areas of policy, such as climate change resilience and overall environmental sustainability.

Active Design highlights where designing for physical activity complements another policy area, but does not provide detailed guidance outside of those subjects that directly promote physical activity. This is to highlight alignment between the policy areas, whilst retaining the focus of the guide.

Some aspects, such as good street design, are important for promoting physical activity but also have many other detailed design considerations that are best tackled in other documents. Where this occurs throughout the Active Design Principles, additional resources are signposted so that more detailed guidance on particular topics can be followed.



What's new in this edition?

The first edition of Active Design was published in 2007 and updated in 2015. This third edition takes forward its past successes and updates it with the latest research and policy, as well as making it even easier to apply. Active Design now makes it clear where design interventions that support physical activity can also support other key objectives such as environmental sustainability, reducing inequalities, and economic growth.

The Policy Framework

Since the last edition of Active Design, the Government's National Planning Policy Framework (NPPF) has seen considerable updates. The role of sport, healthy behaviours and physical activity opportunities, and the importance of these in supporting communities, has been strengthened, along with the role and importance of good design in the planning system. Local authorities are now required to develop Design Codes, and the NPPF now sets out clearly that 'development that is not well-designed should be refused'.

Supporting the stronger commitment to design in the NPPF, the Government has published the National Design Guide, setting out the ten characteristics of a well-designed place. This is complemented by the National Model Design Code, which gives more detailed guidance on urban design matters and shows how successful design codes can be developed.

Both the National Design Guide and National Model Design Code are intended as baseline frameworks for more detailed guidance in specific areas, whether that be a district or site, or by topic, e.g. physical activity. Active Design fits into this framework, and the diagram on page 9 demonstrates how Active Design complements the ten characteristics of well-designed places set out in the National Design Guide.

Updated Research and Engagement

The new edition of Active Design reflects the latest research and practice in encouraging physical activity in the built and natural environment. A literature review of recent publications and studies, policy and design guidance has been undertaken to identify gaps, new topic areas and usability improvements.

Following this, an extensive stakeholder engagement process was undertaken both online and in-person, to understand how Active Design was being used, where it could be improved, and what good practice could be shared.

Initial drafts of the guidance were also released for consultation and comment. These valuable insights have shaped the new edition.

Key changes identified through the research and engagement process were:

- The importance of linking physical activity to other areas of policy priority, such as environmental sustainability and climate change, reducing inequalities and economic growth;
- The need to simplify the principles to make them more 'actionable', and demonstrate their use through examples and case studies;
- New or emerging topics of relevance, such as new transport infrastructure, tackling inequalities in provision, digital solutions, expanding the network of play opportunities; and
- Post-Covid 19 changes to behaviours and needs from the built environment.

Supporting Complementary Priorities

The research, review and engagement with stakeholders demonstrated that Active Design can complement and assist in the delivery of a number of policy priority areas, fitting into a more joined-up approach to designing the built environment.

Throughout the updated guidance, highlighted boxes indicate where Active Design's principles can support the wider policy areas of:

- Environmental Sustainability
- Tackling Inequalities
- Economic Growth

The Ten Principles

Through the review and engagement with stakeholders, the existing Ten Principles of Active Design were confirmed to be still sound and valid. The focus of these has been retained but has been adapted to reflect the changing context and improve usability. They have also been broken down into suggested actions that make them easier to apply in practice. This is intended to support design teams looking to implement Active Design, and planning teams looking to assess proposals.

Some of the principles have been renamed to make them clearer and respond to identified changes and new content. All ten principles have been updated with new guidance supported by the latest research. Where previously the principles were grouped into three categories (Awareness, Accessibility and Amenity), they are now underpinned by a foundational principle of Activity for All, and then grouped by three clear themes:

- supporting active travel;
- active, high-quality places and spaces; and
- creating and maintaining activity.

Below: Relating this edition of Active Design to previous editions and the National Design Guide

 <p>Active Design 2015</p>  <p>Activity for all</p>	 <p>Active Design 2023</p>  <p>Activity for all</p>	 <p>National Design Guide 2021</p>
Supporting active travel		
 <p>Walkable communities</p>  <p>Connected walking and cycling routes</p>  <p>Co-location of community facilities</p>	 <p>Walkable communities</p>  <p>Providing connected active travel routes</p>  <p>Mixing uses and co-locating facilities</p>	 <p>Built form Movement</p>  <p>Movement</p>  <p>Built form Uses</p>
Active, high-quality places & spaces		
 <p>Network of multi-functional open spaces</p>  <p>High quality streets and spaces</p>  <p>Appropriate infrastructure</p>  <p>Active buildings</p>	 <p>Network of multi-functional open spaces</p>  <p>High quality streets and spaces</p>  <p>Providing activity infrastructure</p>  <p>Active buildings, inside and out</p>	 <p>Public spaces Nature</p>  <p>Movement Public spaces Nature</p>  <p>Public spaces Homes and buildings</p>  <p>Homes and buildings</p>
Creating and maintaining activity		
 <p>Management, maintenance, monitoring & evaluation</p>  <p>Activity promotion & local champions</p>	 <p>Maintaining high quality flexible spaces</p>  <p>Activating spaces</p>	 <p>Resources Lifespan</p>  <p>Lifespan</p>

The ten principles of Active Design

FOUNDATIONAL PRINCIPLE



Principle 1 – Activity for all

All environments should support physical activity equitably across all ages, ethnicities, genders, and abilities, enabling everyone to be active and build long-term active habits and behaviours. This is essential for the delivery of all the principles of Active Design and is its foundational principle.

SUPPORTING ACTIVE TRAVEL



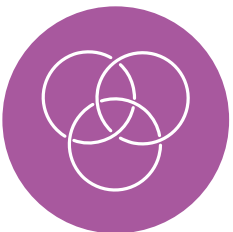
Principle 2 – Walkable communities

Facilities for daily essentials and recreation should be within easy reach of each other by active travel means, making it more likely that people will make the journey by using active travel modes (defined in Theme 1). Good active travel connections should be provided to extend the range of services that are accessible while remaining physically active.



Principle 3 – Providing connected active travel routes

Encourage active travel for all ages and abilities by creating a continuous network of routes connecting places safely and directly. Networks should be easy to use, supported by signage and landmarks to help people find their way.



Principle 4 – Mixing uses and co-locating facilities

People are more likely to combine trips and use active travel to get to destinations with multiple reasons to visit. Places with more variety, higher densities, and a mix of uses also reduce the perception of distance when travelling through spaces. They also generate the critical mass of travel demand to better support public transport services.

ACTIVE HIGH-QUALITY PLACES AND SPACES



Principle 5 – Network of multi-functional open spaces

Accessible and high quality open space should be promoted across cities, towns and villages to provide opportunities for sport and physical activity, as well as active travel connections and natural or civic space for people to congregate in and enjoy.



Principle 6 – High-quality streets and spaces

Streets and outdoor public spaces should be Active Environments in their own right. They should be safe, attractive, functional, prioritise people and able to host a mix of uses, with durable, high quality materials, street furniture in the right places and easy-to-use signage. High quality streets and spaces encourage activity, whereas poor quality streets and spaces are much less likely to be used to the same degree.



Principle 7 – Providing activity infrastructure

Infrastructure to enable sport, recreation and physical activity to take place should be provided across all contexts including workplaces, sports facilities and public space, to facilitate activity for all.



Principle 8 – Active buildings, inside and out

Buildings we occupy shape our everyday lives, both when users are inside and outside. Buildings should be designed with providing opportunities for physical activity at the forefront, considering the arrival experience, internal circulation, opportunities to get up and move about, and making the building an active destination.

CREATING AND MAINTAINING ACTIVITY



Principle 9 – Maintaining high-quality flexible spaces

Spaces and facilities should be effectively maintained and managed to support physical activity. These places should be monitored to understand how they are used, and flexible so that they can be adapted as needed.



Principle 10 – Activating spaces

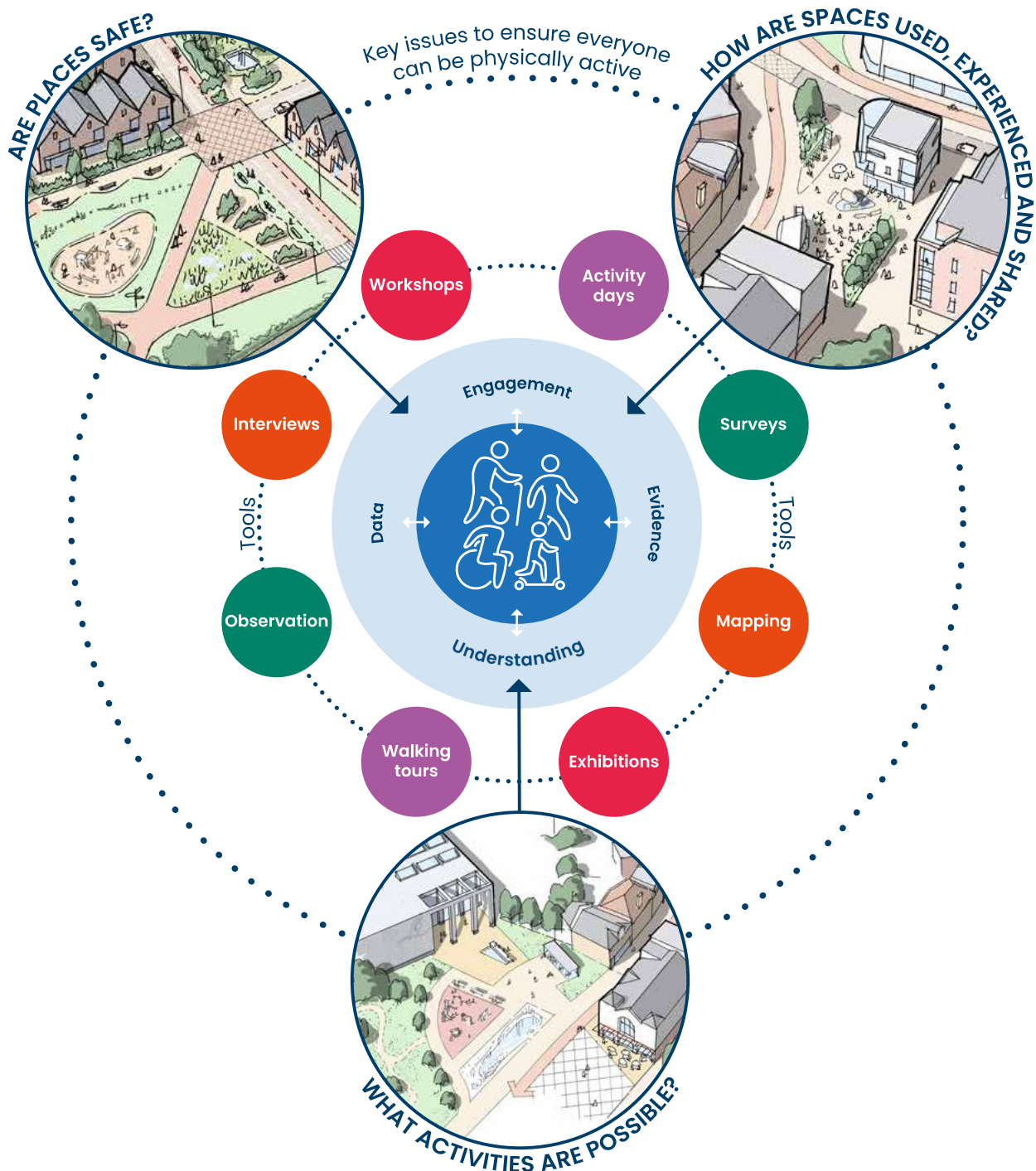
The provision of spaces and facilities which can help to improve physical activity should be supported by a commitment to activate them, encouraging people to be more physically active and increasing the awareness of activity opportunities within a community.



FOUNDATIONAL PRINCIPLE

Activity for all

All environments should support physical activity equitably across all ages, ethnicities, genders, and abilities, enabling everyone to be active and build long-term active habits and behaviours. This is essential for the delivery of all the principles of Active Design and is its foundational principle. To achieve this, it is important that an exercise of learning and listening is undertaken, to properly understand the needs you are seeking to address. Then, you can appropriately consider the issues, and design to meet these needs.



Learning and listening

Understanding different experiences

We live in a diverse society, and every group has different life experiences and priorities. Some groups have historically been poorly served by the built environment, with a lack of consideration for what prevents them from taking part in physical activity. This may include different experiences of safety, a lack of consideration for the activities they enjoy (or are able to take part in), affordability, environments designed with unconscious bias or lack of thought, or a lack of infrastructure or equipment to support mobility.

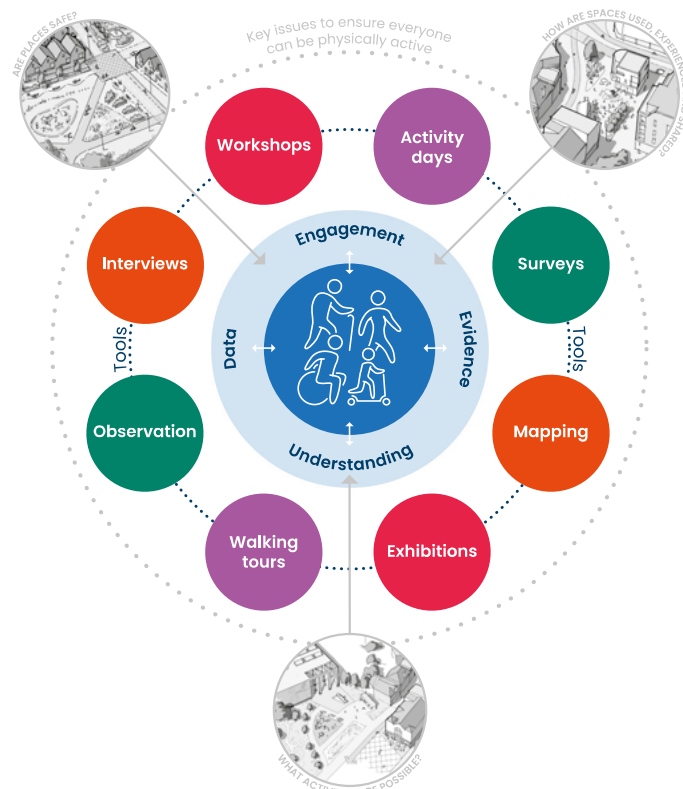
Active Design advocates for a change in approach, to support equity of access to being physically active in the built environment. Early engagement and understanding, ongoing monitoring and flexibility, and targeted action to address imbalances, is essential to ensuring everyone can feel comfortable and able to be physically active in their daily lives.

Engaging and listening effectively

Use of effective and creative engagement techniques, discussion, co-design and evidence gathering is essential to ensure inclusive and equitable spaces and facilities can be designed and delivered, or improved. A range of tools are available for use at different stages of design, to help design teams answer questions and learn about things they were not anticipating.

Effective engagement should continue throughout the design process, to test ideas and refine concepts through to detailed design and delivery.

Even the most well-informed design team or project owner will have 'blind spots' in knowledge and experience. It is important to listen to a wide range of groups, especially those who are often left out of the planning process, as part of setting the brief for a project.



Using local data and evidence

You can use local Active Partnerships, Sport England's Active Lives data, local authority Public Health teams, the Public Health Outcomes Framework and Joint Strategic Needs Assessments to help better understand the inequalities in people's physical activity in your area.

An early design audit should aim to understand opportunities to enhance, and barriers to taking part in, physical activity. This is a valuable tool that can guide proposals throughout their development.

Design audits should include consideration of opportunities and barriers for different genders, ages, socio-economic groups, ethnicities, physical, sensory and mental abilities, as well as considerations for people who experience neurological processing differences (neurodiversity). Where appropriate, this should be conducted by a qualified specialist auditor, and make reference to any requirements and assessments set out under the Public Sector Equality Duty. Proposals should have a positive impact upon the safety and experience of groups addressed by the Duty unless there are exceptional circumstances.

Considering issues that affect physical activity participation

ARE PLACES SAFE?



Create safe places

How safe our places and spaces are is fundamental to enabling different groups of people to use them. This is important for several groups including women and girls, whose experience of the built and natural environment is often very different to that of men and boys.

Safety of spaces and routes can be ensured through natural surveillance from surrounding buildings, adequate and appropriate lighting, clear visibility and design to avoid conflicts between groups. Maintenance and management of the public realm (including landscaping, planting, boundary treatments and lighting) ensures spaces and routes remain safe over time.

People should always be prioritised over, and protected from, vehicle traffic, especially children, older people and those with reduced physical mobility. This can be accomplished by reducing vehicle speeds and dominance in the public realm, as well as appropriate physical separation where necessary.

WHAT ACTIVITIES ARE POSSIBLE?



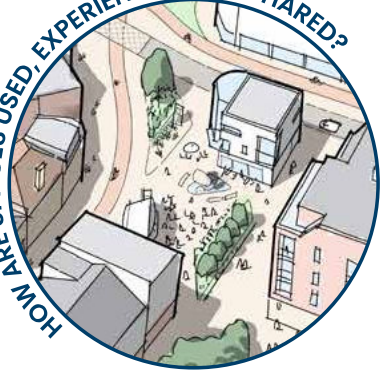
Consider a wide range of activities

Different groups have different interests and abilities when it comes to taking part in physical activity. Recognising and designing for these differences is particularly important for different age groups and those with physical, sensory and neurodiversity impairments.

Active Design advocates for a wide range of physical activity to be considered and included in the built and natural environment. This goes beyond traditional sports pitches and facilities. This includes children's play and playable environments, gathering and social spaces, recreational walking, cycling and wheeling, active travel, food production (e.g. allotments), space for organised classes, dog walking and even augmented reality gaming.

Ancillary infrastructure and activities (e.g. cafés, resting places and public toilets) can support active use of spaces by different groups of different ages, attracting people to use spaces and facilities.

HOW ARE SPACES USED, EXPERIENCED AND SHARED?



Consider different experiences of using spaces

It is important that active spaces are inclusive and do not get dominated by a single group, alienating others.

Spaces should be designed so that different groups can co-exist. This may involve subdividing spaces through design to avoid conflict, or through active management of spaces to ensure all groups have rights to take part in physical activity.

The sensory experience of a space can also affect people differently. People who experience neurodiversity may find certain spaces difficult to navigate and distressing⁷.

Voice Opportunity Power (VOP)



www.voiceopportunitypower.com

VOP is a free resource which provides practical guidance on how to involve young people between the ages of 11–18 in the way that places get built and managed. VOP is designed to support professionals (developers, architects, urban designers, planners and sports providers) in engaging with young people to improve participation in and the quality of new development and regeneration.

VOP has been successfully used in many contexts, including establishing a [youth forum in Mayfair](#), discussing proposals for regeneration in the [Nottingham Trent Basin](#) and child friendly neighbourhoods in [Aberfeldy New Village](#)⁸.

Her Barking, Street Space

Her Barking is a women-led movement, experimenting to collaboratively design and test low cost interventions to make streets and spaces feel safe. As part of this movement, research showed that in Barking, 51% of residents do not feel safe after dark, compared to a national average of 21%. The majority of the residents feeling unsafe in Barking are women, older people and disabled people.



© Julia Forsman

In 2018 Street Space, a social enterprise company, launched Her Barking, engaging residents to identify spaces where people don't feel safe and collaboratively design and test a number of installations across Barking Town Centre as part of London Festival of Architecture 2019.

With funding from The National Lottery, the initiative was able to fund the collaborative design and delivery of a semi-permanent intervention in St Awdry's Walk, a key footpath connection in the local community.

A hanging canopy of shapes and crowdsourced messages, designed by the Hanna Benihoud design studio, was installed in February 2020, and has been successful in improving the perception of the route, leading to increased feeling of safety. This has led to two further Street Space pilot projects on perceptions of safety outside Barking Station.

Useful resources

Sport England provides guidance in the delivery of [accessible sports facilities](#)⁹ including a useful **Audit Checklist** which can be used to analyse barriers and ensure inclusive design outcomes.

Uniting the Movement¹⁰ sets out Sport England's 10-year vision and strategy, and highlights the importance of facilitating Activity for All in tackling the inequalities in sport and physical activity.

Creating and protecting Active Environments, the spaces and places that make it easier for people to be active, is one of the five big issues identified.

The **Local Government Association** holds best practice guidance¹¹ on public engagement, evaluation and monitoring, which can be useful in considering the best way to consult local people on their views.

Sport England's **Local Delivery Pilots** which seek to understand how local identities and structures can be used to increase activity levels¹².

The National Register of Access Consultants (NRAC)¹³ is an independent UK wide accreditation service for individuals who provide access consultancy and access auditor services.

THEME 1

Supporting active travel

Active travel is the simplest and most inclusive way of getting people to incorporate activity into their daily lives, and has numerous benefits for physical and mental health, the environment, the places we live, quality of life and social inclusion.

Many places created in the 20th and 21st centuries have prioritised motor vehicles over people in their design, and created environments that are unsafe, unwelcoming or difficult to undertake active travel in. Conscious effort is required to reverse this, in new and existing places, and to reduce the barriers preventing active travel.

This group of Active Design principles focuses on the creation of places that are easy to get around using active travel, and how to encourage people to do so. They aim to make active travel modes the first choice, and the easiest choice.

The Principles

**Walkable communities****Providing connected active travel routes****Mixing uses and co-locating facilities**

What is 'active travel'?

For the purposes of this guide, active travel is not just walking and cycling. It also includes wheeling, which covers assistive wheeled mobilities such as wheelchairs, mobility scooters or similar. It can also include pushchairs or buggies for children. Different groups may use these in different ways.

Cycling can mean more than the traditional two wheeled bicycle, as it can also include cargo bikes, hand-powered recumbent bikes, bikes with trailers, tricycles and other pedal-powered transport. A full definition of cycles to consider is set out in the Department for Transport's [Local Transport Note \(LTN\) 1/20¹⁴](#).

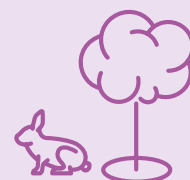
How does this increase activity?

- People will naturally choose a method of travel that is convenient, quick, safe and reliable. If this is the case for active travel modes, more people are likely to use them, increasing physical activity. The design of active travel routes are key to facilitating this change. If the active routes between origins and destinations are safe, continuous, attractive to use and direct, they will encourage more people to consider and use them.
- Locating homes and places for daily essentials and recreation within easy reach by active travel modes (known as "walkable communities" in this guidance) means people are fundamentally more likely to make the journey as a pedestrian or by other active travel modes, rather than choosing to get in the car.
- Where there are multiple reasons to visit a destination, by locating facilities close to each other, people are more likely to combine trips and use active travel to get there. Routes with more variety and uses mixed along them also reduce the perception of distance, making it more likely that people will use active travel.

What other benefits are there?

Environment and climate change

- Compact, attractive walkable places that encourage activity are more efficient with land use, enabling more land to be retained and enhanced for nature and biodiversity.
- By replacing journeys that would otherwise be made by car, carbon emissions are reduced. This is one of the largest potential personal contributions towards tackling climate change. Noise pollution and poor air quality in urban areas, primarily caused by vehicle traffic, can also be substantially reduced.
- Places that encourage active travel do not need as much infrastructure for vehicles, allowing more space for permeable and natural surfaces that can allow surface water runoff to soak away before causing localised flooding. These spaces can also support biodiversity gain in the public realm.



Tackling inequalities

- Active travel is a free or relatively inexpensive way of getting about (when compared to owning and running a car) and can be more accessible to all socio-economic groups.
- If a neighbourhood is designed to encourage active travel, it can help people to get about independently, without needing lifts or other costly transport options.
- With appropriate inclusive design, people with all levels of mobility are more likely to be active. Good design can reduce or remove the barriers which might prevent people with reduced mobility being active.
- Road safety issues, noise and air pollution from vehicle movements can have an increased impact on more deprived communities, as they are more likely to be located on or adjacent to major roads, exacerbating health and social inequalities. Reductions in traffic can have a particular benefit to these neighbourhoods.
- Social interaction is more likely when utilising active travel modes, allowing people to feel more connected to their local area and neighbours. On streets with less through traffic, studies have shown that social links between neighbours are more likely¹⁵.



Economic growth

- Studies on schemes such as the [Mini Holland](#)¹⁶ approach taken in Walthamstow show that higher footfall and corresponding increases in retail spend occur in places where active travel has been encouraged¹⁷.
- The highest-spending customers for local retailers are those that are close to them, and thus use them regularly. The importance of car parking and accessibility to vehicles is often overestimated. Businesses, residents, developers and visitors all benefit from investment in the public realm and walkability¹⁸.
- Well-planned and marketed leisure trails, when combined with public realm improvements, can encourage tourism and other leisure uses in places, with secondary economic benefits.
- Walkable communities can have a wider variety of employment spaces within them, these can be more suitable and accessible for small businesses and start-ups.
- A range of studies have shown that improvements to active travel and the public realm can increase land values and investment confidence in an area¹⁸. Value for money assessments of cycling grants have shown very high benefit-cost ratios¹⁹.





PRINCIPLE 2

Walkable communities

The aim

Facilities for daily essentials and recreation should be within easy reach of each other by active travel means, making it more likely that people will make the journey by using active travel modes (defined in Theme 1). Good active travel connections should be provided to extend the range of services accessible while remaining physically active.

How to do it

New development should be designed to be compact, with shops, schools, community facilities, open space and appropriate sports facilities typically within a maximum 800m distance from homes, along streets and active networks.

Existing communities should be assessed for provision gaps, and opportunities to strengthen their mix of facilities within 800m of homes should be prioritised. Communities should have good onward connections to higher-order services and jobs through active travel networks, and public transport.

2.1 Locate facilities, jobs and homes close to each other

- When planning new places, locate day-to-day facilities such as schools, shops, community facilities, healthcare, open spaces and appropriate sports facilities within 800m of all homes.
- Employment and commercial space should be included within communities. Remote or co-working 'hubs', small flexible commercial units and retail units located at local centres can be integrated into lots of contexts.
- Existing communities with a lack of facilities should be identified and prioritised through Local Plan policies to bring forward proposals that could fill the gaps.
- Secure the early delivery of community facilities, local centres, schools, public space and sport facilities in walkable locations. This helps to ensure active travel becomes a habit at an early stage as new places are delivered.

Below: Locating facilities, jobs, and homes within walking distance of one-another encourages active mobility and sustainable behaviours (Hamptons, Peterborough)



2.2 Promote the active travel choice

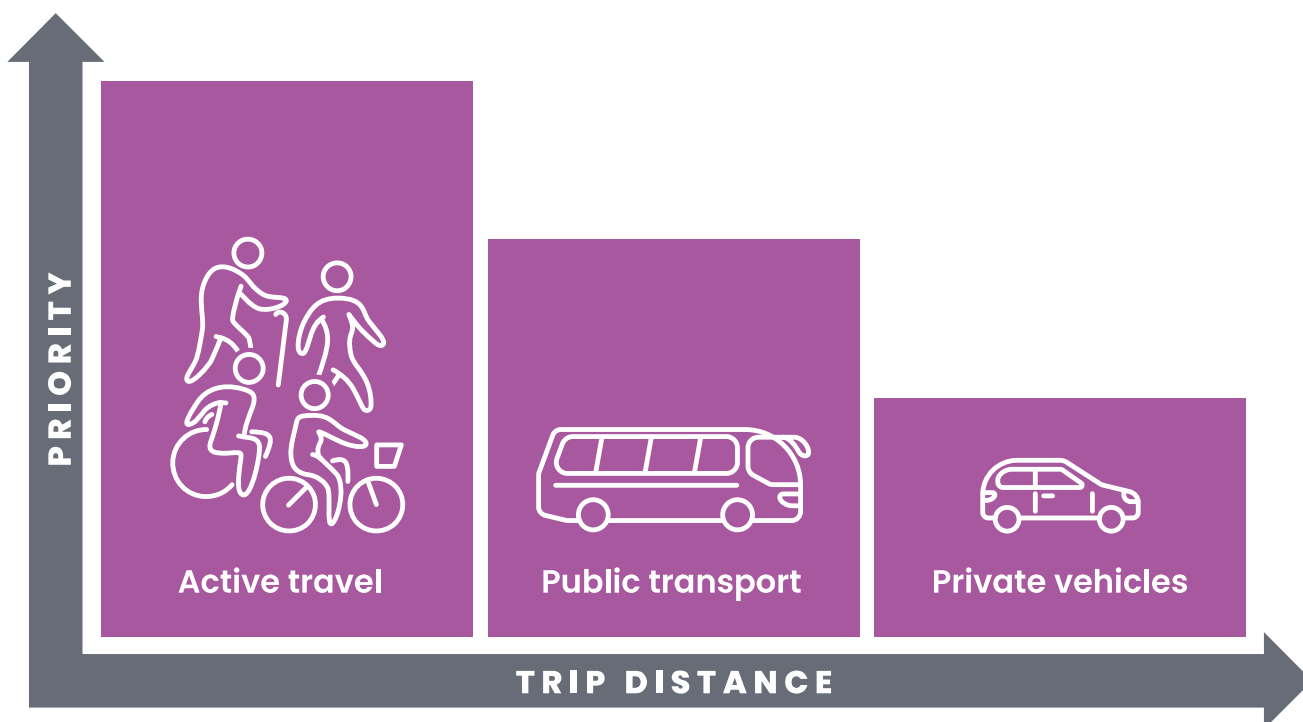
- Encourage people to take the active travel choice by promoting a Hierarchy of Travel, with pedestrians, cyclists and other active travel users considered first during design to ensure there is a genuine choice of ways of getting about. This should apply to all movement networks, including utility and leisure (see Principle 3). Vehicles are likely to still need to be accommodated, but places and spaces should not be solely designed around them.
- Consider the user journey throughout the design process. When and why might people choose not to make a journey using active travel, and what can your design do to help them? For example, parents of primary school children may need to continue their journey to work after drop-off, so co-location of schools with onward public transport opportunities could encourage active travel (See Principle 4).
- At junctions, crossings and other points where active travel interacts with vehicle traffic, active travel routes should be direct, clear, safe and prioritised. This is supported by the hierarchy of users in the Highway Code. (HWC H1,H2,170).



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Above: Giving vulnerable users priority at junctions and crossings encourages active travel (Castle Boulevard, Nottingham)

Below: A hierarchy of movement to support active travel



2.3 Use filtered permeability to make it easier to use active travel rather than drive

- The principle of filtered permeability is that active travel networks should form a continuous and connected grid in a development, whereas private vehicle movement should be less direct and longer, with breaks, either real or perceived, created by design interventions such as street planting, bollards, materials changes or similar. Active Travel connections should have good natural surveillance from buildings for safety.
- The same principle can be used to support direct public transport routes through communities, which support active travel networks by providing onward connections. Bus connections through communities should be direct and uninterrupted, with the use of bus gates at key locations to provide an advantage over private vehicle traffic.
- Existing communities should explore options to reduce through traffic within residential neighbourhoods through retrofit of filtered permeability measures.
- Modern mobile app navigation has increased the use of side streets as cut-throughs for motor vehicles²⁰. Filtered permeability removes these options and puts traffic back onto main streets, which are designed to be able to accommodate through vehicle movement. This can make smaller streets more attractive and safer for active travel.



© Nottingham City Council

Two approaches to creating filtered permeability:
Top: Filtering large vehicles but allowing residential access and active travel using a permanent installation (Shoreditch, London)
Bottom: Filtering private vehicles but allowing buses and active travel using CCTV cameras (Canal St, Nottingham)

2.4 Utilise residential and employment travel planning

- Travel Plans can be useful tools to help people make active travel part of their daily life. These should audit existing travel patterns and travel culture, map options available, and set out an action plan of measures that will result in a shift to more active and sustainable means.
- Travel Plans should incorporate an ambitious but achievable set of mode share targets prior to a robust monitoring and evaluation process, which sets out what further measures and investment are required from the applicant/occupier in the event that those targets are not met.
- New residential developments should develop and implement a Travel Plan, agreed with the local planning authority, to provide information and support for new residents as soon as they move in, to help them find active travel local routes to and from key facilities and destinations.
- Many developments subsidise bus services during the early phases until there is enough patronage to support a commercial service, and may provide free or subsidised bus passes to new residents. Details of active travel options should be provided in welcome packs and digital technology (such as Apps) provided for new residents.
- As part of Travel Plan measures, employers can help their employees have a more sustainable range of choices to get to work. This can include implementing a Cycle to Work scheme, support for public transport fares, creating a Car Share scheme, and publicising active and sustainable travel choices in the workplace.
- Active travel options can also be publicised through community events such as local group walks or cycling events (see Principle 10).

Useful resources

Lifetime Neighbourhoods, published by the former MHCLG, is a piece of research on how future neighbourhoods can accommodate the changing and ageing needs of the population.

The Government provides implementation guidance on their website for the cycle to work scheme²¹.

[Active Travel England](#) publish a Planning Assessment Toolkit and User Guide for the assessment of the Active Travel, connectivity and the co-location of uses within Planning proposals and masterplans.



PRINCIPLE 3

Providing connected active travel routes

The aim

Encourage active travel for all ages and abilities by creating a continuous network of routes connecting places safely and directly. Networks should be easy to use, supported by signage and landmarks to help people find their way.

How to do it

A comprehensive network of safe, high quality and easy to find active travel routes should connect destinations and provide feeder routes to homes. This should create a range of clearly signed routes for all potential or existing users, including a choice between busy and quiet, leisure and utility focused options, and should limit conflict between different transport modes.

Existing networks (including Rights of Way) should be mapped and opportunities identified, and connected with high quality provision, with active travel prioritised. Providing connections and interchange to public transport enhances the utilisation and effectiveness of such networks.

3.1 Create a direct network of routes which connect to places, along routes people want to use

- Proposals for new places should create networks of active travel routes within a development site, clearly connecting to nearby places and routes. These routes should be effectively signposted allowing new users to know where they are located, and how to travel along them.
- As networks become stronger and increasingly more useful as they expand, proposals should add connections that can benefit more than a development site, but also the wider population, e.g. by responding to Local Cycling & Walking Infrastructure Plans and connecting to existing Public Right of Way networks and extending them with new routes.
- 'Pinch points', where there may be insufficient space to accommodate all modes should be identified and design proposals should address them positively and clearly. This can include prioritising active travel over vehicle traffic and considering the opportunity to implement modal filters, where motor vehicles cannot proceed but active travel modes and potentially buses are allowed to.
- 'Desire lines', which are the most direct connections between where people want to go, should inform the design of public spaces, and help define spaces where people will move through (transit space) and where people can stay and linger (staying space).
- Leisure routes should be included in proposals and should include wayfinding and signage for activities of different lengths. Opportunities should be taken to make the route engaging for all users, using interpretation materials, activities for children, and places to rest and relax en route.



Above: A direct network of walking and cycling routes (East Village, London)

Below: Direct, segregated, and well-lit cycle routes provide safe connections (Pebble Mill, Birmingham)



3.2 Provide high quality, safe, routes with a clear role and purpose

- Routes should be designed to be of the highest quality, with suitable widths, treatments and topography which are reflective of their function and purpose. Street furniture, trees, signage or other items should not impact on the use of active travel routes.
- Routes should be safe for all users, including vulnerable pedestrians. The use of tactile paving, lighting and natural surveillance can help to provide a safe environment. Active building frontages consisting of doors and windows can provide the necessary natural surveillance, activity and visual interest. If routes run through dark or quieter open spaces and there is no opportunity to add lighting, natural surveillance or other improvements, then alternative routes should be provided to ensure the network can still be used by all at night or in the winter months.
- A hierarchy approach should inform the design of streets and routes, considering their role in the wider network. The built infrastructure for active travel should respond to the anticipated use levels on those routes, with the consideration that better provision will raise usage levels.
- The potential role of a route must be considered when planning and designing the route. Utility routes (convenient, quick, reliable) should be direct routes, segregated on main streets, and connecting to quieter streets. Leisure routes (fun, interesting, relaxing) may be less direct, through parks or segregated on quieter streets, and should be attractive and fit-for-purpose. These leisure routes, which include open space and play streets, are also useful for learning to cycle and becoming more confident.
- Routes to school should ensure they are safe and usable by children and their guardians through reductions in vehicle traffic, use of dropped kerbs and continuous footways, verges or green infrastructure to separate carriageways from footways, and clearly defined, physically segregated cycling routes. Streets or open space networks that link to primary schools offer the opportunity to include play features en route.
- Streets should be designed and retrofitted to enable children's independent mobility and active travel from a reasonable age.
- Routes for leisure purposes are also important. Nature, art and heritage trails can bring places to life, and give everyone a reason to go outside and enjoy spaces. When coupled with information boards or artwork en route they can be very popular. Opportunities to connect to and enhance active travel routes in the surrounding countryside should be considered.
- Dog walking routes should be integrated within open space networks, to allow a loop or choice of loops to be taken.
- Routes for recreational horse riding, including off-road links and bridleways, should be included or enhanced where appropriate.

3.3 Enable interchange between active modes and onward sustainable travel

- Active travel networks should enable easy onward interchange with public transport. This extends the effective range of active networks by allowing people to continue on longer onward journeys. The design of places should ensure that nearly every public transport trip starts and ends using active travel.
- Bus stops and other interchanges should provide ample, secure and visible cycle parking, which is overlooked, covered and adjacent to the bus stop/interchange. All bus stops and interchanges should provide shelter and seating, and aim to provide real-time timetable information and lighting.
- Major bus stops and other interchanges should aim to provide cycle hubs, with secure parking and basic maintenance facilities.
- Pedestrian and cycle crossings should be clear and integrated in the design of all interchanges.

Potential components of a mobility hub, depending on scale of provision, could include:

Left: Secure cycle parking (Hackney, London) **Middle:** Bus shelter with real-time information (Stevenage) **Right:** Local facilities (Hampton Vale, Peterborough)



3.4 Include wayfinding signage aimed at active travel modes and consider digital approaches

- Much of the directional signage on streets is aimed at vehicle traffic. Active travel users should be considered and provided for equally, with signage appropriate to the routes they would choose, sized appropriately and tailored for all users, including children and disabled people.
- Wayfinding signage should be sensitively sited to ensure it does not contribute towards street clutter. It should be concentrated at key nodes in networks, to help unfamiliar users navigate to key destinations easily.
- Signage can be supported by stencil-painted numbers, colours or lines on the surfaces of routes that match the signage. Although the use of mobile location apps has increased, there is still a need for effective signage and wayfinding to ensure inclusive activity throughout the public realm²².
- As well as providing the direction on signage, indicating the time and distance to key locations and facilities, can be a useful way of improving people's confidence to use and navigate active travel routes. Detailed guidance on signage is contained within [Local Transport Note \(LTN\) 1/20 Chapter 13](#)²³.
- Digital wayfinding, such as route-finding mobile apps, can be tailored for different audiences and needs. For example, neurodiverse users may want certainty about what they will experience en route and at their destination, whilst those with limited mobility may want a route that maximises accessible public realm and streets.
- On-street traffic signing and road markings must comply with the Traffic Signs Regulations and General Directions, which include signs for walking and cycling routes.

3.5 Look beyond the boundary of a site and connect to the wider area

- Identifying active travel connections to likely popular destinations and surrounding networks should be the first stage of any design and should inform the layout of proposals to make active travel distances, and gradients, as small as possible. This should also take into account adjacent sites which are either allocated within local planning policy or anticipated to come forward for development, and existing and proposed Public Rights of Way networks.
- Improving active travel connections from developments to the surrounding countryside should be included in proposals to encourage activity for leisure purposes.
- Providing active travel connections through existing adjoining residential areas is important to access destinations beyond a development and to assist with integration with existing communities.

Wayfinding for Healthy Lives, Oxfordshire

The Kidlington wayfinding project was conceived to improve the health outcomes of primary school children in the Oxfordshire conurbations of Kidlington and Gosford. A key focus of the project was engagement and interaction with the community and various groups throughout the co-design process, involving community and disability user groups, the parish councils, the police, schools and local authorities at all levels.

The outcome of the design process saw the installation of five zoo themed activity trails inspired by the zoo located in the village in the 1930s. The trails range from 1.5km to 5km in length taking in almost every part of the community, passing each school, visiting the majority of green spaces available, joining the canal and linking community amenities and shops.

The circular routes can be joined at any point. Easily visible footprints painted on the surface of the routes at regular intervals make following the routes simple whilst minimising visual intrusiveness. Fingerpost, lamp post and bollard signs are used to bolster easy wayfinding.

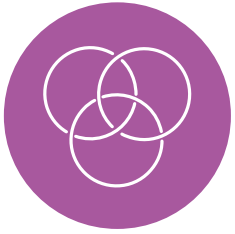
The project was evaluated in two ways: an assessment of its social value by surveying key demographic users (young families) before and after installation; and infrared pedestrian counters located on the trails prior to and post installation. Using the [WELLBY scale](#)²⁴, the summary of these studies show an increase of 0.275 in life satisfaction from trail users which corresponds to a monetary value at the time of the project (2020), of £3,575 per monthly trail user per year. Using the extrapolated trail user data this yields a social return on investment of £18.23 for every £1 invested.

Useful resources

The Chartered Institution of Highways and Transportation (CIHT) hold a library of resources related to [Active Travel and Public Transport](#) including best practice, monitoring and design examples²⁵.

The Department of Transport publishes **Inclusive Mobility**, a guide to best practice on improving access to public transport and creating a barrier-free pedestrian environment.

For technical guidance on appropriate standards for cycling infrastructure, refer to [Local Transport Note 1/20 'Cycle Infrastructure Design'](#) (LTN 1/20), published by the **Department for Transport**.



PRINCIPLE 4

Mixing uses and co-locating facilities

The aim

People are more likely to combine trips and use active travel to get to destinations with multiple reasons to visit. Places with more variety, higher densities and a mix of uses also reduce the perception of distance when travelling through spaces and generate the critical mass of travel demand to better support public transport services.

How to do it

Place schools, shops, community facilities, healthcare facilities, sports and leisure facilities, principal public open spaces and suitable employment close together at key locations within active travel and public transport networks. Ensure residential populations have convenient access by active travel means to a good mix of uses and co-located facilities. This will not only provide greater opportunities to local communities but also increase the population that can access the uses and facilities, potentially in turn boosting their viability.

4.1 Avoid uniform 'zoning' of large areas to single uses

- Ensure land uses are successfully mixed considering active travel networks and the accessibility of locations. Places with more active travel and public transport connections should have more facilities, uses and higher densities to make them as accessible as possible to the most people. Single use 'zones' of land dedicated to only one function increase the distance between homes, work, leisure and other facilities, meaning that trips are more likely to be made in the car. It makes it more difficult to undertake several tasks with a single journey.
- Ensure that conflicts between land uses (e.g. noise, overlooking or smells) are successfully mitigated or prevented through successful design and layout and via the planning application process.
- High density residential schemes can generate a large amount of active travel movements within a small area and therefore opportunities for co-locating other uses should be explored e.g. the use of ground floors of buildings for retail or leisure uses.

Below: Mixed-use local centres can act as a hub for a community (Princesshay, Exeter)



Below: Mixed uses should be focused on connected focal points within a place (Town Square, Stevenage)



4.2 Create mixed use, connected focal points in prominent places within a community

- Locations where lots of active travel routes meet are likely to be highly accessible and should be the focus of where key community facilities are located, such as schools, shops, sports facilities, gathering spaces and play spaces (also see Principle 3).
- Within existing places, map out the locations with the highest accessibility by active travel and public transport to understand places which should have an intensification of mixed land uses.
- Consider the time dimension in co-locating uses to bring day-long activity to streets and spaces. Facilities such as schools have particular hours where they are busy, and they can be co-located with complementary facilities that have different characteristic hours to ensure activity in the public realm throughout the day.
- Consider the form of traditional mixed-use streets such as High Streets as a way of designing places. These can maximise accessibility to surrounding places and encourage movement along them.

4.3 Co-locate sport and recreation facilities alongside complementary uses

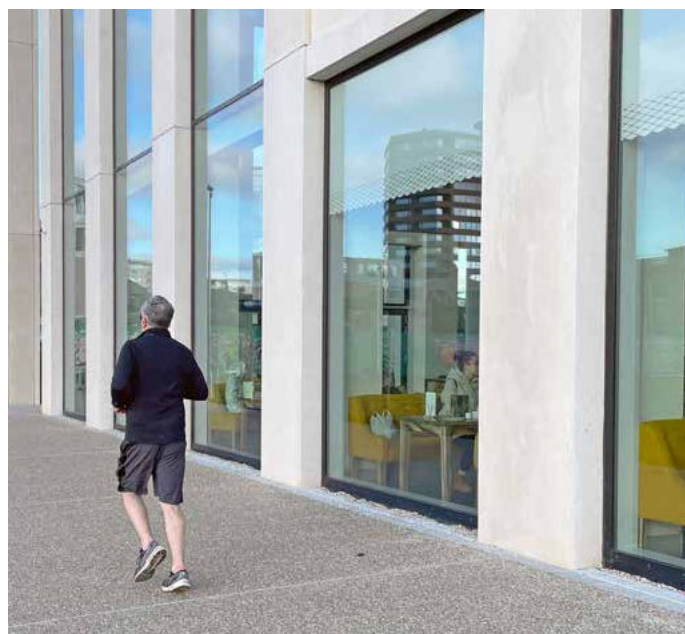
- Playing fields including sports pitches and other sports facilities (e.g. bowling greens, tennis courts, cycle tracks) can be integrated amongst green infrastructure and open space networks at key locations to maximise accessibility.
- Visibility of sports and recreation facilities near commonly-visited destinations can raise their profile and ensure more people in the community are aware of and can access them, helping them become a focal point for the community and social interaction.
- Careful design, through subdividing spaces, seating and other approaches should ensure the users of more formal sports pitches in multi-functional open spaces do not dominate the whole space. Design, function and location of spaces should ensure informal surveillance, so that they can be used by diverse groups (ages, ethnicities, gender and abilities).
- Facilities that are required to support sports such as changing rooms and toilets should be designed where appropriate to be multi-functional so that they can support other physical activities on open spaces (if possible, even when the sports facilities are closed²⁶). For example, pavilions can be designed to include café, social and toilet facilities to support use throughout the week which can improve their sustainability and viability. Further guidance can be found on this, and the use of Community Use Agreements, in Principle 9.
- Through good design, any potential conflicts between nearby residents or other uses of open space can be avoided or appropriately mitigated (for example lighting requirements and other servicing needs and natural habitats).
- For some sports and activities, integrating more frequent smaller scale provision amongst streets, homes and other uses may be a better way of increasing people's access to physical activity opportunities in some contexts, rather than larger combined facilities, which may only be accessible by car for many people, and be more expensive to provide and deliver. This provision may be more informal and could focus on specific local activity or health needs in an area (see Principle 1).

Below: Britannia Leisure Centre sits adjacent to parkland and natural open space (Hackney, London)



4.4 Use the public realm to create informal activity at sports/recreation facilities

- Sports and leisure facilities (and many other public buildings), due to their size and need for enclosure and security can act as barriers to active travel and appear unwelcoming. Designs should make the public realm, connections and greenspace a part of the facility, enabling their use for informal physical activity such as outdoor gyms, nature or trim trails, or programmable, flexible spaces for events linked to the sports facility.
- The co-location of sports facilities with community facilities such as community centres, health centres and libraries can help when combining use of the public realm outside a building as it encourages a range of activities at a location, allowing users to experience spaces differently. This may also help their running costs and third-party income.
- The periphery of playing fields provide opportunities to encourage informal physical activities where this can be done without compromising the requirements of the sports users e.g. sensitively designed nature and trim trails along with active travel routes. Creative re-imagining of the areas around sports facilities, making them more social spaces and the facilities feel less fenced in, can make them more welcoming for many, especially girls²⁷, increasing their sport and recreational value for a greater proportion of the local communities.
- Parks and open spaces can be great places to locate the front entrances of sports facilities, creating a focal point in the space and allowing events such as parkrun, or other group recreational or instructional activities, such as cycle training, to co-locate with the formal sports facility, where space permits.



Top: Sports facilities should be designed to encourage informal activity in the public realm (Hackney, London)
Bottom: High-quality space around facilities can support activity independent of using that facility (Britannia Leisure Centre, Hackney, London)

Useful resources

The **Town and Country Planning Association's 20-Minute Neighbourhood Guidance** reviews in detail the importance of creating complete compact neighbourhoods²⁸. A pilot programme of the 20-minute neighbourhood concept was undertaken in Melbourne (Australia), with detailed reporting on its outcomes²⁹.

THEME 2

Active, high-quality places and spaces

All places and spaces should encourage physical activity, not just buildings and facilities for sport, activity and leisure, but open spaces, green infrastructure, urban public realm and streets, and the range of places we use in our daily lives.

These places and spaces should also be of high design quality and be designed for longevity, with quality materials and flexibility in their use, to keep the place active into the future.

This group of Active Design principles focuses on the creation of these active, high-quality places and spaces, ensuring opportunities to be active are harnessed wherever possible.

The Principles



Network of multi-functional open spaces



High-quality streets & spaces



Providing activity infrastructure



Active buildings, inside & out

How does this increase activity?

- High quality, flexible spaces are those that can be adapted easily and have a clear use when not being programmed for events. They allow opportunities for many different groups to be physically active, and also enable spaces to respond to the changing needs and demands of communities.
- Open space networks can provide a safe and attractive opportunity for active travel between destinations, as well as important spaces to be active (see also Principle 3). A connected network of open spaces can encourage people to travel further and longer, increasing their activity levels. This needs to be combined with good waymarking, signage and knowledge of the connectivity of the networks.
- Providing multifunctional spaces allows for sport and physical activity to be delivered alongside other priorities, such as biodiversity, community space, sustainability or other needs, enabling the function of spaces to be maximised.

What other benefits are there?

Environment and climate change

- The provision of multifunctional greenspace and green infrastructure often provides opportunities for carbon capture, air quality improvement and biodiversity net gain, amongst a raft of other environmental sustainability benefits. This helps to meet the targets of the Government's [25 Year Plan to Improve the Environment](#)³⁰ (See Principle 5).
- There is a clear link between a higher quality, pleasant environment and increased rates of active travel³¹. This increased active travel has a significant positive impact on environmental quality and carbon emissions, by diverting movements from emission-causing transport modes (See Principle 6).



Tackling inequalities

- Free-to-use open spaces integrated throughout an urban area are an important basis for creating inclusive environments and tackling health inequalities. If designed and managed well with consideration for all user groups and experiences, they offer the potential to create a common and free space for all, where activities and events can be undertaken, and outdoor physical activity can take place at no cost (See Principle 1).
- Access to nature and amenity space, when well distributed geographically, and taking into account population densities, enables easy access and good availability, facilitating associated physical activity and health benefits for all^{32,33,34}. At present within many areas there is inequality in how different groups within local communities can access greenspace, which should be addressed.
- Contact with nature and natural environments is shown to enhance mental health³⁵. It improves the experience of being outdoors and physically active and can also provide benefits for nature. Access to greenspace has been shown to result in people experiencing healthier cortisol levels (which controls mood) than those living in areas with limited green space provision³⁶.



Economic growth

- Providing easy access to greenspace is critical. £2.1 billion per year could be saved in health costs if everyone in England had good access to greenspace, due to increased physical activity in those spaces³⁷.
- High Street active travel and public realm improvements can increase retail sales on those streets by 30%, and those who walk to a high street spend 40% more than those who drive. Retail vacancy rates on improved streets can be up to 17% lower³⁸.
- Providing opportunities to reduce sedentary working within workplaces can increase employee health, and thus has associated economic benefits. Employees who are physically active take 27% fewer sick days than their colleagues³⁹.
- Reduced congestion and increased physical activity encourages greater investment and regeneration and in a way that is beneficial for future generations, as referenced and encouraged in the [Transport Decarbonisation Plan](#)⁴⁰.
- Physical activity as part of heritage and leisure trails can be important drivers of tourism with local economic benefits.





PRINCIPLE 5

Network of multi-functional open spaces

The aim

Accessible and high quality open space should be promoted across cities, towns and villages to provide opportunities for sport and physical activity, as well as active travel connections and natural or civic space for people to congregate and enjoy.

How to do it

A network of multifunctional open space should be created across all communities to support a range of activities including sport, recreation and play and other landscape uses including woodland, wildlife habitat and productive landscapes (allotments, orchards).

Facilities for sport, recreation and play should be of an appropriate scale and positioned in prominent locations, to increase awareness and visibility of activity, as well as being appropriately sited and designed to respect residential amenity.

5.1 Create a variety of open spaces

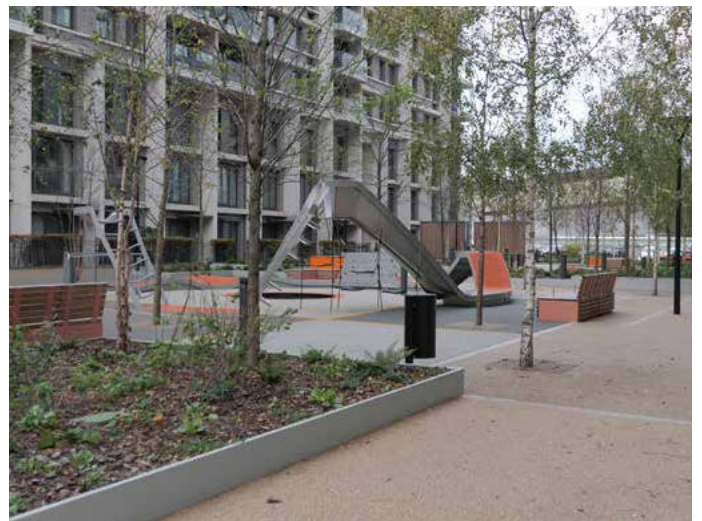
- Open space is not just grass and playing fields (green space), it also includes civic space with hard landscaping (grey space), play areas, informal/amenity, natural/semi-natural places where nature dominates, allotments, formal gardens and incidental 'pocket' parks. Often these uses will be suitable in a range of contexts and could be more complementary in certain locations than other comparable uses. This creates variety in an area, with multiple activity opportunities.
- Accessibility should be considered. Spaces with just grass can be less accessible to some, especially during the winter when they can be muddy. A variety of surfacing materials can be employed to ensure spaces can be used by all.
- Small and large spaces are needed for different activities, functions and uses. Networks should contain spaces of different scales and character.
- Spaces should include active travel networks, leisure cycling networks, natural habitats and other facilities as well as amenity space and sports infrastructure
- Open spaces should be multi-functional, with the potential to incorporate within them sustainable drainage systems (SuDS) such as swales, wetlands and open basins. Careful consideration should be made with respect to location and function of SuDS with other uses.
- Where single large spaces are being created their design should be carefully considered so that they can potentially incorporate smaller, more easily occupiable spaces so that different groups can co-exist and occupy spaces, and a variety of activities can be enjoyed. This should be balanced against the functional requirements of sports facilities such as the need for playing pitches and their run-offs to be free from obstacles (see Principle 4).

5.2 Link open spaces together within and beyond a site

- Find opportunities to connect to wider networks of open spaces, looking beyond the site boundary. Wherever possible, all open spaces should be integrated with nearby active travel networks to form part of direct routes or leisure routes. These connections should respond to local green and blue infrastructure action plans or strategies, where available, and other strategic priorities in an area, such as Walking and Cycling Investment Plans (see Principle 3).
- Utilise clear and distinctive wayfinding in open spaces, together with promotion and awareness raising activities to enhance local knowledge of the networks. This is vital to help people find their way around and use them effectively.
- Include and promote use of nearby 'blue' infrastructure such as rivers, canals and lakes for water recreation activities, as part of the network.

5.3 Plan and design for a wide range of activities

- Formal and informal sport can be integrated throughout the public realm, utilising and creating physical activity opportunities. These spaces should be co-designed with the local community, focusing on identified needs and enabling all people to be active (see Principle 1). Opportunities should include creating age appropriate play space for both younger and older children, including teenagers. This should result in a range of provision which responds to local needs and the co-design process e.g. swings, off road bike tracks, trampolines, skate parks, games areas, table tennis tables, marked running/walking routes and outdoor gyms.
- Research on the usage of different types of facilities by different groups can help identify if there are imbalances in provision in an area. This evidence can support interventions to address such imbalances and offer physical activity opportunities to certain groups who may be underrepresented.
- Formal sports pitches should be integrated within the networks of open space to provide variety, vitality and focal points (see Principle 4).
- Other diverse sources of activity for different groups include food production (e.g. community gardens and allotments), hiking trails, dog walking, horse riding, organised outdoor classes and augmented reality gaming.
- Ancillary infrastructure (e.g. cafés, resting places, public toilets and changing places) can support and increase the range of physical activity opportunities a space can provide. This can create greater diversity of use within spaces, attracting more people to use and spend more time at them and make them more welcoming to all (see Principle 7).



Top: Big Data Institute, Oxford, offers a mix of formal and informal pocket spaces (Old Road Campus, Oxford)

Middle: A play area integrated within the public realm (East Village, Olympic Park, London)

Bottom: Activity can be integrated in areas with shops and cafés to attract people to use the spaces (Market Place, Stevenage)



Above: Blending natural environments with public spaces is beneficial for mental health and for enhancing biodiversity (Nottingham Science Park)



Above: Play should be integrated within attractive open space (Wolverton, Milton Keynes)

5.4 Integrate a diversity of natural habitats to make environments where people want to be outdoors and active

- A variety of habitats should be incorporated into an area, not a single consistent environment. There can be benefits for nature and physical activity when habitats are linked together continuously as wildlife corridors and when they connect to wider habitats and networks e.g. as part of developing walkable communities (see Principle 2).
- Consider the accessibility of space when creating habitats, as some areas for nature without humans using the space can be beneficial in ecological terms. This space may be able to contribute to a wider, pleasant environment without direct access.
- Seasonal variations should be embraced, providing native variety and creating a changing experience for users of the space.

5.5 Make space for children's play

- Children need space to be active in the public realm and open space and their presence often activates spaces, creates destinations for families, builds community connection and encourages adults to be outdoors.
- When children have safe space and permission to play outside near their home, they are naturally active. Outdoor play is also a way that children develop physical literacy and skills such as cycling. This shouldn't just include playgrounds, as children like to play outside near home—including in streets and other shared public space—where they feel safe and welcome to do so.
- Where formal play spaces are provided they should be accessible and convenient to those they are providing for, and ideally integrated as part of destinations and local centres. Create a strategy (or contribute to an existing strategy) for a variety of children's play spaces, creating both formal and informal opportunities.
- Play spaces should be designed to be accessible for all children, including disabled children, in terms of equipment such as high-back swings and wheelchair roundabouts, and ensuring accessible entrances and exits to the play space. Equipment provided should be high quality and durable.
- Different groups of children should also be considered, as they have different needs including children with Special Educational Needs and Disabilities (SEND). Co-design of spaces can play an important part in the design of effective areas.
- Informal play spaces such as trim trails can be inventive and low-cost: smaller children will climb and explore most things given the opportunity.
- Create safe places for children to play on their doorsteps by closing streets for an afternoon. [The Play Street Initiative](#)⁴¹ is a way for residents to regularly create safe space for children to play out on their doorstep, which can lead to more permanent changes.

Sowerby Park & Sports Village, North Yorkshire

Sowerby Park is a 7.5 hectare green space at the centre of a growing community in North Yorkshire. The project, built over a former landfill site, includes a 1km fitness trail, a sustainable drainage system, space for three high quality sports pitches, cycle trails, a BMX park, a new school, and allotments. The project will deliver significant ecological improvements including the retention of existing hedgerows, 300 new trees, and large swathes of wildflower meadow.

The emphasis was on creating a park that became a common place for the community, supported health and wellbeing whilst establishing a matrix of new and improved ecological habitats.

The design process involved significant consultation with local clubs, to ensure the facility met their needs, and local residents to ensure features such as pitch lighting were sensitively integrated.



© Re-form Landscape

Luna Park, Swindon

Luna Park is a traditional play space in Haydon Wick, Swindon, which has been refurbished to make it accessible into a space that all children can enjoy and use. The redesign was driven by Becky Maddern, a local resident who had found that her local park was increasingly not meeting her son's needs. Through engagement with the parish council, Becky helped to raise awareness and supported the design process. The play area was made more accessible by ensuring the surface was suitable for wheelchair users and those with limited mobility. More inclusive equipment was incorporated into the design, which included a wheelchair accessible roundabout, high back swing, several different sensory panels, a low-level spinning bowl and a seesaw with a back and footrest. The redesign of the Luna Park was achieved in a similar cost budget as for a traditional park.

Through the redesign of Luna Park, Swindon Borough Council considered how other parks could achieve the same inclusive design. Other considerations around inclusive design include surface painting which offers opportunities for play and integrated equipment to ensure that children are not segregated. Further information on inclusive design can be found through Plan Inclusive Play Areas (PIPA Play⁴²).



© PIPA Play

Useful resources

Play England publish guidance on **Design for Play**, a guide to creating successful play spaces⁴³.

Guidance on open space, including formal play space is published by **Fields in Trust**, **Guidance for Outdoor Sport and Play**⁴⁴.

Natural England have published a **Green Infrastructure Standards/ Design Guide** which sets out the principles for successful green infrastructure in open space and other environments⁴⁵.

The **London Borough of Hackney** adopted a **'Child Friendly Spaces' Supplementary Planning**

Document which establishes child friendly design principles, ensuring child-friendly design can be embedded beyond play space provision⁴⁶.

SCOPE's campaign **'Lets Play Fair'** seeks to improve levels of accessibility across England's play areas⁴⁷.



PRINCIPLE 6

High-quality streets and spaces

The aim

Streets and outdoor public spaces should be Active Environments in their own right. They should be safe, attractive, functional, prioritise people and able to host a mix of uses, with durable, high quality materials, street furniture in the right places and easy-to-use signage. High quality streets and spaces encourage activity, whereas poor quality streets and spaces are much less likely to be used to the same degree.

How to do it

Streets and public spaces of all types should be designed to be attractive places, using durable materials to reduce maintenance costs and improve longevity. Streets are places and not simply movement corridors, and their role in a network and the surrounding place should be clearly defined. Placemaking should be supported through reducing the speed and dominance of motor traffic, the creation of informal spaces and flexible uses along streets, including children's play, resting places and meeting spots. Street furniture and signage can also contribute to the variety and quality of the street scene, when used in a considerate way.

6.1 Design streets as places, not movement corridors

- Streets are about more than just vehicular through-routes or highways dominated by vehicular traffic. The role of streets as 'places' should be prioritised above their role as movement corridors, with consideration given to the attractiveness of a street and how this may affect its use.
- Separation of active travel activity from vehicular use, for example through the use of planting, can be an effective way to improve the quality of a street, especially where the anticipated volume of traffic is such that pedestrians and cyclists may otherwise feel vulnerable.
- Footways and any segregated cycleways should be uninterrupted and direct, with utility cabinets, car charging points, bins and other street furniture off to the side. Space should be set aside in a street so that such essential items can be accommodated in the future without blocking active travel routes and infrastructure.
- Residential and minor streets are an important part of an active travel network as they are used less by vehicles. Surfacing and carriageway widths should make clear to drivers that these streets are for people, and vehicles should proceed with caution.
- Appropriate ground-floor uses with attractive frontages animate a street helping to make it a place. How they connect to the public realm should be considered. At a minimum, front doors should face the street and be clearly visible with blank frontages avoided.
- Car parking should not be prioritised over other uses and users, and appropriate ways of accommodating cars should not have impacts on active travel and quality of place. For example, on-street parking should be effectively accommodated without impacting on footways or cycle lanes.



Above: Streets should offer an attractive environment, and not be orientated around vehicles (Trumpington Meadows, Cambridge)

6.2 Design streets and spaces of high quality, utilising appropriate and durable materials

- All streets and spaces should be fit for purpose to encourage movement by active travel, and utilise high quality and durable materials which can provide grip in all weathers.
- Surface materials should be used to define space clearly, for example by clearly delineating active travel and vehicle space. Changes in carriageway materials from tarmac to paving, and changes in levels through use of raised tables and continuous footways accompanied by give way markings can help slow vehicles at junctions by making it clear that this part of the street is prioritised for people. (see Principle 2).
- Ensuring a space is safe, and feels safe, is an essential part of securing design quality (see Principle 1).
- The choice of materials and design of key spaces should make reference and take inspiration from the surrounding landscape and historic context, to make a place feel distinctive and rooted in its local environment. This creates opportunities to draw users in and encourages associated activity within these areas.
- In existing places, opportunities to retro-fit and improve existing infrastructure should be taken, responding to changing needs (See Principle 9).
- Maintenance should be considered in design, and active travel infrastructure should not be an afterthought in terms of clearance of snow, fallen leaves or overgrown planting.



Top: A change in surface material can help to define a cycleway from the vehicle space (Castlegate, Sheffield)

Bottom: Cycleways can be accommodated as part of the street network (Manor Kingsway, Derby)

6.3 Create and support safe, flexible spaces which can support multiple forms of activity

- Public spaces should be designed to be multifunctional, allowing for numerous activities and events to be able to take place within a single space, and enabling flexibility for evolving trends, technologies and activities. This should be supported by activity infrastructure (see Principle 7), and opportunities for whole families to be physically active (adults, young people and older people).
- Within public spaces such as parks and civic spaces, subdividing the space into a variety of different environments can provide an opportunity for people to meet, talk, exercise, move through and take part in activities.
- Informal uses of streets (such as children playing in the streets) should also be supported and promoted where appropriate. This informal play has been encouraged through the UK-wide play streets movement, supported by Playing Out.
- The flexible use of spaces and streets should be tested through temporary installations that encourage physical activity and getting people out into the public realm (See Principle 7). These could include the addition of new seating, play spaces, cycle parking, cycle lanes or even temporary retail uses such as café space. 'Parklets', green spaces located in parking spaces, can bring life and nature to streets. Such flexibility can enable opportunities to engage with communities to consider what is sought within localities⁴⁸.
- Spaces and streets should include seating at appropriate locations. Studies^{49,50} have shown that seating is often most well-used when located at edges in public spaces (which may be the physical edge, or defined by landscaping and other space subdivision), and can be delivered through standalone benches, steps, or integrated into landscaping proposals and raised planting beds. A mix of social seating (e.g. benches facing towards one another) and solitary seating (e.g. moveable chairs or single seat benches) can provide a place for a mix of people to feel comfortable in a space. Attention should be given to the amount, siting and design of seating to provide sufficient capacity for potential users and to support personal safety.

Below: Civic spaces should be multifunctional to offer spaces for different activities (Centenary Square, Bradford)



6.4 Create resilient spaces that can be active in all seasons

- Streets and spaces should be designed for use in all seasons, with particular consideration given to the hotter summer months and the colder, darker, winter months.
- The use of tree planting, colonnades, shelters, sustainable drainage systems and rain gardens improves the street scene and plays a role in extending the outdoor season through improving drainage, offering cover and regulating air temperature.
- Street trees can play a large role in offering shade and natural cooling throughout summer for users across towns and cities, reducing ambient temperatures. They should be located appropriately so as not to hinder existing or block proposed active travel routes and infrastructure.

Broad Meadow, Oxford

Broad Street in Oxford is a wide, centrally located street that connects the shopping heart of the city centre to the historic university area. In the past it was underused, with some car parking, and mainly used as a transit space. In the summer of 2021, to aid the economic recovery of the city after the pandemic, Oxford City Council set up a temporary 'meadow' in the space using shipping cases that transported the Covid 19 vaccine as planters to create a wildflower meadow environment, integrating seating, a performance area and space for street food. The experiment was a huge success, creating a destination and lots of outdoor activity in a previously unused space and bringing a more natural environment into the city centre. Based on this Oxford City Council, together with Oxfordshire County Council, have taken the decision to make it a permanent space, creating a long-term asset and flexible space for a variety of events and activities.

The [Oxford City Council website](#) holds further detail on this project⁵¹.



Useful resources

Manual for Streets and Manual for Streets 2⁵² provide comprehensive guidance on successful street design. Work is underway at present to update and bring them together into a single Manual for Streets.

The Global Designing Cities Initiative publishes several handbooks for successful street design, using international case

studies, including **Designing Streets for Kids** and the comprehensive **Global Street Design Guide**.

Originally developed by **Transport for London**, and now endorsed by the **Department for Transport**, the **Healthy Streets toolkit** sets out measurable criteria for healthy streets as places in urban areas, with a selection of tools

and approaches to make change happen⁵³.

Historic England have produced guidance called **Streets for All: Advice for Highway and Public Realm Works in Historic Places** which provides detailed advice on what you can do to help make our streets more attractive, distinctive and user-friendly for everyone⁵⁴.



PRINCIPLE 7

Providing activity infrastructure

The aim

Infrastructure to enable sport, recreation and physical activity to take place should be provided across all contexts including workplaces, sports facilities and public space, to facilitate activity for all.

How to do it

Infrastructure to support physical activity should be provided and be easily accessible and safe. There are a range of opportunities to achieve this, for example providing water fountains, public toilets and clear wayfinding networks. Offices and workspaces should provide changing facilities and cycle parking to encourage employees to commute via active travel. Sports and community facilities should look beyond their primary function, to encourage wider activity, including the provision of infrastructure which non-facility users can access, such as toilets, refreshments, social spaces and water refilling stations.

7.1 Provide infrastructure which supports and enables active travel

- Deliver a broad range of infrastructure to encourage activity for the full range of potential users, not just those who are most likely to be active. The provision and maintenance of simple infrastructure such as public toilets, changing spaces, secure cycle parking, seating, signage, lighting and drinking fountains can increase the number and variety users within a locality⁵⁵.
- Provision should be safe, within prominent locations, and ensure it meets the needs of the local population through co-design and consultation (See Principle 1).
- Accessibility of routes and destinations for all groups, especially disabled users, should be provided through appropriately-sized and provisioned infrastructure.
- Provide access to toilets as part of public spaces which are free to use. This is an important consideration that may influence whether some users feel they can visit a space, participate in an activity there and how long they will participate.
- Safe and secure cycle parking should be provided at all locations, with consideration given for larger and adapted cycles and trikes. It needs to be central to design considerations and carefully planned into the development from the outset in a way that makes it attractive and convenient to the user.
- Appropriate cycling, buggy and children's scooter parking should also be provided at schools, community facilities and play spaces in prominent and convenient locations, as well as additional provision for parents, guardians and carers who may accompany their children by cycling.



Top: Bike maintenance and water fountain facilities are placed to support active travel (Ladybower Lake, Derbyshire)

Bottom: Cycle parking located in a prominent location and designed to be part of the public realm (Croydon, London)

7.2 Provide infrastructure which supports physical activity

- High quality, well-placed and well-maintained outdoor gym equipment and informal sporting equipment, such as goalposts, swings, trampolines, a basketball hoop or BMX pump-tracks can play multiple roles in generating activity, whether utilised as part of a fitness routine or as part of a more formal group exercise (eg. fitness camps). However, not all equipment will be appropriate or attractive to all groups, so consideration should be given to the different needs of people in the local area to help ensure overall equity of provision (see Principle 1).
- Include appropriately designed and sited storage facilities and electrical power points for equipment that might be used for public events such as parkruns, street parties, markets, festivals, etc.
- Provide connections or expand Public Rights of Way networks to encourage linkages between places and enable activity. Bridleways and connected off-road routes, linked to quiet lanes can also provide safe and attractive routes for horse riding. The use of equestrian crossings at important intersections can improve safety and complete links.



Top: A dedicated active travel bridge (University of Northampton)
Bottom: Trim trail equipment placed along pedestrian route to school (Houlton, Rugby)

7.3 Provide supporting infrastructure which enables people to utilise spaces flexibly

- Frequent opportunities for people to stop and sit should be provided across public spaces, streets and active travel routes. Accessible, well-placed seating encourages people to remain within an area, whilst supporting users to undertake active journeys⁵⁶.
- Cafés, street tables, well-designed outdoor space and other local services can be used to support and enable activity, by encouraging a wider range of users and people to stop and linger. This increases the vitality and attractiveness of a space.
- Dog waste bins, drinking water for dogs and, where required, dedicated space for dogs to be let off the lead should be provided to prevent conflict with other open space users. Spending areas should also be provided for assistance dogs.



Top: Cafés offer space to stop and linger, and increase the vibrancy of a place (The Tuning Fork Café, Houlton, Rugby)

7.4 Integrate and utilise innovative digital technology in spaces and places

- Consider how micro-mobility systems such as e-bikes may be accommodated, aiming to avoid conflict with other users both whilst in use, and when parked. The public realm should be clearly delineated so that it is clear where to park different types of micro-mobility modes.
- Wayfinding apps, or those which seek to encourage physical activity through augmented reality or gaming, can be effective in getting those who are less active to become active⁵⁷.
- Providing opportunities for free Wi-Fi internet connection can encourage people to utilise a space and provides the infrastructure to enable other digital interventions.
- When creating digital technology, consider how wider groups might be able to access the information. Any online platforms or applications must be created with accessibility and inclusion standards in mind and alternative ways to access information should be considered.



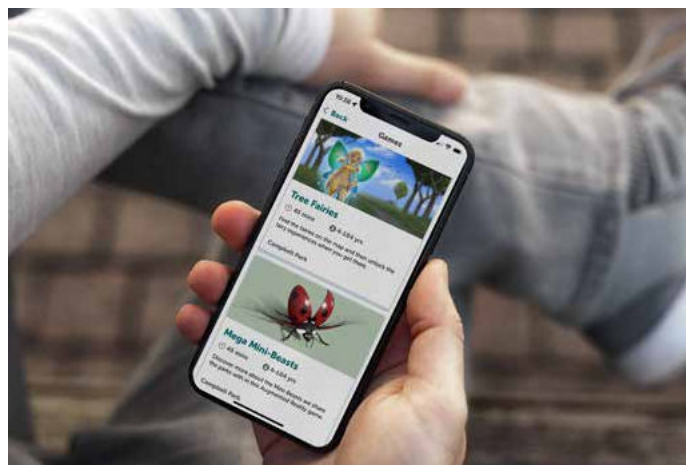
Above: e-bike parking, Hoxton, London

Love Exploring App, Milton Keynes

The Love Exploring mobile app uses 'augmented reality' graphics that display on smartphones as you walk around. Thousands of people, families and children have taken to local parks and streets to use the app, exploring the game and trails since its launch in October 2021. Games change regularly, and include Dinosaur Safari, Space Walk, Tree Fairies, Mega Mini-Beasts, Butterflies and Moths and Spooky Halloween trails.

The app creates an opportunity for families to go for local walks, exploring their local area and the extensive parks network. As well as family trails, other features allow people to explore local heritage and places of interest, learning more about their area and encouraging regular physical activity.

<https://www.milton-keynes.gov.uk/health-and-wellbeing-hub/love-exploring>



Useful resources

The British Standards Institute publishes **PAS 6463:2022: Design for the mind – Neurodiversity and the built environment**.

Many cities have undertaken specific exercises in wayfinding to improve experience using active travel modes in their areas. These include **Legible London**⁵⁸, **Nottingham Navigator**⁵⁹ and **Legible Leeds**⁶⁰.

Changing Places toilets⁶¹ are a recommended and highly valued facility for new developments and existing public venues to provide especially. They enable everyone, regardless of their access needs or disability, or reliance on assistance of others, to use a toilet facility safely and comfortably. They can help anyone to feel more able to use and access the places and spaces they want to visit. They include standard design, signage and visual information for people with sensory impairments and learning disabilities. They can also benefit other people whose first language is not English.



PRINCIPLE 8

Active buildings, inside and out

The aim

Buildings we occupy shape our everyday lives, both when users are inside and outside. Buildings should be designed with providing opportunities for physical activity at the forefront, considering the arrival experience, internal circulation, opportunities to get up and move about, and making the building an active destination.

How to do it

Consider the user journey of arriving at a building by active means – it should be easy to find the way in, park cycles and store belongings. Once inside, spaces should enable regular activity and active circulation, and should be connected to the outdoors through the use of space and landscape. Valued older buildings can be brought back to life through creative reuse, increasing vitality, community connections to a local place and make activity a visible and distinctive part of a place. Physical Activity can also be a method to re-utilise or regenerate places, taking advantage of the economic and social benefits it creates.

8.1 Orientate and design buildings to encourage activity

- Buildings should visually and physically interact with streets and spaces. Pedestrian entrances should be prominent, clear and face the street. It should be easy and obvious for a pedestrian to find the entrances and exits of buildings.
- Cycle parking and storage for other wheeled mobility options such as mobility scooters, wheelchairs or similar should be adjacent to the front door, or as close as possible. It should be visible, covered, secure and not tucked away. It should be more prominent and easier to access than car parking.
- Level access into buildings for those with limited mobility should be through the main entrance. It should not be separate, tucked away and difficult to find.
- Where it is necessary to provide car parking either for disabled users, operational reasons or other essential requirements, it should not dominate the front of a building. It should be located to the rear, side or underneath of a building, with appropriate overlooking for safety.
- Clear and safe footways from the car park should direct users to the main pedestrian entrance.
- Stairways should be prominent and obvious within buildings, with elevators and lifts conveniently located for people who need them but less prominent than the stairs. Where possible, stairs should be designed as a feature element in a building, encouraging their use.

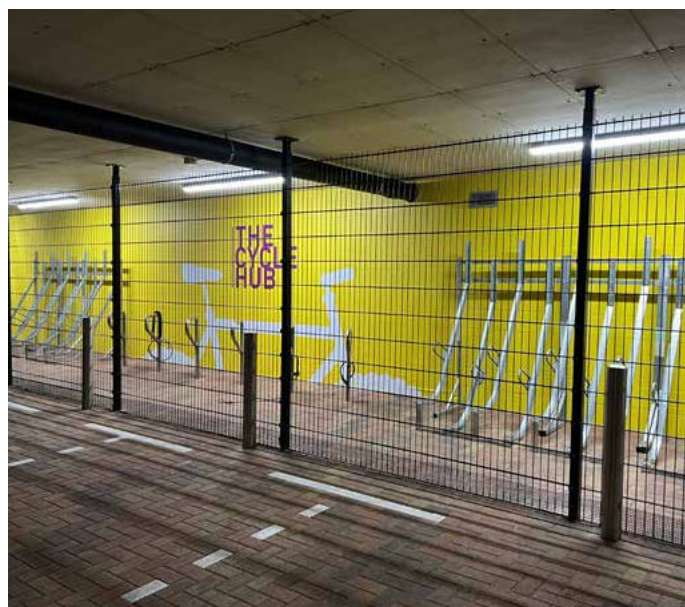


Top: Cycle parking should be convenient, with a visible and secure location near the building entrance (Trumpington, Cambridge)

Bottom: Homes designed with convenient secure cycle parking adjacent to the front door (Great Kneighton, Cambridge)

8.2 Provide activity infrastructure inside and outside buildings

- Secure cycle parking should be provided at all key destinations. Shops and other facilities should have visitor cycle parking accessible in the public realm. Offices and employment buildings should provide cycle parking for employees as well as accessible visitor cycle parking.
- Showers, lockers, bike maintenance equipment and changing spaces should be provided and signposted within buildings, close to secure cycle parking, to encourage active travel.
- In homes, cycle storage should be conveniently located, helping to make it is easier to cycle for a journey than to take the car. Where it is not possible to easily provide accessible and convenient internal cycle parking, the provision of cycle hangars within the street should be considered. In flatted developments, space for cycle maintenance should also be provided alongside appropriate cycle storage.
- Pushchair and children's scooter parking can be provided in appropriate facilities to encourage families to arrive by active means. Access should be level following the principles of [Universal Design](#)⁶².
- As the population ages, it is crucial that buildings are adaptable for lifetime use and changing requirements. As a minimum, all buildings, whether residential or otherwise, will require wider doors, generous space for wheelchairs (and mobility scooters), handrails, enough space for circulation for those with limited mobility, and frequent and effective lighting.



Top: Secure cycle parking integrated within a building (Chiswick Park, London)

Bottom: Visitor cycle parking integrated within the public realm and not blocking footways (Eddington, Cambridge)

8.3 Utilise areas within and around buildings to support activity

- Informal spaces within and around buildings can accommodate a range of physical activity uses e.g. table tennis tables, table football, swing seats, pocket play, food growing space, spaces for mini tennis, paddleball, street cricket or outdoor gyms.
- A landscape plan can identify areas where informal outdoor gatherings can occur, with appropriate provision made such as seating, planting or pathways, which can encourage people to use outdoor space. The inclusion of planting and natural habitats in these spaces can increase contact with nature.
- Covered spaces and shelters outside buildings can enable people to use outdoor spaces for more months of the year, or even throughout the year. Consideration of solar orientation and microclimates can also extend the use of outdoor spaces throughout the year.
- Office spaces can encourage movement, for example with sit-stand desks or the provision of spaces that encourage circulation and movement, including standing meeting rooms.

Below: Areas inside and outside buildings should be designed to encourage activity (TheCentre, MK)



8.4 Consider how to repurpose valued local assets into new physical activity destinations

- Existing valued heritage buildings can be transformed into valuable new assets that can encourage people to get out and be more physically active. When considering re-use, make sure that physical activity possibilities are considered along with other potential uses.
- Heritage buildings can form the centrepiece of local heritage or art trails, or become new community spaces that can host activities such as fitness or dance classes.
- Repurposing old department stores into new town or city centre leisure destinations can be a successful way of saving a local landmark. Schemes that integrate residential development alongside leisure and physical activity opportunities can ensure greater viability, as well as encouraging a mix of uses.
- Older buildings can often lack level access or infrastructure to support people arriving to them by active travel means. Where possible, sensitive interventions should be made to adapt old buildings and their surroundings to modern requirements to support active travel without harming their overall character.



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Above: Repurposed local assets can become community centrepieces (Houlton School, Rugby)

FitWel Building Accreditation Scheme

Fitwel is a certification system which is designed to demonstrate that buildings have been designed to improve health outcomes. US based, but applicable all across the world in many different contexts, Fitwel certifies buildings which pass its accreditation process. This process has been generated by analysis of 5,600+ academic research studies, with Fitwel implementing a vision for a healthier future where all buildings and communities are enhanced to strengthen health and wellbeing.

Useful resources

Centre for Accessible Environments and the National Register of Access Consultants (NRAC)⁶³ hold considerable resources and expertise on accessibility of buildings and other environments.

THEME 3

Creating and maintaining activity

It is essential that once delivered, spaces are utilised effectively and can be relied upon to be useful for years to come. To achieve this, how spaces will be used and maintained should be factored into the design process at the outset, and opportunities for activation of these spaces should be explored. Often, designing spaces to be flexible and able to accommodate multiple different uses can prevent a space becoming disused and allow it to respond to evolving and changing needs of a community, and changing activity trends.

The Principles



Maintaining high-quality flexible spaces



Activating spaces

How does this increase activity?

- People are more likely to use their environment for physical activity if places and facilities seem well maintained and safe.
- The monitoring and evaluation of physical activity interventions allows understanding to be developed of what is effective and what is less so. This allows changes to be made as required, to increase opportunities or the effectiveness of interventions.
- Encouraging people to be physically active through the activation of spaces and places is essential for communicating the benefits of physical activity and increasing participation, especially with people who traditionally feel excluded and or those who are less active, such as those with long term health conditions.
- Ensuring spaces and places are well maintained and managed enables them to provide value for money, to have a longer lifespan and remain a valued asset to communities for a longer period of time.

What other benefits are there?

Environment and climate change

- Well managed and maintained facilities are more effective, more resource efficient and used more, leading to less need for replacement. This in turn reduces the need for further carbon emissions in reconstruction in the future.
- Creating spaces which can be used flexibly for many different activities reduces the need to provide dedicated spaces for each anticipated (often time-limited) activity, and as such is more effective in creating compact places. In turn, this encourages the co-location of uses and facilities (See Principle 4).



Tackling inequalities

- Communicating and promoting physical activity opportunities in an effective and innovative way can open up opportunities to those who are less active, less confident to be active or simply unaware that opportunities exist. This can strengthen community bonds, increasing community cohesion and reducing loneliness.



Economic growth

- Activating spaces can have knock on benefits to the economy by increasing footfall in spaces and facilities, which can be vital for their long-term viability and as a tool to regenerate or reactivate places.
- Utilising spaces for multiple uses reduces the need to invest in multiple facilities and increases the opportunities for economies of scale within a particular facility or space.
- Investment in providing, activating and maintaining spaces and programmes for increased physical activity over time reduces other costs associated with managing poor health





PRINCIPLE 9

Maintaining high-quality flexible spaces

The aim

Spaces and facilities should be effectively maintained and managed to support physical activity. These places should be monitored to understand how they are used, and flexible so that they can be adapted as needed.

How to do it

The management, long-term maintenance and viability of facilities and spaces should be considered in their design. As these spaces operate, monitoring should be undertaken of their use and effectiveness. This enables evaluation, assessing the success of Active Design initiatives and understanding where changes can be made. Where spaces and facilities have been designed flexibly (see Principle 6), design responses can be undertaken to respond to this evaluation, or spaces could be activated differently (see Principle 10).

9.1 Manage and maintain spaces to enable effective and efficient use

- People are more likely to participate in sport and physical activity if places to be active are attractive and safe⁶⁴. Whilst spaces may be effective in encouraging physical activity through their design at the outset, this must be maintained to enable continued effective use over the lifetime of a place or facility, including both management and repair.
- As part of the management of space, it is important that a broad range of users are targeted, with a focus on those who are most in need, to reduce health disparities. This can be both through the management of facilities and through activation (see Principle 10)
- The broader use of school sports facilities (or other education establishments) by local communities outside of school hours offers significant opportunities for expanding access to sports and physical activity. Community Use Agreements can be an effective tool to achieve this access (see Houlton Case Study). Revenue from community use can fund ongoing maintenance. Funding may be available to support this⁶⁵.

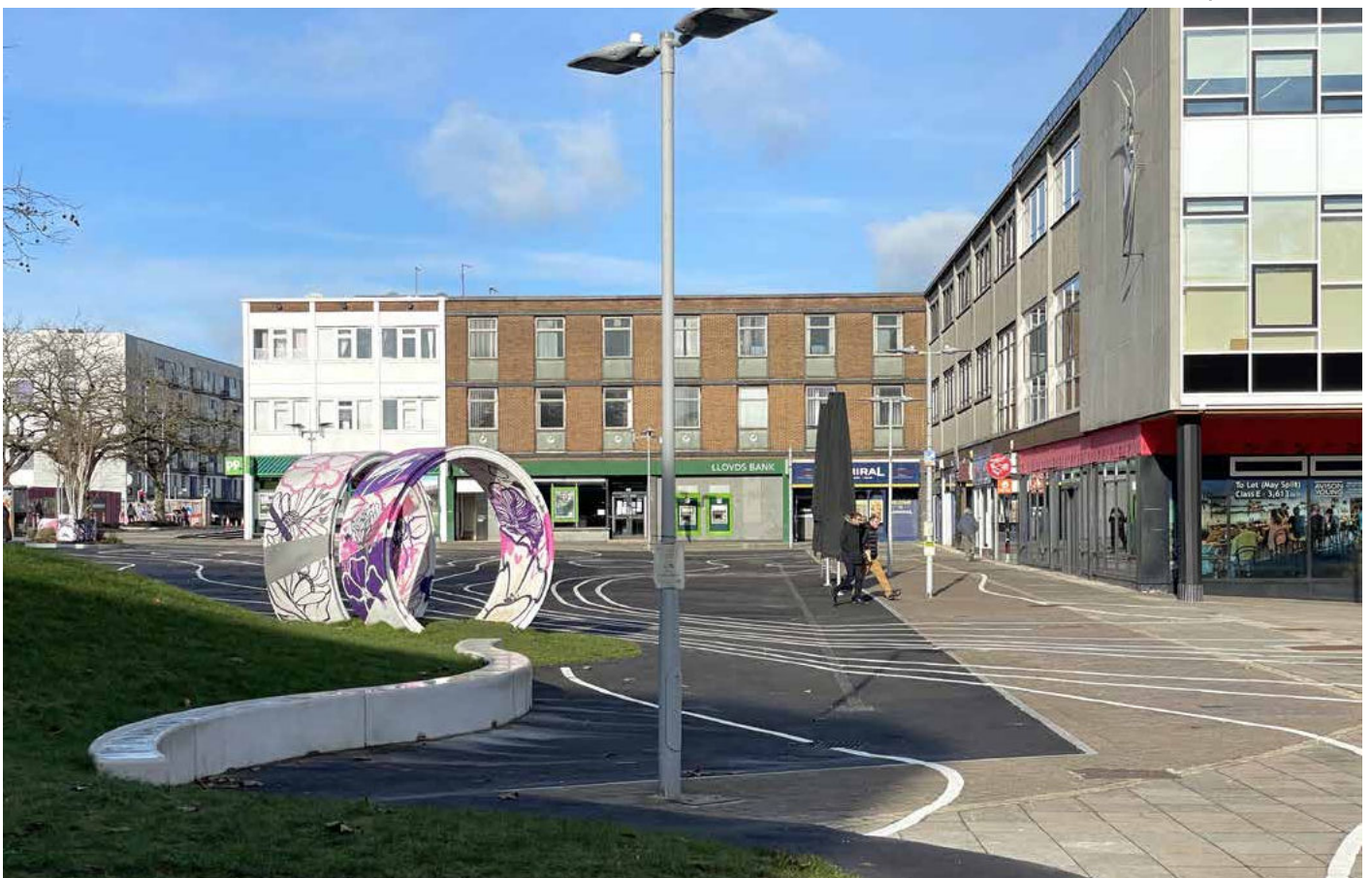
Below: Spaces should encourage physical activity



9.2 Monitor the effectiveness of Active Design interventions and be prepared to make changes if circumstances have changed

- All Active Design interventions should be monitored to understand their effectiveness and efficiency, regardless of their typology or scale. Monitoring should be granular and consider different groups, split by age, gender and other appropriate measures. This monitoring will then indicate whether a space is operating as designed, alternative operation has been taking place (beyond the expected design or use) or that a space is ineffective and requires reconsideration.
- It is essential that spaces are monitored and evaluated so they can adjust to users' needs and respond to unintended usage. For example, if spaces are dominated by a single group to the detriment of other groups, remedies could include physical design changes, splitting up spaces, ongoing management solutions or activation (see Principle 10).
- Spaces which have been flexibly designed (see Principle 6) can be adjusted to enable effective responses to these monitoring outputs, whether minor or major changes are required. This can include changes to further maximise the value and effectiveness of physical activity interventions or to adjust their effectiveness to encourage activity from particular groups or those in need.
- This monitoring and evaluation can also help to measure and understand long term health impacts, and the changing characteristics, health profile and demographic needs of a community. These outputs can be used to strengthen, and justify, cross discipline work between planning, health, leisure services and other operations.

Below: Temporary interventions can be monitored to assess their success (Stevenage Town Centre)



9.3 Consider management and monitoring, and how it will be funded, at an early stage

- Spaces should be designed to be able to respond to the changing needs of a community over time (see Principle 6), and as such, how spaces can respond to monitoring outcomes should be considered at the outset of the design process.
- How this management and maintenance will be secured and funded should be considered at an early stage. Monitoring and evaluating physical activity interventions can be embedded into monitoring activity required as part of planning permissions to measure the impacts of new developments at different scales, including buildings, spaces, streets or places.
- Major developments provide the opportunity to secure funding towards community development (e.g. staff and activation budgets) and the monitoring and evaluation of Active Design interventions should be considered as part of this, as well as the delivery of programmes to get the community active.
- Alternatives to local authority management of public realm, streets, spaces and formal open space may need to be considered, and the right organisation should be identified at an early stage.
- Alternative management groups might include sports clubs managing new playing fields, or developers taking responsibility for public open space and related facilities, either as part of their own management regime or with the support of other management entities.
- Business Improvement Districts (BIDs) may be appropriate stewards of the public realm in certain locations such as town centres.
- Consider how monitoring can ensure the design is continuing to meet the needs of the groups it was intended to target and support from earlier engagement.

Below: Interventions can be monitored to evaluate their success



Useful Resources

The Town and Country Planning Association (TCPA) publish a practical guide on **Long Term Stewardship** in new developments.

Further information on sports facility management can be found in the **Sport England Asset Transfer Guidance**⁶⁶.

There is a free online resource from **Sport England (Use Our School)** that offers further guidance and information for local authorities and other education providers on how to make the best use of school facilities for the benefit of the local community. It is especially useful for those who have responsibility within a school for establishing, sustaining and growing community activity on school sites. 'Use Our School' can be accessed here; www.sportengland.org/useourschool

Below: Well managed and maintained places ensure that activity benefits can be realised over the long-term (Alconbury Weald, Huntingdon)





PRINCIPLE 10

Activating spaces

The aim

The provision of spaces and facilities which can help to improve physical activity should be supported by a commitment to activate them, encouraging people to be more physically active and increasing the awareness of activity opportunities within a community.

How to do it

Methods to promote sport and physical activity should be supported to communicate the benefits of such activity across all settings including neighbourhoods, workplaces and facilities. Effective investment should be employed to allow this promotion, with consideration given to how promotion could be more effective to target those in the most need. Volunteers and local champions within a community should be supported and encouraged where possible, as often local people can be the most effective in communicating within their communities the opportunities for sport and physical activity.

Managers and operators of our places and spaces should encourage their wide and varied use, establishing a broad programme of activities and events to engage the local community and visitors.

10.1 Provide investment into activity promotion, as well as provision itself

- Once a space or facility is provided, consider how it may function in the early days of its existence. Think about who it is designed for, and how the existence of the space or facility will be promoted in local communities effectively.
- Investment into programming will ensure that capital investment is used to its best effect, and can prevent a new space or facility from underperforming or being undervalued by the local community.
- Engage with local stakeholders, the Active Partnerships network and local councils to set up a programme of activities and events to activate the space, enabling the widest range of promotion within the community (See Principle 1).
- As part of wider stewardship programmes, major new residential developments provide the opportunity to secure investment (e.g. community activation funds) to support projects which can help new residents, which can help new residents to be active in their new surroundings, as soon as they move into the development. This can help to create and embed positive physical activity habits from the outset of a new development.

Below: Promotion can encourage use of spaces and facilities



**THIS
GIRL
CAN**

10.2 Make spaces social to form connections around physical activity

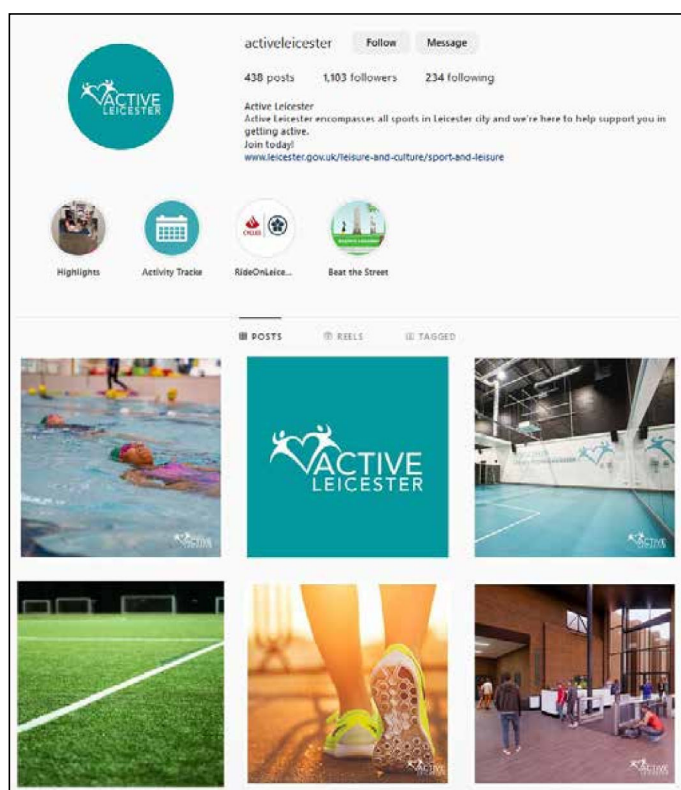
- Sport and physical activity should be a fun experience and can have a positive impact on both people's physical and mental health. Sharing these experiences with others can be a good way to make or maintain social connections, which can help reduce loneliness and create lasting friendships. It can also be a method to foster community cohesion.
- Spaces should be designed and activity promoted with this in mind, providing not just spaces for the physical activity itself, but space for people to gather, sit and chat before and after the activities.



Top: The Hub Café in Victoria Park, London, offers spaces to sit and rest, surrounded by parklands and playgrounds (Victoria Park, London)

10.3 Use digital technology to promote and activate, as well as more traditional methods

- Technology and social media can provide an easy, effective and highly accessible method to facilitate, communicate and encourage physical activity. Innovative and effective methods of utilising technology to promote physical activity in local spaces should be explored.
- The use of communication technologies and social media can be an excellent method of increasing awareness of physical activity opportunities in local places and spaces to those who are less active.
- The utilisation of fitness and health tracking applications is increasing year on year, and these can be an excellent method of encouraging more informal physical activity, either alone or in groups. Spaces should be designed to accommodate this activity, especially creating safe spaces for those exercising alone (see Principle 6).
- Those who cannot, or do not, have access to digital communications should also be considered in the promotion of activity at local spaces and places, with innovative methods explored on how to engage these groups (See Principle 1).



Above: Social media can communicate active opportunities to a wider audience

10.4 Encourage temporary uses and testing of ideas

- The temporary use of a space can provide opportunities to promote specific sports or activities and to demonstrate the wider possibilities for promoting physical activity. This can be through temporary events, or through trialing physical activity interventions in different contexts to see if they are successful in a local community, prior to investing in a facility or programme of activation.
- Temporary uses and testing of ideas through prototyping and piloting is a useful method to demonstrate the benefits of physical activity interventions without significant investment, allowing efficient use of resources.



Above: Temporary uses and pop-ups can explore the potential of spaces to encourage activity (Broad Street, Oxford)

Valence Park

Funded by the Greater London Authority (GLA) and the London Marathon Trust, Street Space (a social enterprise company) were commissioned to work closely with local residents to collaboratively design and deliver a programme of 'activation' events to increase the level of social and physical activity in Valence Park within the London Borough of Barking and Dagenham. Over 300 local residents were engaged over a six month programme through taster activities including basketball, walking, learn to ride, treasure hunts and park photography.

Through listening and working closely with local people and existing park volunteers, Street Space developed a series of 'micro experiments' to attract and bring new audiences to Valence Park. 'All Roads Lead to Valence Park' identified and tested opportunities for new, playful wayfinding to draw people's attention to the Park and encourage new visitors.



© Street Space



© Street Space

Alfresco Dining, Soho, London (Flexible Spaces)

To help in the safe economic recovery of the hospitality sector after the Covid-19 pandemic, and encourage more people back into cities, the UK government relaxed restrictions on pavement dining licences from summer 2020. In Soho, Westminster Council closed many streets to vehicle traffic to allow the allocation of space to safe street dining in the open air.

The scheme was a success in terms of helping the economic recovery of businesses in Soho, and encouraging many more people back into central London, and made walking in Soho considerably easier and more attractive. This flexible use of existing space, and prioritising people over vehicles in the public realm, has encouraged the government and many councils to continue the scheme, and transform many streets and public spaces into more active destinations. There were issues that occurred during the trial with footways becoming difficult or impossible to use for those with disabilities, and this has played a part in informing the post-Covid revised scheme's more limited locations and suitable streets.

Useful Resources

Office for Health Improvement and Disparities provides guidance and information on the role and benefits of community champions in reducing health inequalities⁶⁷.

Sport England's *This Girl Can* campaign provides a resource network and classes programme which seeks to get women and girls more involved in physical activity⁶⁸.

A network of 43 **Active Partnerships**⁶⁹ cover the whole of England, bringing together people and organisations to increase physical activity levels. The Active Partnerships connect and support a vast array of organisations, using their position to influence systems, policies and strategies that can make it easier and more attractive for people to be active in their day to day lives.



Applying the principles

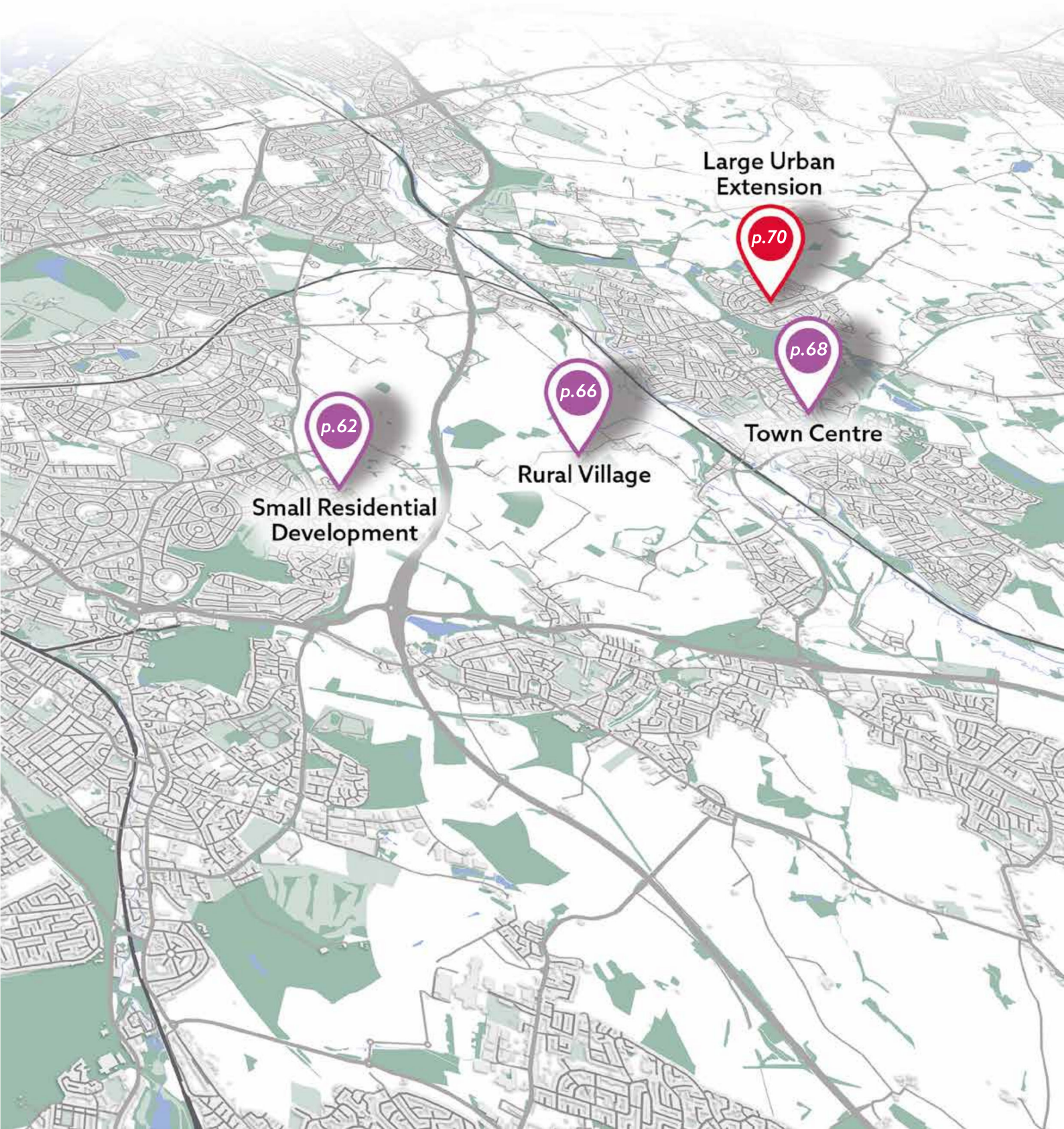
The principles of Active Design can be applied anywhere in our built and natural environments. They have the most impact when combined with each other and can be applied from the largest scales to smallest details.

Through a mix of in-depth case studies and illustrative places, this guide shows how the principles can be applied in a variety of places, from a city centre through to rural villages. Case studies take a detailed look at how Active Design principles have been delivered on the ground, in terms of strategy, process, funding and design success.

Illustrative places demonstrate how the principles can be applied, giving inspiration to planners, designers and others working in and/or looking to engage with and influence projects across some of the most common development typologies.



-  Case Study
-  Illustrative Place



**Small Residential
Development**

p.62

Rural Village

p.66

**Large Urban
Extension**

p.70

Town Centre

p.68

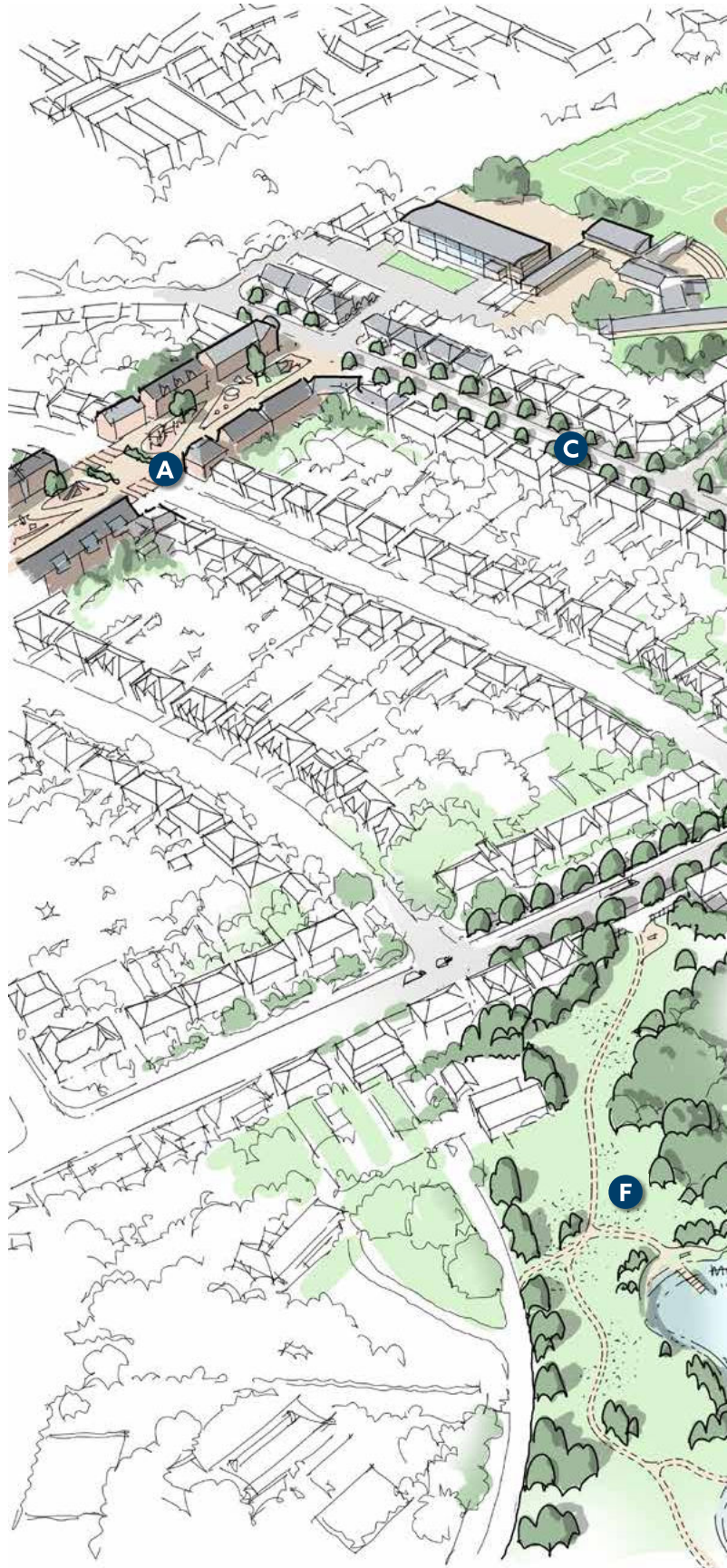
ILLUSTRATIVE PLACE 1

Existing Suburban Neighbourhood

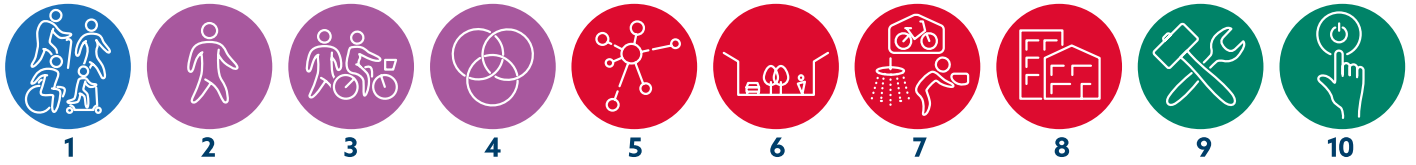
Many of the existing suburban neighbourhoods in our towns and cities were built around the car and are not designed to support physically active behaviors. With simple interventions and the engaged support of communities, existing neighbourhoods can be adapted so that people can live physically active, healthier behaviors close to home.

Design Interventions

- A** Pedestrian-priority street en route to school, with on-street play opportunities.
- B** Active travel and public transport only traffic allowed through local centre.
- C** Waymarking and cycle paths to connect local centre to existing primary school.
- D** Segregated cycling and walking space on major road with reduced vehicle space.
- E** Modal filters to restrict through traffic and improve walking and cycling environment.
- F** Publicly accessible nature reserve and habitat networks.
- G** Community garden and green links established on former in-block garage plots.
- H** Junction improvements to prioritise and segregate active travel at major intersections.
- I** Primary school with shared sports facilities for community use.
- J** Intensified local centre with residential, retail and community uses with flexible civic space.
- K** New community park with local leisure and sports facility.
- L** Active travel and public transport interchange (mobility hub) at local centre.
- M** Regenerated local industrial estate providing mix of local employment and small retail or commercial spaces.



ACTIVE DESIGN PRINCIPLES IN ACTION:



ILLUSTRATIVE PLACE 2

Small Residential Development

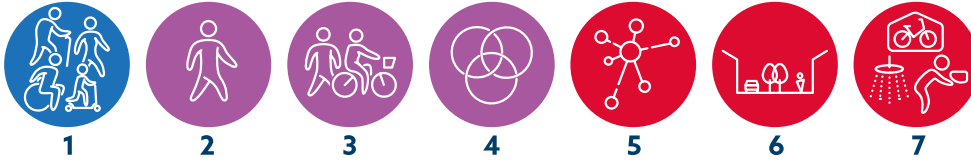
All new development can embrace the principles of Active Design. Smaller residential developments should look to their surroundings to integrate active travel connections, provide open spaces and have well-designed homes that include cycle storage and adaptations for a lifetime of physical activity.

Design Interventions

- A** Open space at the heart of development to connect existing neighbourhood to new.
- B** Active travel connections to existing streets to complete walking and cycling networks.
- C** Enhanced cycle path link between town and nearby village.
- D** Active travel wayfinding provided at key nodes in network.
- E** Low-key vehicle entrance to development with active travel priority.
- F** Roundabout improvements for active travel to connect to nearby leisure centre.
- G** Children's play space with formal equipment and informal adventure trail.
- H** Seating around open space, landscape design includes natural habitats.
- I** Sustainable drainage integrated with rain garden to provide amenity and habitat.
- J** Improved existing bus stop with new pedestrian crossing and shelters.
- K** Car parking away from main route through site and collected into green parking squares.
- L** Onward connection to wider Public Rights of Way and countryside.
- M** Street design and durable surface materials to prioritise active travel.
- N** Lifetime Homes with easily accessible bike storage and car parking further from front door.



ACTIVE DESIGN PRINCIPLES IN ACTION:



ILLUSTRATIVE PLACE 3

Business Park

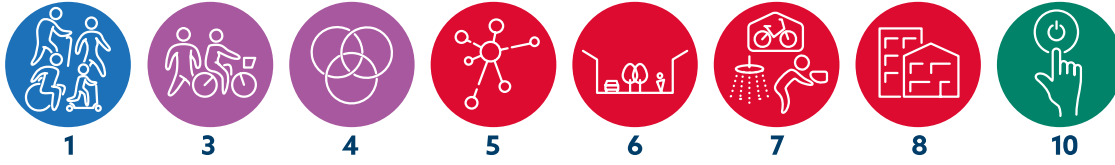
The changing way that we all work means that places of employment need to change to support healthy and active behaviours throughout the working day. Active Design can be applied across a wide range of employment spaces, to create an environment that encourages people to get outside during breaks or meetings, and to engage in physical activity as part of their day.

Design Interventions

- A** Central 'hub' space with seating, planting, outdoor meeting space and flexible events space.
- B** Shared use sports facilities integrated into the public realm.
- C** Trails and walks along local features such as canals.
- D** Mobility hub for active travel and public transport at heart of the site.
- E** Active travel links to nearby neighbourhoods.
- F** Car parking consolidated at the edge of the site to create walkable public realm.
- G** Creative use of roofs on logistics facilities, e.g. for activity areas, solar power or new habitats.
- H** Service and HGV movements at edge of site away from walkable centre.
- I** Shared outdoor spaces with seating, meeting space and outdoor gyms.
- J** Buildings designed with integrated opportunities to get outside and move about.
- K** Links to wider countryside and natural habitats.
- L** Running tracks and loops within public realm.
- M** Outdoor gyms and other outdoor activity provision such as orchards or community gardens.
- N** Well lit, overlooked spaces with integrated cycle parking and front doors of buildings facing them.



ACTIVE DESIGN PRINCIPLES IN ACTION:



ILLUSTRATIVE PLACE 4

Rural Village

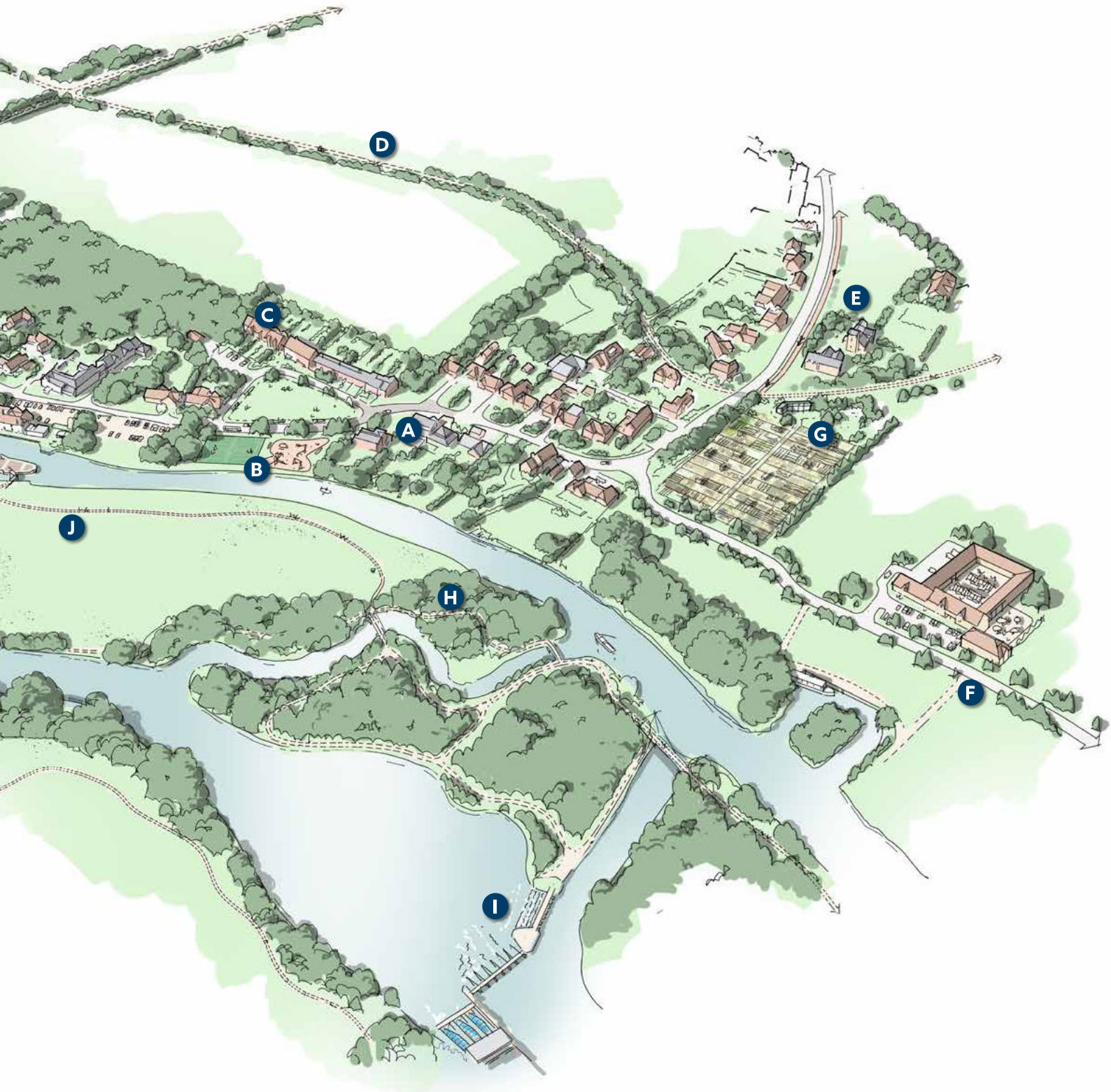
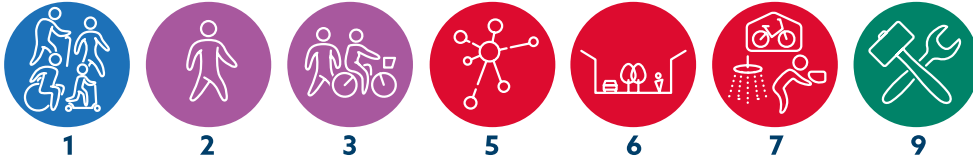
Villages and rural areas benefit from access to the countryside and open spaces for leisure and physical activity. With additional intervention, they can make this more accessible and useful for more groups, and create spaces for different types of physical activity.

Design Interventions

- A** Traffic calming measures in village centre to create a more attractive place and an active travel friendly environment.
- B** Activity areas and play areas at heart of village.
- C** Accessible community facilities for classes and local events.
- D** Linked bridleway network away from vehicle traffic.
- E** Long-distance cycleway links to nearby towns and destinations provided in field margins.
- F** 'Quietway' network of active travel priority routes on country lanes, retaining local vehicle access.
- G** Allotments and community gardens with local community shop selling produce.
- H** Volunteer-run local nature reserve with river restoration project.
- I** Community hydro power station completes walking loop by providing new bridge.
- J** Links to national or regional footpaths.
- K** Use of heritage asset to create a focus for heritage or nature trail.
- L** Traffic calming measures at entrance to village.
- M** Clear wayfinding on footpaths and around village.
- N** Walking loops with clear wayfinding and trails of different lengths marked.



ACTIVE DESIGN PRINCIPLES IN ACTION:



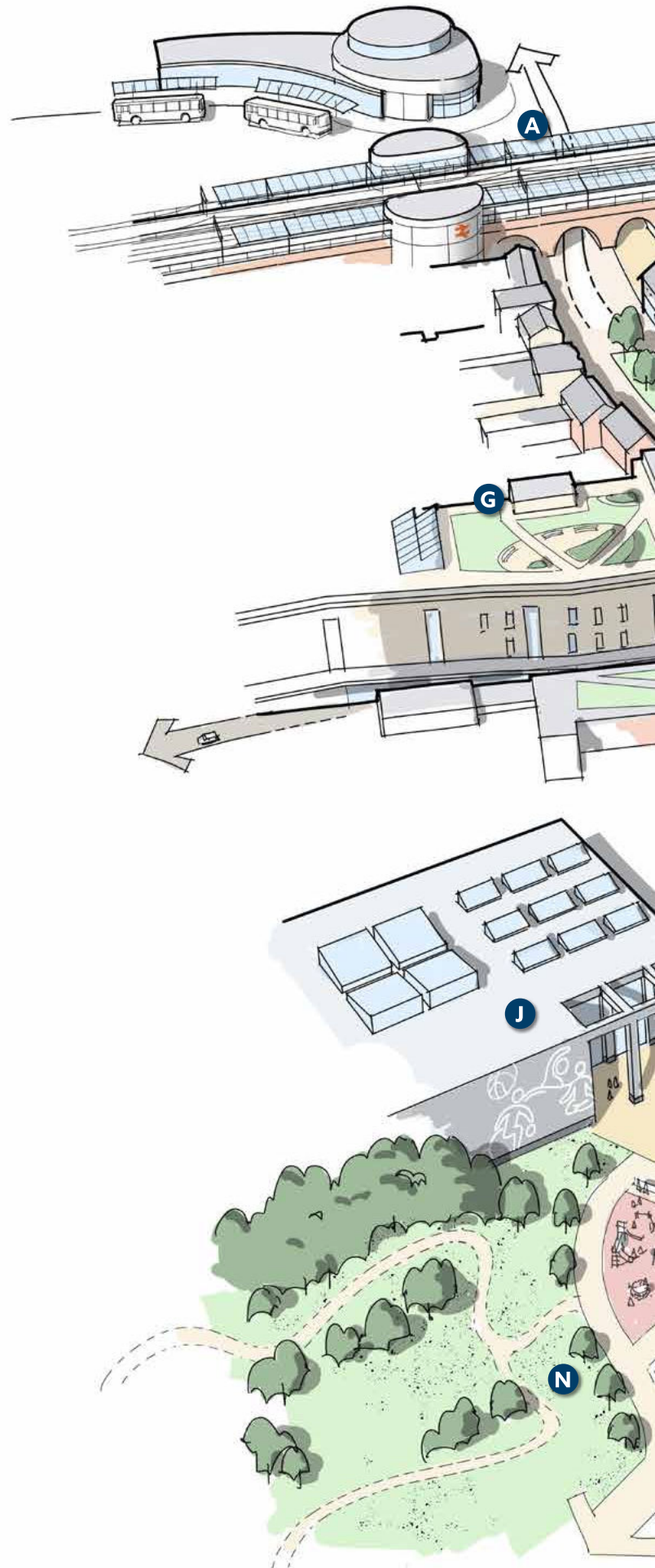
ILLUSTRATIVE PLACE 5

Town Centre

Town centres can bring together the local community, and form an essential part of a place's identity. Physical activity can be encouraged through simple changes that can work hand in hand with other priorities such as economic regeneration, building community inclusion and climate change mitigation and resilience.

Design Interventions

- A** Public transport interchange with bus station and stops located close to train station.
- B** Bike hub at public transport interchange, with secure storage and maintenance facilities.
- C** Greening of streets, with integrated seating, opportunities for play and exploration.
- D** Shading or sheltering of streets to ensure continued use in hot and cold weather.
- E** Temporary space in vacant plot used to provide events space and outdoor physical activity opportunities.
- F** Former department store repurposed for community space, leisure facilities, residential use and employment co-working spaces.
- G** Roof terraces for co-working space to provide additional outdoor environment in town centre.
- H** Continuous, connected cycleway network running into the heart of the town centre.
- I** Traffic calming and wide pedestrian crossings to connect town centre streets together.
- J** Sports and leisure facility with frontage onto town park.
- K** Public realm connected with sports and leisure facility to extend activity out of building.
- L** Redesign of existing square to ensure it is flexible and can be used for a wide variety of events.
- M** Well designed urban living opportunities with reduced car parking needs and access to shared private outdoor spaces.
- N** Town park with a variety of natural habitats.
- O** Removal of vehicles on a secondary street to provide quiet cycling network.



ACTIVE DESIGN PRINCIPLES IN ACTION:



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10



CASE STUDY

Houlton: Large-scale residential-led development

Fact File

Name: **Houlton**

Location (town, county): **Rugby, Warwickshire**

Local planning authority: **Rugby Borough Council**

Date of planning consent/
construction/completion: **Under construction, first completions in 2018**

Case study type: **6,200 home residential-led development on former brownfield site**

Houlton is a residential-led development of 6,200 homes, located to the east of Rugby, Warwickshire on the site of the former Rugby Radio Station. Designed to be a complete new community, it includes schools, shops, community facilities, sports pitches and employment space, linked together with an extensive and varied network of green open spaces and active travel networks.

Houlton is being developed by master developer Urban&Civic, who deliver the site infrastructure including open spaces, schools and other key placemaking ingredients. Urban&Civic then sell parcels of land to housebuilders, who develop within this overall framework.

Health, wellbeing and physical activity are considered throughout the design at all scales. The site demonstrates a comprehensive consideration of the principles of Active Design when applied to major new development.



ACTIVE DESIGN PRINCIPLES IN ACTION:



How it happened

- An overarching masterplan set the core structure for the site.
- At a later stage, more detailed design codes are set out for key phases of development, with landscape and open space networks prioritised. This enables flexibility and responsiveness in the detailed design.
- The key infrastructure that supports and enables activity and active behaviours is delivered by the master developer Urban&Civic. This supports the long-term investment in the quality and value of the site.
- Development parcels are sold to housebuilders, to be developed in line with the design code for that key phase, which defines clearly how these areas should connect into active travel and green infrastructure networks.

Why is it successful?

- Although only 900 homes have been occupied to date, participation in community activities and usage of physical activity facilities such as allotments, community gardens and the open space network is high, as a proportion of the total population.
- In its early stages, Houlton saw a considerably higher sales rate of homes than the surrounding area, and is now seeing increase sales values, reflecting the attractiveness of the new community and its quality of life, driven by the open space network and facilities within easy reach of new residents. Urban&Civic have 14 development sites across England following a similar model.

Lessons learned

- The open space network brings the place together and enables physical activity interventions.
- Having a continuing interest in the site enables Urban&Civic to invest for long-term quality, which in turn leads to faster sales and higher values. Active behaviours, health and walkable communities and opportunities for higher quality of life are a key part of the attraction for potential new residents.
- An ongoing flexible approach to development ensures that decisions can be revisited, adaptations can be made, and new opportunities to improve physical activity, health and wellbeing can be taken in response to changing trends and in consultation with local residents.
- In this case, this approach is being delivered by a private developer but these lessons are applicable to all sites.



Applying the principles



Principle 1: Activity for all

Houlton is designed to be a self-contained new community, and offers homes and facilities for a wide range of groups, including a proportion of affordable homes as well as other specialist accommodation types.

Active travel and open space networks and open spaces are designed to be inclusive to those with different levels of accessibility, and Urban&Civic regularly undertakes residents' surveys to understand issues that emerge.

Children's play is extensively and inventively provided throughout the development, with a major neighbourhood park that includes a wide range of equipment for different ages, through to informal play incorporated within open space networks and streets by simple interventions like logs to climb on. Urban&Civic is funding a 3-year research project to understand how to integrate and encourage children's play even more successfully in the future.

The site has newly-opened allotments which have been oversubscribed, and along with the neighbouring community garden, these offer another activity option for the community.

Below left: Picnic benches provided next to open spaces

Below right top: Community garden space next to allotments

Below right bottom: Natural and informal play equipment provided within open space





Principle 2: Walkable communities

Local centres, schools, sports facilities and community facilities are designed and delivered in key locations at the heart of the masterplan, and are typically delivered prior to homes. This ensures the ingredients of a walkable place are there when new residents arrive, encouraging active travel habits from day one. Houlton is designed so that children can be educated at all age levels within one mile of all homes on site. Coupled with the early delivery of primary schools and a secondary school which are integrated with the active travel network, this also encourages early and consistent adoption of active travel habits.

As part of the travel planning package for the development, new residents get a free bus pass with each new household, and a travel pack with information about active travel networks and local public transport options. A monitor and manage approach to parking provision has ensured that car parking at the Dollman Farm centre (see Principle 4 text, below) is significantly lower than local authority requirements, due to the success of active travel options.



Principle 3: Connected walking and cycling routes

The entire development is linked by a comprehensive network of active travel routes. These are designed to be appropriate to the street or space they are within, and their function within the network. They vary from dedicated cycleways and segregated footways along main streets, to shared surface spaces within quiet residential streets. Wider connections and active travel connections to nearby employment areas are coming forward soon.

'Green' pedestrian links form an alternative network away from streets, overlooked by homes. Many of these are 'trim trails', offering informal play and fitness equipment along the route. School routes offer 'play along the way' opportunities.

The principle of filtered permeability is employed for all neighbourhoods and development parcels. Continuous networks are provided for active travel, but not for vehicles, which are directed towards main roads, where active travel facilities have the space to be segregated.



Principle 4: Mixing uses and co-locating facilities

Careful thought has been given to the co-location of land uses and facilities, which are mixed throughout the residential parcels and connected to the active travel network. An important early project has been the conversion of the former Dollman Farm into a centre combining a café/restaurant, community hall, co-working space, nursery and local shop, next to sports pitches, allotments and a community garden.

The secondary school is located in the former buildings of the Rugby Radio Station, and has been retrofitted and reimagined in an award-winning development. It will form a key part of the district centre in later phases, envisaged as the mixed-use heart of the new community.

Urban&Civic have delivered the non-residential land uses and facilities, investing in their quality as important placemaking components of the new community.



Above: Houlton School in the District Centre is envisaged as the mixed-use heart of the new community and walkable from all new homes



Principle 5: Network of multifunctional open space

Houlton is brought together by its comprehensive open space network.

This continuous network contains civic parks, play areas, nature reserves, sports pitches, allotments, community gardens, surface water management and wetland habitat. It also hosts a complete active travel network that links with the street network to allow a choice of routes throughout the site. These networks create leisure as well as utility networks, and host nature trails and wayfinding with information about nature and heritage en route to encourage their use.



Principle 6: High quality streets and spaces

There is a mix of street types that have been considered as part of the masterplanning process to deliver pedestrian and cycling movement first, with vehicles segregated on most main streets. Cyclists only join vehicle carriageways in quiet residential streets. Some streets that link open spaces are only designated for active uses, with vehicle access kept away or limited to private drives and separated by fences.

Street trees are provided throughout the design of the street, and side road crossings are designed to make it clear (through materials and raised tables) to drivers that pedestrians and cyclists have priority. Civic spaces, such as those at Dollman Farm and outside schools, are protected from traffic and prioritise pedestrians.

As well as formal streets and civic spaces, a major natural space has been set aside on Normandy Hill for walks and outdoor recreation. It is centrally located and within a close distance of homes on the site, and offers views across the surrounding countryside.



Top: Wayfinding through open spaces helps to encourage use of the active travel network

Bottom: Priority for pedestrians and cyclists at side road crossing shown through use of materials



Principle 7: Providing activity infrastructure

Active travel is supported by provision of cycle parking at key destinations and facilities throughout the site. There is seating within the open space networks at appropriate locations, and this is considered as part of the landscape plan. Outdoor gyms and play equipment are provided along trim trails and within open spaces, particularly on potential routes to school. Wayfinding and information boards are located along the active travel networks and within natural open spaces to encourage their use as a leisure activity. A financial contribution was also provided to improve the existing canal towpath which runs through the site, improving its role as part of the active travel network.

Larger infrastructure investments include a future new pedestrian bridge to the neighbouring Daventry International Rail Freight Terminal (DIRFT), a major employer, and dedicated cycleways to surrounding areas and neighbouring Rugby.



Principle 8: Active buildings, inside and out

A community use agreement with the secondary school enables local residents and local sports clubs to benefit from the school's sports hall by safeguarding bookable slots for them to utilise. This is supported by an additional entrance to the school so the public can access the facilities without needing to enter the school itself. An additional agreement with a new on-site commercial gym enables the primary school to access swimming pool facilities.



Principle 9: Maintaining high quality flexible spaces

Open spaces are maintained by a management company, who charge all residents an annual fee. The quality of outdoor spaces, their upkeep and their contribution to quality of life is a key part of the commercial strategy of the development to sell homes.

As Urban&Civic maintains a long-term interest in the site, a continuous programme of monitoring how people use spaces is undertaken. This information can result in changes to the masterplan and ongoing development of the site.



Principle 10: Activating spaces

Early conversion of part of Dollman Farm into the Tuning Fork restaurant created a walkable destination to focus the early community around. Its success caused a rethink of the masterplan to site a local centre there.

During the early stages of establishing the community, the developer has supported community groups looking to use sports, community and school facilities, and looks to identify community 'champions' who can take forward the governance of the site into the future.



Top: Trim trails and play equipment is provided in open spaces and potential routes to schools

Bottom: The Tuning Fork restaurant became a walkable destination for the early community

CASE STUDY

Aspire@ThePark, Pontefract community and sport facility

Fact File

Name: **Aspire@ThePark**

Location (town, county):
Pontefract, West Yorkshire

Local planning authority:
Wakefield Council

Date of planning consent/
construction/completion:
Opened 2021

Case study type: **Sports and
community centre within a
public park**

Aspire@ThePark is a community and sports facility which is located within Pontefract Park, to the north-west of Pontefract, Yorkshire. The Park also houses Pontefract Racecourse, with Aspire@ThePark built upon land which previously accommodated a number of tennis courts that had fallen into disrepair to the south of the racecourse.

Aspire@ThePark was opened in 2021 and part-funded by Sport England, and it provides a valuable local community sports facility at the heart of an existing open space. Facilities on site include:

- two swimming pools, one 10-lane 25m pool, one 'studio pool' with adjustable depth to accommodate a wide range of aqua-activities;
- fully equipped gym, overlooking Pontefract Park;
- fitness studios, including spaces which are bookable by local health partnerships, and a spin cycling studio;
- Climbing area fitted with auto-belay and bouldering wall;
- An artificial grass football pitch;
- Four tennis courts;
- Café, open to the public seven days a week, located in the reception area of the building which is accessible to the public even if they are not participating in activities on site;
- Public toilets, including an accessible toilet on the outside of the building; and
- Pedestrian and cycle links to the wider park and local communities.

The combination of these facilities, their use and the role the facility plays within the local community make it an excellent example of the Active Design principles in practice.



ACTIVE DESIGN PRINCIPLES IN ACTION:



How it happened

- The responsibility for leisure was brought into the Health Improvement Team of the council, allowing the creation and implementation of a wider strategy from Wakefield District Council to unite physical activity and health, including social prescribing and other health interventions. This enabled opportunities to explore a more holistic offer within the facilities.
- Understanding of the local context and facilities available in the area allowed decisions to be made on what to accommodate on site, and where to rely on other provision elsewhere to meet local needs. This led to the focus at the facility on the provision of multiple studio spaces rather than a single large sports hall, and influenced the swimming pool provision (See Principle 1 text, below).

Why is it successful?

- It caters for a wide range of activities, with the flexibility of the spaces offered (eg. studio space and adjustable depth pool) enabling a vast range of activities to be accommodated.
- It has helped to regenerate the park, creating a destination and bringing people into a space which was previously less used. The provision of the public toilets and café have further added to this, combining opportunities for both formal and informal activity.

Lessons Learned

- Long term vision and political buy-in was essential to delivering a large scale investment in physical activity interventions, particularly at this scale.
- Dialogue with local community groups, neighbouring uses and local business was essential in managing conflicts where they occur and maximising effectiveness of facilities and physical activity interventions.



Applying the principles



Principle 1: Activity for all

As demonstrated by the range of facilities present, Aspire@ThePark caters for a wide range of activities and users. The flexibility and effective management of these facilities enable the needs of a range of groups to be accommodated, avoiding conflicts. An example of this is the size of the pool (10-lanes) which enables public swimming to occur alongside school swimming lessons, with space for circulation and without conflict.

Injury rehabilitation sessions are also accommodated within the 'studio pool', and programmes such as cardiovascular rehabilitation sessions operate within the studio spaces. Once discharged or recovered, participants of these sessions often meet at the café within the facility, meeting with friends made and continuing bonds established through the sessions, and undertaking activity at the site.



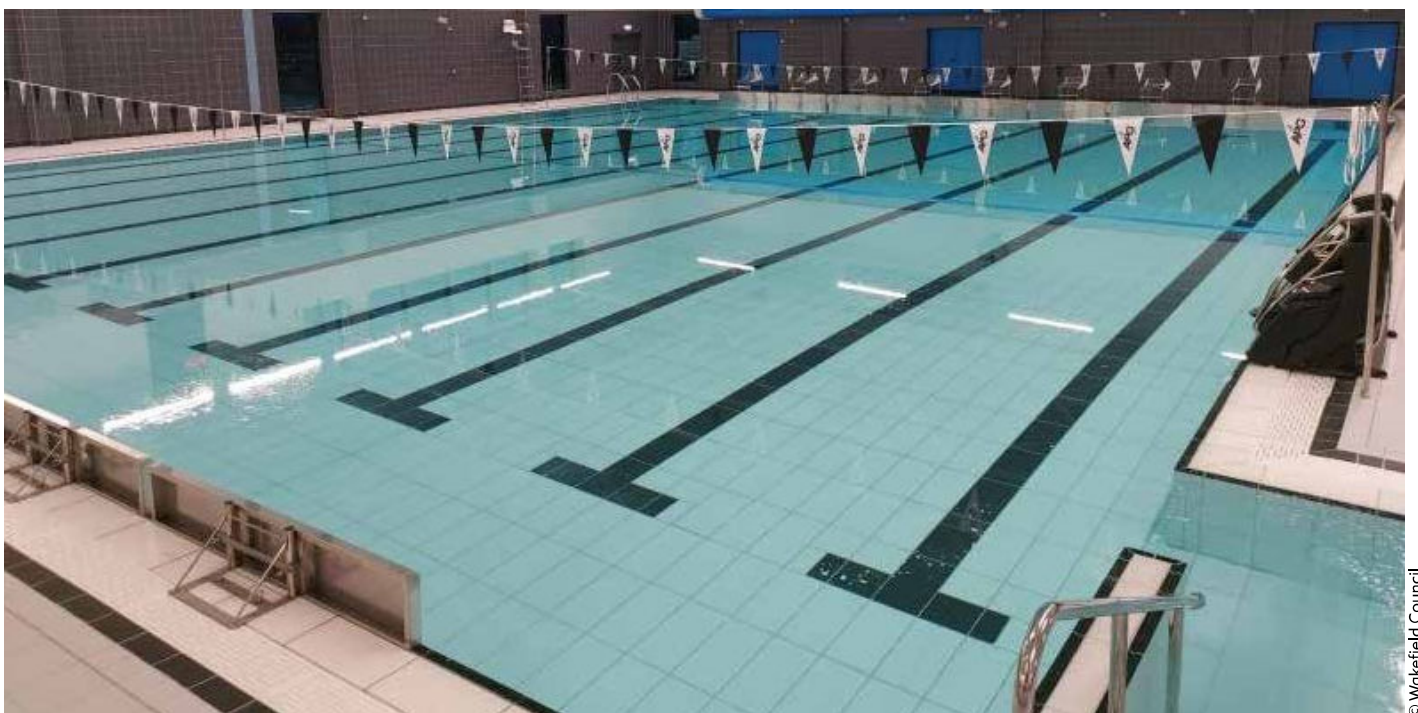
Principle 4: Mixing uses and co-locating facilities

Whilst on the edge of Pontefract, Aspire@ThePark is located close to Pontefract town centre. This, combined with the facility acting as a 'destination' space for multiple different activities, creates the opportunity for linked trips by active travel.

The Aspire@ThePark facility is located in Pontefract Park, and is close to Pontefract Racecourse and the New College, which offers specialist sports and leisure courses. The facility has brought new users to the park, and in turn increases vitality of the space, and has helped its viability. The Racecourse is a popular local running route (also hosting a parkrun) and users of Aspire@ThePark often combine running the loop with activity within the facility, or use of the café. Aspire@ThePark also offers rental of equipment to use within the park, including running buggies to encourage activity in its surroundings.

Aspire@ThePark also provides facilities for the trust which manages the park, with a small meeting room accessible from the side of the building, separate from the main entrance. This allows the trust to use the room anytime, even when the facility is closed. The trust also encourages park users to utilise the facilities within the building, with a local 'storytelling' route encouraging children to explore the park incorporating the entrance area to Aspire@ThePark.

Below: The 10-lane swimming pool allows public swimming to take place alongside school swimming lessons





Principle 8: Active buildings inside and out

Aspire@ThePark takes a prominent location within the park, at the entrance closest to Pontefract town centre. Cycle parking is located right at the entrance to the building, with lockable secure cycle spaces to the side. There is also a children's play space at the front of the building, to entertain children when waiting for onward transport following swimming lessons at the facility. Parking is located at the rear of the building, and is not obvious on approach. Pedestrian linkages have been established on clear desire lines within the park, as well as linking to the college, drawing people to the entrance of the building. Much of the building's frontage is glass, both providing visibility to the activities going on inside but also providing active surveillance of the park.

Within the internal layout of the building, care has been taken to ensure that there are many appropriate opportunities to glimpse the activity taking place, such as views from the café into the pool area. The layout has been designed to ensure that where circulation areas are present, stairs are clearly located and are often in locations more prominent than lifts.

Below: Climbing wall space



Principle 9: Maintaining High Quality Flexible Spaces

A key aspect of the design of Aspire@ThePark is the creation of flexible spaces which can be used for a great number of different activities. This not only provides for lots of different users (See Activity for All above) but also allows the spaces to adapt over time, providing for new activities which were not necessarily envisaged within a space at the outset. An example of this is the tennis courts are used weekly by a local cycle training scheme, who undertake cycle lessons and proficiency testing on the tennis court area.

Further, the artificial grass pitch is not just available for formal group or sport bookings, but is also available as an informal 'kickaround' space in school holidays, with only a small fee charged for use.



Principle 10: Activating Spaces

The operator of Aspire@ThePark employs both service staff for the building and 'Activators' who are responsible for activating the spaces within it. These people work closely with the staff managing the building to ensure that the activities organised are fit for purpose and can easily be accommodated. These activators also work with local health practitioners and commissioning services with social prescribing programmes, including healthy weight programmes.

Aspire@ThePark also works with New College, providing training courses and employment opportunities, as well as support for sport and leisure courses offered by the college. This further entrenches the role of the facility within the local community.

CASE STUDY

Nottingham – active travel transformation

Fact FileName: **Nottingham**Location (town, county):
Nottingham, NottinghamshireLocal planning authority:
Nottingham City CouncilDate of planning consent/
construction/completion:
**Strategy published 2016, Canal
Street transformation 2020,
programme ongoing**Case study type: **City-wide
active travel infrastructure
transformation programme**

Nottingham is engaged in an ongoing programme, transforming the city's streets for active travel. This includes the provision of an extensive network of new segregated on-street cycle routes that will connect all parts of the city, local networks, junction improvements, and radical changes to the city centre and its public realm, removing private vehicles from key streets.

In June 2020, Nottingham and Derby City Councils received £161m financial backing for a significant programme of transport improvements, funded through the Department for Transport's (DfT's) Transforming Cities Fund. This success followed a process of developing plans, building support and creating deliverable schemes. A number of schemes have already been delivered, and many more are in the pipeline as part of a rolling programme of investment.

The active travel improvements are integrated with extensive public transport upgrades, including bus priority measures, real-time information provision and expansion of the tram network.



ACTIVE DESIGN PRINCIPLES IN ACTION:



How it happened

- Cycling infrastructure was recognised as offering multiple benefits for the city and a good overall return on investment. This fed into a political ambition to make Nottingham cycle-friendly.
- A strategic network design was created as part of the Local Plan to identify key corridors and prioritise them based on deliverability and local benefits, particularly in areas with higher levels of deprivation. Supporting infrastructure design standards for new cycleways and junction design were produced.
- Using the DfT's Active Mode Appraisal Toolkit, overall costs and benefits were assessed. An assessment by Active Travel England of Nottingham's capacity to deliver and effectiveness of the proposed schemes underpinned the success of the bid to the Transforming Cities Fund.
- Ongoing scheme delivery is now underway, with complete corridors, junction improvements and several new active travel-only bridges delivered.
- Continuous public engagement has created wide support for the transformation, along with evidence of delivery success and improvements to quality of life, particularly in the city centre.
- Development sites that connect to, or form part of, the strategic network have a clear basis for design and masterplanning.

Why is it successful?

- Successful early delivery of schemes, backed by clear design standards, has helped build a basis for central government funding of the city-wide transformation and wider rollout of further interventions.
- Continuous corridors, connecting key destinations, are delivered along with junction improvements which together encourage usage instead of piecemeal improvements that do not join up.
- Improvements to the cycling network are married with improvements to the city centre public realm and quality of environment, removing private vehicles from key streets and creating new spaces for socialising, outdoor activity and recreation.
- The clarity of the strategic cycle route scheme enables site-level design to proceed with certainty on what is needed and how policy will be applied to determination.

Lessons Learned

- Political ambition and support are essential to speed up delivery.
- A clear underlying strategic plan of active travel routes can align public and private development aims.
- Early delivery of schemes with visible benefits can build confidence in outputs and their deliverability.
- Detailed work, public engagement and exploration of options, along with consideration of the positives and negatives of junction redesigns can deliver better schemes that work for all.



Applying the principles



Principle 1: Activity for all

The city's cycling infrastructure design sets out universal cycling standards that cover a wide range of different types of cycles, beyond typical two-wheeled bicycles, ensuring the network is inclusive.

Junction design, where multiple different modes could come into conflict, is undertaken in detail, considering pedestrians and cyclists, then public transport and finally private vehicles. Universal design principles ensure that those with physical or sensory disabilities can safely navigate junctions.

Delivery of the strategic cycling network has been phased to prioritise more deprived neighbourhoods and districts within the city. This network phasing also prioritises links to destinations where a large proportion of users are likely to use active travel, such as universities, hospitals and major employment locations that are a distance from the city centre.

Below: Segregated, two-way cycle routes with priority at side road junctions to encourage cycling through the city



Principle 3: Providing connected active travel routes

Underpinning the transformation is a recognition of the importance of a fully connected strategic network, giving good coverage and direct routes into the city centre and between key destinations.

The routes take a variety of forms. Typically they are segregated 3–4m two-way tracks on main roads, separated by a kerb or upstand from vehicle traffic, and given priority at side road junctions. Where the route takes a residential street, cycles share the carriageway with vehicles, but only if vehicle traffic is restricted through a modal filter so it only provides access to homes on the street. Reorientation of give way priority markings has been undertaken to ensure cyclists on the route have priority.

At busy junctions with a significant amount of vehicle traffic, cycle routes are continuous and obvious, and do not conflict with pedestrian traffic. Designs for cycle routes adopt low-impact approaches which rely on cyclists giving way and slowing at junctions, rather than relying on complex, engineered solutions.





Principle 5: Network of multifunctional open space

The cycling networks link and create new open spaces throughout the city. Most notably, several city centre streets have had cars removed from them to create civic spaces, and a new green open space created on Middle Hill as part of a combined active travel upgrade and tram bridge.

Links to and through parks and along the River Trent form part of the network, and wider green infrastructure assets in the Trent Valley are connected, such as Attenborough Nature Reserve.

The cycling network connects to locations such as Queens Drive Park & Ride, where a BMX track has been created, connecting to a wider woodland leisure cycling network and routes along the River Trent.



Principle 6: High quality streets and spaces

The city centre has seen a number of street changes, including at Canal Street, where private motor vehicles have been removed through modal filters, and only buses, cyclists and pedestrians can use it. This removes a significant barrier between the city centre and the rail station and canalside. Smaller city streets, such as Carrington Street, have had vehicles removed completely with high quality paving replacing tarmac carriageways, to create a pedestrian and cyclist only zone. These interventions are planned as part of wider works to connect key destinations, and integrated with building redevelopment.

Separated cycling infrastructure is provided on routes with lots of vehicle traffic, transitioning to on-street on quieter residential streets, with appropriate modal filters to prevent vehicle cut-throughs.

Side road junction design is consistent across the city, with a prominent green paint colour (the city's corporate colour) painted where cycleways cross side roads. This makes cycling priority visible and easy to understand for vehicle users and cyclists.



Principle 7: Providing Activity Infrastructure

New active travel bridges have been, or will be, provided at key points where they can connect routes together. In the west of the city a new bridge now connects the tram stop with the Boots employment site, which will be a centre for regeneration and development in the coming years. A further bridge over the River Trent is planned for the Trent Basin area, connecting to a riverside park and large sporting facilities.

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Left above: Cycling track at Victoria Embankment allows children to practice cycling in a safe space

Left below: Pump track provided next to mobility hub with access to off-road networks through woodland and along river

CASE STUDY

Activity at and around work

Fact File

Name: **Activity at and around work**

Location (town, county): **Various**

Local planning authority: **Various**

Date of planning consent/
construction/completion: **Various**

Case study type: **Employment**

There are many different types of employment and working environments, and millions of us spend considerable amounts of our lives there. The principles of Active Design can be applied across a wide range of employment locations, encouraging people at work to be physically active, and making the areas in which people work more conducive to active travel and physical activity.

This case study draws from several different locations to give an overview of how Active Design can be applied at work and in areas where people work:

1. Maylands, Hemel Hempstead – an older industrial estate being transformed
2. Here East, Olympic Park, London – a new mixed creative and innovation district
3. Rutherford Appleton Laboratory and Daresbury Laboratory – large institutions with complex employment characteristics
4. Baytree Nuneaton – a large modern warehousing facility



ACTIVE DESIGN PRINCIPLES IN ACTION:



How it happened

- At Maylands, a recognition that regeneration was required translated into a masterplan that prioritised mixing uses, active travel-friendly streets and a healthy environment to ensure the district retained its long-term competitiveness.
- At Here East, the sporting legacy of the 2012 Olympics was put into practice through creative repurposing of the buildings and spaces around them.
- The Rutherford Appleton and Daresbury Laboratories, are large institutions away from nearby facilities and this has meant that on-site provision of sports and recreational facilities were included, and staff demand is driving new provision and improved cycling facility provision.
- At Baytree Nuneaton, the demands of a competitive labour market means employers are keen to retain and attract employees with an improved quality of workspace, and to minimise loss of work due to ill health. These factors have combined to make health and wellbeing key design points of the buildings.

Why is it successful?

- Enabling people to be active during their working day, especially for those who work in offices and are largely sedentary in their employment, can bring significant benefits to the workforce's health and overall happiness.

Lessons Learned

- Activity can be incorporated into a wide variety of work environments, and the main requirement is a recognition that employees want to work in healthy places and workspaces, with access to sport and recreational facilities during downtime.
- Early masterplanning of new sites and schemes can yield significant benefits by articulating a vision for an active and healthy place.



Applying the principles

Maylands, Hemel Hempstead

Maylands is a major mixed industrial estate, created as part of the 1947 New Town plan for Hemel Hempstead. Formerly the home of Kodak in Europe, it now hosts a vibrant mix of light industrial, office and warehousing uses. To support its regeneration, a masterplan was prepared to guide new development into a more mixed and integrated district.



Principle 2: Providing connected active travel routes

Supporting the mixed uses at Heart of Maylands, the key streets through the estate are being progressively upgraded with new dedicated cycleways and improved pedestrian crossings. These connect to the Nickey Line, a former railway line and now cycleway, to the north, and to the emerging Quietway network of rural lanes with traffic reduction measures. Localised junction improvements and cycle crossings on the A414, a major dual carriageway, increase the connectivity of the network and make it more accessible to less confident cyclists.



Principle 4: Mixing uses and co-locating facilities

The 'Heart of Maylands' centre sits in the middle of the estate and is easily accessible by walking from most businesses. It is being regenerated as a mixed-use centre, with local retail, cafés, restaurants and essential facilities being developed. Residential development is also occurring above ground floor active uses, with a focus on affordable housing close to jobs. A co-working hub increases the job density around this key centre. This mixed-use development is being concentrated at the most connected and accessible location, and enables workers within Maylands to access facilities within a close distance of their work.

Maylands centre incorporates a wide mix of uses including:

Left: Cafés and retail facilities **Middle:** Residential apartments **Right:** a co-working hub



Here East, Olympic Park, London

Here East is an innovation and technology campus situated in Queen Elizabeth Olympic Park, London. It is located in the former 2012 Olympics Media Centre and hosts a mix of creative companies, educational institutions, supporting retail and catering, and cultural spaces. Creative businesses based in Hackney and neighbourhoods nearby can occupy spaces in Here East, making it a valuable part of the local community. Adjacent to Here East are two local primary schools, small industrial workshop units, a canal, and the former Copper Box Arena, which is now a multifunctional sporting facility. The site also includes some residential apartments for an even wider mix of uses.



Principle 5: Network of multi-functional open space

As part of the Queen Elizabeth Olympic Park, Here East is located within a major network of open spaces strung along the Lea Valley, which provides a wider network, and access to a wide range of sporting facilities both formal and informal. Within Here East itself, spaces include a civic square ('the yard'), a canalside terrace and a landscaped walk, which connects to nearby woodland, playing fields and nature reserve.



Principle 6: High quality streets and spaces

Here East prioritises active travel throughout, with only limited service access for delivery vehicles and a route for buses. Car parking is consolidated at the edge in a multi-storey car park which allows the streets to be focused around active travel. Buildings have active frontages facing streets and spaces, exposing the activities within to provide a visual link between the outside and inside, and making the outdoor spaces more usable and attractive.



Principle 10: Activating spaces

At the centre of the scheme is 'the yard', a flexible space that can accommodate an outdoor cinema, public markets and a public events space for the local community. At one end of the yard is the auditorium, which is used for talks, screenings, exhibitions and cultural events for the local community.



- Top:** The Yard space hosts events and is a gathering space outside the main buildings
- Middle:** Seating and planters within public realm make spaces usable and active
- Bottom:** A play area integrated within the public realm provides amenity and activation

Rutherford Appleton Laboratory and Daresbury Laboratory

Rutherford Appleton Laboratory (RAL) and Daresbury Laboratory (DL) are the Science and Technology Facilities Council (STFC)'s two major national laboratories, hosting national scientific experiments and facilities, and employing nearly 3,000 people on site. Both are large 'campuses', located away from nearby towns, and provide a wide range of amenities on site for their mixed and diverse workforce.



Principle 7: Providing Activity Infrastructure

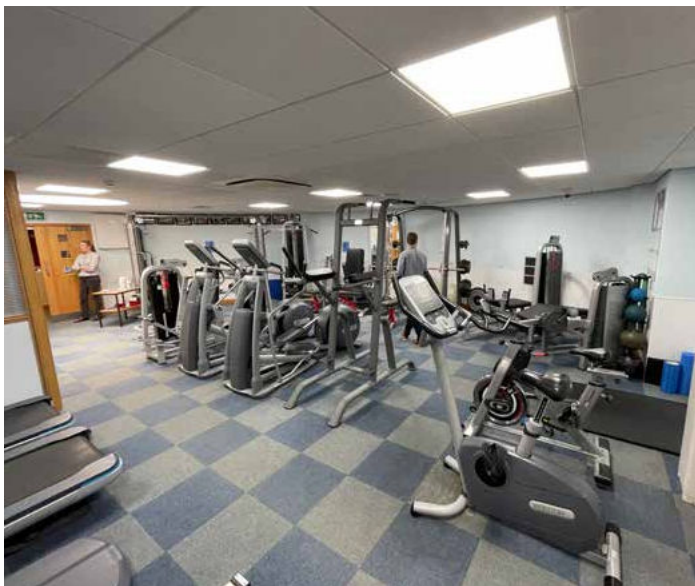
Both sites have on-site gyms, and RAL offers football pitches, tennis courts and bookable indoor rooms, which enable staff to engage in sports and physical activity at lunchtime or before and after work. Both laboratories are both located in the countryside, and have access to an extensive network of wider public rights of way. The RAL site is large enough to include hiking routes and woodland within an area of landscape created from an excavated area, previously associated with a major facility. Low-cost interventions have been made in this area, with benches and tables provided.

Both laboratories are keen to encourage people to get to work via active means, particularly cycling. New buildings provide secure bicycle storage and showers.



Principle 10: Activating Spaces

Daresbury Laboratory runs a regular 5k/10k run from the site through the surrounding woodland, encouraging staff to take part and providing a visible sporting event and creating publicity for the wider recreational networks.



Above: On-site gym provides subsidised classes and physical activity opportunities

Right top: Secure cycle parking is provided next to main buildings within the site

Right middle: Table tennis tables are located within a linear park

Right bottom: An annual fun run from the campus through the surrounding woods

Baytree Nuneaton

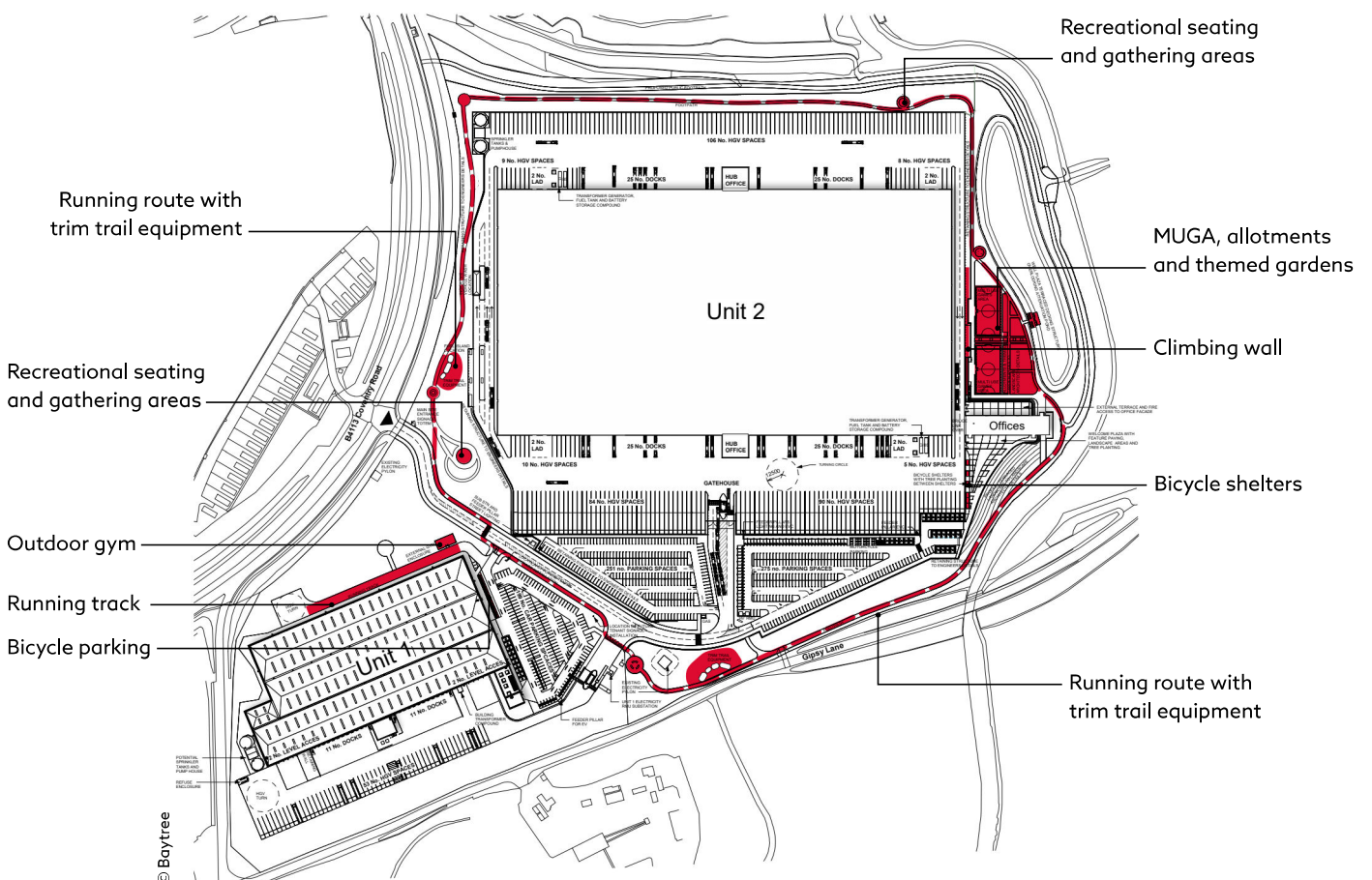
Baytree is a major developer of logistics facilities, part of the AXA Group. At Nuneaton, it is developing a new group of major warehousing facilities which put the health and wellbeing of employees front and centre. In a competitive jobs market for logistics at the heart of England, employers in this space (who will lease the buildings) are looking to retain employees and minimise staff absence due to illness and poor health.



Principle 8: Active Buildings

The new warehouses incorporate a range of physical activity and wellness interventions around the exterior. A running route around the building will link outdoor gym equipment, recreational seating and gathering areas within planted landscaping, that also incorporates essential drainage and ecological habitats.

Inside the buildings, the office and circulation areas prioritise staircases for internal movement, and include seating areas and recreational spaces. Internal facilities include a climbing wall, to encourage regular physical activity during breaks.



CASE STUDY

Stevenage town centre urban regeneration

Fact File

Name: **Stevenage town centre**

Location (town, county):
Stevenage, Hertfordshire

Local planning authority:
**Stevenage Borough Council,
Hertfordshire County Council**

Date of planning consent/
construction/completion:
**Masterplan 2016, new bus
station 2022, programme
ongoing**

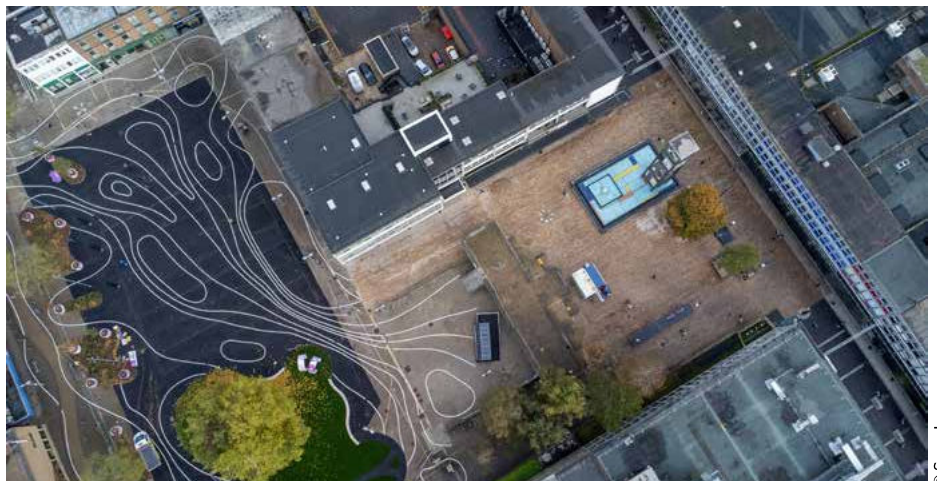
Case study type: **Urban
regeneration**

Stevenage, located 45km north of London in Hertfordshire, is the UK's first designated original post-war New Town and was designed to create a new, healthy place for populations affected by bomb damage and overcrowding. It is currently undergoing an ambitious town centre regeneration programme to provide new homes, transport infrastructure, jobs and facilities, within a rejuvenated public realm that prioritises walking and cycling.

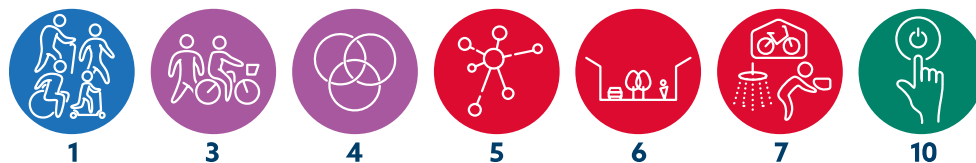
At the heart of the regeneration plans are new homes in the town centre within walkable distance of all its facilities. This is supported by new spaces for physical activity, including streets with play equipment, a new events space laid out for sports and recreation, and changes to the street network to make them better for active travel.

Who?

- Stevenage Borough Council (SBC) leads on planning policy and initiated the push for regeneration.
- The Stevenage Development Board brings together voluntary key stakeholders from public sector organisations, private businesses, not-for-profit organisations and heritage organisations. The Stevenage Development Board was set up in March 2020 to formulate a bid for the national Government's Town Fund initiative, of which Stevenage was awarded £37.5m. It is chaired by independent businessperson Adrian Hawkins OBE, and provides strategic oversight for the Towns Fund projects.
- Partnership working with private sector partners Mace, Reef Group and the Guinness Partnership.



ACTIVE DESIGN PRINCIPLES IN ACTION:



How it happened

- The Local Plan, supported by the Stevenage Central Framework (see below) allocated significant planned growth to the town centre, underpinning the regeneration approach.
- The Stevenage Central Framework (prepared by David Lock Associates) was commissioned to provide a spatial framework for development, identifying key connections, public realm and sites within the town centre. It was backed up by an Implementation Plan.
- The first set of sites for delivery, known as SG1, was assembled through a joint venture between SBC and Mace.
- The successful award of £37.5m from the national Towns Fund will enable a wide range of new projects, including many related to physical activity such as a new sports and leisure hub, upgraded active travel infrastructure, improvements at the railway station and an arts & heritage trail.
- SBC is the owner of much of the town centre public realm and has been actively undertaking visible change ahead of new building development.

Why is it successful?

- The investment programme covers all aspects of placemaking and regeneration, and has generated wider investment interest in the town centre as a mixed-use destination and centre.
- It demonstrates how many of the UK's New Towns can successfully regenerate and improve, while supporting the active and healthy behaviours that were the original attraction of these places for new residents post-World War Two.
- It retains broad political support despite being a significant change to the town.

Lessons Learned

- A guiding masterplan provides certainty and a framework within which many partners can work.
- A multi-partner delivery board is able to take forward proposals and de-politicises the process.
- The importance of high quality public realm and physical activity opportunities in transforming streets and spaces.
- The temporary use of space to test ideas can be successfully based around physical activity opportunities.



Right: The 2016 town centre masterplan was the basis for investment and regeneration (David Lock Associates)

Applying the principles



Principle 1: Activity for all

The regeneration of the town centre is led by an inclusive approach that prioritises equitable access for all (via active travel or public transport), and the provision of accessible, walkable public realm which offers something for everyone.

The vision is to ensure that the town centre is a point of investment, and that this brings wider benefits for all in the town and its surrounding areas.

A significant component of the regeneration is the provision of new homes in the town centre, most of which are apartments of various sizes. One of the sites will be coming forward shortly, delivering its first phase, comprised of affordable homes.



Principle 3: Providing connected active travel routes

Stevenage, is equipped with a comprehensive network of segregated cycleways that run parallel to major roads. This network has been underused for many years due to the ease of driving, and perceptions of safety issues on routes that may lack natural surveillance. This network is a great asset for the town and connects most areas to the town centre quickly and easily. The town has been designated as one of Hertfordshire's Sustainable Travel Towns, prioritising investment and ongoing work on an active travel Implementation Plan.

Where the cycleways and pedestrian routes meet the town centre ring road, improvements are being made or planned to the quality of underpasses, wayfinding, and provision of controlled surface-level crossings across this wide dual carriageway.

The town centre masterplan ultimately envisages the downgrading of Lytton Way in the west from a dual carriageway to more of an 'urban boulevard' environment. A new surface crossing connecting the Bus Interchange to the railway station and bus priority measures have already been installed, and consultation is underway about the future of the route.



Above: New bus interchange near main train station frees up public realm in the town centre for events space



Right: A new signal controlled active travel crossing of Lytton Way connects the rail station with the bus station and town centre



Principle 4: Mixing uses and co-locating facilities

Before the regeneration plans, the town centre had only around 250 homes in its entirety. A major component of the plans is residential-led development in the town centre, to create a population that can support local facilities and an night-time economy. This new town centre population is much more likely to get about by active and sustainable means than residents in car-based suburbs.

This approach moves away from previous regeneration approaches of the 1990s and 2000s, which were primarily retail-focused. Instead, this approach aims to build a wide mix of self-supporting uses, based around a walkable catchment population, and to create an urban neighbourhood within the town centre, that also provides higher-order facilities for the whole town.

A visible example of this is a new primary school, planned for the south-east of the town centre, to cater for local residents in the new residential development.

Stevenage is experiencing significant commercial interest and investment in highly-skilled employment, particularly in life sciences. This builds on the town's existing high-tech industries in aerospace and pharmaceuticals.

This is being encouraged as part of a holistic growth of town centre employment along with residential growth, with workers embedded in the town centre and able to walk to facilities, cycle to work or use public transport.

A new bus interchange and bus priority measures have taken the place of a former surface car park and has released land near the Town Square in the heart of the town centre for improved public realm and active uses.



Principle 5: Network of multifunctional open space

At the centre of the town, the town square has been rejuvenated with new seating, lighting and renovation of frontages, and is now integrated with the former adjacent bus station, which will in time become a 'garden square', to provide a complementary green space to the more urban Town Square.

These form the centre of a walkable network of streets and spaces, connected to the Town Centre Gardens to the east. A new sports and leisure facility, which will face and activate the gardens, has been funded through a successful recent Towns Fund bid.



Right above: Market Place has been transformed with play equipment within the public realm

Right below: Entrance to the new covered bus interchange



Principle 6: High quality streets and spaces

The importance of high quality and active public realm is best exemplified by Market Place, a row of shops connecting the town centre to neighbourhoods to the east. It previously suffered from neglect, empty units and a poor public realm that meant people either avoided it or hurried through.

It has been transformed by the provision of seating, informal play equipment and planting within the street, turning it into a place people now enjoy and feel safe in.

This investment has revitalised the street, and it is now full with no vacancies, and is busy and active throughout the day.



Principle 7: Providing Activity Infrastructure

A new secure cycle hub is being constructed at the railway station, adjacent to the main entrance, and connected to the segregated strategic cycling network.

This will provide much improved cycle storage, and is intended to encourage commuters to cycle to the station instead of driving, and also to enable 'reverse commuters' to Stevenage's high-tech industries to store bicycles securely for the last-mile connection from the station to work.

Pedestrian wayfinding around the town centre is consistent and clear, and is designed to reflect Stevenage's heritage and architecture.



Above: Distinctive wayfinding signage reflects the New Town heritage within the town centre



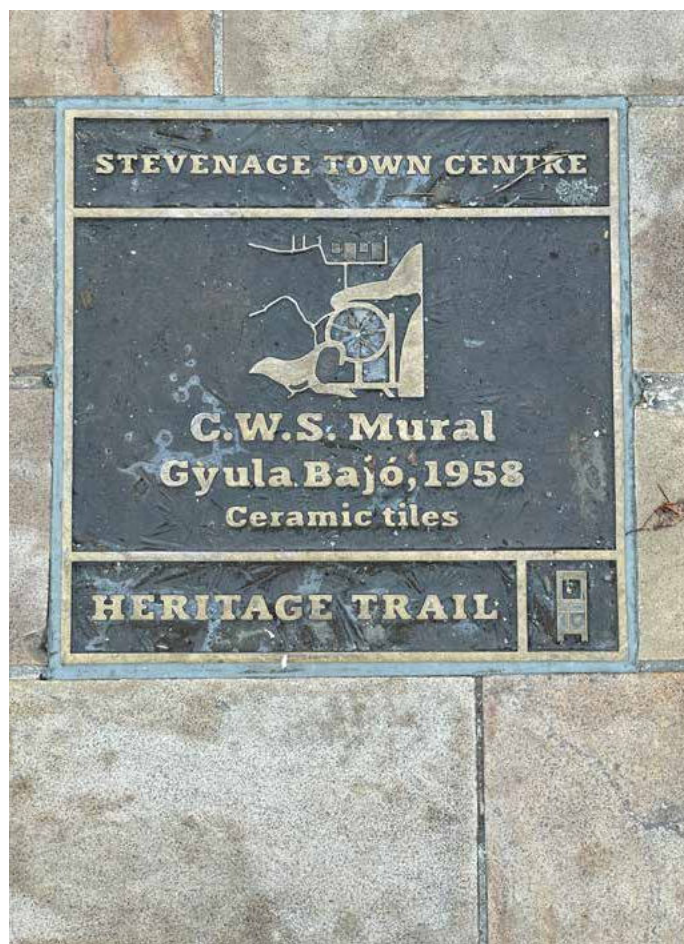
Principle 10: Activating Spaces

Event Island Stevenage is a large new piece of temporary public realm that has been recently created on the former bus station (now relocated close to the railway station). This community space has increased greenery, informal play provision and provided a stage for performances and events. It will eventually become the site of the planned 'garden square', but in the meantime it is being used as an 'urban lab' that tests out different uses of the space to see what is successful.

Sport and physical activity uses have proved popular, with play equipment such as trampolines in landscaped areas, and enough space set aside for local sports clubs to convert the space temporarily for events. Recently, a covered ice rink was installed for people to enjoy. Other uses include concerts and community events.

A Heritage Trail is being established, celebrating the town's New Town status, and some of the unique parts of its built environment. At the moment this consists of a series of ground plaques, utilising hoarding to show the history of the town and in the future will form part of the planned wayfinding provision.

Stevenage has a proud history of arts and culture, and the history and heritage of the town is respected through the regeneration. There are several pieces of listed artwork within the town square, and the vibrant atmosphere of Event Island Stevenage is designed to showcase local talent. With a stage for performances from local schools and community groups, it acts as a platform to celebrate arts and culture.



Above: A heritage trail with plaques in the ground connects some of the key sites

References

- ¹ UK Chief Medical Officers' Physical Activity Guidelines – 2019
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/832868/uk-chief-medical-officers-physical-activity-guidelines.pdf
- ² Physical activity guidelines: disabled children and disabled young people – Department of Health and Social Care and Office for Health Improvement and Disparities – 2022
<https://www.gov.uk/government/publications/physical-activity-guidelines-disabled-children-and-disabled-young-people>
- ³ Use of science to guide city planning policy and practice: how to achieve healthy and sustainable future cities – Sallis et. al. – 2016
<https://pubmed.ncbi.nlm.nih.gov/27671670/>
- ⁴ Uniting the Movement – Sport England
<https://www.sportengland.org/about-us/uniting-movement>
- ⁵ Everybody active, every day – Public Health England – 2014
<https://www.gov.uk/government/publications/everybody-active-every-day-a-framework-to-embed-physical-activity-into-daily-life>
- ⁶ Spatial Planning for Health – OHID – 2017
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/729727/spatial_planning_for_health.pdf
- ⁷ Guidance can be found in BSI's PAS 6463:2022
<https://www.bsigroup.com/en-GB/standards/pas-6463/>
- ⁸ Voice Opportunity Power, Mayfair Youth Forum
<https://voiceopportunitypower.com/uploads/MYF-Case-Study-long.pdf>
Nottingham Trent Basin: [Nottingham-Trent-Case-Study.pdf](#) (voiceopportunitypower.com)
Aberfeldy: [Aberfeldy-Estate-Case-Study.pdf](#) (voiceopportunitypower.com)
- ⁹ Accessible Facilities Guidance – Sport England
<https://www.sportengland.org/guidance-and-support/facilities-and-planning/design-and-cost-guidance/accessible-facilities>
- ¹⁰ Uniting the Movement – Sport England
<https://www.sportengland.org/about-us/uniting-movement>
- ¹¹ Not another consultation – Local Government Association – 2010
<https://www.involve.org.uk/sites/default/files/uploads/Not-Another-Consultation.pdf>
- ¹² Local Delivery – Sport England
<https://www.sportengland.org/funds-and-campaigns/local-delivery>
- ¹³ National Register of Access Consultants
<https://www.nrac.org.uk/>
- ¹⁴ Cycle Infrastructure Design (LTN 1/20) – Department for Transport – 2020
<https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-120>
- ¹⁵ Driven to excess: Impacts of motor vehicles on the quality of life of residents of three streets in Bristol UK, Hart, Joshua; Parkhurst, Graham – 2011
<https://uwe-repository.worktribe.com/output/968892/driven-to-excess-impacts-of-motor-vehicles-on-the-quality-of-life-of-residents-of-three-streets-in-bristol-uk>
- ¹⁶ Transforming cycling in outer boroughs: Mini-Hollands programme – Mayor of London
<https://www.london.gov.uk/programmes-strategies/transport/cycling-and-walking/transforming-cycling-outer-boroughs-mini-hollands-programme>
- ¹⁷ Walking and Cycling: the economic benefits – Transport for London
<https://content.tfl.gov.uk/walking-cycling-economic-benefits-summary-pack.pdf>

-
- ¹⁸ **The Pedestrian Pound, Living Streets – 2018**
<https://www.livingstreets.org.uk/media/3890/pedestrian-pound-2018.pdf>
- ¹⁹ **Value for Money Assessment for Cycling Grants, Department for Transport – 2014**
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/348943/vfm-assessment-of-cycling-grants.pdf
- ²⁰ **The Impact of GPS-Enabled Shortest Path Routing on Mobility: A Game Theoretic Approach – Cabannes et. al. – 2018**
<https://trid.trb.org/view/1495267>
- ²¹ **Cycle to work scheme implementation guidance for employers – Department for Transport – 2019**
<https://www.gov.uk/government/publications/cycle-to-work-scheme-implementation-guidance>
- ²² **Inclusive Design Standards – London Legacy Development Corporation – 2019**
<https://www.queenelizabetholympicpark.co.uk/-/media/inclusive-design-standards-low-res-final.ashx>
- ²³ **Cycle Infrastructure Design (LTN 1/20) – Department for Transport – 2020**
<https://www.gov.uk/government/publications/cycle-infrastructure-design-ltn-120>
- ²⁴ **Living long and living well: The WELLBY approach – 2021**
<https://worldhappiness.report/ed/2021/living-long-and-living-well-the-wellby-approach/>
- ²⁵ **Active Travel – CIHT**
<https://www.ciht.org.uk/knowledge-resource-centre/resources/active-travel/>
- ²⁶ **See the Active Design Aspire@ThePark Case Study for good examples of this**
- ²⁷ **What Makes A Park Feel Safe Or Unsafe? – University of Leeds – 2022**
<https://eprints.whiterose.ac.uk/194214/1/Parks%20Report%20FINAL%207.12.2022.pdf>
- ²⁸ **The 20-Minute Neighbourhood – Town and Country Planning Association**
<https://tcpa.org.uk/collection/the-20-minute-neighbourhood/>
- ²⁹ **20-Minute Neighbourhoods – Plan Melbourne**
<https://www.planmelbourne.vic.gov.au/current-projects/20-minute-neighbourhoods>
- ³⁰ **A Green Future: Our 25 Year Plan to Improve the Environment – HM Government – 2018**
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/693158/25-year-environment-plan.pdf
- ³¹ **A raft of literature, but see The 20-Minute Neighbourhood – Town and Country Planning Association and Gear Change**
<https://tcpa.org.uk/collection/the-20-minute-neighbourhood/>
<https://www.gov.uk/government/publications/gear-change-one-year-on-review>
- ³² **The health benefits of urban green spaces: a review of the evidence – Lee, Maheswaran – 2010**
<https://pubmed.ncbi.nlm.nih.gov/20833671/>
- ³³ **The relationship of physical activity and overweight to objectively measured green space accessibility and use – Coombes, Jones, Hillsdon – 2010**
<https://pubmed.ncbi.nlm.nih.gov/20060635/>
- ³⁴ **Improving access to greenspace A new review for 2020 – Public Health England – 2020**
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf
- ³⁵ **Nature How connecting with nature benefits our mental health – Mental Health Foundation – 2021**
<https://www.mentalhealth.org.uk/sites/default/files/2022-06/MHAW21-Nature-research-report.pdf>
- ³⁶ **Mental Health and Town Planning – Royal Town Planning Institute – 2020**
<https://www.rtpi.org.uk/practice/2020/october/mental-health-and-town-planning/>
- ³⁷ **Improving access to greenspace A new review for 2020 – Public Health England – 2020**
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/Improving_access_to_greenspace_2020_review.pdf

- ³⁸ **Walking and Cycling: the economic benefits** – Transport for London
<https://content.tfl.gov.uk/walking-cycling-economic-benefits-summary-pack.pdf>
- ³⁹ **Walking and Cycling: the economic benefits** – Transport for London
<https://content.tfl.gov.uk/walking-cycling-economic-benefits-summary-pack.pdf>
- ⁴⁰ **Transport Decarbonisation Plan** – Department for Transport – 2021
<https://www.gov.uk/government/publications/transport-decarbonisation-plan>
- ⁴¹ **What are play streets?** – Playing Out
<https://playingout.net/play-streets/what-are-play-streets/>
- ⁴² **Plan Inclusive Play Areas (PIPA)**
<https://www.pipa-play.org/>
- ⁴³ **Design For Play** – Play England
<https://www.playengland.org.uk/designforplay>
- ⁴⁴ **Guidance for Outdoor Sport and Play** – Fields in Trust
<https://www.fieldsintrust.org/guidance>
- ⁴⁵ **Introduction to the Green Infrastructure Framework - Principles and Standards for England** – Natural England – 2023
<https://designatedsites.naturalengland.org.uk/GreenInfrastructure/Home.aspx>
- ⁴⁶ **Growing up in Hackney: child-friendly places supplementary planning document (SPD)** – London Borough of Hackney – 2022
<https://hackney.gov.uk/child-friendly-spd>
- ⁴⁷ **Let's Play Fair: inclusive playgrounds** – Scope
<https://www.scope.org.uk/campaigns/lets-play-fair/>
- ⁴⁸ **How we do community-led street design** – Sustrans
<https://www.sustrans.org.uk/for-professionals/our-approach/how-sustrans-does-community-led-street-design>
- ⁴⁹ **The Social Life of Small Urban Spaces** – William H Whyte – 1980
<https://www.pps.org/product/the-social-life-of-small-urban-spaces>
- ⁵⁰ **Public Spaces, Public Life** – Jan Gehl – 2004 (no hyperlink available)
- ⁵¹ **Overview, Broad Meadow** – Oxford City Council
https://www.oxford.gov.uk/info/20359/building_projects/1530/broad_meadow
- ⁵² **Manual for Streets** – Department for Transport and Ministry of Housing, Communities and Local Government – 2007
<https://www.gov.uk/government/publications/manual-for-streets>
- ⁵³ **Healthy Streets** – Transport for London
<https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets>
- ⁵⁴ **Streets for All** – Historic England – 2018
<https://historicengland.org.uk/images-books/publications/streets-for-all/heag149-sfa-national/>
- ⁵⁵ **Essex Design Guide** – 2018
<https://www.essexdesignguide.co.uk/>
- ⁵⁶ **Movement for All** – The Richmond Group of Charities
<https://richmondgroupofcharities.org.uk/movement-all-our-physical-activity-programme-0>
- ⁵⁷ **Influence of Pokémon Go on Physical Activity: Study and Implications** – Althoff, White, Horvitz – 2016
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5174727/>
- ⁵⁸ **Legible London** – Transport for London
<https://tfl.gov.uk/info-for/boroughs-and-communities/legible-london>
- ⁵⁹ **Nottingham Navigator** – Streetwise
https://www.streetwisesystems.com/project_nottingham.php

-
- ⁶⁰ **Legible Leeds – City Wayfinding**
<https://www.citywayfinding.com/legible-leeds/>
- ⁶¹ **What are Changing Places Toilets – Changing Places**
<https://www.changing-places.org/>
- ⁶² **What is Universal Design – National Disability Authority**
<https://universaldesign.ie/what-is-universal-design/>
- ⁶³ **National Register of Access Consultants**
<https://www.nrac.org.uk/>
- ⁶⁴ **A longitudinal analysis of the influence of the neighborhood built environment on walking for transportation: the RESIDE study – Knuiman et. al. – 2011**
<https://pubmed.ncbi.nlm.nih.gov/25117660/>
- ⁶⁵ **New funding to help schools open their sports facilities – Sport England – 2021**
<https://www.sportengland.org/news/new-funding-help-schools-open-their-sports-facilities>
- ⁶⁶ **Community Assets and Rights – Sport England**
<https://www.sportengland.org/guidance-and-support/facilities-and-planning/community-assets-and-rights>
- ⁶⁷ **Community champion approaches: rapid scoping review of evidence – Public Health England – 2021**
<https://www.gov.uk/government/publications/community-champion-approaches-rapid-scoping-review-of-evidence#:~:text=Community%20champions%20or%20health%20champions,between%20services%20and%20disadvantaged%20communities>
- ⁶⁸ **This Girl Can – Sport England**
<https://www.thisgirlcan.co.uk/>
- ⁶⁹ **Active Partnerships**
<https://www.activepartnerships.org/>

