

Active Travel Toolbox

Linking Active Travel and Public Transport to Housing Growth and Planning

Toolkit Part 3: Active travel and public transport planning in new housing developments



Delivered by Sustrans in partnership with:



Toolkit Part 3: Active travel and public transport planning in new housing developments
Housing Growth And Planning Toolkit
Active Travel Toolbox

Written by Sustrans with support from Dr Adrian Davis, The TAS Partnership Limited and Living Streets.



About Sustrans

Sustrans is the charity making it easier for people to walk and cycle.

We are engineers and educators, experts and advocates. We connect people and places, create liveable neighbourhoods, transform the school run and deliver a happier, healthier commute.

Sustrans works in partnership, bringing people together to find the right solutions. We make the case for walking and cycling by using robust evidence and showing what can be done.

We are grounded in communities and believe that grassroots support combined with political leadership drives real change, fast.

Join us on our journey. www.sustrans.org.uk

Head Office
Sustrans
2 Cathedral Square
College Green
Bristol
BS1 5DD

© Sustrans 2017
Registered Charity No. 326550 (England and Wales) SC039263 (Scotland)
VAT Registration No. 416740656

This is the third part of the Active Travel toolkit on Linking Active Travel and Public Transport to Housing Growth and Planning.

The Active Travel toolkits aim to help LEPs and their local delivery partners to:

- 1 Develop your business case for investment in cycling and walking schemes.
- 2 Link walking and cycling schemes to your strategic economic growth priorities, housing growth and planning, and public health.
- 3 Support the planning and delivery of walking and cycling schemes in your local area.

This toolkit will cover the following areas:

- 1 How transport planning can enable sustainable transport within new developments
- 2 Tools to increase active travel to and from new developments
- 3 Integration of active travel with public transport for longer journeys

A slide pack on *Sustainable transport planning in new housing developments* can be downloaded separately. It summarises the key evidence base and statistics to help you prepare presentations, funding bids and reports.

Our key messages include:

- 1 Sustainable transport usage will be significantly increased if direct, attractive and safe walking, cycling, and public transport infrastructure are built both within and to connect new developments to existing networks.
- 2 The sooner sustainable transport is fully considered within the planning of a new development the more efficient their location, use and value will be.
- 3 In order to maximise sustainable travel, it is important to ensure:
 - a The right transport infrastructure is built into new developments from the outset; and
 - b New developments are connected to existing sustainable transport networks to enable people to reach their destination.
- 4 Walking routes should be coherent, direct, safe, comfortable and attractive.
- 5 The provision of safe, direct and attractive cycling routes alongside convenient and secure cycle parking should be provided.
- 6 A clear sensible layout with through routes ensuring the permeability of new developments for walking, cycling and public transport routes is essential.
- 7 In conjunction with sustainable transport provision, private motor vehicle use should also be managed - for example speed restrictions and parking management.
- 8 There are a number of freely accessible tools to help plan and develop the business case for cycling and walking schemes to connect new developments to employment and other services people require access to.
- 9 Active travel provision should also integrate with public transport use for longer journeys to enable convenient, attractive sustainable modes from door to door. This needs to include improving access and secure parking infrastructure for bikes.

Table of contents

5	How transport planning can enable sustainable transport within new developments
5	Walking
8	Cycling
11	Public transport
13	Motor vehicle management
18	Increasing active travel to and from new developments
20	The integration of sustainable transport
20	Integration of walking and public transport
21	Integration of cycling and public transport
23	References

1. How transport planning can enable sustainable transport within new developments

Transport planning that supports greater use of sustainable transport should be an essential part of the planning of all new developments. Generally the sooner sustainable transport is fully considered within the planning process of a new development the more efficient their location, use and value will be.

There are a number of provisions that can be undertaken within the development itself to maximise sustainable transport. This should include:

- 1 Walking provision
- 2 Cycling infrastructure
- 3 Public transport provision
- 4 Vehicle management
- 5 On-site car clubs

Many of the above measures should not be wholly dissimilar to improving infrastructure in existing developments. The advantage for new housing developments is that it provides a blank canvas within which to design much better and more integrated solutions as part of the overall design of the development itself.

1.1 Walking

On average 80% of journeys shorter than one mile are walked¹. However, the number of walking trips made per person has fallen by 32% since 1995², accompanied by an increase in distance travelled across all modes of transport.

Streets have both a movement and a place function. They have to meet the needs of multiple road users and, just as importantly, are places for social interaction. This is why the Manual for Streets³ suggested the application of a user hierarchy to the design process which places sustainable transport above other motor traffic and highlights the need to always consider the pedestrian first.

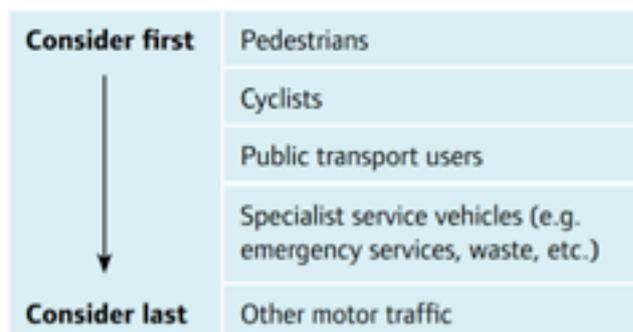


Figure 1: Manual for Streets: User Hierarchy

Walking routes should be coherent, direct, safe, comfortable and attractive (see Table below). A clear sensible layout with through routes ensuring the permeability of new developments for walking, cycling and public transport routes is essential. Crossings should enable pedestrians of all ages and mobility to cross roads conveniently (following desire lines), safely and in comfort.

Minimising blank walls and fences creates active frontages and helps pedestrians to feel safe. Street design (e.g. footway width, paving quality, and on street parking) can help reduce vehicle speeds to 20mph increasing the comfort and safety of pedestrians and cyclists. The use of landscaping (e.g. streets trees and urban drainage systems) and building form helps to create an attractive and interesting walking environment.

Table 1: Five design principles for walking routes

Coherent	Walking routes should enable people to reach their destinations easily and conveniently.
Direct	Pedestrians should be able to reach their destinations as directly as possible.
Safe	Pedestrian infrastructure must be safe and pedestrians must feel safe.
Comfortable	Footways, footpaths and pedestrian areas should be designed to meet the needs of all users.
Attractive	The walking environment should be clean, attractive and enjoyable.

Tools: Design guidance for increasing walking

There are already a number of public tools which support the design of neighbourhoods including for new developments to increase walking and improve the quality of the public realm.

Homes & Communities Agency – Urban Design Lessons

This guide demonstrates a range of approaches towards good urban design. The report shares examples of attractive neighbourhoods with common principles – easy navigation, streets and public spaces becoming places in their own right, improving the built environment to enable social interaction and a sense of community, and where people are likely to feel safe.

[Urban Design lessons is available here.](#)

Chartered Institute of Highways and Transportation (CIHT) – Planning and designing for Walking

CIHT has developing a range of guidelines to assist professionals in implementing

DfT's 'Manual for Streets'. This includes two guides focusing on walking: 'Planning for walking' and 'Designing for walking'.

Planning for walking outlines characteristics of pedestrian journeys, benefits of walking, factors that discourage walking and how they can be overcome, the legal framework that applies to pedestrians and how plans and strategies for pedestrian travel are developed.

[Planning for Walking is available here.](#)

Designing for Walking explains how facilities for walking should be designed. Well-designed facilities that follow desire lines, are clutter-free, and are legible to all users will assist in enabling walking journeys and improve the experience of those already walking. The design of facilities should also consider the volumes of people walking along (actual or desired) or crossing streets, and the solutions will depend on a variety of considerations. The needs of all users should be carefully taken into account and prioritised as appropriate.

[Designing for walking is available here.](#)

Active Travel Design Guidance, Welsh Government

The Active Travel Act gave powers to Welsh Ministers to produce statutory guidance for the design of active travel routes in Wales. The guidance includes support for the planning, design, approval, construction and maintenance of active travel routes.

[Active Travel Design Guidance is available here.](#)

Case Study: Gateshead Exemplar Neighbourhood

The Exemplar Neighbourhood uses supplementary planning guidance to ensure new developments fully integrate pedestrian access into the development of the site to take full advantage of its sustainable location and provide an example for the northeast in terms of residential led regeneration.

Gateshead's Exemplar Neighbourhood describes itself as:

*"a prime location for families as well as young professionals and older people to live in Gateshead's Centre with opportunities to live within a few minutes' walk of shops, leisure facilities, employment, education, open space and public transport."*⁴

The 40-hectare site is within a 10 minute walk of Gateshead College, Baltic Business Quarter Developments and a five minute walk from most Gateshead centre facilities. It is also well served by bus routes and two metro stations.

The Supplementary Planning Document for the Exemplar Neighbourhood says that pedestrian access must be fully integrated into the development of the site to take full advantage of its sustainable location. It identifies the opportunity to create an active neighbourhood, for example, by improving and creating new crossing points

(e.g. across the railway line), landscaping pedestrian routes as part of a wider green infrastructure network and ‘filtered permeability’ to connect people to local facilities while restricting passage and movement of motorised vehicles.

[For more information about the Exemplar Neighbourhood Supplementary Planning Document](#)

1.2 Cycling

There are two key areas for cycling provision that should be designing into all new developments wherever feasible:

- a. The provision of safe, direct and attractive routes (for developments including streets and public spaces)
- b. The provision of convenient and secure cycle parking

The provision of safe, direct and attractive routes (for developments including streets and public spaces)

To ensure cycling infrastructure is designed to a high standard a number of freely available cycling design standards exist. For example the London Cycling Design Standards and the Welsh Active Travel Design Guidance. Not all of these standards currently focus on new developments but the guidance and principles within them can often be applied to new housing developments.

Previous work from Sustrans suggested guidance and design principles to enable attractive, safe and convenient cycle infrastructure in new housing developments⁵.

The key principles raised in this work include:

Design and provide high quality walking and cycling networks and infrastructure	Cycling and walking should be encouraged in all new developments and regeneration schemes, through the design of high quality walking and cycling networks, provision of convenient secure cycle parking, active travel promotion delivered through travel plans, and enforcement of car parking standards.
All stakeholders need to work together	The planning authority, the highway authority, the developer and occupiers all have key roles to ensure these positive conditions are in place and are maintained.
New developments are a blank canvas	New developments offer opportunities for coherent, high quality network enhancements across an area
New developments should aim to make cycling and walking more convenient than using a car	All new developments should be accessible and permeable by walking and cycling. The spatial planning and route network design within new developments should aim to make cycling and walking more convenient and attractive than using a car, for people of all ages.

Development sites can join up existing cycling and walking routes and networks	Development sites can provide new through routes for pedestrians, cyclists and public transport which can complete missing links or increase the density of the existing cycling and walking networks in the vicinity.
Use filtered permeability to encourage sustainable transport	Filtered permeability (the use of traffic free connections, bus gates and exemptions for cycles from one-way orders and turning restrictions) is recommended at access points and at strategic locations within new developments
New housing developments should set speeds at 20mph or less as default	Road design within new developments should deliver low speeds (20mph or less) to enable cycle users to mix with traffic and to facilitate pedestrians to cross roads more freely
Secure and convenient cycle parking should be provided throughout the development	Secure and conveniently located cycle parking should be provided throughout the development, to accommodate short and longer stay visitor use and regular long stay use by residents and employees
Use a design brief for cycling and walking infrastructure for sites with more than one developer	A design brief for cycling and walking infrastructure is important for larger developments and where more than one developer is involved in developing a site.

The provision of convenient and secure cycling storage

Convenient and secure bike storage is important for any new development if cycling is to be encouraged.

Case Study: Cycle Parking Guides for new residential developments in Cambridge and London

Encouraging new homes to include cycle parking and how this should be designed is an essential part of local planning guidance in Cambridge and London.

One in four residents cycle to work in Cambridge and nearly 20% of trips within the city are made by bicycle. This means having somewhere that is safe and convenient to park bicycles is important to residents in the city. This led to the production of a cycle parking guide for developers to ensure good quality cycle parking is provided in new developments. The guide makes a number of recommendations for planning authorities and developers:

- a. Make sure residential cycle parking is conveniently situated, assessable and easy to use
- b. Ensure cycle parking is safe and secure
- c. Cycle parking should always be covered
- d. Cycle parking should be fit for purpose and enable at least the frame and a wheel to be secured

- e. Keep cycle parking managed and well maintained
- f. Finally ensure cycle parking is attractive and in keeping with surroundings

[Click here to download the Cycle Parking Guide for New Residential Developments](#)

The London Assembly's Housing Supplementary Planning Guidance states that all new developments should provide dedicated storage space for cycles at the following levels:

- 1 per studio and one bed properties
- 2 for all other dwellings
- 1 short stay parking space for every 40 units

The London Assembly additionally requires "Cycle storage outside the home should also be secure, sheltered and adequately lit, with convenient access to the street".

One example of how this is being used is a new luxury development called 250 City Road in Old Street. The mixed use development includes over 700 new homes. One bike parking space is provided for every single bedroom in the property equating to 1,486 in total in comparison to 200 car parking spaces. The property also has a resident's bike workshop and a bike lift for convenient access to cycle storage facilities⁶.

[For more information about the London Assembly's Housing Supplementary Planning Guidance.](#)

Case Study: Designing a building for cycling - Cykelhuset, Malmo

This housing development used the money that would be traditionally spent on car parking to meet the needs of people who do not need or want to own a car.

A new development currently underway in central Malmo, Sweden called Cykelhuset⁷ (bicycle house) has decided to use the funding that conventionally is spent on car parking to instead develop the building to meet the needs of people who do not want or need to own a car. Increasingly car ownership in many western cities is in decline especially amongst Millennials (those born in the 80s and 90s). This generation often want to live centrally and use public transport, cycling and walking to get about as it's often more convenient and cheaper than owning and maintaining a car⁸.

The developers at Cykelhuset researched why people have to use cars and then developed their approach to find alternatives by bike. For example to get around shopping by car the developers installed large mailboxes to ensure online shopping was convenient and provided cargo bikes that can be borrowed to transport shopping home. Commuter bikes are also provided. Residents of the building will have access to a subscription service that can be used for carpooling, bike repair services, and public transport when the weather is bad.

The building is also designed so that bicycles can be taken easily to every apartment through wider than usual lifts with doors that open on both sides. There is parking downstairs and in front of each apartment.

[For more information about Cykelhuset](#)

1.3 Public transport

Any significant developments will also need to fully consider public transport provision, both to and from the site and infrastructure within the site to support this.

Key recommendations include:

- Research take-up of potential bus/train travel - passengers and stakeholders - as part of planning of a new development
- High quality and appropriate infrastructure – bus stops, bus shelters – information e.g. at stop timetables and priority e.g. traffic management.
- New developments should aim to make public transport more convenient than using a car
- Use filtered permeability to encourage sustainable transport
- Secure and convenient cycle parking should be integrated with public transport where possible

Case Study: South Yorkshire Developers Guide

South Yorkshire's Developers Guide helps developers design and develop new housing developments that support public transport use. This insures applications are in line with existing planning policy therefore speeding up the planning process.

South Yorkshire's Developers Guide provides support for developers to ensure proposals for development meet the planning authority's requirements in relation to sustainable transport provision. This includes guidance in relation to public transport, especially buses, for example site layout:

- site entrances and exits should be situated nearby public transport access points;
- accessible attractive, direct and safe walking routes should link the site to public transport stops
- within the site high density buildings should be placed closest to public transport access points.

The South Yorkshire Residential Design Guide also contains information on how public transport should be incorporated into residential schemes based upon the DfT Manual for Streets.

[South Yorkshires Developers Guide can be downloaded here.](#)

Case study: Luton-Dunstable Guided Busway: modal shift from a vital bus link

Partnership, LEP vital role and funding of busway between three towns leads to significant modal shift.

The South East Midlands Local Enterprise Partnership (SEMLEP) Infrastructure Investment Plan published in October 2013 summarised the scale/distribution of major developments in the area over the next 20 years, together with the infrastructure required to support these. Whilst most trips generated by these developments were envisaged to occur locally, a proportion would place between these “growth centres” and adjacent towns.

The Inter-urban bus improvements in the SEMLEP area project comprised a package of improvements to inter-urban bus services focussed on those towns that are not well connected by rail and received Local Sustainable Transport Fund revenue. The project was intended to also provide initiatives to increase sustainable travel between key stops and nearby education, health, retail and leisure facilities and include working with each local Highway Authority, who would also promote successful partnership working with local businesses for greater use of the inter-urban bus services.

One major outcome was the culmination of a guided busway between Luton and Dunstable. Seeking to tackle problems of congestion along this popular corridor and provide an attractive alternative to the car, Luton Borough Council, the LEP and Central Bedfordshire in partnership, transformed the disused Luton-Dunstable railway into a fast-track busway which directly links Houghton Regis, Dunstable, Luton and London Luton Airport. The busway stops in the three town centres as well as the Luton and Dunstable hospital. It also allows out of town services (Toddington, Leighton Buzzard and Milton Keynes) to quickly and easily use the busway.

The award-winning busway resulted in 9% modal shift in Dunstable and a 23% increase in cycling, attributed to the shared-use path, as reported in autumn 2014 – having been launched in September 2013.

1.4 Motor vehicle management

If new developments are going to be successful in encouraging transport to be undertaken by sustainable means we must both ensure high quality and attractive provision whilst also managing private motor vehicle use. This can be achieved by:

- a. Reducing traffic speeds and redesigning streets for people
- b. Managing car parking

Slowing traffic speeds in residential and urban areas

More than half of the largest 40 urban authorities in the UK have implemented policies to set 20mph speed limits as default for their residential and urban streets. However, new developments should aim to build in traffic calming measures from the outset by, for example:

- Using small corner radii so that motor vehicles approach a junction with more caution.
- Adding raised crossings at formal or informal crossings to remind drivers to reduce their speeds
- Providing space for on street parking and using landscaping (e.g. trees and planters) to narrow the carriageway.
- Closing routes to motor vehicles to prevent the creation of 'rat runs'.

Case Study: Portsmouth City Council

Portsmouth was the first city in England to introduce 20mph zones with some success.

Portsmouth City Council was one of the first local authorities in England to implement an extensive area wide 20 mph speed limit scheme covering the majority of its residential roads and using speed limit signing. 20mph limits are now installed on 94% of their road network by length.

A review of Portsmouth's 20mph scheme by Atkins for the DfT found no real difference in the speed of motorists in small residential streets with existing low speeds (as a result of narrow carriageways and on-street parking). However at sites where the average speed was greater than 24mph before becoming a 20mph zone vehicle speeds dropped by on average 7mph⁹.

The research suggests 20mph zones can be effective although to work best it is suggested they should be used in conjunction with other traffic calming measures and street redesign.

[The full evaluation report is available here.](#)

Case study: The Slow Streets Sourcebook

The Slow Streets Sourcebook developed by Urban Design London illustrates a range of traffic calming measures which reduce traffic speeds and improve the quality of place.

This Sourcebook showcases a range of ideas from across the UK and is intended to be used by street designers. It is designed to be used in conjunction with 20mph zones as signage alone is often not enough to reduce speeds significantly.

Importantly good design is not just about reducing speeds but making streets more attractive to live and dwell. This can provide more space for retail forecourts which can be used for selling, seating, entertainment. When this space is well managed it can attract people and reduce the perception of vehicle dominance.

[The Slow Streets Sourcebook is available here.](#)

Car parking and ownership management

Many local planning authorities also take measures to inform the amount of parking space available at new housing developments. These should be strictest at more urban dense sites with good public transport services and nearby services enabling active travel as a common form of everyday mobility.

In London, for example where space is even more of a premium and public transport options are numerous the “London Plan” sets the following maximum residential parking standards¹⁰:

- 4+ bed – 2-1.5 spaces per unit
- 3-bed – 1.5-1 spaces per unit
- 1-2 bed – Less than 1 per unit

Other evidence points towards transport choices changing in London. It has been reported that London is about to enter a supermarket store parking building boom that will see homes replacing cars. In Spring 2016 London had 15 sites in supermarket car parks that have residential planning permission agreed or have been sold equating to up to 7,500 housing units¹¹. The supermarkets are not closing they are just relocating parking space that is no longer required. This is far more profitable for them and adds new customers.

Case study: The Triangle Housing Project, Swindon

By providing sustainable transport provision the Triangle Housing Project in Swindon has convinced planners to reduce average parking provision by half for each new home.

The Triangle is a new development completed in 2011 with 42 homes. It was built by HAB, Happiness Architecture Beauty, a new business set up to challenge the way normal volume housing is built in the UK. Therefore both environmental sustainability and the context, history and landscape of a place are built into the design of the development.

The Triangle focuses on a 'village green' with a shared kitchen garden and kids natural play area surrounded by terraced houses based on Swindon's Victorian railway heritage. Each property has covered outdoor vertical cycle parking. A key feature of the success of the development was a rule of only one car space per development which is partially screened by gabion wall bin surrounds. This gives the impression of a safer, less car dominated public space. The planners agreed to a reduction in average parking provision from two to one per unit, because the project has excellent cycle storage and a bus stop at the entrance.

The development is now managed by a community trust which gives residents joint ownership of the public realm supporting neighbourliness and social cohesion. The development was built to be affordable and the developers are using it as a modal that is currently being rolled out to other places.

[More information about The Triangle is available here.](#)

Case study: Vauban, Freiburg

Vauban, a residential development on the edge of Freiburg used a combination of sustainable transport provision and economic incentives to encourage residents not to purchase car parking spaces in this development. Only 16% of residents own cars in the development.

A worldwide demonstrable success of these principles when incorporated with high density housing is Freiburg in Germany. In the 1960s it was a traffic dominated town much like any other in Europe but in the early 1970s, they began to rethink the long-term viability of their communities.

Freiburg planning over the last 40 years has aimed retaining and enhancing the beauty, walkability, mixed use and vibrancy of its historic city alongside high density housing to create a "city of short distances". This emphasized biking, walking and public transit, traffic calming, and mixed-use human-scale development.

Vauban was a residential development located on the site of a former French Military



Vauban, Source Creative Commons

base on the southern edge of the city of Freiburg. The site is 42 hectares and has 5,000 residents. The aims for the development completed in 2006 included creating a district with greatly reduced car use.

To enable this a number of measures were undertaken. Two tram lines have been completed to connect Vauban to the existing tram network across the city of Freiburg. Extensive community engagement has taken place to encourage the benefits of public transport and active travel to correspond with wider policies to discourage car use. At the heart of this was an economic incentive.

Households can choose to nominate themselves as car-free households and pay a one off fee to an association to purchase land that would otherwise be used for parking for the creation of community spaces, such as parks and sports facilities. Households that own cars are required instead to purchase a car parking space costing around 17,000 euros.

The whole residential area is traffic calmed, while much of the development is car free and private cars must be parked in a parking garage on the edge of Vauban. As a result most residents use public transport, walking and cycling to get around. In 2013 83% of Freiburg's population lived within 800m from a tram stop giving them access to the 88% of jobs in the city. This has resulted in there being only 164 cars per 1,000 people in Vauban, far low than the average for Freiburg which is already doing much better than most cities.

[For more information about how Freiburg was planned and developed to enable sustainable transport.](#)

On-site car clubs

Statistics suggest cars are not in use for 97% of their time. Therefore dedicated parking space for cars is a relatively inefficient use of space that could be better utilised for building, green space or pedestrian use or cycle lanes.

Increasingly the provision of car clubs in new developments are being used to enable low car or car free developments by providing on-site access to a car service. Like other sustainable transport infrastructure success relies upon consideration as early as possible in the planning process. It's also important that the local planning authority, developer and car club operator work in partnership to support car clubs.

Featured tool: Car clubs in new developments

CarPlus BikePlus in partnership with the University of the West of England have produced a guide to setting up successful car clubs in new developments.

The University of the West of England alongside CarPlus BikePlus undertook research to better understand car clubs in new developments. Through this research they developed a guide in April 2016 to research and share best practice, lessons and benefits of introducing car clubs in new developments.

The key findings include:

- Car clubs can help reduce traffic and congestion, improve air quality and carbon reduction through tackling car dependency and ownership.
- Car clubs are more likely to be successful based upon factors including: population density, accessibility and availability of public transport, parking constraints, car ownership levels and other cultural and socioeconomic characteristics.
- There are benefits to developers in that car clubs can increase the likelihood of gaining planning permission and by making the development more saleable if the target occupants are perceived to hold driving licences but are less likely to own cars.
- Local authorities should help to create the regulatory framework that requires a car club as part of S106 agreement and help to raise awareness and promotion of car clubs with car club operators.
- Providing car club bays in new housing developments can free up space that can be used for other purposes, for example amenity or green space.

[The full guide is available here.](#)

Case study: Derwenthorpe, York

Reducing car ownership through a successful car club scheme in a new development in York.

Derwenthorpe lies about 2 miles to the East of York city centre currently being developed by Joseph Rowntree Housing Trust as a sustainable urban extension. Their aim is to develop a sustainable residential community with a mix of housing tenures and a range of sustainable transport solutions. There were also concerns from the outset from local residents that the development would generate a lot of traffic.

To address these concerns the planning application and Section 106 agreement included a number of features to reduce car dependence. This included limited car parking to 1.1 spaces per dwelling, improvements to local bus services alongside incentives for new residents to use them, improvements to walking and cycling routes as well as supporting a car club with free membership and limited free drive time for residents for an initial period.

The car club was operational prior to the first resident moving into the development and was promoted in a 'home user guide' provided to all residents on arrival. Travel advisers were also funded from the i-travel York team to provide tailored travel advice for resident to encourage sustainable travel choices.

The car club is considered to be an important enabler to Derwenthorpe being a one-car per household neighbourhood. The car club is also used by residents of adjoining neighbourhoods. Originally one car club bay and vehicle was provided for residents. This has subsequently grown to seven vehicles and bays due to the success of the scheme. A recent survey found there was an average of 1.12 cars per household in the development and 12% of households did not own a car.

[More information about Derwenthorpe is available here.](#)

2. Increasing active travel to and from new developments

In addition to improving the design and infrastructure within the new development transport planners should also look at the impact beyond the boundaries of the site to ensure:

- a. Sustainable transport provision helps new residents travel to and from key destinations and services
- b. Existing routes and networks are improved to ensure increased capacity arising from a new development is built into urban transport planning.

There are a number of different tools available to assist planners develop cycle networks and routes that best serve people and prioritise where cycling will have the greatest uptake. Currently there are less tools available to assist with walking although often by planning cycling routes and networks and ensuring high quality design should facilitate increased walking along the same routes.

Tools to assist with route planning should plan for both the present and the future to account for new developments and rising population levels in local areas.

Local Cycling and Walking Infrastructure Plans

DfT has also published guidance for local bodies to develop Local Cycling and Walking Infrastructure Plans (LCWIPs).

LCWIPs are a new, strategic approach to identifying cycling and walking improvements required at the local level. They enable a long term approach to developing local cycling and walking networks, ideally over a 10 year period, and form a vital part of the Government's strategy to increase the number of trips made on foot or by cycle.

The Department for Transport is currently offering support for local bodies to develop LCWIPs.

National Propensity to Cycle Tool

The DfT's National Propensity to Cycle Tool (NPCT) has recently been developed. The interactive web based tool aims to help transport planners tasked with prioritising where to invest to best realise uptake of cycling. The model will not only provide insight into where cycling has the greatest potential to grow, but also calculate resulting societal benefits. The NPCT tool is based upon trip distance data and hilliness to estimate journeys that could be taken by bicycle.

The NPCT tool has two levels. For strategic regional planning there are four scenarios for cycling in different locations in the future:

- Go Dutch – assumes people in England has the same likelihood to cycle for commuter trips as for people in the Netherlands
- Electric – people also consider using E-bikes for longer and hillier trips
- The Government's target to Doubling cycling by 2025
- A future where women are just as likely to cycle as men in England

Secondly the NPCT can also be used at a smaller scale focusing on commuter cycling along a particular road to estimate future mode share for cycling and relocate space from less sustainable modes to cater for cycling growth. The tool suggests routes will be aligned to ensure:

- Shorter and more direct routes for cycling are possible
- High quality routes are planning with adequate separation from motor traffic where necessary

The tool will sit alongside a new version of the Impacts of Cycling Tool (ICT) which will incorporate regional estimates of benefits for cycling.

Together these tools are designed to help local transport planners to make the business case for cycling and where we should be focusing our cycling investment.

[More information about the NPCT is available here.](#)

Sustrans RATE Tool

In 2015 Sustrans developed the RATE tool to assist local transport planners objectively assess cycling and walking route proposals based on geographic and socio-demographic data. RATE can analyse existing proposals and determine where schemes could be developed to achieve the aim of increasing the number of everyday short trips made on foot or on bike. The RATE tool ranks and prioritises schemes based upon a variety of data including housing and employment density, education, public transport infrastructure, demographics and air quality data.

The RATE tool was originally developed in partnership with Merseytravel across the Liverpool City Region. Merseytravel had a number of potential schemes but no quantitative ability to prioritise them in order to submit transport proposals to the LEP for Local Growth Funding. Both existing and growth in employment and housing were incorporated into the model to account for spatial changes in housing and employment. The RATE tool analysed the proposed schemes against this information and prioritised where usage and need was greatest. This enabled Merseytravel to submit three years' worth of schemes now included in their Growth Fund package.

More information about RATE is available by contacting Martyn Brunt, Head of Mapping Services: martyn.brunt@sustrans.org.uk

Sustrans economic tools

The following tools from Sustrans can be found and downloaded in the Making the economic case toolkit:

- Strategic Investment Tool - calculates the typical impact and cost of an investment programme
- Infrastructure Impact Tool - estimates the impact, primarily in terms of increases in the number of cycle trips, of investments in specific types of cycling infrastructure
- Recreational Expenditure Model - estimates the economic benefit of recreational cycling in terms of the expenditure it contributes to the local economy

3. The integration of sustainable transport

Many journeys are composed of more than one mode of transport, especially longer journeys which can include multiple stages from door to door. It is therefore important to integrate sustainable transport modes including walking, cycling, bus and train travel in the context of new housing developments.

Local sustainable transport needs to play a greater role in enable people to reach major transport hubs efficiently to travel further afield. Public transport use can be maximised if infrastructure around commuter hubs is improved to enable better active travel and public transport transition.

3.1 Integration of walking and public transport

65% of rail journeys, for example include a walking stage¹² and people will walk up to 800m to get to a railway station¹³. Public transport interchanges form an important part of pedestrian networks because they allow people who walk to travel further by bus or by train. Bus stops should be easily accessible for people of all abilities and take into account issues, such as pedestrian desire lines and allowing sufficient space for waiting passengers and movement of pedestrians along the footway. Access to stations on foot “requires well sign-posted, high quality walking routes that are well lit, feel secure, are maintained properly and offer direct access from all directions in the surrounding area”¹⁴. Within the interchange clearly signing facilities, such as left luggage, seating, shops and toilets helps to create a more attractive and comfortable walking environment.

- giving people information about how they can access a station by sustainable means is vital
- the amount and quality of cycle parking at stations needs to keep pace with the rapid growth in cycling, ensuring cycle parking is secure and well-sited

Case study: Cambridge Cycle Point

Cambridge Cycle Point Opened in early 2016 and provides the largest safe cycle parking facility at any UK railway station.

Cambridge Cycle Point was modelled on European style cycle parking facilities and also features on-site maintenance, a cycle hire facility and a cycle shop. Cycle Point is run by Abellio and provides space for 2,850 bicycles over three floors protected by CCTV. It will be open 7 days each week from the first to the last trains of each day. All parking will be free of charge.

A Cycle Point is also located at Leeds railway station with capacity for 300 bicycles.

Greater Manchester has installed a network of similar hubs in many locations within the city centre including railway stations and office developments. The hubs have a paid for membership system, lockers, showers and swipecard entry access to ensure cycle safety.

[For more information about Cambridge Cycle Point.](#)

[For more information about Manchester's Cycle Hubs.](#)



This toolkit was written by Sustrans in partnership with Living Streets and The TAS Partnership. The toolkit was peer reviewed by the Town and Country Planning Association.

4. References

1. DfT, 2016. National Travel Survey, 2015 <https://www.gov.uk/government/statistics/national-travel-survey-2015>
2. National Travel Survey table nts0303 <https://www.gov.uk/government/statistical-data-sets/nts03-modal-comparisons>
3. DfT, 2007. Manual for Streets. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/341513/pdfmanforstreets.pdf
4. Gateshead Council (2013). Exemplar Neighbourhood Supplementary Planning Document <https://www.gateshead.gov.uk/DocumentLibrary/Building/PlanningPolicy/SPD/Exemplar-Neighbourhood-SPD---June-2013.pdf>
5. Sustrans Draft Design Manual Chapter 10, 2015. Cycling in new developments (Draft).
6. Berkeley Homes, 2016. 250 City Road <http://www.berkeleygroup.co.uk/new-homes/london/islington/250-city-road?userSearchID=4d01311f-d618-40d8-87d9-8fb65a479ec9>
7. Co.Exist, 2016. These Swedish “Bike Apartments” Are Designed For Life Without Cars. <https://www.fastcoexist.com/3063204/world-changing-ideas/these-swedish-bike-apartments-are-designed-for-life-without-cars>
8. Schrodgers, 2014. The end of the road: Has the developed world reached ‘peak car’? <http://www.schrodgers.com/en/SysGlobalAssets/digital/insights/pdfs/m-the-end-of-the-road.pdf>
9. Atkins, Interim Evaluation of the Implementation of 20 mph Speed Limits in Portsmouth. <http://webarchive.nationalarchives.gov.uk/+/http://www.dft.gov.uk/pgr/roadsafety/research/rsrr/theme4/interimeval20mphspeedlimits.pdf>
10. Mayor of London, 2016. The London Plan. <https://www.london.gov.uk/what-we-do/planning/london-plan>
11. CityLab, 2016. Why grocery store parking lots are disappearing in London. <http://www.citylab.com/housing/2016/05/london-is-replacing-parking-lots-with-apartments/482298/>
12. DfT, 2015. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/484929/nts-multistage.pdf
13. CIHT, 2015. Planning for Walking. <http://www.ciht.org.uk/en/document-summary/index.cfm/docid/082BEF1B-0FD2-44F4-90A0B31EB937899A>
14. Welsh Government (2014). ‘Design Guidance: Active Travel (Wales) Act 2013. Version 1.
15. Railway-technology.com 2016. DfT opens new southern entrance at Leeds Station <http://www.railway-technology.com/news/newsuk-dft-opens-new-southern-entrance-at-leeds-station-4770535>