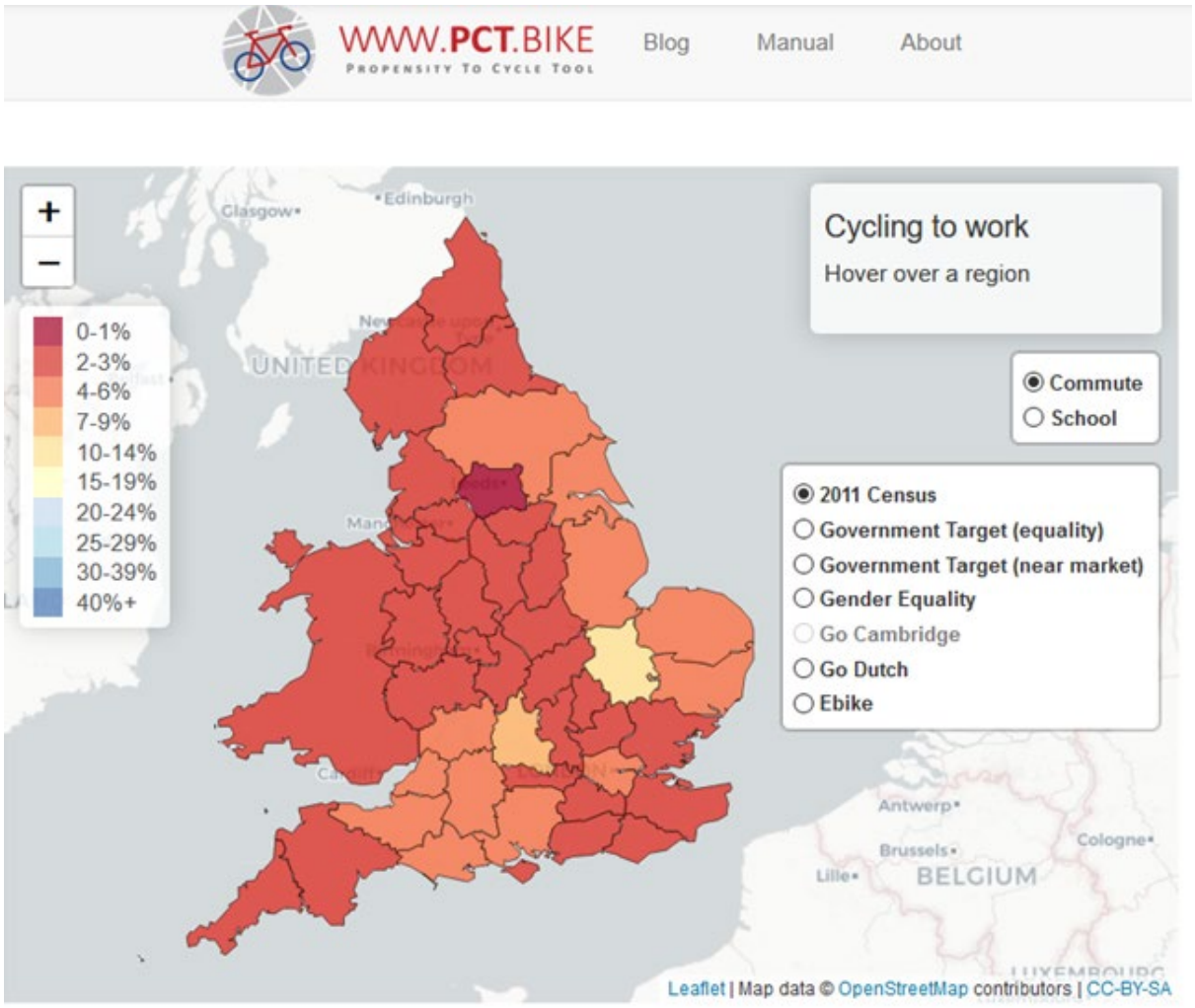
The Propensity to Cycle Tool:

Impact Report 2020



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Executive Summary

The Propensity to Cycle Tool (PCT) is an open source tool developed to support cycle infrastructure planning in England and Wales. The tool features in national guidance on cycling within England and Wales. It is now being used by 81 organisations and 108 documents have been found that have made use of the tool. The tool has been used both for providing an assessment of baseline cycling conditions in an area, as well as for predicting the potential for future cycling in an area, using a range of scenarios. The ‘Go Dutch’ scenario has seen the most increase in usage since the previous assessment.

The tool has been used in all regions of England to some degree, particularly within the south east, south west, the West Midlands and parts of the East of England. County Councils in Wales are yet to make use of the tool.

The tool’s most common usage has been for infrastructure planning and, in particular, to support the preparation of Local Cycling and Walking Infrastructure Plans (LCWIPs). The tool has also been used in support of funding applications and has been used in 15 successful funding bids, 11 for the Transforming Cities Fund and 4 for the Access Fund for Sustainable travel.

Introduction

This report assesses the current usage of the Propensity to Cycle Tool (PCT) as of July 2020 and its increase in usage since its development in 2017. It builds on a similar assessment that took place in June 2019 and highlights how the usage of the tool and its practical impact continues to grow.

The PCT was designed to assist transport planners and policy makers in England and Wales to prioritise investments and interventions to promote cycling and can be used to better understand the questions of:

- Where is cycling currently common?
- Where does cycling have the greatest potential to grow?

The tool can be used both as a strategic planning tool to identify future visions of an area through various scenarios of change. It can also be used at a smaller scale to explore the potential for cycling uplift on a specific corridor, for example.

The PCT is an open source, freely available tool, with data downloads available in a range of formats and source code accessible on GitHub. The PCT provides estimates of cycling potential under a range of scenarios of cycling growth, initially for commuting but more recently (in England) also for travel to school. Cycling potential is calculated, visualised, and made available for download at area, desire line, route, and route network levels. This allows cycle planning based not just on existing (usually low) levels of cycling, but on an estimate of future potential.

Organisations have used demographic tools and data, such as ACORN or MOSAIC, to look at propensities to use different modes of transport. There was, however, a clear pre-PCT demand for more detailed spatial data and for information about cycling potential as well as propensity - in other words, to understand better the potential for cycling to grow, as well as places and people among which cycling is currently high. The PCT is distinctive in that most scenarios focus on trip characteristics: distance and hilliness, which in both low- and high-cycling contexts prove to be strong determinants of cycling, while demographic predictors vary widely by context.

About the Search

This report is based on a desktop review of documents published on the web referencing and making use of the PCT for decision making. The search was conducted during June and July 2020 and primarily focused on searching for the term “propensity to cycle” alongside authority names. In some instances, further searching was required where usage of the tool was less explicit, to give an accurate reflection of how it is currently being used. A specific search for funding applications using the tool yielded two additional results.

The aim of the search was to compile a comprehensive list of authorities that have been using the tool to influence their work, and to better understand where it is being used, as well as how and by whom.

This type of search should give an indication of usage of the PCT and how this has changed. It will not, however, find instances where the tool has been used but not noted in a report, or where indexing means that a reference is not picked up via an online search. This therefore risks under-representing usage. Conversely the tool's usage may be over-represented in some instances, where it is referred to in a document but may not have had significant influence on the output, although an assessment of the relevant documents has been completed to avoid this where possible.

A set of case studies at the end of this document seeks to address this by providing more detailed information on a small range of cases where the tool has been used comprehensible and to help to better understand its current and potential usage, as well as its impact.

Levels of Impact

81 organisations have made use of the tool in some way, within 108 documents. Out of these 81 organisations, 57 of these are combined authorities, unitary authorities and County Councils, all of which have transport planning powers. The remaining 24 organisations are made up of District Councils, town council and charitable organisations as well as national transport bodies. This is an increase from a previous assessment in 2019, which found 86 documents across 61 organisations. When considering those authorities within a County or Combined Authority that have used the tool, the tool has had an impact on a further 84 authorities that are within their remits, meaning the tool has influenced 165 organisations across England and Wales in total.
WIthin England, County Councils and unitary authorities are classed as strategic transport authorities that have the responsibility for transport planning in their area. Since 2009, legislation has been in place that allows multiple authorities to collaborate and form a combined authority. This enables them to make collective decisions and offers the potential to streamline decision making at a regional level. At present in England, there are ten combined authorities across the country, all consisting of unitary authorities. Many have also set up a separate transport executive body for transport planning. Within Wales, all Counties and County Borough councils are required to plan and implement transport strategies for their areas.

All combined authorities in England apart from Cambridgeshire and Peterborough show some evidence of having made use of the PCT. Within the combined authorities, the tool has been used to support the development of a range of transport plans, including Cycling and Walking strategies and LCWIPs. In the north of England, the North East and North of Tyne combined authorities have collaborated on a transport funding bid, using the tool to support this.

At the regional County level in England, usage of the tool is more mixed. Out of the 25 County Councils in Englands, just 11 have been found to have made use of the PCT, predominantly for a mix of cycling and walking strategies and for funding bids. Some district authorities within these 11 counties have also used the tool for more localised infrastructure planning. There are two district authorities (Mole Valley and Harrogate) where the tool has been used to inform plans in spite of the tool not having been used at the county level.

In Wales, the tool is referred to in national guidance but County or County Borough councils did not refer to its use.

In addition to statutory authorities, the PCT has also had some use by other organisations and groups. Town Councils are civil parishes in England that sit below the district level. Two examples have been found of its usage by town councils (Faversham and Sandbach) with the aim of influencing transport planning at the county level. Faversham Town Council used the PCT within their 20s Plenty Feasibility Study, which is now being implemented on trial basis within the town by Kent County Council. Sandbach Town Council used the PCT to demonstrate the Strategic Cycles routes within the town with the intention of influencing Cheshire East's transport plans.

The tool was used by a charity (Derwent Valley Trust), campaigning for a new leisure-based cycle route between Derby and Matlock. Ham and Petersham neighbourhood forum, in Richmond, west London have used the tool to help support a cycling feasibility study. This links to their approved neighbourhood plan and an understanding of a need to focus more on the theme of 'active neighbourhoods' and active travel. The South Downs National Park Authority has used the tool to support them with future route planning through the park.

Note that Figure 1 shows low usage of the PCT within Greater London. This is to be expected, as London has a suite of transport planning tools that are substantially more advanced than those available at a national level to all authorities. For instance, Transport for London has produced London-specific analysis of both walking and cycling potential, which are similar to PCT in concept but make use more detailed spatial data available on all purpose travel behaviour in London.

Regional Impact

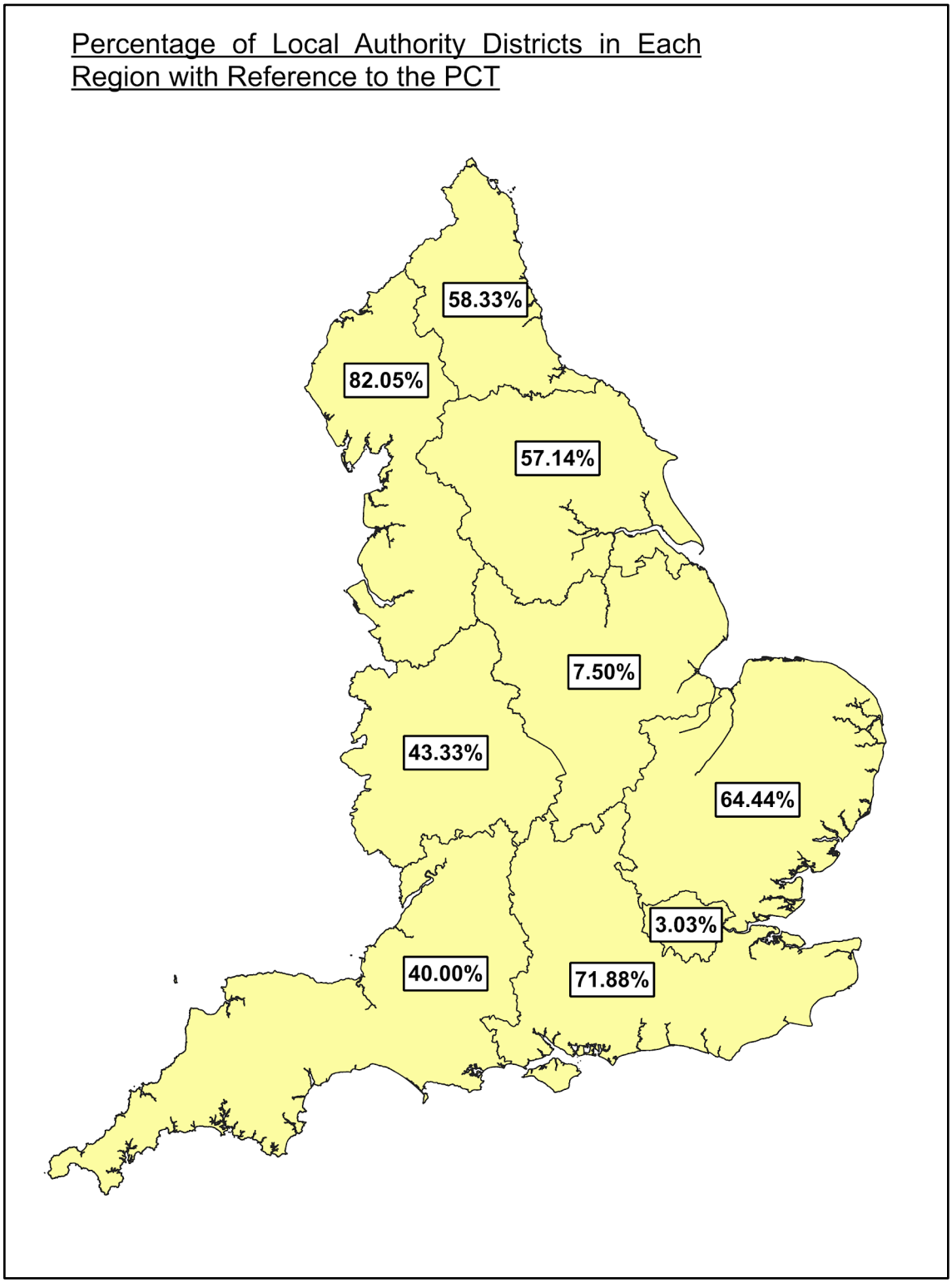
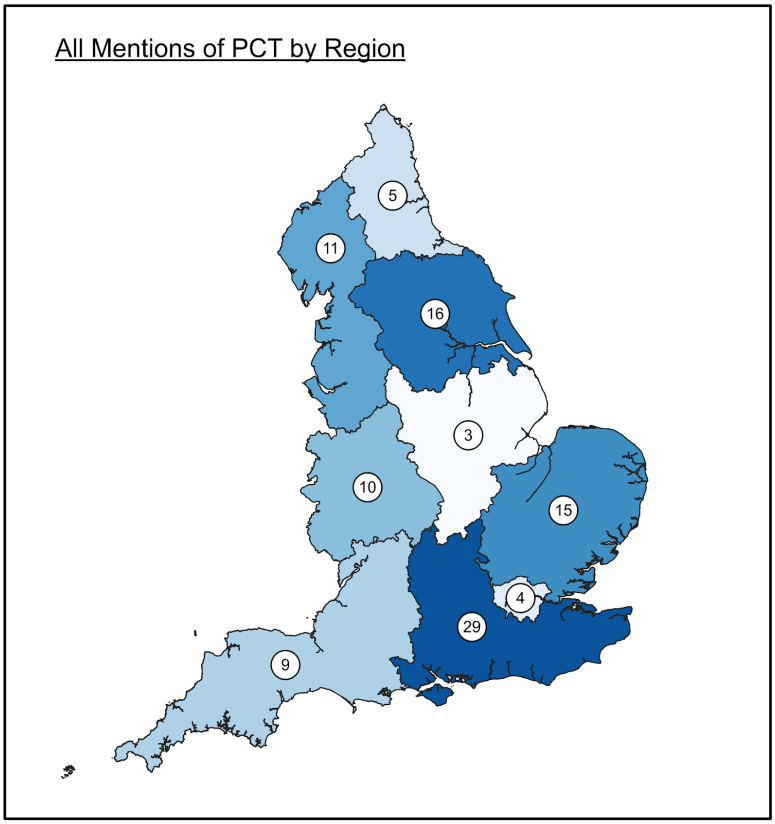


Figure 1: Map indicating the percentage of Local Authorities with remit over transport planning in each region that have used the PCT.

The tool has had varied usage across the regions in England, with most use being seen within the south east, south west, West Midlands and parts of the east of England.

North East

The PCT has had relatively minimal usage in the region and its main use has been to support funding applications to the Transforming Cities Fund by the two combined authorities of North East and North of Tyne. These two authorities incorporate the whole of the region. Northumberland (County) Council have also used the tool within a public health report. There has been no use of the tool for cycling strategies or plans.



North West

Within the North West, there has been a wide number of uses in most of the region apart from Cumbria. The two combined authorities of Liverpool City Region and Greater Manchester have used the tool to support their walking and cycling strategies. Trafford Borough Council within the Greater Manchester Combined Authority has also begun to use the tool to support its own cycling and walking strategy work.

At the county level, Lancashire County Council has also used the tool in its walking and cycling strategy. Within Lancashire, Preston has also used the tool as part of its city plan.

Four other unitary authorities within the region (Blackburn with Darwen, Blackpool, Cheshire East, Warrington) have used the tool to support their cycling and walking strategies.

Figure 2: Map indicating number of mentions of the PCT by region

Yorkshire and the Humber

Within this region, the West Yorkshire Combined Authority has produced LCWIPs individually for all five of its metropolitan districts and used the tool within these. They have also used the PCT to influence a scheme of canal towpath improvements and a funding application.

Sheffield City Region Combined Authority has used the tool in applications for funding, and Sheffield City Council and Barnsley within this area have also used the tool within their transport strategy.

Outside of the combined authority areas, three other authorities (East Riding, Harrogate, North East Lincolnshire) have used the tool within their transport planning. Aside from Harrogate, there has been no further use of the tool within North Yorkshire county or the unitary authorities of City of York and Hull City.

East Midlands

In the East Midlands, there has been a minimal use of the PCT for transport strategy planning. The only reference to the PCT is within funding applications for the Transforming Cities Fund, within which three of the unitary authorities in the region (Derby, Leicester and Nottingham) have referred to it. No usage of the PCT was found within the four counties within the East Midlands or their linked districts.

West Midlands

Within the West Midlands, the tool has been used most substantively within the West Midlands Combined Authority area. The West Midlands Combined Authority have produced a number of plans and reports in relation to cycling that use the tool to varying degrees. Three of the metropolitan authorities within the combined authority (Birmingham, Dudley, Solihull) have also used the tool for their own cycling and walking strategies.

Warwickshire County Council also uses the tool as part of a business case for investing in cycling.

The unitary authority of Stoke on Trent has also used the tool to support a funding application. Outside of these examples, there is no use of the tool within Worcestershire or Staffordshire or any further use of the tool for infrastructure planning in Warwickshire or the 15 district authorities that make up these three counties.

East of England

There is varying use of the PCT across the East of England region. Within Essex, Essex County Council have commissioned Cycling Action Plans for each of the 12 Boroughs within the region, and three of these incorporate use of the PCT.

Hertfordshire County Council have prepared a Local Transport Plan that references the PCT and covers all Boroughs within the County. Two Boroughs within Hertfordshire (Broxbourne and Stevenage) have developed LCWIPs and utilise the PCT within these. Hertsmere Borough also uses the PCT within its Infrastructure Delivery Plan

There has been less use of the PCT in Norfolk, with it used by Norfolk County Council in support of two funding applications. Similarly, in Suffolk, use of the PCT has been in two separate funding applications. Bedford and Luton unitary authorities have also used the PCT to support funding applications.

Thurrock Council, a unitary authority, has not made use of the PCT in its transport planning but has used it as part of the Joint Strategic Needs Assessment in relation to tackling obesity in the area.

Cambridgeshire and Peterborough Combined Authority is located within this region and is the only combined authority not to demonstrate any use of the tool.

South East

There are no combined authorities that fall within the South East region. There is limited use of the tool at the county level with only West Sussex and East Sussex having used it to support cycling infrastructure planning. Within Kent, Kent County Council have used the tool to predict the future demand of a new cycle route along the A26 and two of the district authorities within Kent have made use of the tool for infrastructure planning (Ashford, Folkestone and Hythe).

Hampshire County Council have made use of the tool for a number of funding applications, collaborating on these with the unitary authorities of Portsmouth City Council, Southampton City Council and Isle of Wight Council. Portsmouth City Council have also used the tool in relation to air quality appraisals.

Within Hertfordshire, the tool has been used by four district authorities for infrastructure planning (Broxbourne, East Hertfordshire, Hertsmere, Stevenage) and has also been used by the County Council in their local transport plan. Within Surrey, the tool has been used by two district authorities (Guildford, Mole Valley) but no use of the tool at the County level was found.

Many of the unitary authorities in the region have used the tool to support the development of their cycling and walking plans, and out of 19 unitary authorities in the region, only four have not used the tool. The South Downs National Park Authority has also made use of the tool.

No use of the tool has been found in the county of Oxfordshire or the districts within it.

South West

Within the South West, the West of England combined authority has used the PCT to help to develop a cycling and walking plan for the area as has Gloucestershire County Council. Somerset County Council has used the PCT less extensively, only being used to provide a business case for a new cycling scheme near Taunton. Devon County Council have also used the PCT to develop cycle infrastructure plans for Exeter. Outside of these specific schemes, however, no use of the PCT was found in the rest of Devon and Somerset.

Four unitary authorities and one district authority within the region have made use of the tool to varying degrees, both in relation to transport strategies and funding applications. The other eight unitary authorities in the region have not used the tool.

London

Use of the PCT across London is minimal, with just one out of 33 authorities using the tool. This is because Transport for London does its own cycling potential analysis. Lambeth Council has used the PCT to help prepare their transport strategy.

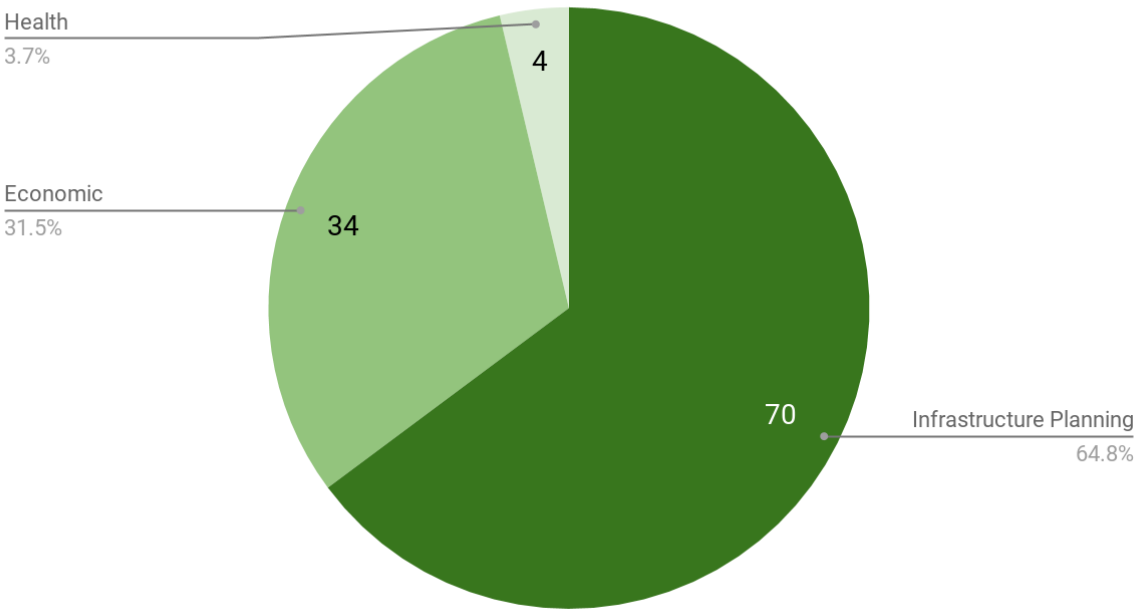
Wales

The only use of the tool in Wales was found at the national level, where it is referenced as part of guidance to local authorities as a data source that could be used for cycle infrastructure planning.

Types of Usage

The tool has been used predominantly for infrastructure planning; it is also used for economic appraisals, to support funding bids, and in supporting wider public health assessments.

Figure 3: Types of usage



Infrastructure Planning

The PCT was designed to support cycle infrastructure route planning, so it is unsurprising that most of its use is in specific relation to infrastructure planning. Most documents found that used the PCT were strategies or reports relating to infrastructure planning in some form. In total, 70 documents were found that used the PCT for some form of cycle infrastructure planning.

Local Cycling and Walking Infrastructure Plans (LCWIPs) are a strategic approach to identifying cycling and walking improvements at the local level in England, as set out in the Department for Transport's 2017 Cycling and Walking Investment Strategy. There was frequent use of the PCT found in preparation of LCWIPs. In some instances, the tool was referenced in finalised LCWIPs but there was also evidence found in the earlier stages of LCWIP preparation, either in a draft version or in a scoping of evidence base stage. Outside of LCWIPs and broader area cycling strategies, the tool has been used for more specific and focused infrastructure planning, such as the Rochdale Canal towpath, and the Theale railway station upgrade.

The impact of the PCT on this large range of documents is difficult to measure, but it is clear that the tool has had an influence and impact on cycle route planning by helping organisations to better understand those routes that have the most potential for cycling. This, in turn, has helped to support them in planning for these new potential routes.

Organisations vary in how they have developed their cycling strategies and plans, with some providing quite specific details on route planning and delivery, and others taking a broader approach. In many instances of infrastructure planning, authorities provide detailed action plans for future infrastructure based on the work that they have done on future route planning, using the tool. This is often supported with estimated or planned investment in future cycling

infrastructure. With most LCWIPs being in the relatively early stages of implementation, it has not been possible to measure any impact as yet in terms of physical infrastructure changes as a result of using the tool within these strategies. It is hoped that this is something that will be possible to do in the future.

Economic Appraisal & Funding

The PCT has been used to support 20 distinct funding bids to both the Access Fund for Sustainable Travel, and the recently granted Transforming Cities Fund. In total the PCT has been used in 15 successful bids that have secured nearly £80m[1] in funding. The most notable use of the PCT in this context has been in its use in bids for the Transforming Cities Fund. 11 out of the 12 successful bids for Tranche 1 used the tool. In 6 cases these bids used the PCT to provide and visualise baseline data for the bids. The majority (7) of these bids also utilised the Go Dutch scenario to make the case for additional investment in infrastructure and in some cases to calculate the economic benefit of such an increase in cycling to the region in question.

Preliminary figures for successful Tranche 2 funding from the Transforming Cities Fund have been announced (Transport Xtra 2020). Although at the time of writing not all funding has been allocated, 6 out of the 10 published proposals for Tranche 2 found during the search have used the PCT. A further 3 of those bids used the PCT in their Tranche 1 bid but not Tranche 2. This could be due to the specific nature of the projects bid for in Tranche 2.

The PCT has been used in a number of other formal economic appraisal documents. In these cases the PCT was used to estimate the impact of increased cycling on a number of economic indicators and in turn to estimate the benefit cost ratios for proposed projects. Somerset Council's proposal to develop cycling infrastructure along the M5 to a new employment hub is an example of this approach.

Health

Two instances have also been found of the tool being used to support wider public health assessments. In both Thurrock Council and Northumberland County Council, the PCT has been used within a discussion of the importance of active travel for health. Portsmouth City Council have also used the tool to help understand impact on air quality if mode shift is achieved through their LCWIP.

Scenarios Used

A number of scenarios have been developed within the PCT, which enable organisations to view cycling potential based on specific criteria for both commuting trips and travel to school. The baseline Census 2011 data enables organisations to view existing cycle levels in their area with regard to either commuting or travel to school. In addition to this, the currently available scenarios in relation to commuting trips are Government Target (equality), Government Target (near market), Gender Equality, Go Dutch, and E-bikes. For travel to

[1] This only includes Tranche 1 Funding from the Transforming Cities Fund, as Tranche 2 funding has not been finalised.

school, the scenarios available to use are Government Target (equality), Go Dutch and Go Cambridge.

The Government Target scenarios represent a doubling in the level of cycling. In the two variations of this, Government Target (equality) models this increase as occurring across all commuters based on trip distance and hilliness (without regard to any socio-demographic characteristics), whereas Government target (near market) models this increase as also occurring based on certain socio-demographic characteristics that are currently associated with cycling propensity.

Gender Equality illustrates the increase in cycling that would result if women were as likely as men to cycle specific trips (between each origin-destination pair).

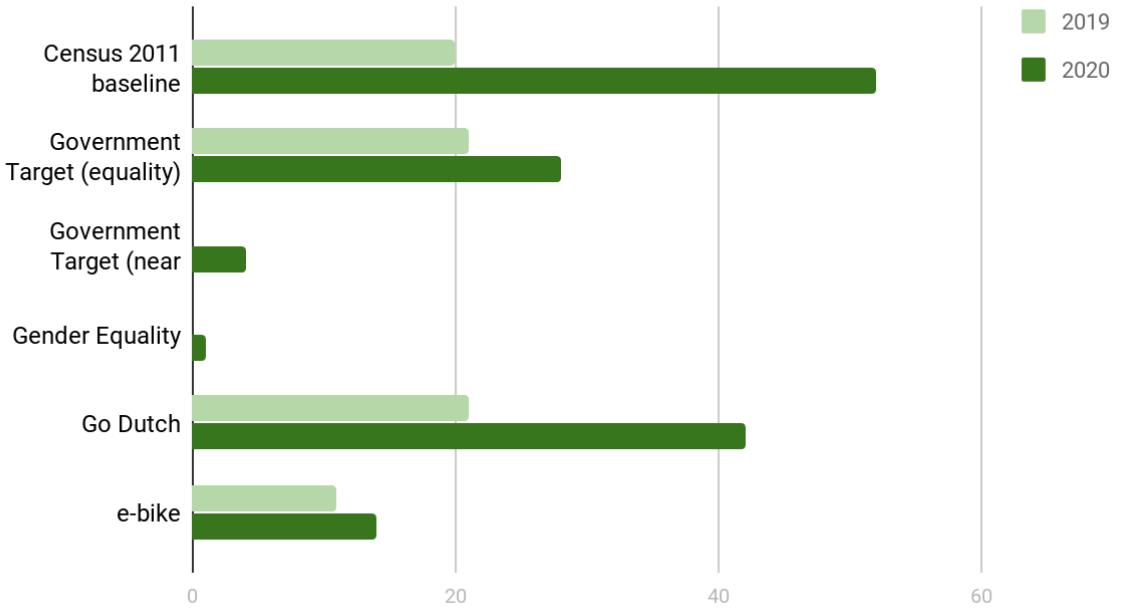
The Go Dutch scenario represents what would happen if people were as likely to cycle as the Dutch based both on trip distance and hilliness, and the E-bikes scenario models the additional increase in cycling that could be achieved through the widespread uptake of e-bikes (on top of Go Dutch). For travel to school, the Go Cambridge scenario represents the potential for cycling if children were as likely to cycle to school as those in Cambridge, based on trip distance and trip hilliness.

Approximately one third of the documents reviewed (34) made no specific references to the data or the scenarios used. It may be that they did make detailed use of the tool, but this detail was not provided in the documents reviewed. Of those documents that did refer in more detail to using the tool, 52 of these referred to the Census 2011 baseline data.

The most commonly used scenario was Go Dutch, which was used by 42 of the documents reviewed. Of these, 15 also referred to the Government Target (equality) scenario. It is positive to find that a wide number of documents are using the Go Dutch data given the ambitious nature of this scenario. All of the examples that used the E-bike scenario also used the Go Dutch scenario, suggesting that where there is interest in seeing significant increases in cycling, then the use of E-bikes is also a consideration.

The Government Target (equality) scenario was used 28 times. The newer Government target (near market) was used just four times, and Gender Equality was used once.

Figure 4: Commuting scenarios used



This usage of the scenarios demonstrates that organisations are using the PCT for visualising a range of future scenarios as well as using it to help them to understand baseline cycling levels. The usage of the tool has grown since 2019, particularly the use of the Go Dutch scenario.

The travel to school data is a newer addition to the tool and was used in three of the documents reviewed. Only one of these documents (Aylesbury Garden Town LCWIP) modelled potential increase in cycling to school, using the Go Dutch scenario.

Case Studies

Figure 5: Map indicating Case Studies used in this report

Ham and Petersham Neighbourhood Forum: ***Cycling and Walking Feasibility Study (2018)***

Ham and Petersham is located within the London Borough of Richmond upon Thames in West London. This cycling and walking feasibility study was commissioned by the Ham and Petersham Neighbourhood Forum to support the vision for a safe and coherent walking and cycling environment as set out in their neighbourhood plan. Peter Jones Associates prepared the study and used the government's guidance on LCWIPs. The study makes recommendations for a complete cycling network for Ham and Petersham in the London Borough of Richmond, including suggested infrastructure treatments and indicative costs.

The PCT is used in the study to show the existing proportion of commuters cycling to work in the neighbourhood, as well as the existing commuter flows across the route network and whether or not the routes are faster or quieter. It then uses four of the scenarios within the tool (Government target, Gender Equality, Go Dutch, e-bikes) to forecast demand for both fast and slow routes.

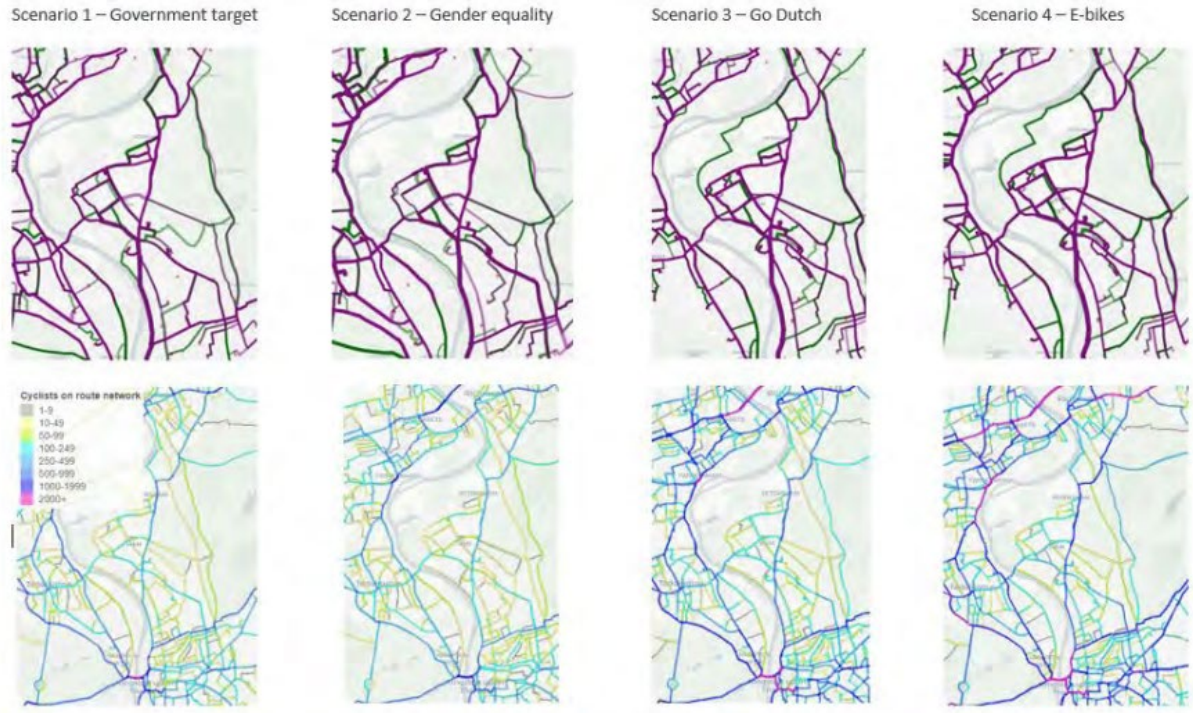


Figure 6: Forecasted demand for fast and slow routes (LSOA) from Ham and Petersham Cycling Feasibility Study (page 13)

The study combines the use of the PCT with other assessments of the neighbourhood to develop recommendations for a complete cycling network for Ham and Petersham, including suggested infrastructure treatments and indicative costs.

Buckinghamshire Council: *Aylesbury Garden Town LCWIP*

This LCWIP was commissioned by Buckinghamshire County Council and prepared by Jacobs, to support the Aylesbury Transport Strategy and Aylesbury Garden Town masterplan. Aylesbury was awarded garden town status in 2017, and the aim of the document is to detail how the town can evolve as part of the garden town programme, to provide high quality walking and cycling routes that are accessible to all.

The LCWIP demonstrates an extensive use of the PCT to analyse existing use patterns and identify key corridors for future plans. It uses the tool to provide a picture of current cycling to work patterns within the town, and uses the Government target scenario to understand on which routes there is potential for cycling to increase and where new, more direct routes may be beneficial. The report also uses the 'Go Dutch' scenario to highlight where there is further potential for increases in cycling and notes that orbital connections surrounding the town are important, using the tool to help to understand where there are currently gaps in existing infrastructure.

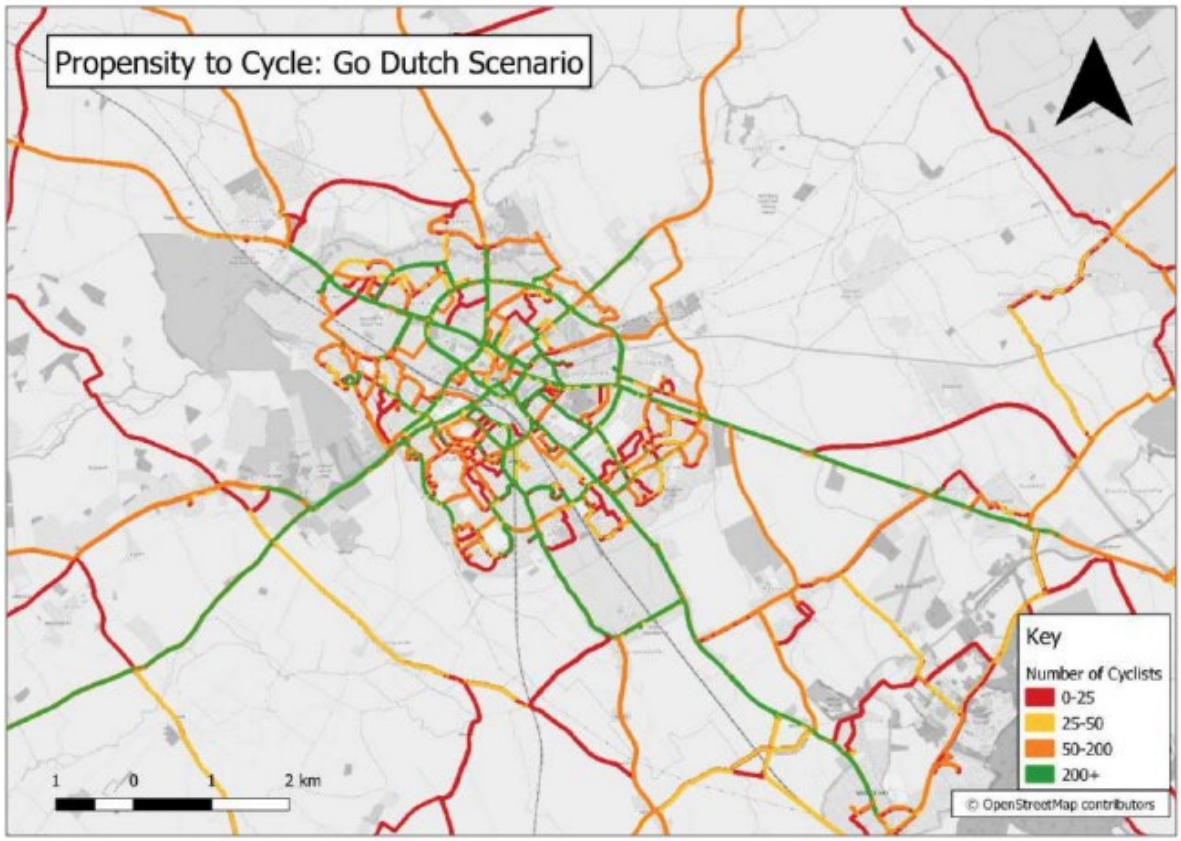


Figure 7: Propensity to Cycle: Go Dutch Scenario from Aylesbury Garden Town LCWIP (page 30)

This LCWIP also makes use of the schools layer within the PCT and assess the potential for school trips by bike, using the 'Go Dutch' scenario and identifying a key route that could help to support future increased levels of walking and cycling.

The use of the tool helps to highlight that the greatest number of cyclists exist on the town centre route and radial connecting routes to the town centre. It shows that there is potential for an increase in cyclists both within the town centre and on orbital routes surrounding the town centre, as well as certain radial routes. The document uses this information to create 'the Ayesbury Wheel', which helps to visually display the radial connections to key origin and desigionation areas as well as those potential future orbital links. It then proposes specific route improvements that could be implemented to deliver this vision.

Figure 8: Emerging cycling network plan, the Aylesbury Wheel from Aylesbury Garden Town LCWIP (page 4)

The document shows a good understanding of some of the limitations of the tool and notes that PCT outputs should be conducted alongside other sources of information to give a balanced view.

The Aylesbury Garden Town masterplan (2020) references the LCWIP and the recommendations within it. It highlights the importance of being able to demonstrate a worked-through set of priorities for attracting investment.

Devon County Council/ Exeter Cycling Campaign: *Living streets for Exeter*

Exeter Cycling Campaign were invited by Devon County Council to propose modal filtering solutions for Exeter and produced, from this, the document title 'Living Streets for Exeter.' The report used the PCT to help to show what an area-wide example of modal filtering and increased cycling levels might look like. Taking one part of the city, the PCT has been used to better understand what existing start/destination journeys are used for cycling in this locality. It also uses the PCT to model the potential for an increase in cycling, based on the Go Dutch and e-bike scenarios. It finds potential to increase cycling by 18-23% in the Go Dutch scenario and 40% in the e-bike scenario.

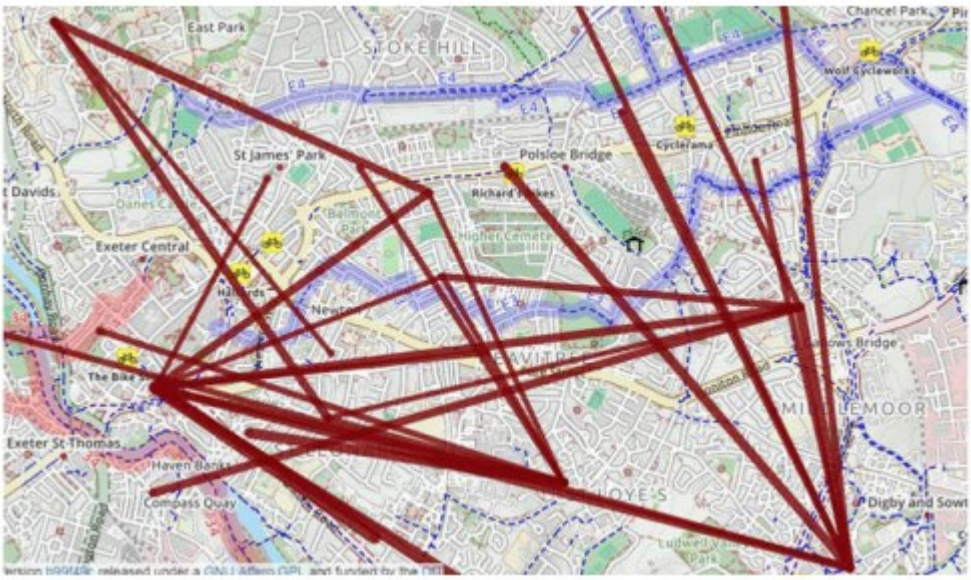


Figure 9: the 30 most heavily used cycle commuting journeys using the PCT 2011 Census data from Living Streets for Exeter (page 14)

The report uses the information from the PCT on start/destination journeys to estimate which routes cyclists currently use within the area and highlights these as primary cycle desired routes that need to be preserved and improved for cycling. The report supplements the data from the PCT with cycle desire lines data from survey work, Strava heat maps and mapping of existing dedicated cycling routes. This range of data sources has then been brought together to identify a number of potential modal filter points that are predicted to have the most impact on cyclability within the city area.

A number of 'quick fix' solutions have also been proposed in the report that are felt to be relatively easy to implement, but these appear to rely on the data from user surveys rather than that of the PCT.

Gloucestershire County Council: ***Central Severn Vale Cycling and Walking Infrastructure Plan***

This Local Cycling and Walking Infrastructure Plan (LCWIP) for Central Severn Vale includes the communities of Cheltenham, Gloucester, Churchdown and Bishop's Cleeve. This is an LCWIP that focuses on a specific region of the county with two large towns in close proximity to each other, rather than covering an entire council authority. The PCT has been used to outline the existing cycle use in the area for commuting based on 2011 Census figures, both at a broad area level and also at a route level.

The plan uses the PCT to estimate the potential for future cycling flows using the 'Go Dutch' scenario in the PCT. In the initial analysis the Go Dutch scenario is used on the route network level (as indicated in the figure below) to estimate where on the current road network these commutes would take place. The report also attempts to model the specific routes with the most potential. The 'Go Dutch' routing analysis map shows the strong potential for several strategic corridors within the wider Cheltenham and Gloucester area.

The report goes on to identify and audit potential cycling routes that connect key destinations, reflecting the connections emphasised in the 'Go Dutch' scenario. These routes comprise sections of the proposed Gloucestershire Countywide Cycleway. As indicated in Figure 13, the one of the primary links that was ultimately identified is between the urban centres of Gloucester and Cheltenham, with more radial routes out to surrounding suburban and village centres.

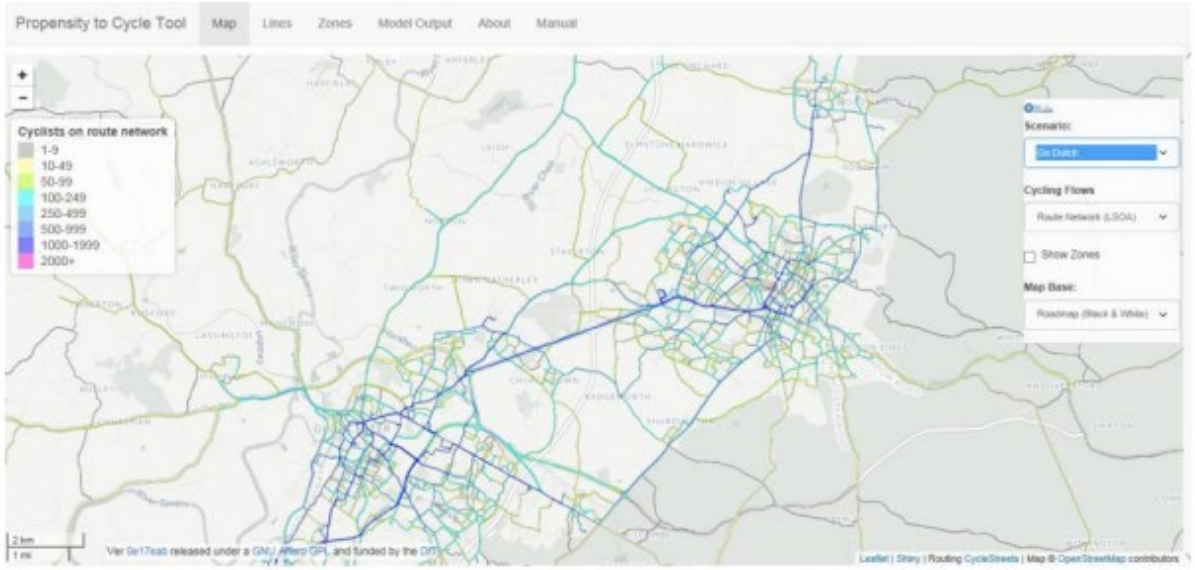


Figure 10: Potential cycling flows in the 'Go Dutch' scenario from Central Severn Vale LCWIP (page 32)

Isle of Wight Council: *Local Cycling and Walking Infrastructure Plan - Isle of Wight (Newport and Ryde) 2020-2030*

This Local Cycling and Walking Infrastructure Plan covers the towns of Newport and Ryde on the Isle of Wight and was published in 2020. The plan uses the PCT to calculate the proportion of commuters in each area with a fast route commute distance of less than 10km, and notes that the average proportion across all zones within the Isle of Wight is 58%, though notably higher than this around the main settlements.

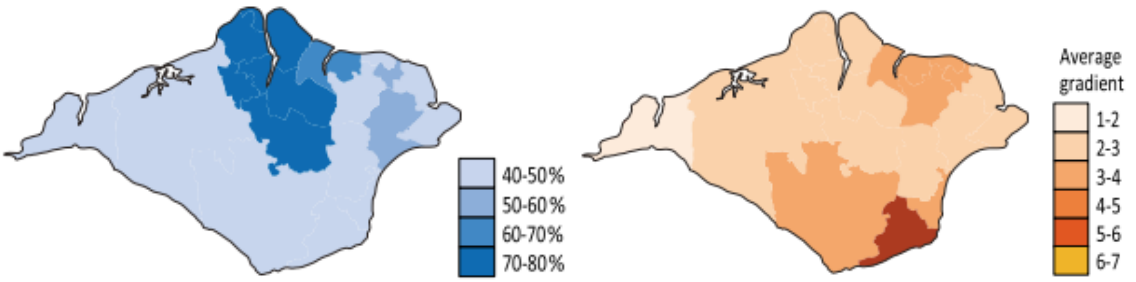


Figure 11 & 12: Proportion of commuters with a fast route commute distance less than 10km; the average hilliness of commute trips less than 10km from LCWIP Isle of Wight (Newport and Ryde) (page 9)

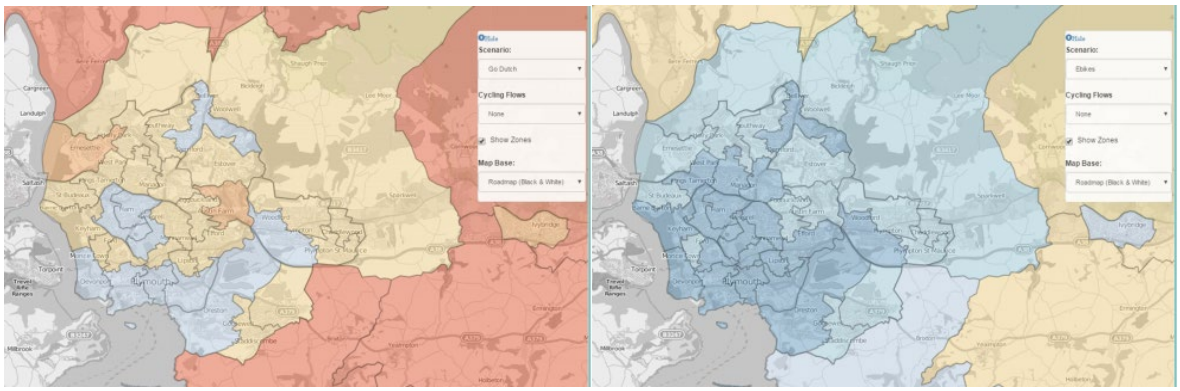
It also uses the tool to highlight what the proportions of cycling would look like based on Government Target scenarios. Using the Go Dutch scenario, the top desire lines for cycling are also identified. The plan notes that these desire line corridors were then mapped to the network and verified by key stakeholders, to create a list of proposed routes. Following the identification of routes, a route auditing process took place.

The outcome of this work is that a Provisional Network Plan for Cycling has been developed consisting of 16 routes in total across the two settlements.

Plymouth City, South Hams District & West Devon Borough Councils

In 2017 Plymouth City Council, South Hams District Council and West Devon Borough Council produced a joint local plan. As part of this process WSP Consultants were engaged to produce a report on the baseline local transport conditions. The authors of this report assessed the current network for active travel and alongside the potential for future development of sustainable travel methods. The PCT was used in this context to demonstrate what the Go Dutch and E-Bike scenarios would mean for regional cycle commuting.

Comparing these scenarios, the authors identified that the proliferation of E-Bikes would potentially lead to large regional shifts towards cycle commuting. This use of the PCT focused specifically on the urban fringe of Plymouth and what ambitious provision could mean in terms of intra-regional and inter-authority cycle commuting as opposed to specifically urban cycling. This area-level focus is potentially the result of the collaborative nature of the report, where multiple co-located authorities are sharing the responsibility for producing a local plan. This potentially highlights the use of the PCT, and especially the more ambitious scenarios such as E-Bikes, for more inter-authority and area level analyses. In the report's concluding passages it was recommended that in order to increase active mode use in the area, investment be targeted in the corridors towards the areas of the urban fringe identified in the scenarios used previously in the report.



Figures 13 & 14: Indicating the Go Dutch (left) and E-Bike (right) scenarios for Plymouth and surrounding areas (page 75)

Portsmouth City Council Local Air Quality Plan

Portsmouth City Council is currently developing a LCWIP. However, alongside and integrated in this process the Council have also been developing a Local Air Quality Plan. The broad approach to this plan has been stipulated by the guidelines developed by Central Government's Joint Air Quality Unit.

Although the full report has not yet been published, the PCT is cited in a number of its supporting documents that have been made public. It is clear in the initial business case that the plan is anchored by a proposed Clean Air Zone that would introduce a charge for polluting vehicles (although this would not include cars). One of the additional solutions identified by Portsmouth City Council, however, is to support mode shift from motorised vehicles to active modes, partially through the improvement of cycling infrastructure provision. The stated goal is to increase cycle commuting in order to encourage an antecedent decrease in motor vehicle congestion - particularly important as passenger cars will not be included in the Clean Air Zone.

Much of the expected impact of active travel initiatives on the Air Quality of Portsmouth are attributed to the emerging LCWIP. What is novel in this case is the extent to which these two plans are integrated and the use of the PCT in tying the extent of one into the impacts of the other. In the context of traffic modelling, this was done by taking the PCT assumptions of growth in cycle traffic from the LCWIP and modelling them as lapsed motor journeys to understand their impact on wider traffic flows and by extension, Air Quality. Using the same estimates for new cycling trips, the PCT also contributed to an economic appraisal of the Air Quality plan produced by Atkins consultants. Using the PCT in conjunction with the DfT's Active Modes Appraisal Toolkit. This outlined the economic benefits that a switch to active modes would provide with most benefits attributed to the public health effects of any mode-shift to cycling.

The focus of the analysis was on routes with particularly poor air quality, using the PCT to estimate likely baseline flows of cyclists. The purpose of this was to understand how an increased provision for cycling would impact the air quality of these routes due to a decrease in car trips. They do not state which scenario, if any, was used to reach this conclusion, rather that the PCT was used to estimate the impact of improved infrastructure provision on flows along these specific routes, in order to model them as lapsed car trips.

Reading Borough Council LCWIP: 2020-2030

In the Reading LCWIP, developed in conjunction with West Berkshire and Wokingham councils, it is stated that the PCT was used in the network-level route planning stage of the planning process. This is a welcome change as this stage comes after the information gathering phase, in which many other councils have focused their use of the PCT. For the authors of the Reading LCWIP it appears that the route planning tools that the PCT provides were of particular importance.

The exact usage of the PCT in route planning is not extensively analysed. However, it appears that the authors used the tool to understand desire lines from the origin/destination pairs based on Census data and then compared these common desire lines with the route level data from the Go Dutch scenario. This comparison was used to identify key corridors between suburban areas and Reading town centre.

The PCT was also cited as a source for the prioritisation of the routes in terms of stages of development and allocation of funding. Alongside other metrics available to the council the PCT was mentioned as a source in the calculation used to estimate the future flows of proposed infrastructure on the network and thus their urgency.

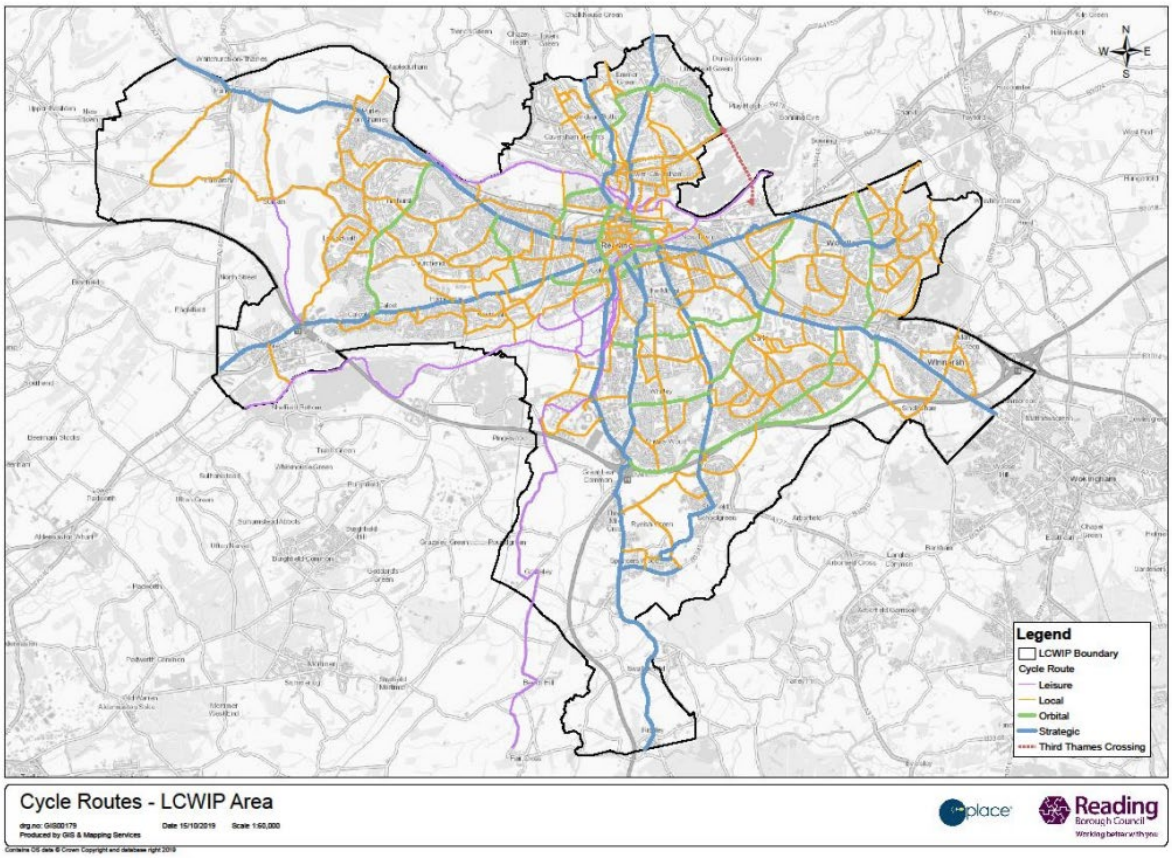


Figure 15: Indicating the proposed cycle network for Reading and surrounding areas based on the corridors identified using the PCT (page 31)

Stevenage Borough Council LCWIP

Stevenage Borough Council's LCWIP was developed through funding provided by the Department for Transport's pilot LCWIP fund. Stevenage is a non-Metropolitan District Authority within Hertfordshire, so does not have direct remit over transport planning. As a result this document is written in collaboration with officers from Hertfordshire County Council. Stevenage is a notable site for the development of an LCWIP as historically it has a high level of cycling provision but low cycling uptake (3% mode share). As a New Town it has a compact and planned built form, but also extensive road provision for motor vehicles meaning there is little in the way of congestion-related 'push' towards active modes for convenience.

The authors of the plan used the PCT to analyse firstly the current distribution of cycling in the borough. This followed a predictable pattern where cycling was more prevalent in the centre of the town where existing provision and short distances make it convenient. The subsequent analysis of Government Target and Go Dutch scenarios revealed that Stevenage has a very high propensity to cycle. The Go Dutch scenario in particular indicates a potential for 17%-21% mode share.

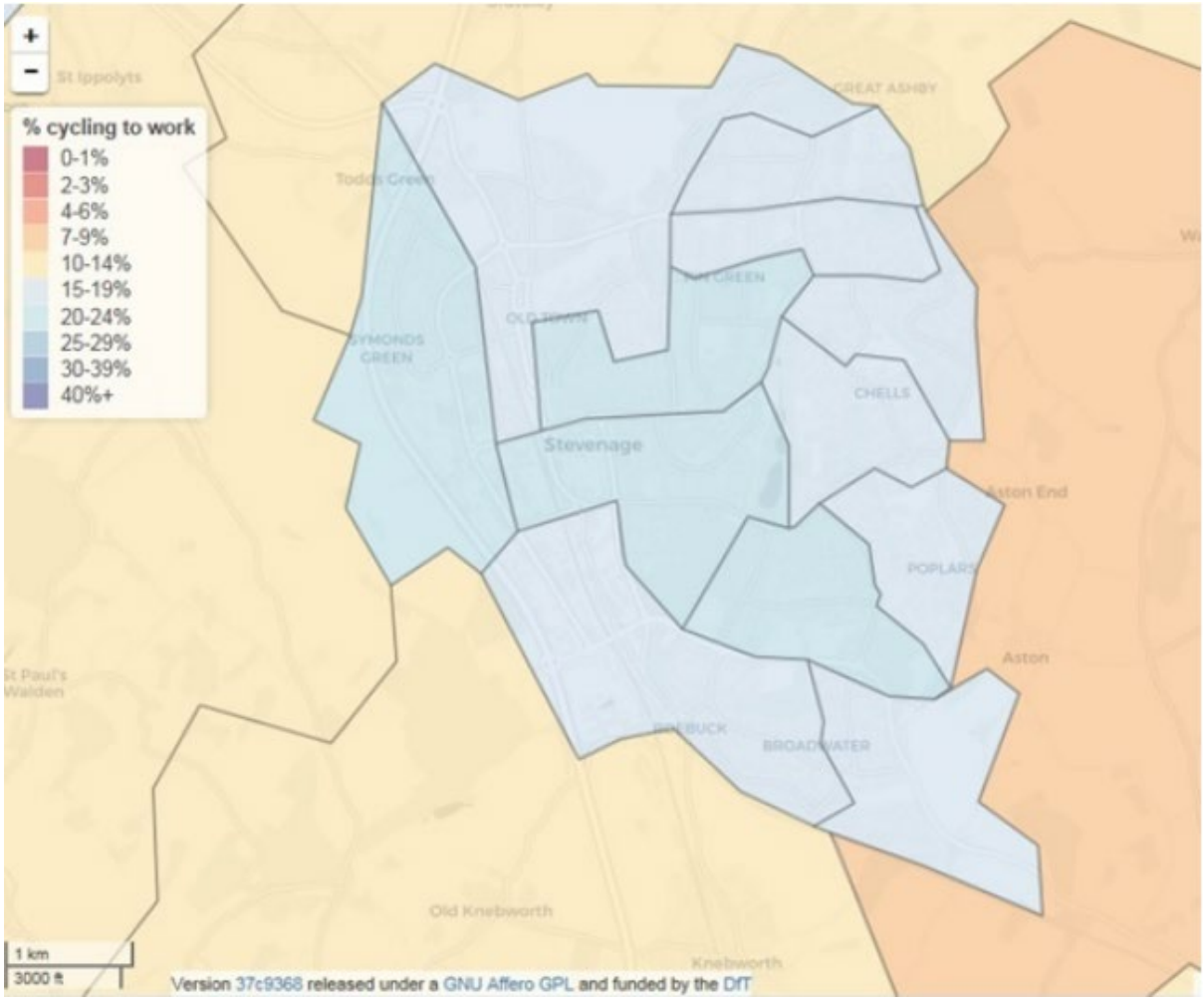


Figure 16: showing the Go Dutch Scenario for Stevenage (page 10)

The initial area-based analysis using the PCT around the borough's propensity to cycle has supported a wider consideration within the LCWIP of how existing infrastructure can link to new infrastructure along both current and potential desire lines. This involved the analysis of popular destinations using the PCT data and the clustering of desire lines from the 'Go Dutch'

scenario. This has included analysis of future development within the borough and how that may affect future cycle flows. These approaches were considered and combined into a proposed route plan. This plan seeks to update and extend the existing network infrastructure taking into account current and projected flows based on both data provided by the PCT and the council's own planning data, indicating the distribution of future development.

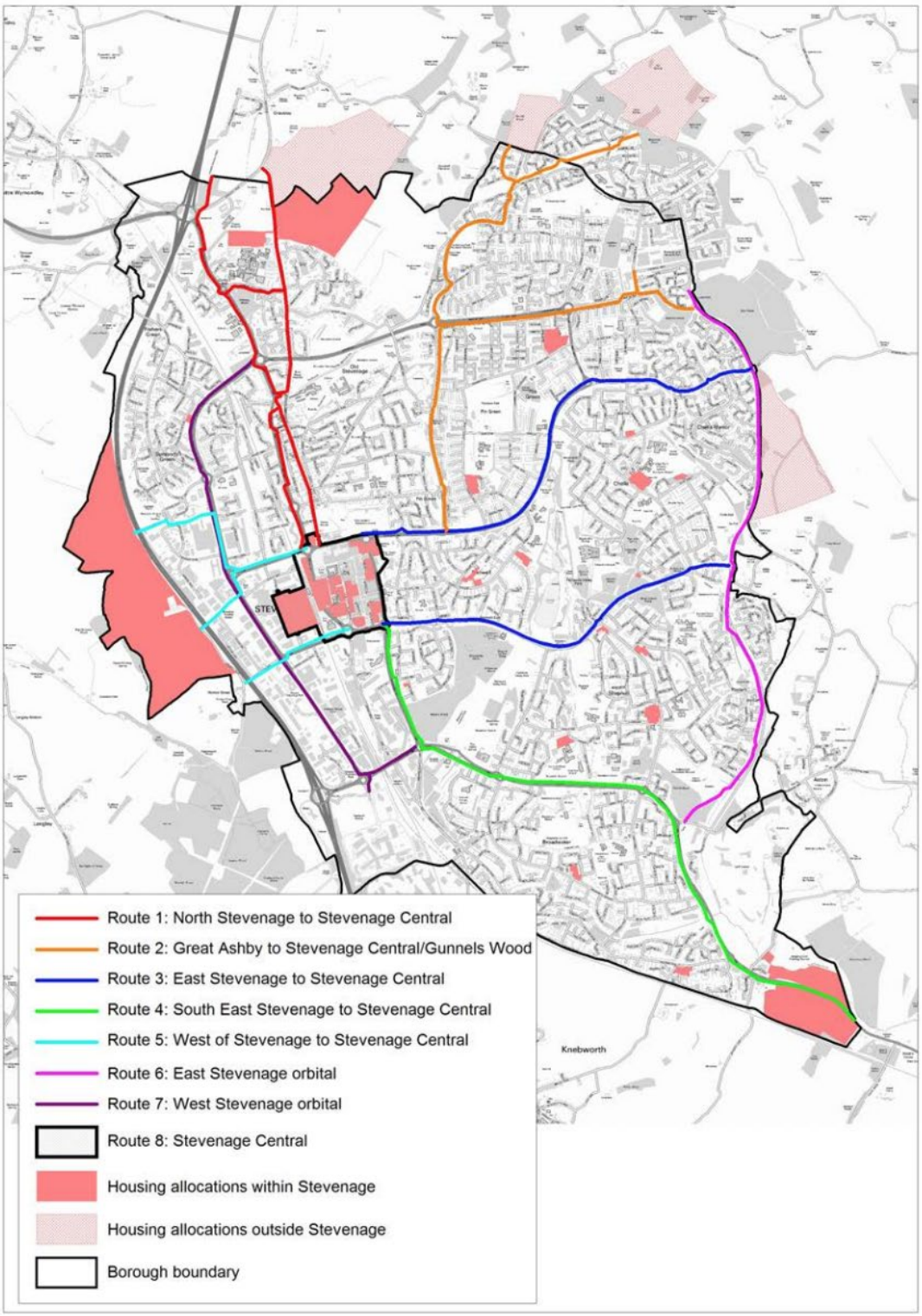


Figure 17: Showing the proposed cycle route network for Stevenage (page 28)

Warrington Borough Council Draft LCWIP

With a single occupancy vehicle mode share of 74% for commuting, Warrington's LCWIP (currently in draft form) is responding to the problems of a particularly car-dependent region. It is also quite an ambitious plan, commensurate with the scale of the problem in the city. The PCT is referenced throughout the LCWIP. The central thrust of the PCT's use within the draft plan is firstly in the analysis of the current distribution of cycle commuting within Warrington and secondly in identifying corridors for more detailed route planning.

The use of the tool for analysis of the current propensity to cycle within the borough is cautious and shows awareness of the limitations of the PCT in this context. The authors acknowledge that multi-modal trips and students travelling to school or college are not counted. Also acknowledged are the issues presented by the low numbers of cyclists currently represented in the Census 2011 data. However the process for identifying corridors relies on the Top-20 LSOA origin destination pairs which presents a potentially distorted view of total cycle commuting in Warrington.

Nevertheless, in the LCWIP the issue of Warrington's current propensity to cycle is taken seriously. The PCT data is here used within the context of Sport England's Active Lives survey and wider census mode share data. It is concluded that although few people cycle for their commute, there is a significant amount of infrequent utilitarian and leisure cycling in Warrington. The PCT data was also used to demonstrate that many motor vehicle commute trips are within a cycleable distance, especially closer to the town centre, and that the topography in much of the borough is suitable for cycling. The net conclusion from this analysis of the existing local conditions for cycling is that Warrington has a high propensity for cycling despite its current car dependency.

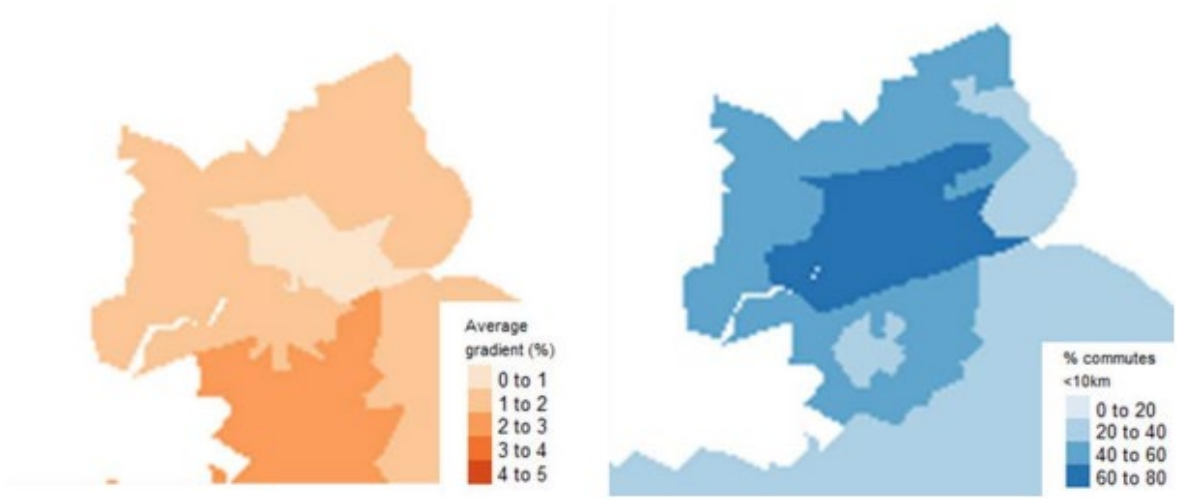


Figure 18: A demonstration of the use of the PCT data to visualise the spatial distribution of an area's topography and commute distance information (page 29)

This observation contextualises the scale and ambition of the strategic infrastructure plan that the LCWIP proposes for cycling. Here too the PCT was used, with the 'Go Dutch' scenario identifying the initial corridors in the planning process. These corridors were then analysed in relation to the distribution of existing and planned trip generators, including a soon to be built business park on the edge of town, to help identify more specific routes from these corridors. As other authorities have also emphasised in their LCWIPs, the Warrington authors

emphasise that the ‘Go Dutch’ Scenario relies on the provision of high-quality segregated infrastructure.

Conclusion

There has been an encouraging growth in use of the PCT since the previous analysis of usage in 2019. It has been used in all regions of England to some degree, with Southern England, the West Midlands and parts of the East of England seeing the most usage. Although the Welsh Government have supported the use of the tool within national guidance, usage by the Welsh County Councils was not yet found.

The tool has been used most significantly for infrastructure planning and, in particular, to support the development of LCWIPs. It has also seen significant usage within funding bids and has played a role in many successful funding bids for cycling infrastructure across England. A further application has been in economic assessments of schemes and strategies.

The use of the tool to provide baseline cycling data is the most common usage of the tool that was found. Although the use of the various scenarios within the PCT has grown since 2019, there is still potential for further growth in their usage, which would ensure that organisations are getting the most out of the tool and the insights that it can provide. Scenarios based around travel to school data have also had limited amounts of usage compared to the commuting data.

Many of the organisations that were found to reference and use the tool did not specify exactly how they used it or what their findings were. Although it may be that detailed analysis was completed but not reported on, it seems likely that use was limited in some cases. There is therefore potential in the future to encourage organisations to use the tool to its full potential and to provide more training and guidance to organisations to help to support them in doing this.

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