Dover District Audits

Sandwich

March 2020

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

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1.0	First Issue	HB	LD	08/04/2020

Contents

† Image Sourced from Google Street View

Introduction

Description of the Area and History

Sandwich is located in the south east of England, on the east coast of Kent. It sits in the River Stour estuary and is a historic port.

Sandwich is 'one of the best preserved medieval towns in England'[1] and one of the 'Cinque Ports', a historic group of coastal ports in Kent, Sussex and Essex[2]. In medieval times and before, Sandwich was a main Kent and UK port until silt build-up in the River Stour made it no longer accessible by ships or large boats.[3]

As well as medieval architecture, including Grade I listed structures (such as the Fisher Gate, which dates back to 1384[4]), Sandwich boasts a rich history. The Port of Sandwich has had geographical significance since the Roman invasions[5] (around 664 AD), when there was most likely a settlement at the site of what is now called Sandwich, due to its close proximity to Richborough Roman Fort (Rutupiae).[6] Sandwich has remained a key gateway to trade, transit and settlement throughout the ages, including mass settlement of a large Flemish population under Elizabeth I (1561), accounting for much of its architectural style.

'The name of the town is, most likely, Saxon in origin, approximately meaning sandy place, or the place on the sand.'[7] Centuries later, the town's fourth Earl, John Montagu, became known for requesting his meals served between two pieces of bread, to allow him to continue playing cards without stopping to pick up cutlery.[8] In recounting this, English MP and historian, Edward Gibbon, coined the term 'Sandwich' to describe the popular food (1762). The town was also home to political activist and philosopher, Thomas Paine (1737-1809)[9], and its Guildhall Museum houses original copies of Magna Carta and the Charter of the Forest from 1300[10].

Sandwich is also known for its wildlife and habitats, with the Monk's Wall nature reserve and bird observatory at Sandwich Bay[11], and the 15 acre Gazen Salts Nature Reserve on the edge of the town[12].

Economy

Until 2011, an integral part of Sandwich's economy was Pfizer UK, the British subsidiary of the transnational pharmaceutical company. Pfizer built a research and development centre to the North of Sandwich (adjoining NCN 15), which employed over 3,000 people. The facility was closed in 2011 and the site is now a business park, called the Discovery Park Enterprise Zone.

Sandwich is part of the District of Dover (within the County of Kent), along with Deal and Dover. The Cycle Friendly Deal report gives a comprehensive account of the district's recent socio-economic background:

> 'Historically the area has received its fair share of economic blows including the demise of the coal mining industry in the latter half of the twentieth century followed by the retreat of the Royal Marines (1996) and then the abandonment of the pharmaceutical giant Pfizer at the turn of the 21st century. No major inward investment has occurred to counter these losses. These disinvestments have altered the area's economic demographics. Of the population, 57% are 16-64 and 26% are 65 or over.'[13]

The above figures differ markedly for those observed for the UK as a whole. In 2017, 62.9% of the UK population was aged between 16 to 64 and 18.2% were aged 65 years and older.[14]

The sectors which continue to thrive include hospitality, retail, health and education; sources for which are the 2011 census and the 2017 'Economic Impact of Tourism Report', which show 6% of the working population employed in hospitality.

Transport

The 2011 Census shows high car ownership in Sandwich, with 46.2% of households owning one car/van and 35.7% owning two or more (both higher than the Dover District average), compared to 18.1% of households without a car/van.[15] 2011 Census data show that in 2011, driving was substantially the most popular mode for commuting to work, with an average of 66% commuting via car, compared to 3.1% cycling and 13.9% on foot.

However, the Southeastern Railway High Speed Javelin Service (which serves, Sandwich and Deal, among others) was not in existence in 2011, therefore its impact it not represented in the most recent data available. The assumption is that it would increase the proportion of people commuting by train.

Despite the A256 running along the west side of Sandwich, there are no A-roads within the town itself; probably due to its narrow, medieval streets. In light of this, one might expect Sandwich's roads to be reasonable quiet, however, onsite observations showed that this was not the case and that there were frequent vehicle movements around the town. Detailed traffic counts were not available for this report, however, Census data shows that, in 2011, most of the working population commuted by car/van; 35% were commuting between 10 and 20km to get to work and 26.5% were travelling to work within the town (this would seem to align with the Dover Cycling Strategy of 2008, which estimated that 25% of all car journeys were less than 2 miles, at that time.[15] While we don't know the ratio of distance travelled to car use for work, this data goes some way to explain the car dominance on Sandwich's streets; along with its draw to visitors, its high car ownership and its ageing population.

Policy

The Department of Transport's 'Cycling and Walking Investment Strategy' commits to supporting walking and cycling infrastructure projects. The Kent Active Travel Strategy and its 2018/19 Action Plan is a further framework for activities and initiatives that encourage and facilitate active travel within the Dover District. It includes integration of active travel into planning, provision and maintenance of appropriate routes for active travel, and support for active travel within communities.

Unlike neighbouring Deal, Sandwich has produced its own cycling and walking strategy, however, tourism office staff cite the importance of these activities for residents and visitors alike, the need for clearer wayfinding on NCN routes through the town (responding to multiple reports of cyclists finding the current signage confusing), and more accurate mapping and wayfinding for the River Stour Trail, leading East to the coast.

Strengths and Opportunities

Sandwich has great potential to become an exemplar town for walking and cycling. Its strengths, both in terms geography and liveability, create opportunities for many interventions that are reasonably easy to deliver and generate significant impact. Existing strengths and opportunities include:

- Sandwich is a small town with many residents living within a short distance from amenities and services. In addition to the compact size of the town, its topography is mostly flat, therefore, many local trips could be made on foot or by bicycle.
- There are good bus and train links between Sandwich and other towns, with the train station and bus stops located in close proximity to the majority of residents; accessible on foot or cycle.
- The town is well connected, with a comprehensive interconnected road network linking neighbourhoods across the urban area.
- There are numerous schools in the area, presenting an opportunity for behaviour change work around the school commute and a need for quality walking and cycling routes that enable active travel to school.
- As explored above, tourism and retail are key to the town's economy. Sandwich is a fascinating town to visit. With its wealth of history and unique attractions, it draw visitors from far and wide. NCN1 and NCN15 already bring visiting cycle

1 http://www.visitsandwich.co.uk/
2 https://en.wikisource.org/wiki/1911_Encyclop%C3%A6dia_Britannica/Cinque_Ports
3 open-sandwich.co.uk
4 *Historic England*. *National Heritage List for England*. *Retrieved 2 April 2010.*
5 http://news.bbc.co.uk/1/hi/england/kent/7648033.stm
6 open-sandwich.co.uk
7 open-sandwich.co.uk
8 https://www.bbc.co.uk/news/uk-england-kent-18010424
9 http://www.open-sandwich.co.uk/town_history/scrapbook/thomas_paine.htm
10 http://www.stuff.co.nz/travel/destinations/uk-and-ireland/66399757/how-a-longlost-magna-carta-was-found-in-a-british-town
11 http://www.sbbot.org.uk/
12 https://web.archive.org/web/20110511094345/http://www.breathingplaces.org/public/place_by_name/Gazen-Salts-Nature-Reserve?id=28154
13 *Cycle Friendly Deal,* 2017, p. 10
14 Source: Overview of the UK population: November 2018 (via https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/articles/overviewoftheukpopulation/november2018)
15 Kent Highway Services, *Promoting Cycling in the Dover District,* 2008, p. 5 https://www.kent.gov.uk/__data/assets/pdf_file/0005/7862/Dover-cycling-strategy.pdf

† Image Sourced from Google Street View

tourers and visitors from neighbouring towns. Further improvements to cycling and walking routes could attract more visits and enable further tourism and commerce within the town.

- The town has a significant older community, who would benefit from opportunities for physical and social accessibility. Such as, connecting care homes to shops and key amenities, improving footways to facilitate mobility aids, adapted cycles and people with mobility challenges, and investment in leisure routes.
- The medieval street network lends itself to pedestrian movements. However, over time, priority has shifted toward vehicles, creating conflict with visitors exploring the narrow, historic streets on foot and residents popping to the local shops. Fortunately, the town has retained so much of its medieval layout, architecture and character that there is scope to re-prioritise pedestrians and, in doing so, create a uniquely pleasant public realm - befitting of a medieval town centre and akin to other medieval towns across Europe.

Barriers to Cycling and Walking

- A lack of dedicated cycling and walking routes to key destinations throughout the town, including schools, tourist attractions and local amenities.
- High volumes of traffic.
- Low levels of service for pedestrians across the town, e.g. poor quality footways and crossings.
- Physical barriers on existing cycle and walking paths, e.g. bollards and chicanes.
- Lack of bound surfaces on existing footways and cycle paths
- Limited or no traffic and/or parking restrictions on residential streets.
- A lack of secure cycle parking.

Area Wide Recommendations

In addition to route specific recommendations presented in this report, the following town-wide recommendations are suggested:

- Investigate removing through-traffic on residential roads.
- Reduce speed limits to 20mph throughout the town and remove centreline on carriageways.
- Remove physical barriers (such as chicanes and bollards) on cycling and walking routes.
- Implement School Streets outside schools where possible (timed closures of the road outside a school during drop-off and pick-up, Monday to Friday in term time).
- Create school zones around schools, providing safe crossings, reduced parking and high quality walking and cycling routes from local residential areas.
- Collaborate with developers and Dover District Council / Kent County Council to ensure new developments provide for and prioritise walking and cycling, and connect to existing walking and cycling networks.
- Review signage and improve wayfinding on all walking and cycling routes.
- A town-wide behaviour change programme to reduce car use, delivered in partnership with schools and local businesses.
- Conduct a collaborative design programme, which partners with local community groups and individuals, in order to explore the liveability of local space.
- Discover local perceptions of the town and collaborate with a broad range of residents to re-imagine their surroundings as accessible, enjoyable and appealing places, with opportunities for play, activity, connection and social cohesion.
- Pedestrianise central Sandwich (where footways are too narrow for pedestrians) and re-focus the medieval centre to prioritise people on foot, cycle or mobility aid.
- Conduct Equality Audits of the streets of Sandwich, in which footways and crossings are assessed according to their accessibility for people with limited mobility.
- Respond to Equality Audits by widening footways, removing unessential street furniture, improving surfacing, etc.
- Where shared use paths are designated, ensure ideal width of 3m, minimum width of 2.5m, as per Sustrans traffic-free routes design guidance[14]
- Review accessibility of bus stops

14 https://www.sustrans.org.uk/for-professionals/infrastructure/sustrans-traffic-free-routes-and-greenways-design-guide/

Case Studies

In addition to the Government's Cycling and Walking Investment Strategy, a number of local authorities and devolved administrations have published their own strategies for increasing levels of walking and cycling and some of these are summarised below, together with a few practical examples.

London Cycling Design Standards

The Mayor of London has set out his vision for cycling and his aim to make London a 'cyclised' city. Building high quality infrastructure to transform the experience of cycling in London and to get more people cycling is one of several components in making this happen. This means delivering to consistently higher standards across London, learning from the design of successful, well used cycling infrastructure and improving substantially on what has been done before. It means planning for growth in cycling and making better, safer streets and places for all.

The six core design outcomes, which together describe what good design for cycling should achieve, are: Safety, Directness, Comfort, Coherence, Attractiveness and Adaptability.

Adaptability is a measure in the Cycling Level of Service assessment matrix, with scores given against the following factors:

- Public Transport Integration
- Flexibility
- Growth enabled

The key point here is that provision must not only match existing demand, but must also allow for large increases in cycling.

Quietway 2, Margery Street

Greater Manchester: Made to Move

The goal in Manchester is to double and then double again cycling in Greater Manchester and make walking the natural choice for as many short trips as possible. The intention is to do this by putting people first, creating world class streets for walking, building one of the world's best cycle networks, and creating a genuine culture of cycling and walking. According to the 2011 Census, the proportion of commuters who cycled to work in Greater Manchester was 2.2%.

To make the vision a reality, the aim is to create dedicated networks for walking and cycling. This means building segregated cycling routes on main roads and through junctions supported by traffic-calmed cycling routes. It also means improving the quality of the public realm and better wayfinding to make walking short journeys much easier. The key actions being undertaken are listed below.

Taking action

1. Publish a detailed, Greater Manchester-wide walking and cycling infrastructure plan in collaboration with districts.
2. Establish a ring-fenced, 10 year, £1.5 billion infrastructure fund, starting with a short term Active Streets Fund to kick-start delivery for walking and cycling. With over 700 miles of main corridors connecting across Greater Manchester, this is the scale of network being aimed for.
3. Develop a new, total highway design guide and sign up to the Global Street Design Guide.
4. Deliver temporary street improvements to trial new schemes for local communities.
5. Ensure all upcoming public realm and infrastructure investments, alongside all related policy programmes, have walking and cycling integrated at the development stage.
6. Develop a mechanism to capture and share the value of future health benefits derived from changing how we move.
7. Work with industry to find alternatives to heavy freight and reduce excess lorry and van travel in urban areas.

Cycling Action Plan for Scotland

Scotland's plan is that a shared national vision for a 10% modal share of everyday journeys by bike is being targeted, with a related clear aspiration for reduction in car use, especially for short journeys, by both national and local government. They state that a long term increase in sustained funding is required, with year-on-year increases over time towards a 10% allocation of national and council transport budgets as are currently being achieved in Edinburgh. The primary investment focus is on enabling cycling through changing the physical environment for short journeys to enable anyone to cycle.

There is commitment to a shared vision of 10% of everyday journeys by 2020 by bike, and positively promoting modal shift away from vehicle journeys which will over time reduce car use for local trips.

At its meeting on 9 February 2012, Edinburgh City Council committed to spend 5% of its 2012/13 transport budgets (capital and revenue) on projects to encourage cycling as a mode of transport in the city, and that this proportion should increase by 1% annually. This funding would be used to support the delivery of the Active Travel Action Plan (ATAP). In 2010, the Council approved its ATAP, which seeks to build on the high level of walking in Edinburgh and the growing role of cycling. It set targets of 10% of all trips and 15% of journeys to work by bike by 2020. These targets are incorporated in the Local Transport Strategy.

South West City Way, Glasgow

From 2014 to 2016, the estimated number of cycling trips on the route of the South West City Way increased by 70%, from 115,450 trips by bike in 2014 to 195,800 in 2016. In 2016, cycling trips made up 22% of all estimated trips on the route. An estimated 43.5% of journeys made on the South West City Way in 2016 were journeys to or from work.

Before

After

† Image Sourced from Google Street View

Old Shoreham Road

Brighton and Hove City Council reallocated road space on Old Shoreham Road in 2012 and introduced "hybrid" cycle lanes, with low-level kerbs separating bicycles from motor vehicles and from the footway. The improvements also included:

- Full segregation for cyclists from motor vehicles, achieved by providing a low kerb edge
- Improvements to side road junctions to make crossing the road easier for pedestrians and people with mobility problems.
- Shared areas for cyclists and pedestrians at bus stops.
- A new zebra crossing across Old Shoreham Road at Chanctonbury Road.

Old Shoreham Road, Hove

Bike Life

Sustrans 2017 Bike Life report is the UK's biggest assessment of cycling in seven major cities: Belfast, Bristol, Edinburgh, Birmingham, Cardiff, Greater Manchester and Newcastle.

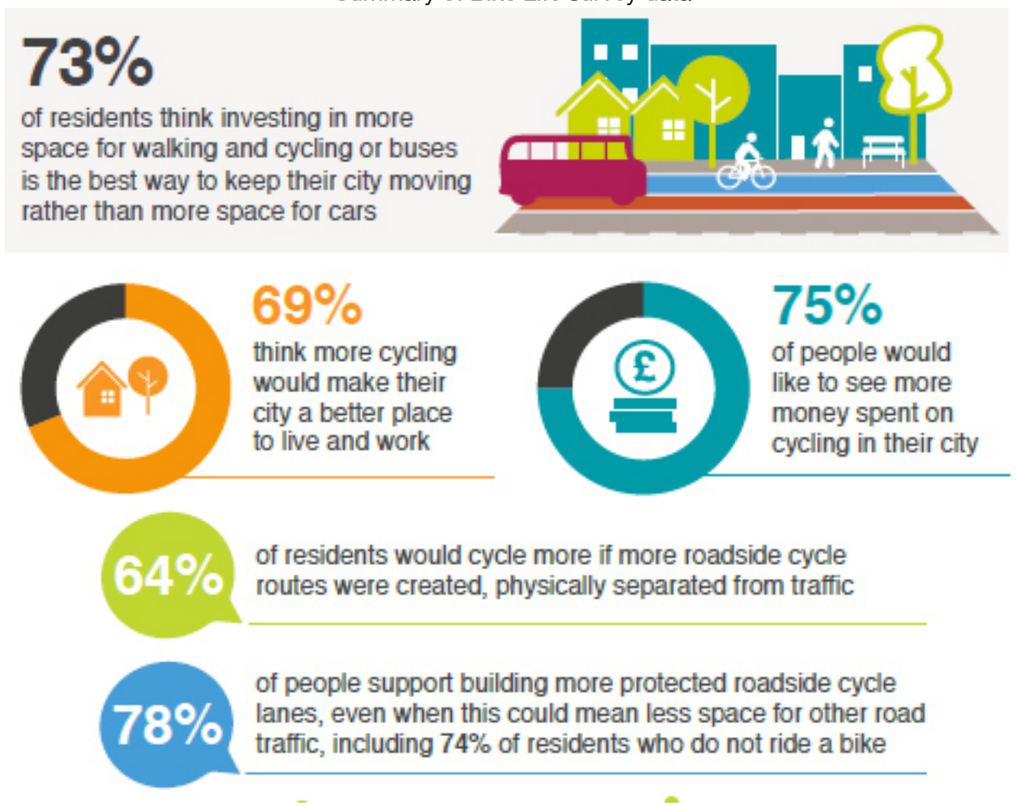
Bike Life is inspired by the Copenhagen Bicycle Account (a biennial summary of key statistics on cycling in Copenhagen) and is an analysis of city cycling development including infrastructure, travel behaviour, satisfaction, the impact of cycling and new initiatives. The information in the report comes from local cycling data, modelling and a representative survey of over 1,100 residents in each city conducted by ICM Unlimited, social research experts. There is widespread public support for creating dedicated space for cycling, as shown in the infographics below.

Liveable Cities and Towns

Sustrans believes that dedicated high quality walking and cycling routes are only part of the overall picture and it is important to regard all public highways as public space and not solely movement corridors for motor vehicles. With this in mind, Sustrans offer the following general principles when designing liveable cities and towns.

1. Ensure that every child who can has the opportunity and confidence to walk and cycle safely to school using high quality walking and cycling routes.
2. Support schools, workplaces and local communities to make walking and cycling the easiest and most attractive option for everybody who can to get around.
3. Create '20 minute neighbourhoods' – places where people can meet most of their everyday needs within a 20-minute walk of their home.
4. Radically reduce the volume and speed of vehicles on main roads, across city and town centres and local high streets – creating places where motorised transport is guest.
5. Remove the through-traffic from our residential areas – creating social streets where walking has priority.
6. Ensure every town and city is served by a dense network of protected cycle routes across urban areas, complemented by off-road routes and routes on quiet streets, as well as walkable routes to and within urban areas. Routes should be attractive, fully accessible, and make people feel safe and secure.
7. Support work to ensure that appealing, comprehensive, affordable and innovative public transport options are available for all, and are integrated with walking and cycling.
8. Green our urban areas and ensure everyone can easily access high quality green spaces and green corridors that are good for and connect us to nature.
9. Embrace the potential of cargo bikes to replace vans and cars in the transportation of goods, services and people, whilst removing the negative impacts of freight in the urban environment.
10. Give everyone the opportunity to take up cycling by providing cycles, including electric and adapted, improving cycle parking, and expanding public cycle scheme provision, inclusiveness and integration.
11. Use evidence, insight and stories to make a compelling case for change and win hearts and minds.
12. Encourage a new public debate on motorised transport use – a citizens' assembly which considers the radical and immediate intervention needed to reduce unnecessary journeys by motor vehicles, fairly.
13. Ensure the real cost of motorised transport and its impact on current inequality and future generations is recognised in cross-departmental government decision making, and investment in sustainable and active travel is prioritised.
14. Support diversity in transport and planning, so that decision makers are better representative of the communities that they serve. This is key to making walking and cycling attractive and inclusive activities.

Summary of Bike Life survey data



Sustrans design principles

Designing for busy roads

Recently published guidance from Highways England (Interim Advice Note 195/16) is a useful starting point when considering whether the busier roads are likely to be suitable for cycling and walking.

This guidance suggests that the key threshold at all traffic speeds is an average annual daily traffic flow of 5,000 vehicles per day (vpd). At higher traffic flows, physical separation from motor vehicles is recommended.

Reducing traffic speed from 30mph to 20mph is clearly desirable, but if traffic flows cannot be reduced below 5,000 vpd, then physical separation will still be required. In these situations it is tempting to accommodate cyclists on existing footways, but this is not acceptable if it means a reduced level of service for pedestrians.

Speed Limit	Average Annual Daily Traffic (AADT)	Minimum Provision
40+	All flows	Cycle Tracks
30	0-5,000	Cycle Lanes
	>5,000	Cycle Tracks
	<2,500	Quiet Streets
20	2,500-5,000	Cycle Lanes
	>5,000	Cycle Tracks

From Interim Advice Note 195/16

Sustrans recommends a minimum shared path width of 3.0 metres in an urban setting, with reduced widths acceptable in certain circumstances. The table below is taken from the Sustrans Design Manual, a handbook for cycle-friendly design.

On some roads it may not be possible to accommodate cycle lanes, cycle tracks or a shared path and the designer must consider other alternatives, such as closing the road to through traffic or finding a different route alignment.

Type of route	Minimum path width
Urban traffic free	3.0m on all main cycle routes, secondary cycle routes, major access paths and school links; wider on curves and steep gradients. 2.5m possible on access routes and links with low use
Urban fringe traffic free	3.0m on all main cycle routes, major access paths and school links 2.5m possible on lesser secondary cycle routes and access links
Rural traffic free	2.5m on all main routes, major access paths and school links 2.0m possible on lesser routes and links

From Sustrans Design Manual

Traffic restrictions

Experience from towns and cities across the UK and in Europe suggests that in addition to providing good quality infrastructure for walking and cycling, it is necessary to restrict motor vehicles so that active travel is the natural and obvious choice for short trips. This does not mean any lack of accessibility for motor vehicles, just that they may need to make longer trips than the equivalent journey on foot or by bike.

There are various ways that traffic can be restricted and the designer will need to consider the appropriate solution for each location. A number of suggested measures are listed below:

- Vehicle Restricted Areas (pedestrian zones)
- Traffic calming and 20mph zones to reduce vehicle speeds
- Reduced availability of on-street and off-street parking
- Workplace Parking Levy
- Congestion charging
- Clean Air Zones

Filtered permeability

Filtered permeability gives pedestrians and cyclists accessibility and journey time advantages compared to other vehicles by exempting them from access restrictions that apply to motor traffic and by the creation of new connections that are available only to cyclists and pedestrians. Measures can include:

- cycle contraflows on one-way streets
- exemptions from road closures, point closures and banned turns
- permitting cycling in parks and open spaces
- traffic free paths such as links between cul-de sacs and public or permissive routes through private areas
- traffic cells, restricting through traffic in defined areas
- cycle parking situated closer to destinations than car parking

Recommended measures

A number of technical solutions have been included in the brief main text descriptions for each location and some of these are summarised in this section.

Traffic calming

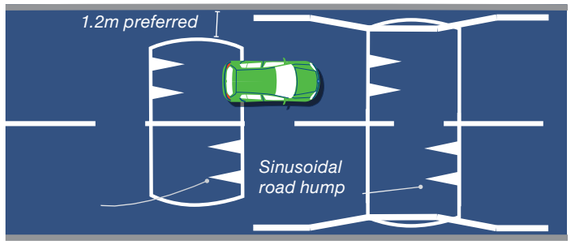
Physical measures to reduce traffic speed can be useful in locations where the speed limit is regularly exceeded or there is a record of accidents. There may be objections from local residents, emergency services and bus operators. Extensive traffic calming is unlikely to be supported on major roads, other than for short lengths. Common vertical and horizontal features are illustrated below.

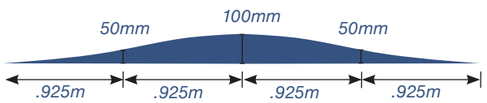
Informal road crossings

Where a footway alongside a main road crosses a side road, clear priority should be given to pedestrians. The most effective approach is to provide a clear, wide contrasting surface that is raised above carriageway level.

If this is not possible for reasons of available space or cost, flush dropped kerbs should be provided as a minimum.

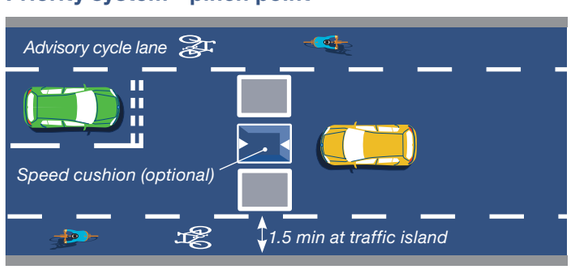
Road humps





Sinusoidal road hump cross section
(preferred geometry for vertical dimension)

Priority system - pinch point



† Image Sourced from Google Street View

Zebra crossings

Unsignalled ‘priority’ crossings for both pedestrians and cyclists are a standard part of the toolkit in many parts of continental Europe but are not widely used in the UK. Some local authorities have experimented with “Parallel Crossings” where extra space is provided for cyclists adjacent to a Zebra crossing. These are becoming increasingly common in London and an example from Canterbury is illustrated below.

Chaucer Road, Canterbury

20mph speed limits

It is widely accepted that 20mph is much safer for all road users in urban areas and many towns across the UK have introduced 20mph as the default speed limit, particularly in residential areas. If collisions do occur, the risk of a fatality or serious injury is significantly reduce at 20mph compared with 30mph.

As of 2019, there are 60 local authorities on the list of places who have implemented or who are implementing a community-wide 20mph default speed limit published by ‘20’s Plenty for Us’. In the South these include Brighton & Hove, Chichester and Portsmouth.

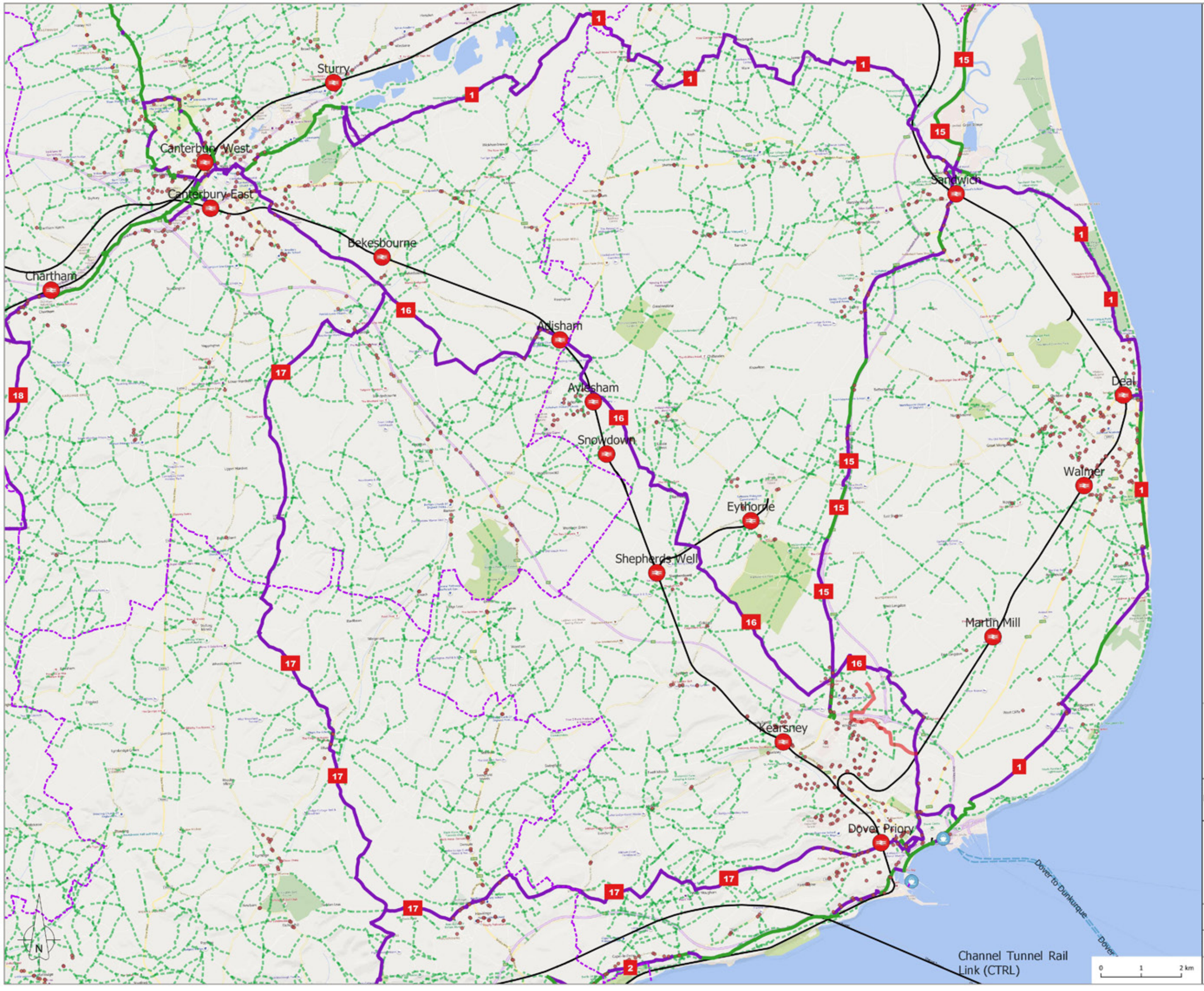
Studies show that a 20mph limit can improve traffic flows and road capacity in some situations, by reducing stop-start traffic and promoting a more even flow through urban streets.

Point closures

Point closures (modal filters) are a simple, cheap, effective and reversible way to remove through traffic from streets. They can also reduce the need for more extensive traffic calming and are best implemented across a wider area to avoid traffic displacement onto parallel routes.

Very few of these schemes are implemented in Hampshire due to the legal processes around road closure and concerns of emergency services. They have been used extensively in London to create “traffic cells” so that through traffic is eliminated from residential neighbourhoods.

Sustrans design guidance for shared use paths



KEY

National Cycle Network

- On-Road
- Traffic Free
- Public Rights of Way
- Railway Station
- Railway Track
- Ferries
- Bus Stops
- Administrative Boundary
- Proposed Bus Rapid Transit Route

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PROJECT
Dover District Cycling and Walking Assessment

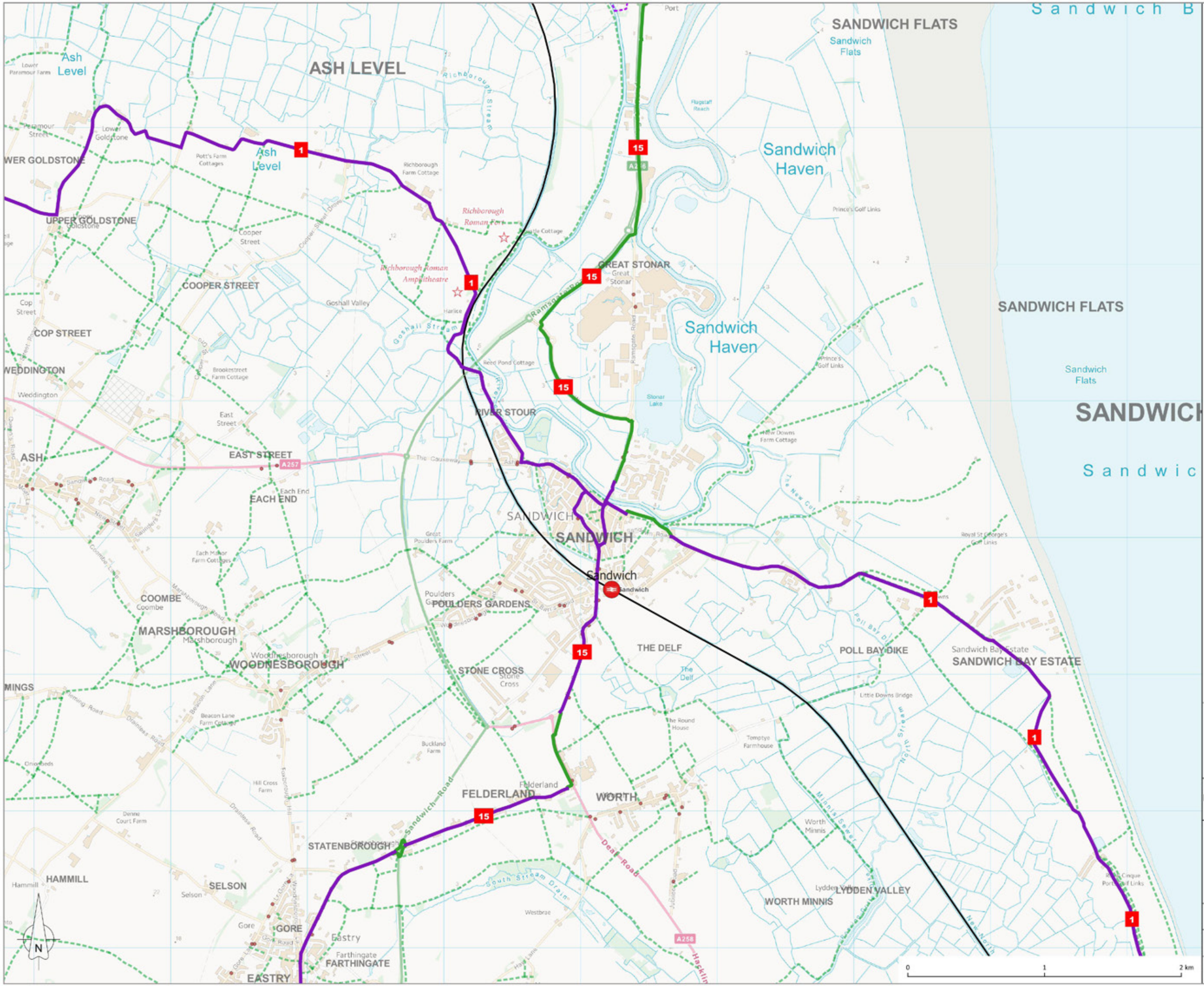
TITLE
Dover District Existing Sustainable Transport Network

Drawn	Checked	Date	Scale at A3
SM	DY	30/1/2020	1:85000

STATUS: ISSUE

DRAWING NUMBER: 12513DOV-SD-MAP-00-02

REVISION: B



KEY

National Cycle Network

- On-Road
- Traffic Free
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- Railway Station
- Railway Track
- Ferries
- Bus Stops
- Administrative Boundary

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PROJECT
Dover District Cycling and Walking Assessment

TITLE
Sandwich Existing Sustainable Transport Network

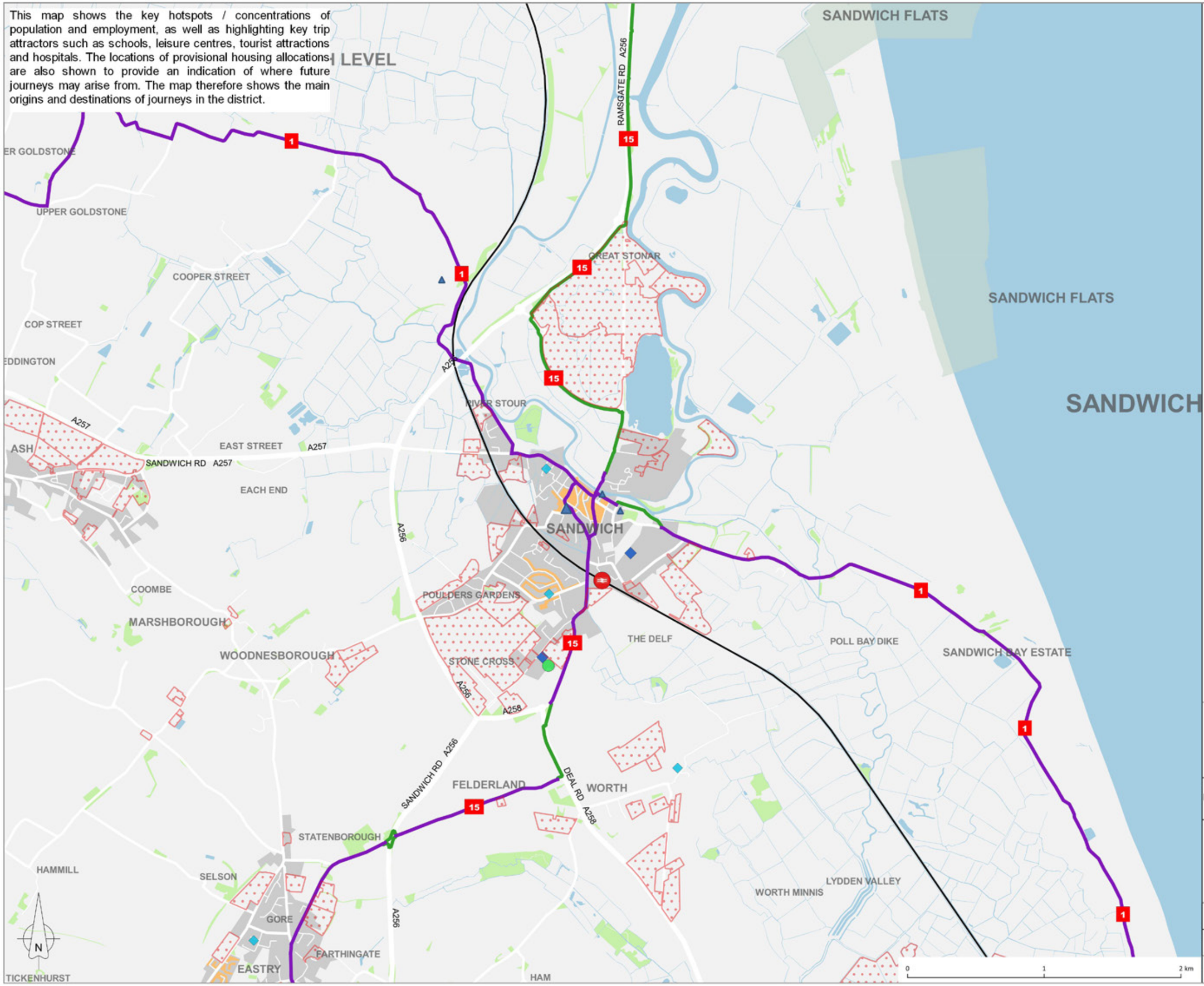
Drawn	Checked	Date	Scale at A3
SM	DY	7/1/2020	1:25000

STATUS: ISSUE

DRAWING NUMBER: 12513DOV-SD-MAP-00-02

REVISION: A

This map shows the key hotspots / concentrations of population and employment, as well as highlighting key trip attractors such as schools, leisure centres, tourist attractions and hospitals. The locations of provisional housing allocations are also shown to provide an indication of where future journeys may arise from. The map therefore shows the main origins and destinations of journeys in the district.



KEY

Employment
2011 Census Population
Density of Employment (Jobs per Hectare)
- 20 - 50
- 50 +

Population
2011 Census Population
Density (People per Hectare)
- 0-50
- 50 - 100
- 100 +

Trip Attractors
Education
- Primary School
- Secondary School
- Further Education

Local Facilities and Amenities
- Leisure/Sports Centre
- Hospital
- Top 15 Tourist Attractions in Dover District
- Smaller Tourist Attractions

Transport
- Railway Station
- Railway Track
- Ferries

National Cycle Network
- On-Road
- Traffic Free

Other
- Administrative Boundary
- National Nature Reserves/AONB
- DCC Provisional Housing Allocations

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PROJECT
Dover District Cycling and Walking Assessment

TITLE
Sandwich Trip Generators and Attractors

Drawn	Checked	Date	Scale at A3
SM	DY	7/1/2020	1:25000

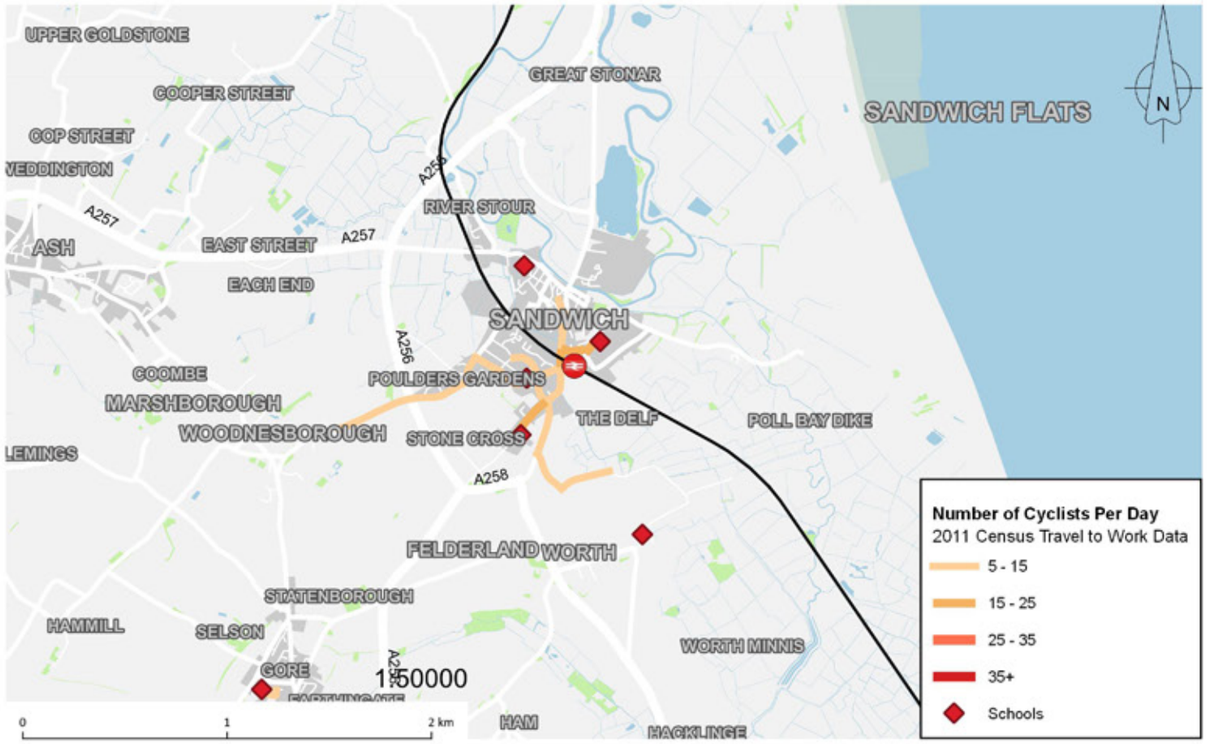
STATUS: ISSUE

DRAWING NUMBER: 12513DOV-SD-MAP-00-01

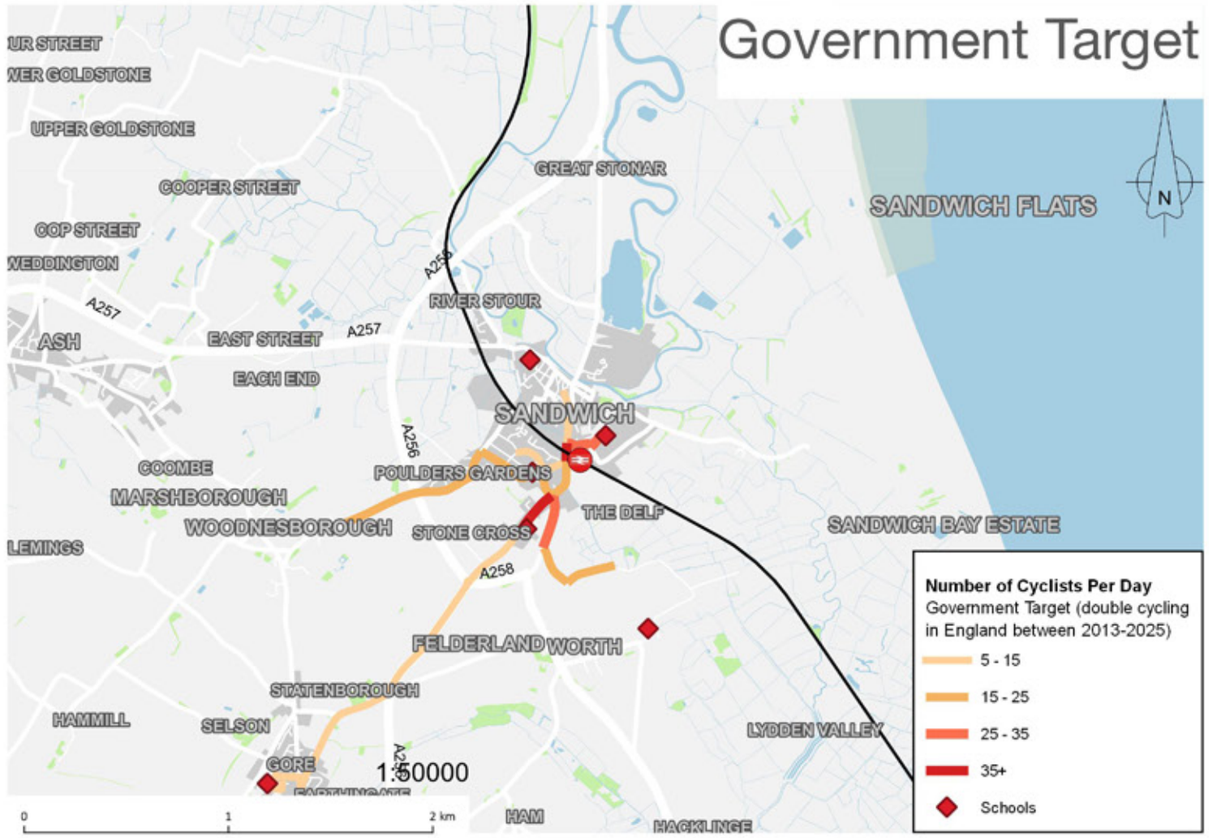
REVISION: A

Sandwich PCT School Data

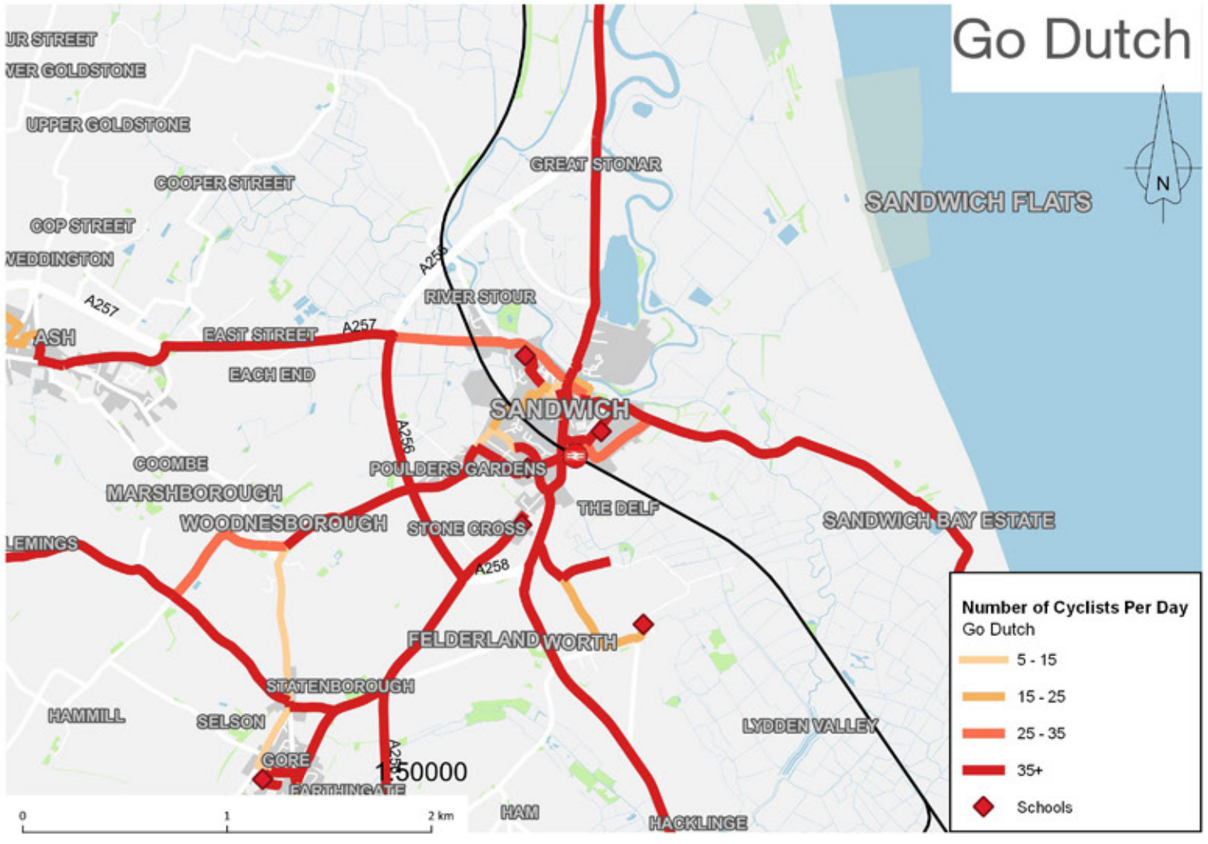
2011 Census

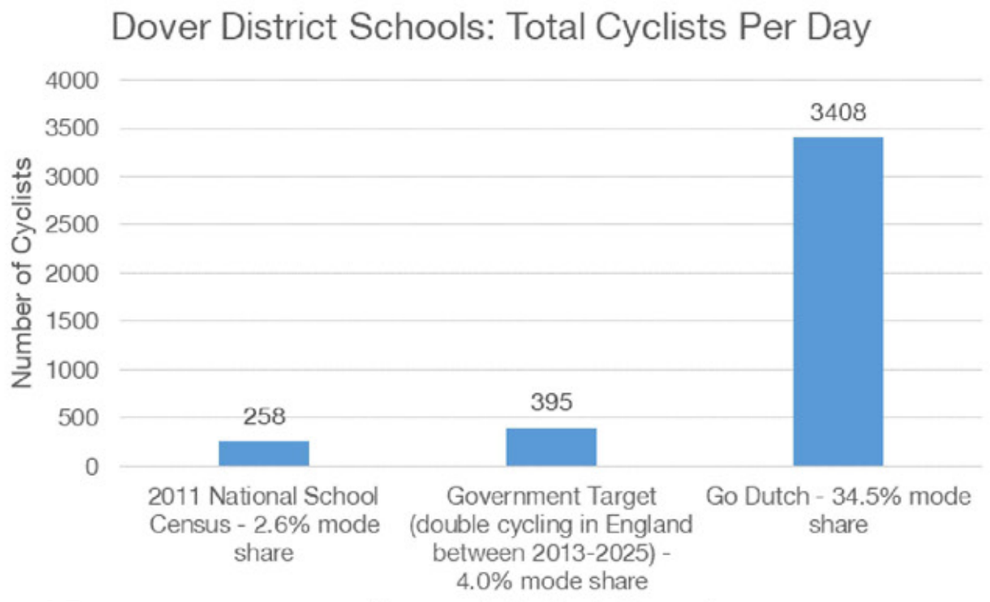


Government Target



Go Dutch

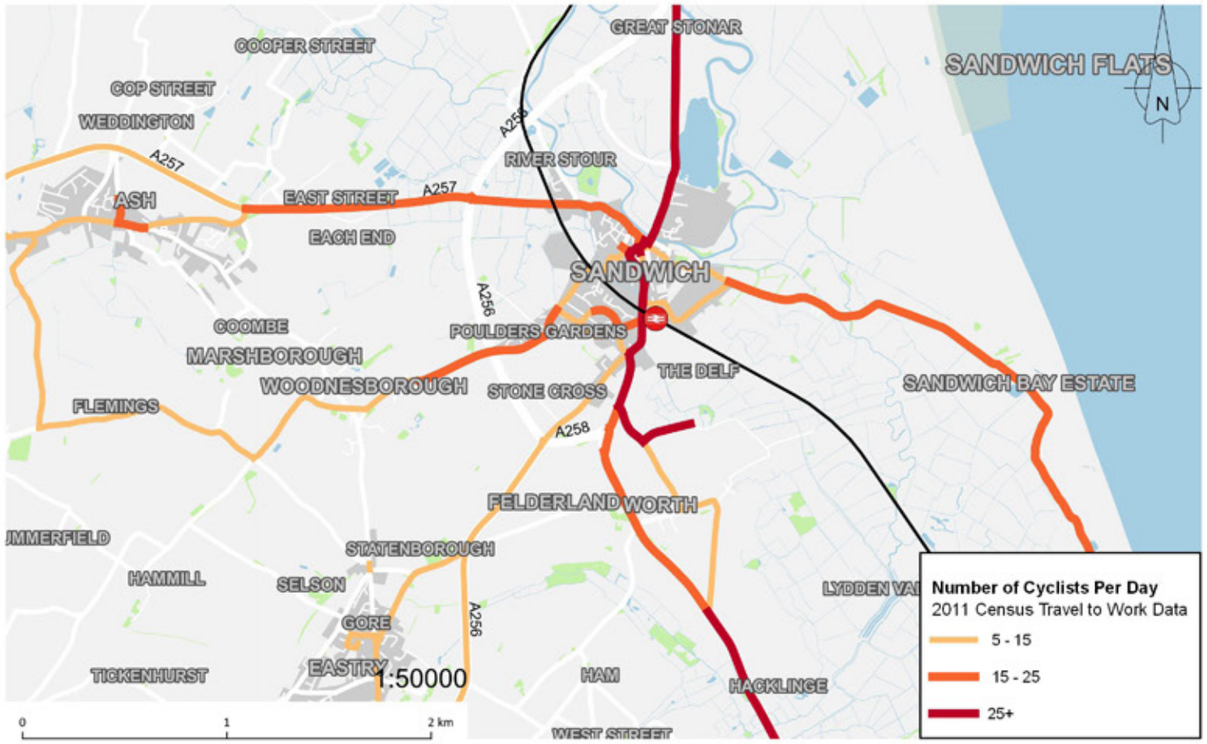




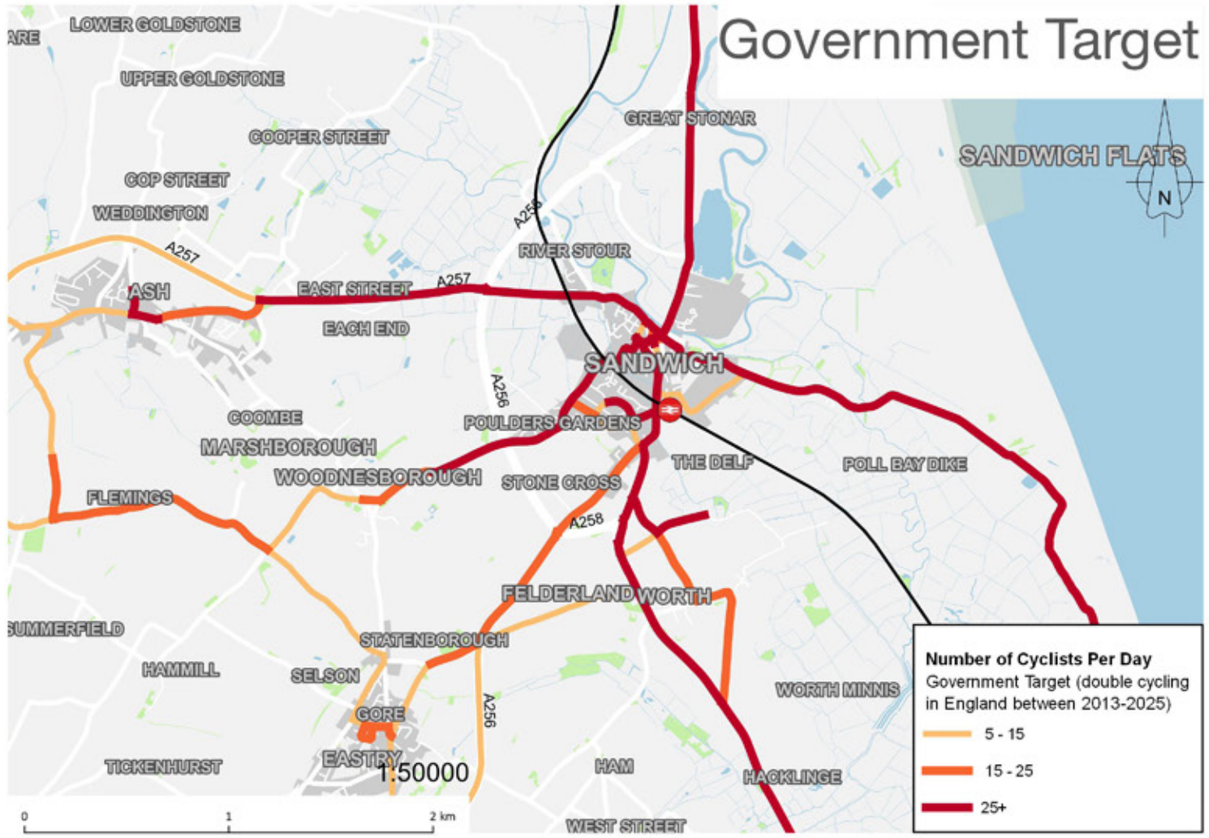
PCT School Data

These maps of cycling routes to school are derived from School Census 2010/11 data, so do not reflect any recent changes in school sites or catchment areas. If the local priority is enabling more students to cycle to school, then these travel patterns are a useful guide to routes where investment is needed. However, it must be remembered that education and escort to education is only 13% of all trips. In Swale, the Government target would see an increase of 150% in cycling to school, while the Go Dutch scenario suggests that cycling could increase 30 fold on 2010/11 levels.

Sandwich PCT Commute Data 2011 Census



Government Target



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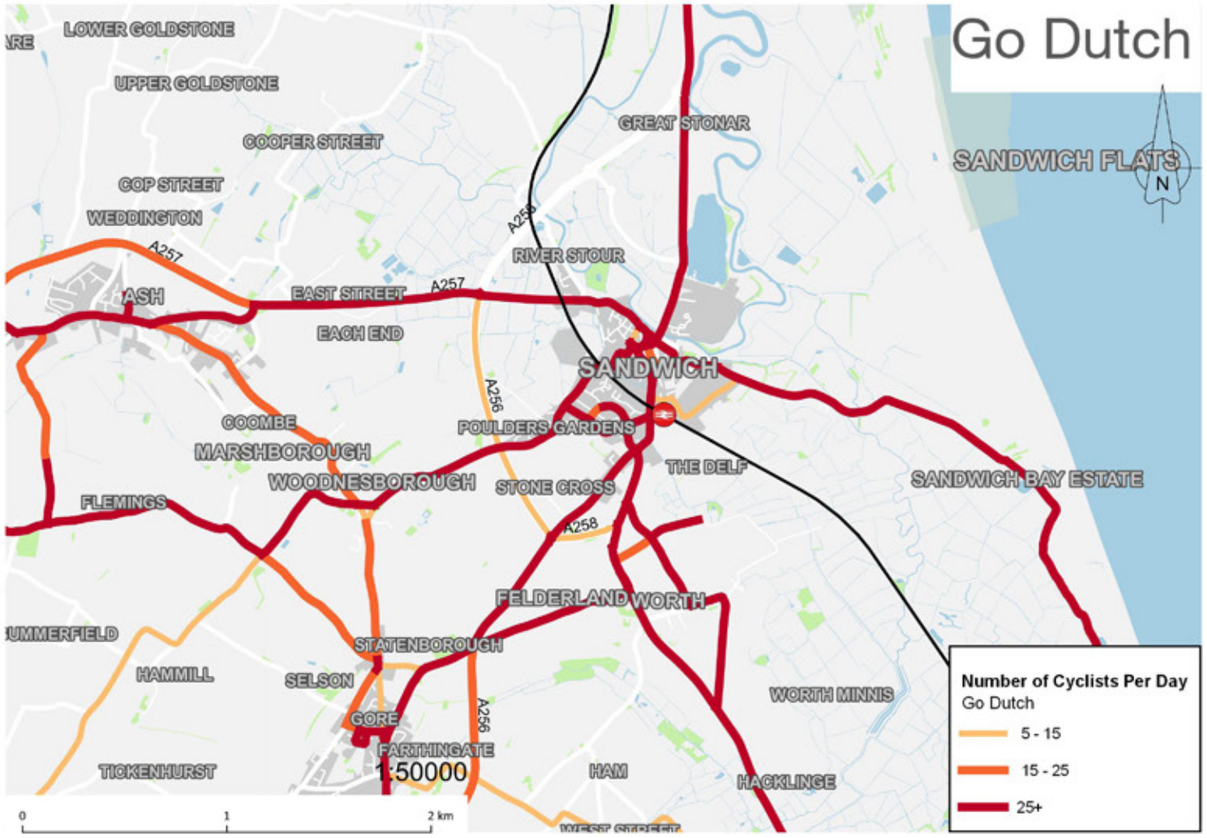
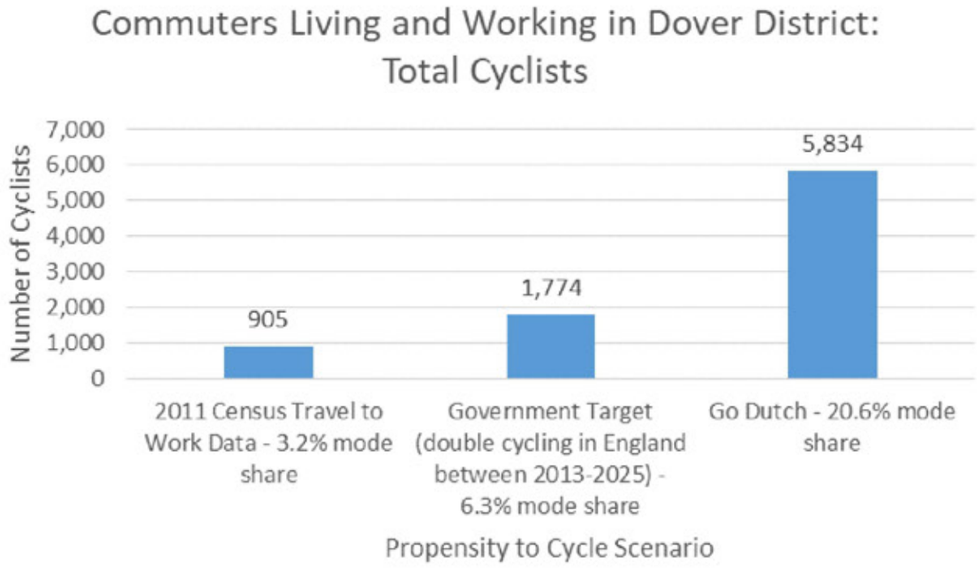
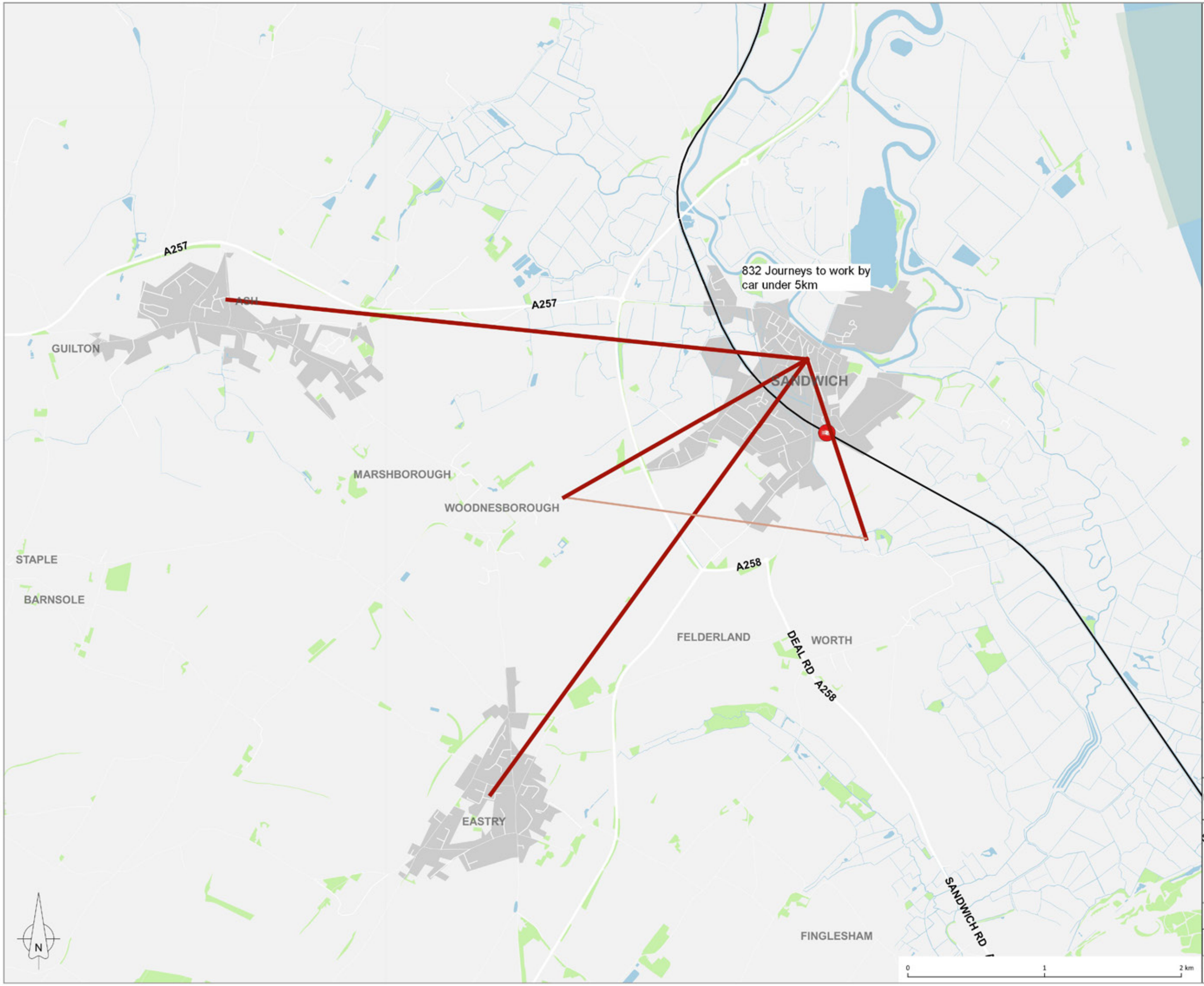




PCT Commute Data

These maps of cycling routes to work are derived from Census 2011 data, so do not reflect any recent changes in employment sites. If the local priority is enabling more people to cycle to work, then these travel patterns are a useful guide to routes where investment is needed. However, it must be remembered that commuting is only 14% of all trips. In Swale, there is clearly huge potential for increasing cycle trips to work. The Government target would see levels more than double, while the Go Dutch scenario suggests that cycling could increase more than seven-fold here.



KEY

Census 2011 Commuter Flow Data
Number of Car Commuters Per Day

- 25 - 35
- 35 - 45
- 45+

Other
2011 Census Density of Employment (Jobs per Hectare)

- 50 +
- Ferries
- Railway Station
- National Nature Reserves England

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PROJECT
Dover District Cycling and Walking Assessment

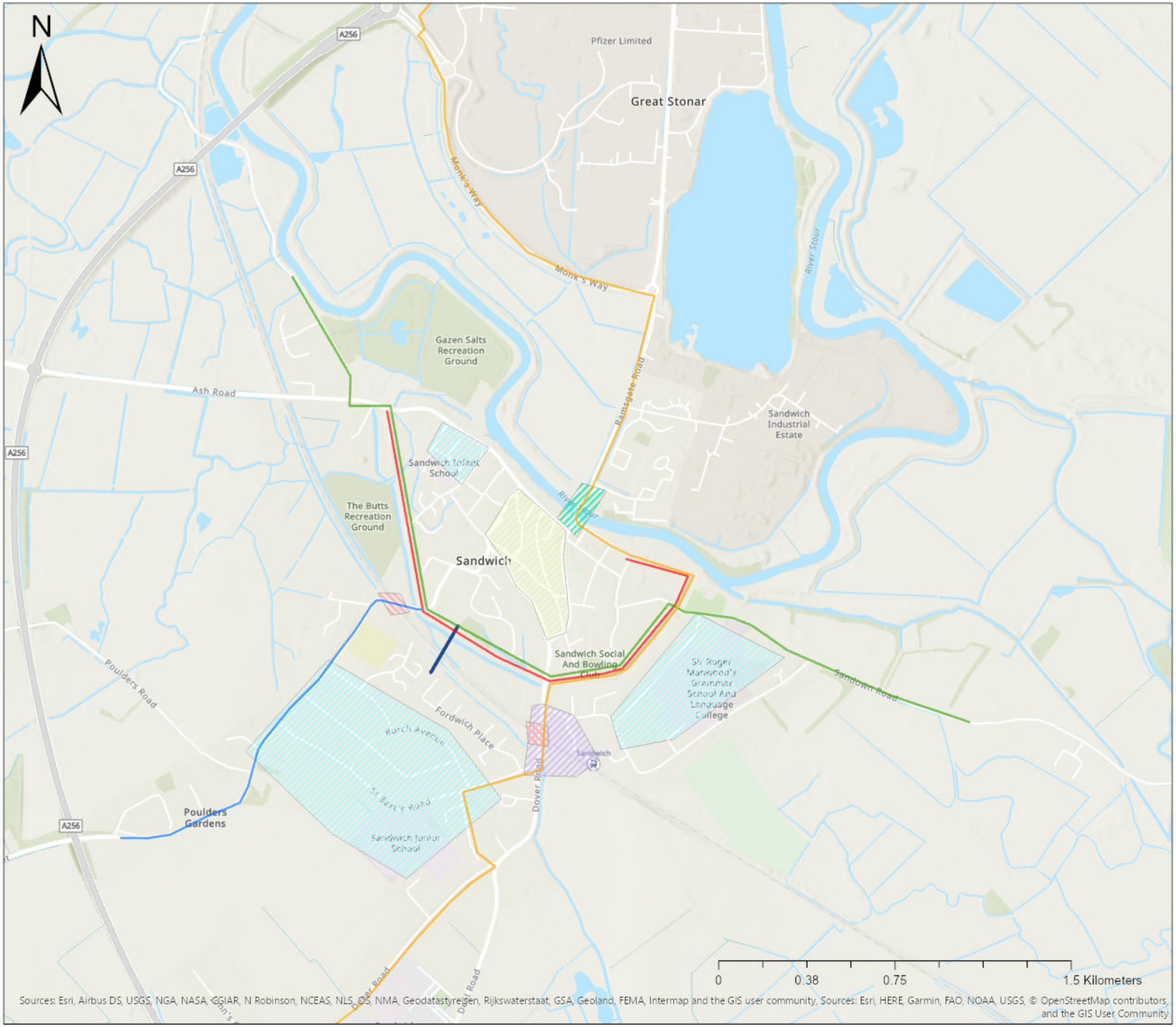
TITLE
Sandwich Commuting Journeys by Car under 5km (PCT Straight Lines)

Drawn	Checked	Date	Scale at A3
SM	LD	9/1/2020	1:25000

STATUS: ISSUE

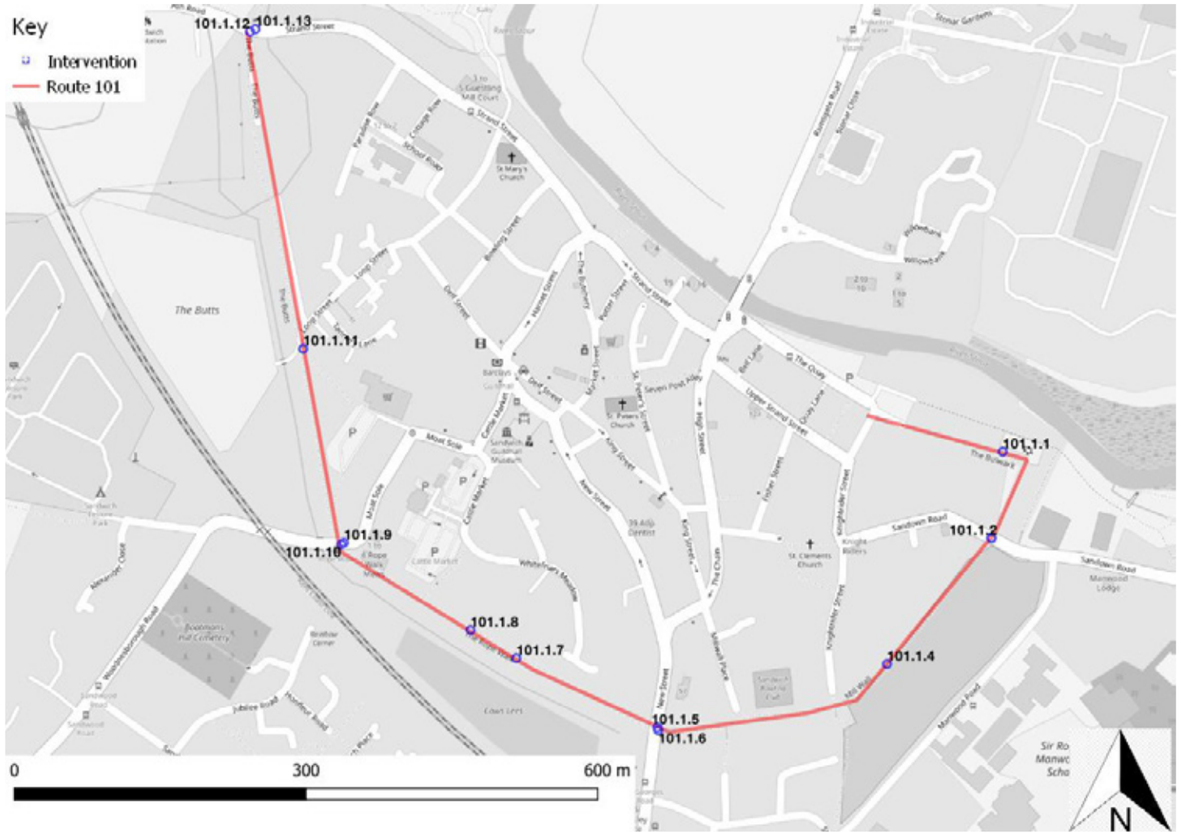
DRAWING NUMBER: 12513DOV-SD-MAP-00-03

REVISION: A


N
A256
A256
A256
A256
Pfizer Limited
Great Stonar
Monk's Way
Monk's Way
River Stour
Ramsgate Road
Gazen Salts Recreation Ground
Ash Road
Sandwich Industrial Estate
Sandwich Infant School
The Butts Recreation Ground
Sandwich
Sandwich Social And Bowling Club
St Roger Manwood's Grammar School And Language College
Sandown Road
Fordwich Place
Birch Avenue
St Bert's Road
Sandwich Junior School
Poulders Gardens
Poulders Road
Dover Road
Dover Road
Deal Road
Legend
Cycle Routes
101
102
103
104
Focus Areas
201: town centre accessibility
202: access to train station
203: level crossings
204: access to schools
205: addressing severance
206: toll bridge
0
0.38
0.75
1.5 Kilometers
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Sources: Esri, HERE, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Route Recommendations

† Image Sourced from Google Street View



Route 101 'The Sandwich Arc': Town Quay – Gazen Saltz Nature Reserve

Route Description

The site visit highlighted the opportunity to provide an off-road walking and cycling route in Sandwich that could serve as a spine to other routes in, or going through town. The proposed route, The Sandwich Arc, would use an existing series of traffic-free paths to connect users from the Quay to the Gazen Saltz Nature Reserve. The proposed route is a distance of 1.5km and connects users to popular tourist attractions, shops and schools, and utilises the following existing walkways:

- The Bulwark
- Mill Wall
- The Rope Walk
- The Butts

Background

The NCN1 connects Deal to Sandwich north of the town and Dover to the south. The route therefore serves as the entry and exit point for cycle users choosing to follow the NCN1 alignment and will be their initial experience of cycle infrastructure in the town.

The PCT simulations demonstrate that east-west cycle commuting in Sandwich is currently very low (under 15 cycles per day), despite the NCN 1 running east-west through the town and in contrast to the NCN15 north/south route, which serves over 25 cycle commuters per day. This is due to barriers on the existing NCN1 alignment explored in the next two chapters, including narrow streets shared with considerable vehicular traffic and an elongated, meandering route, interspersed with one-way gyratory systems in the town centre. The east-west connection is crucial to increasing modal share, as it unlocks commuter trips within the town and to/from Ash and Deal.

School commute PCT data shows high propensity for cycling to school throughout the town, but very little currently occurring, with a few users (5-15 per day) using NCN15, and none using NCN1 east-west. The proposed Route 101, The Sandwich Arc, would create a safe, straightforward and traffic-free route for families commuting to Sandwich Infants School (west) and/or Sir Roger Manwood's School (east), and key amenities including St Thomas's Hospital and the Co-op. It would also provide a quality leisure route, connecting residents to green space.

Existing conditions

The existing path on the walkway is a bound asphalt surface approximately 1.5-3m wide – the surface condition is acceptable. In sections the path runs adjacent to a steep bank that may require a barrier if more people are likely use the path. On some sections, the path would need to be widened to 3m, to accommodate shared use. Currently, the walkways are designated as no cycling – a significant barrier to delivery. The route will require a change of designation to shared use.

Barriers to Walking and Cycling

The most significant obstacles along the route is where paths intersect with the carriageway on Sandown Road, New Street and Woodnesborough Road. The proposed route finishes on Strand Street where a zebra-crossing could connect pedestrians to the nature reserve. Parallel zebras are proposed for Sandown Road, New Street, Woodnesborough Road. In order to make this route accessible to all users (walking, cycling, wheeling, pushing buggies, using mobility aids etc.), the steps at the entrance to Rope Walk from New Street would require conversion to an accessible ramp and the route would require removal of barriers throughout.

General Recommendations

- Permit cycling on The Bulwark, Mill Wall, The Rope Walk and The Butts
- Widen shared use path to ideal 3m, minimum 2.5m where possible
- Introduce parallel zebra crossings when walkways intersect with the carriageway, except Strand Street ,where a zebra crossing is proposed

- Convert existing steps on the entrance to Rope Walk from New Street into accessible ramp
- Remove barriers along route

Specific Recommendations

101.1.1 Permit cycling on The Bulwark and widen to minimum 3m where possible

101.1.2 Introduce parallel zebra on Sandown Rd to connect The Bulwark to Millwall

101.1.3 Remove barriers and brick pillars at existing crossing

101.1.4 Permit cycling on Mill Wall and widen to 3m where possible

101.1.5 Convert zebra crossing to parallel zebra crossing on New Street to connect Mill Wall to The Rope Walk

101.1.6 Remove steps and introduce ramp/ gradient

101.1.7 Permit cycling on Rope Walk and widen to 3m where possible

101.1.8 Address safety issue of steep bank on western side of the path

101.1.9 Remove or reduce parking south of The Butts to provide space for safe crossing

101.1.10 Introduce parallel zebra on Woodnesborough Rd connecting Rope Walk to The Butts

101.1.11 Permit cycling on The Butts and widen to 3m where possible

101.1.12 Introduce zebra crossing connecting the Butts to Gazen Saltz Nature Reserve

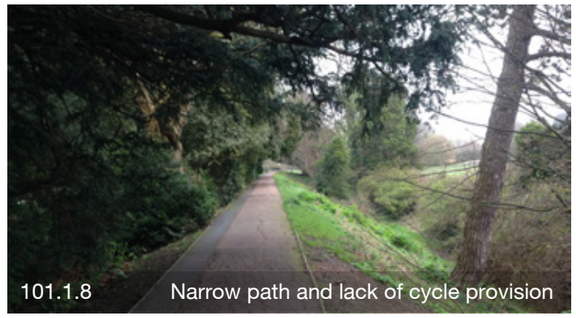
101.1.13 Remove fence/barrier at entrance to Gazen Saltz Nature Reserve


101.1.1 Narrow path and lack of cycle provision


101.1.8. Narrow path and lack of cycle provision


101.1.10 Lack of formal crossing


101.1.2. Lack of formal crossing


101.1.8 Narrow path and lack of cycle provision

101.1.11 Narrow path and lack of cycle provision


101.1.3 Access restriction – (barrier).


101.1.8 Narrow path and lack of cycle provision

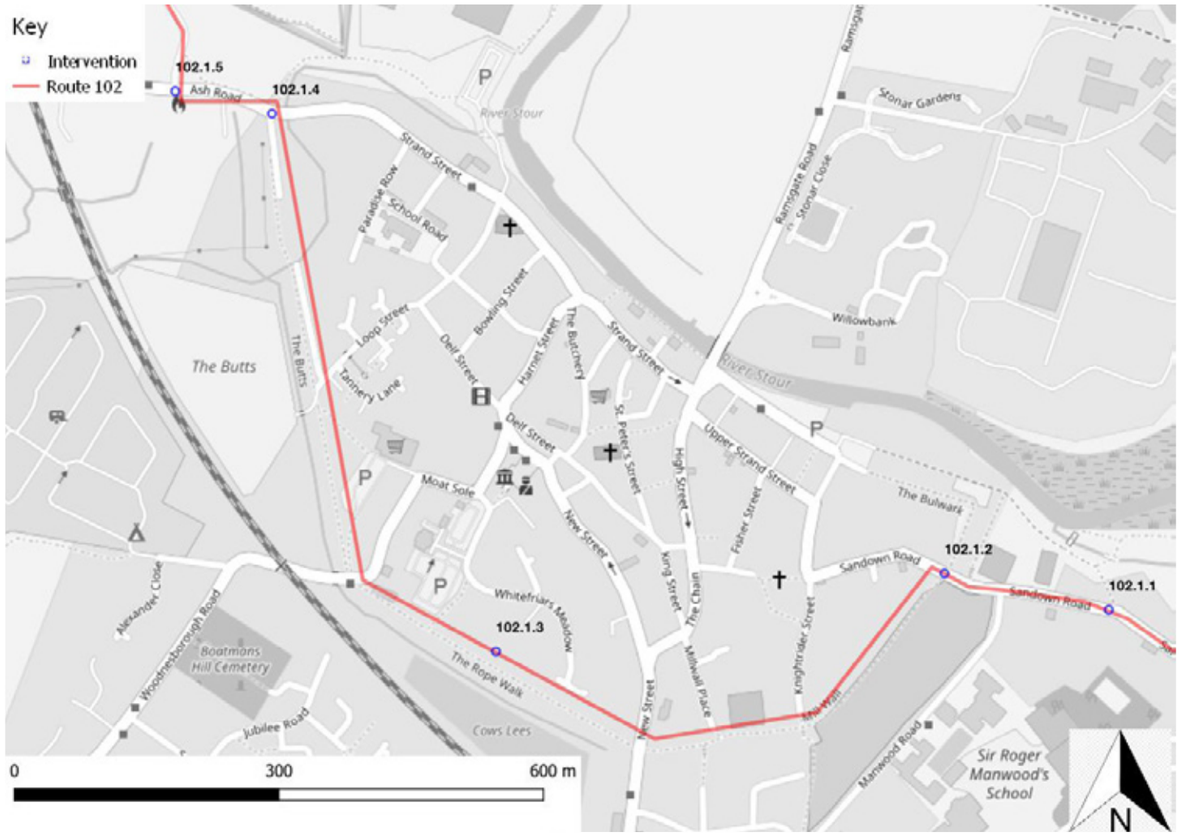

101.1.12 Lack of formal crossing


101.1.5 Lack of cycle provision

101.1.9 Accessibility restriction (parking)


101.1.13 Access restriction – (barrier)

† Image Sourced from Google Street View



Route 102 - NCN1

Route Description

Sandwich is strategically significant to the National Cycle Network with both NCN1 and NCN15 running through it. The NCN 1 connects Sandwich to Deal in the south east and Canterbury to the west. The existing alignment of NCN enters Sandwich via Sandown Road from the east and exits via Richborough Road to the north. Due to the town's one way system, entering Sandwich from the east - heading west - requires the route user to perform a short, but complicated and often congested detour. Realigning NCN1 onto proposed Route 101 offers the cycle user a safer, more pleasant and direct route through the town. The realignment includes bringing cycle users onto Mill Wall from Sandown Road at the site of the proposed parallel zebra crossing. NCN1 users re-join the previous alignment on Strand Street before turning right and continuing north on Richborough Road.

Background

National Cycle Network Route 1, which runs through Sandwich, is a key route in the network:

'Route 1 is one of the National Cycle Network's star routes: a long distance challenge that connects Dover in the south of England to the Shetland Islands to the northeast of Scotland. This epic cycle journey will appeal to anyone looking to stretch their legs, test their limits and see the beautiful scenery of the British Isles.'

In Sandwich, NCN 1 intersects with NCN Route 15, making the town a key interchange for cycle tourers, day-trippers and local residents using the two routes for exercise, leisure, work and to access neighbouring towns, including Canterbury, Dover and Ramsgate. As discussed above, PCT data demonstrates that an accessible east-west cycle route through the town (utilising NCN1), is crucial to increasing modal share on both work and school commutes.

Existing conditions

The existing NCN1 alignment uses roads in the town centre (High Street, New Street, Harnet Street and Strand Street). Currently, these roads lack protection for cyclists. On some roads, the carriageway is between 3.2m-3.9m wide one-way – a width considered dangerous, as it encourages drivers to consider overtaking cyclists in close proximity. Due to the priority of vehicle movements on the current alignment it is possible that cycle users will share the narrow carriageway with heavy goods vehicles and high volumes of traffic.

Barriers to Walking and Cycling

The existing NCN1 alignment does not contain physical barriers (such as chicanes), however, the quality of the route is affected by confusing wayfinding and perceived danger from sharing narrow roads with vehicles. These barriers may be significant enough to dissuade potential users.

For those choosing to walk, the current alignment offers a poor level of service in terms of footways and crossing points.

Specific Recommendations

102.1.1	Introduce double yellows to restrict parking on western side of Sandown Rd
102.1.2	Realign NCN 1 to continue on Sandown Rd and to join at entrance to The Bulwark/ Mill Wall (past the right turn on to existing alignment towards River Stour).
102.1.3	Realign NCN to follow alignment of Route 101
102.1.4	Introduce protected right turn on to The Butts for those travelling east on Ash Road/Strand St (to continue on route 101)
102.1.5	Introduce protected right turn on to Richborough Rd for those travelling west on Strand St/Ash Road
102.1.6	Direct westbound users to turn left on to proposed parallel zebra crossing (part of Route 101) on Sandown Road, to continue on Route 101

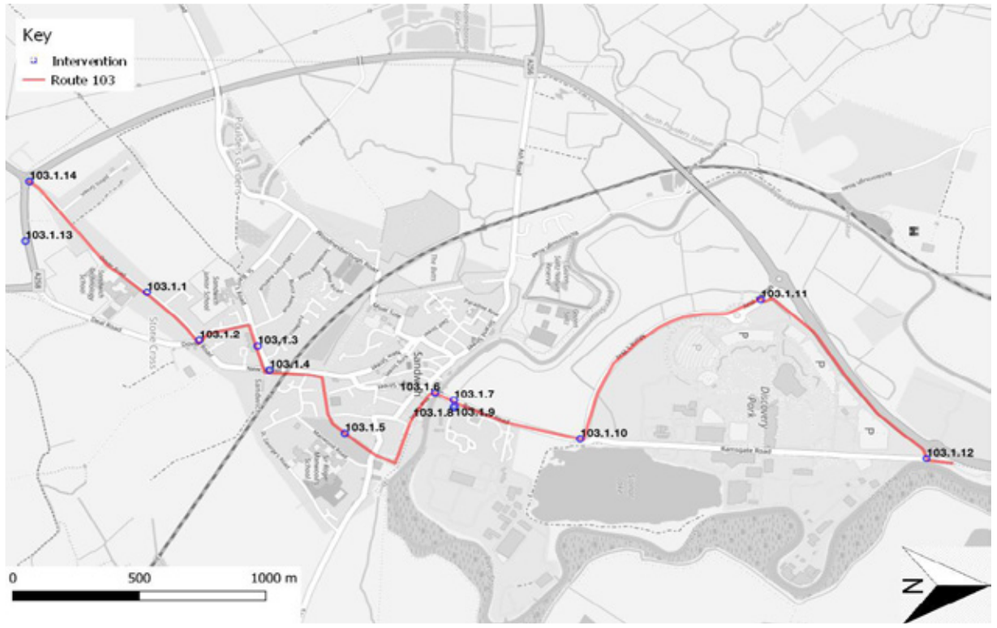
102.1.1 Streets narrowed by on-street parking

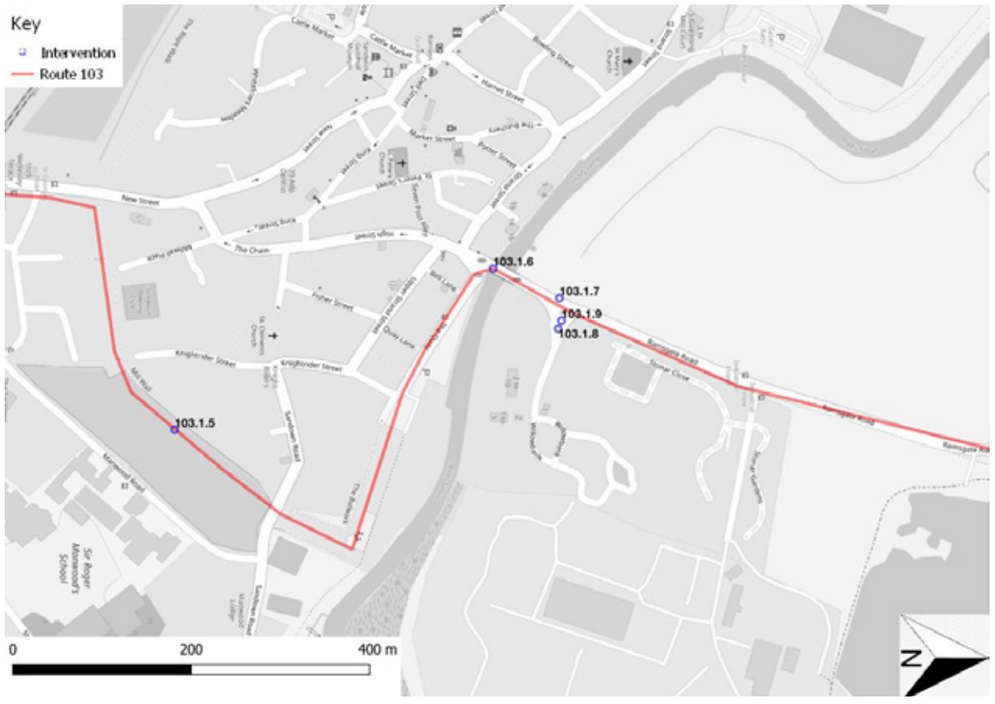
102.1.4 † Lack of wayfinding

102.1.5 † Right turn unprotected for cycles

102.1.6 † Lack of wayfinding

† Image Sourced from Google Street View





Route 103 - NCN15

Route Description

National Cycle Network Route 15 connects Sandwich with Whitfield to the south and Ramsgate to the north. Entering from the south, the NCN alignment follows Deal Road/Dover Road/New Street until reaching Sandwich town centre. From the town centre, northbound users are signed over the Toll Bridge and along on Ramsgate Road/Monk's Way, past the Discovery Park (former Pfizer site) and through Great Stonar, where a future large-scale development is planned .see 'Sandwich Trip Generators and Attractors' Map, pg 9).

Background

National Cycle Network Route 15 in Kent offers connections to Route 16 at Whitfield (to the South of Sandwich), Route 1 in Sandwich and a coastal, circular route connecting Sandwich, Ramsgate, Broadstairs, Margate and Whitstable – known as the Viking Coast Trail. The Trail is a popular route, offering residents and visitors both leisure opportunity and connection to other coastal towns. Closer to Sandwich, NCN 15 serves to connect the town centre to the Discovery Park (a Research and Development hub) and several industries that occupy the former Pfizer site, to the North of the town.

PCT simulations demonstrate that over 25 cycle users per day use NCN15 to travel north/south across town. These commuters are most likely employees of the Discovery Park in the north, commuting from main residential neighbourhoods south of the river. School commute PCT data shows high propensity for cycling to school throughout the town, but very little currently occurring, with a few users (5-15 per day) using NCN15. The interventions proposed on this route, would make it safer and more accessible to families and children travelling to/from schools and amenities in the planned Great Stonar development (north of Discovery Park) and travelling to the Viking Coast Trail for leisure.

Existing conditions

Entering Sandwich from the south, the NCN 15 alignment uses Deal Road, taking users past Sandwich Technological College - this road is fast flowing and intimidating for cyclists. A short section of off-highway cycle track runs parallel to the college, however, it lasts for approximately 170m before abruptly requiring cyclists to re-join the carriageway. Cycle users then follow Deal Road/Dover Road/New Street before reaching the town with no infrastructure to improve safety for cyclists using these roads. Once reaching the town, cycle users are similarly presented with an environment that lacks any protective infrastructure.

The route continues through the town to the toll bridge and on to Ramsgate Road. Discussions with Visitor Information staff highlighted that users find navigating the town centre difficult and confusing.

At the Ramsgate Road/Willow Bank roundabout, crossing points for cycle users and pedestrians are demarcated, however, these are informal and do not require vehicles to give way. Continuing north towards the Car Converter roundabout, cycle users are provided with an off-highway shared use footway which is of good quality. The issues with this route are the intersections of the shared use footway and Monk's Way and Ramsgate Road (opposite Car Converter). Again, informal crossings are provided but vehicles are not required to give way to cyclists or pedestrians.

Barriers to Walking and Cycling

As with the NCN1, the existing NCN15 alignment does not contain physical barriers, but is also confusing in terms navigating the town-centre gyratories and one-way systems, on roads which are shared with high volumes of traffic and often large vehicles. For several sections of the existing alignment, cyclists are required to cycle on the carriageway alongside fast moving vehicles. At other points, cyclists are required to cross busy roads, with a significant proportion of HGVs, (particularly in the vicinity of the Discovery Park) without controlled crossings

For those choosing to walk, the alignment offers a poor quality of footways and crossing points.

Recommendations

103.1.1 Introduce double yellows on both sides of the road between 69 and 54 Dover Road

103.1.2 Dropped kerbs and barrier removal to allow cycling and wheeling movements on to Hazelwood Meadow

103.1.3 Double yellow lines, St Bart's Rd between number 127 and junction with Dover Road

103.1.4 Protected right turn from Dover road on to St Bart's Road

103.1.5 Direct cyclists to join Route 101 alignment from Toll Bridge and New Street

103.1.6 Introduce cycle priority traffic lights on Toll Bridge

103.1.7 Introduce parallel zebra across Ramsgate Road (south of junction with Willowbank)

103.1.8 Introduce parallel zebra across Willowbank (east of junction with Ramsgate Road)

103.1.9 Cut back vegetation

103.1.10 Introduce toucan crossing across Ramsgate Road (south of junction with Monk's Way)

103.1.11 Introduce toucan crossing across Monk's Way (south of junction with A256)

103.1.12 Introduce toucan on NCN15 across Ramsgate Road, east of junction with A256)

103.1.13 Realign NCN 15 to connect from A258 to Dover Road

103.1.14 Remove barriers and cut back vegetation. Formalise entrance for pedestrians and cyclists

103.1.4 † Right turn unprotected for cycles Source


103.1.10 Lack of formal crossing

103.1.1 † Street narrowed by parking


103.1.6 Lack of cycle priority traffic lights


103.1.11 Lack of formal crossing


103.1.2 Access restriction – (barrier)


103.1.7, 103.1.8 Lack of formal crossing

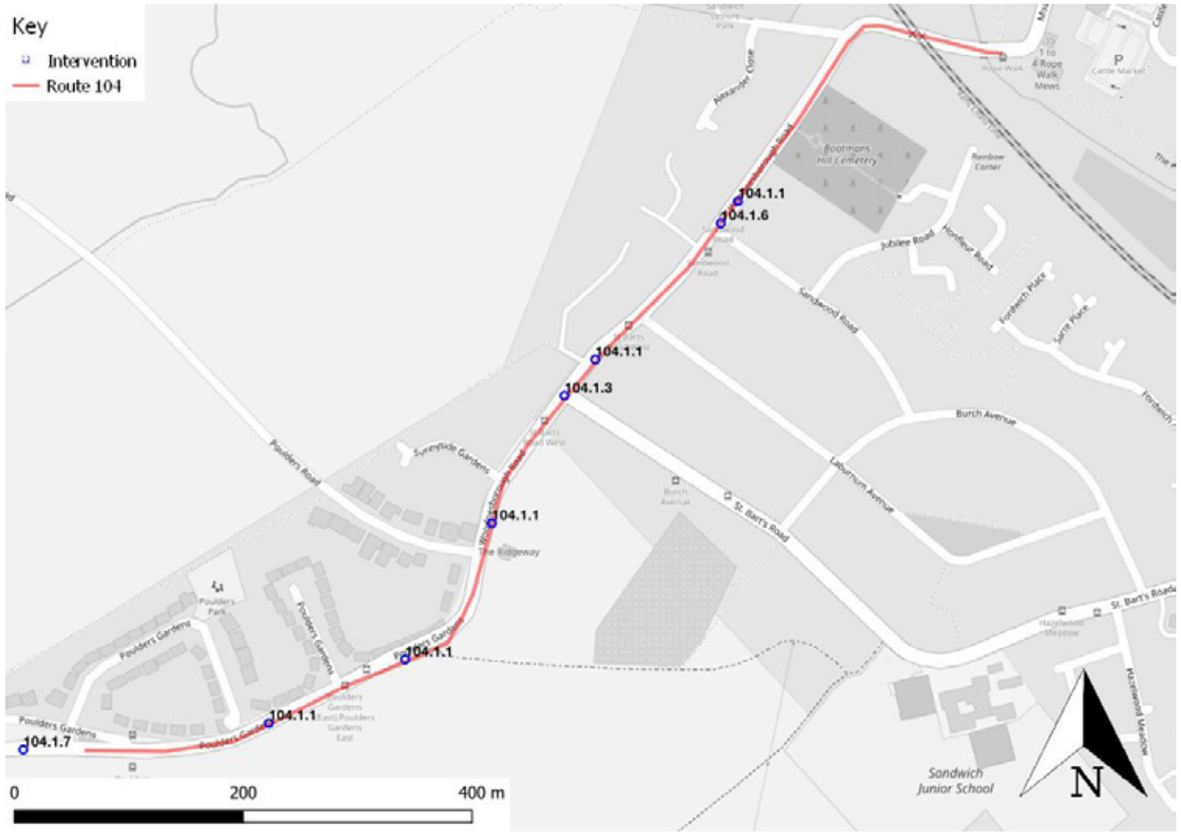

103.1.12 Lack of formal crossing

103.1.3 † Street narrowed by parking


103.1.9 Overgrown vegetation causing obstruction


103.1.14 Access restriction – (barrier)

† Image Sourced from Google Street View



Route 104 Poulders Gardens – St Thomas's Hospital

Route Description

Route 104 begins at the junction of Poulders Gardens/Woodnesborough Road and ends at St Thomas's Hospital. The route passes St Bart's Road, which connects to Sandwich Junior School and St Thomas's Hospital, providing connectivity to the proposed Route 101 - The Sandwich Arc. Along with existing NCN15, This route would serve as a key connection for the planned Stour Cross development, to the south-east of Poulders Gardens (see 'Sandwich Trip Generators and Attractors' Map, pg 9).

Background

PCT simulations demonstrate that this is a key connection between the town centre and neighbourhoods along Woodnesborough Road to Poulders Gardens (and potentially on to Woodnesborough). In the 'Go Dutch' scenario, and with installation of the interventions proposed in this chapter, this route could serve over 25 cycle commuters per day. It could also provide a connection for Sandwich Junior School and potentially serve an increase of school cycle commutes from the current 5-15, to a 'Go Dutch' scenario of over 35 per day.

Existing conditions

At the Poulders Gardens junction, Woodnesborough Road is designated as 40mph and there is no cycling infrastructure. Parking is unrestricted until the junction with St Bart's Road. At Sunnyside Road, the environment becomes more built up with a greater level of housing and parking. The carriageway is two way, however, vehicles are frequently required to pull in give way due to parking. The route crosses the town's northern level crossing with the associated issue of surface quality and space.

Barriers to Walking and Cycling

The existing condition of the proposed alignment does not provide for safe cycle or pedestrian movements. Woodnesborough Road has long straight sections with wide lanes that promote high vehicles speeds and also sections that are narrow and heavily parked, which increase the likeliness of conflict or interaction between vehicles – this environment can be difficult to navigate by cycle, especially for inexperienced users.

Recommendations

104.1.1 Traffic data analysis for whole route to determine its suitability as a quiet route. Create 20mph zone and introduce traffic calming measures and enforcement, as

104.1.1 † Lack of traffic calming

South West end of Route 104.

104.1.3 † Lack of protection for cycles turning right

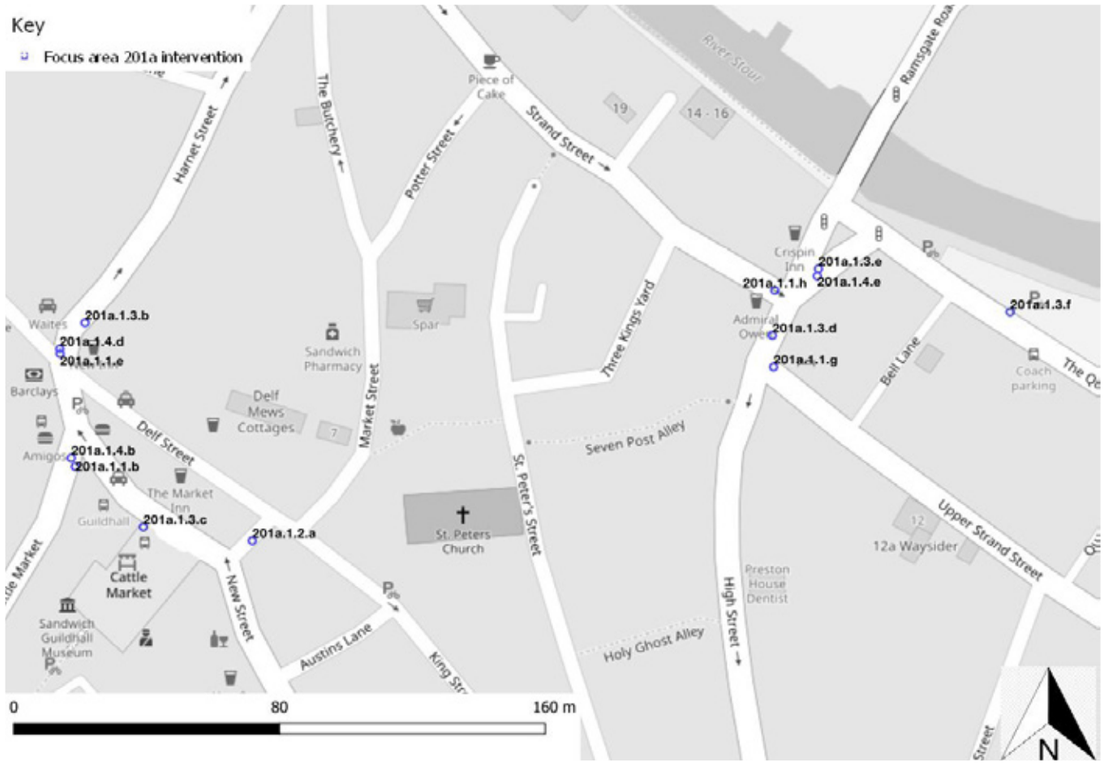
104.1.6. Street narrowed by parking

Example chicane † Somerset County Council

Example village gateway † Somerset County Council

Focus Area Recommendations

† Image Sourced from Google Street View



Focus area 201a – Improve Accessibility in the Town Centre

Description

This scheme presents the first of two different approaches that could be taken to improve conditions for people on foot and on mobility aids in the town centre.

The interventions set out here seek to address some of the barriers to walking around the town. In the town centre, four types of intervention are proposed:

- Introduce continuous footways
- Limit vehicle through access
- Introduce zebra crossings
- Reduce junction width/corner radii

These interventions aim to improve the accessibility of the town centre for pedestrians, but do not necessarily seek to influence the volume of traffic in the town.

Existing conditions

The scale of the town centre is suited to pedestrian trips and most of the town's tourist attractions are located within or adjacent to the town centre. However, owing to the constrained medieval street layout and the prioritisation of vehicle movements in the town, the amount and quality of infrastructure serving pedestrians is low.

The narrow medieval streets struggle to accommodate pedestrians and the many vehicles (including Heavy Goods Vehicles) travelling through the town. Greater space is apportioned to motor traffic than to people on foot, creating barriers to residents accessing key amenities and tourists exploring the town. This issue is particularly acute in the town centre, but also present within the periphery, where busy roads, prioritising motor vehicles, deter walking or cycling for short trips to the train station or local schools.

Barriers to Walking

Many footways within town are of poor quality and, at times, they are completely inaccessible for people with visual impairments or limited mobility. In the town centre, footways are often excessively narrow and uneven, obstructed by bollards, have significant upstands and lack dropped kerbs and tactile paving. People using mobility aids are frequently forced into the carriageway, as footway widths barely accommodate one single-file pedestrian, with turning vehicles often encroaching onto footways. Space on Sandwich's narrow streets is divided disproportionately, with the vast majority being apportioned to vehicles. This creates barriers to walking in the town, an activity that the town's ageing population and many tourists are keen to do, in spite of inaccessible footways.

A further consequence of prioritising vehicle movements is the negative impact on people's ability to cross streets and side roads safely and conveniently. Accommodating the flow and turning movements of vehicles has resulted in wide junctions with large corner radii, wide roads with no crossing facilities and the blocking of pedestrian desire lines. These issues are found throughout the town, limiting people's ability to access shops, tourist attractions and other goods and services within the town centre. Lack of crossings restrict residents living on the edge of the town from accessing the town centre, the train station and local schools and amenities.

Recommendations

201a.1.1 Introduce level continuous footway to meet pedestrian desire lines (a-i)
201a.1.2 Prevent vehicle through-access (a,b)
201a.1.3 Introduce Zebra crossing (a-g)

201a.1.4 Reduce junction width/turning radii (a-e)

201a.1.1 Lack of continuous level footway

201a.1.2 Lack or pedestrian prioritisation

201a.1.3 † Lack of formal crossing

201a.1.4 Wide junction and poor pedestrian provision

† Image Sourced from Google Street View

Focus area 201b – Town Centre Pedestrianisation

Description

This scheme proposes a more radical approach to Sandwich's town centre, which would supersede scheme 201a.

As discussed in the previous scheme, the prioritisation of vehicle movements through Sandwich town centre has a negative impact on the quality of the pedestrian experience. This issue is compounded with the substandard condition of existing footways that many find difficult to use. The size and scale of the town and its many shops, cafés and tourist attractions invite walking, however, pedestrian movements are marginalised in favour of vehicles. This has a detrimental impact on the liveability of the town for residents and the quality of the experience for visitors to Sandwich.

The attractiveness of the town is also denigrated by vehicular dominance. As a unique, medieval town, Sandwich offers significant appeal to tourists. However, traffic volumes are detrimental to the visual amenity and urban realm, resulting in historic vistas replete with parked vehicles, over-bearing signage and excessive road markings.

The map (inset left) sets out a concept for pedestrianisation of the town centre. As the map shows, it may be possible to pedestrianise a significant proportion of the town centre, while permitting vehicles to come within 200m of the Guildhall and access the car park on the town quay.

Removing vehicle movements from the town centre can be achieved using signage or filters such as bollards. However, it is the quality of the public realm (in particular the footways) as well as the presence of vehicles that negatively impacts the pedestrian experience of the town centre. Removing most vehicle movements from the town centre provides the space needed to improve footways and public spaces. Therefore, a feasibility study into town centre pedestrianisation is recommended, including concept designs of streets and public realm where people are prioritised.

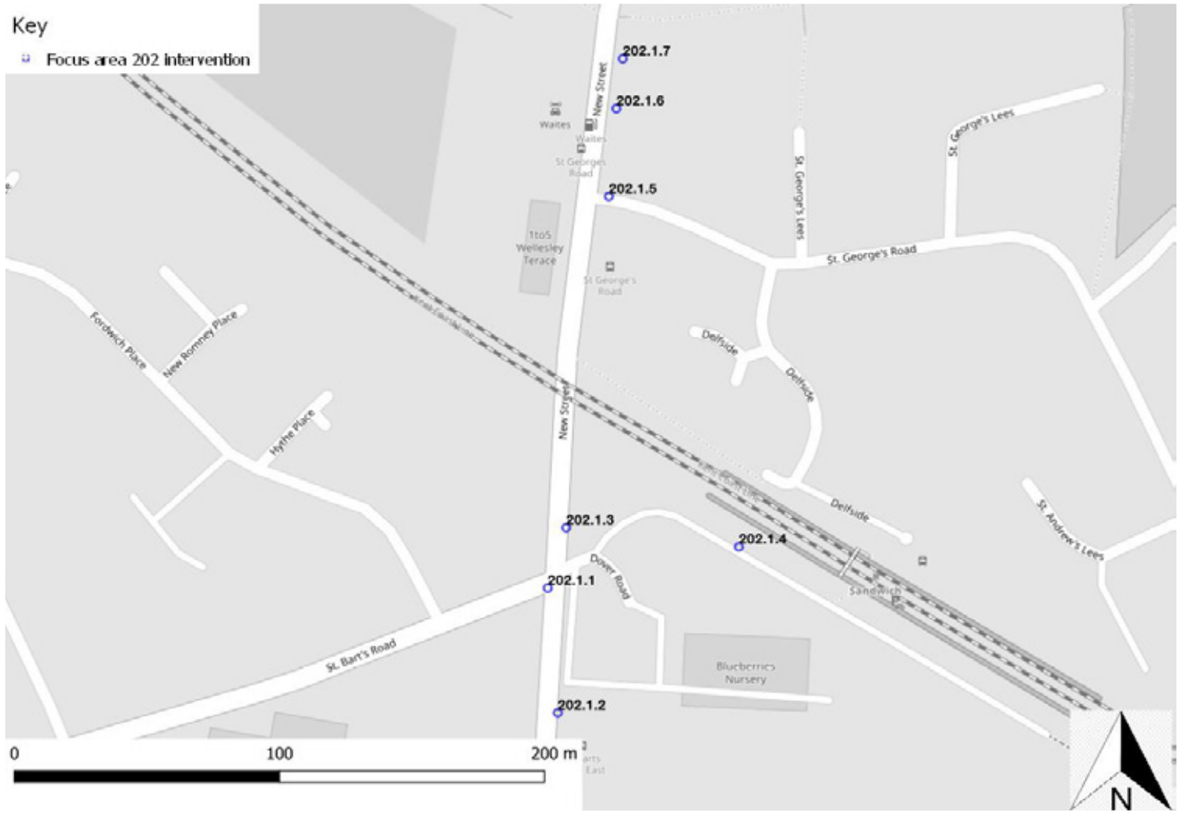
These images are examples of town centre redevelopments that have provided accessible pedestrian and cycle environments and high quality public realm. (Widemarsh Street Hereford and Frodsham Street, Chester):


Frodsham Street, Chester


Frodsham Street, Chester


Widemarsh Street, Hereford †


Widemarsh Street, Hereford †



Focus area 202 – Improve access to Sandwich Station

Description

Ensuring a good level of accessibility to Sandwich Station is vital for promoting sustainable travel among those living in Sandwich and for enabling visitors to arrive by rail and continue their journey into town safely and conveniently.

Existing conditions

Despite being a key transport link in Sandwich, accessibility to Sandwich Station is poor. The station is located immediately east of New Street and the northern platform is accessed via St George's Road and Delfside. The southern platform can be accessed from Delfside via a pedestrian footbridge or by a private road opposite St Bart's Road.

Barriers to Walking

Dover Road/New Street is a main route into Sandwich town centre with significant traffic flows. North of the station the speed limit is 20mph however this designation does not apply south of the station where the speed limit is 30mph. There are no controlled crossings to help pedestrians navigate east/west across Dover Road/New Street and footways are narrow. The southern access to the station is informal and unsigned and would be difficult to locate for those unfamiliar with the area.

Recommendations

202.1.1 Introduce continuous footway across St Bart's Road junction with New Street

202.1.2 Convert traffic island to zebra crossing on New Street (north of St Bartholomew's church)

202.1.3 Introduce Pelican crossing to enable connectivity to Sandwich Station on New Street (north of access to train station via private road)

202.1.4 Formalise access through private road to southern platform at Sandwich Station

202.1.5 Introduce continuous level footway on St George's Road junction with New Street

202.1.6 Narrow southbound carriageway and increase footway on New Street

202.1.7 Extend double yellow lines between entrance to Mill Wall and St George's Road

202.1.8 Introduce protected right turn for cycle users from New Street to St George's Road

202.1.9 Protected transition for cycle users from St Bart's Road to southern platform at station


202.1.1, 202.1.9 Lack of continuous level footway


202.1.2 † Lack of formal crossing


202.1.3 † Lack of formal crossing

Focus area 203 – Level Crossings

Description

The two level crossings in Sandwich present a unique challenge in regards to pedestrian safety and accessibility. The footway on the level crossings consists of painted road markings which offer pedestrians little protection from traffic. Though it may not be possible to make physical alterations to the level crossing, the advisory footway could be widened to provide adequate width by reducing the carriageway width.

Existing conditions

The level crossings in Sandwich have approximately the same layout; footways that narrow on approach to the crossing, with the kerb upstand reducing to carriageway level. On the crossing the footway is delineated by painted markings. There is no tactile paving indicating a change of environment for those with impaired vision.

Barriers to Walking

Each level crossing in Sandwich has footways that are insufficiently wide. There is little scope to increase the size of the level crossing, however, space from the carriageway may be reallocated for pedestrians. Likewise, it will not be possible to alter the surface of the level crossings, but could be addressed on the footways immediately north and south of the level crossings. The environment is intimidating with no infrastructure to moderate vehicle speeds.

Recommendations

203.1.1 Narrow southbound carriageway and increase footway width on New Street

203.1.2 Widen the footway on the level crossing to accommodate all users.

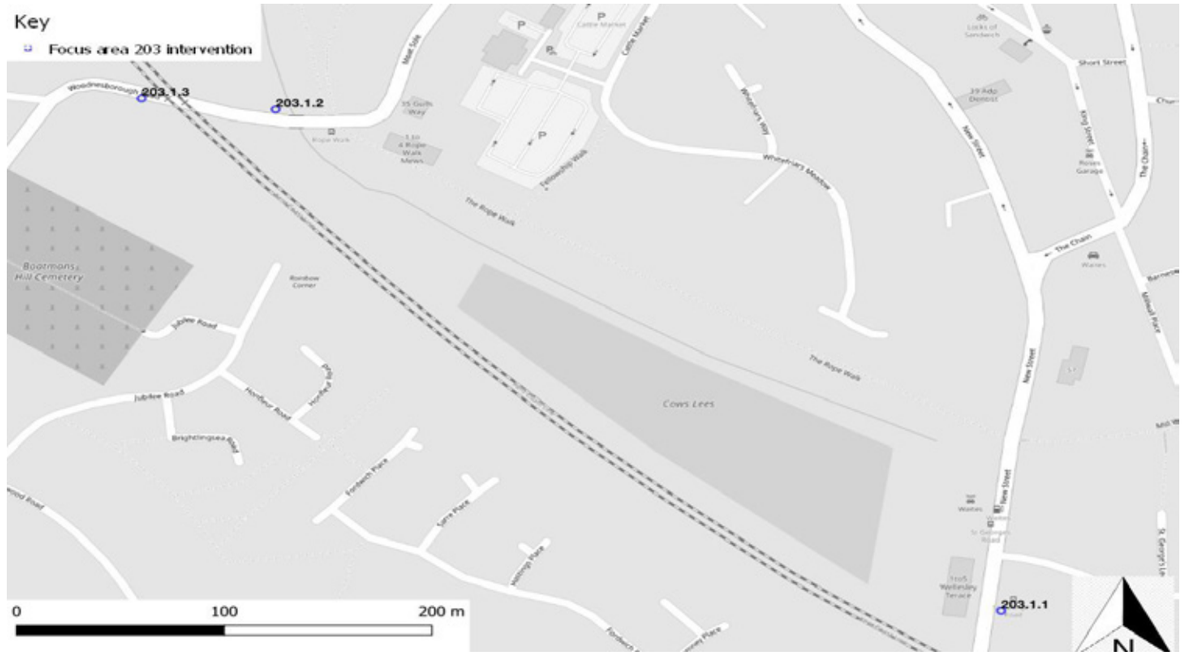
203.1.3 Propose tactile paving or similar demarcation to identify level crossings for people with visual impairments

202.1.4 Poor pedestrian access to Train Station

202.1.5 † Lack of continuous level footway

203.1.1. Level crossing

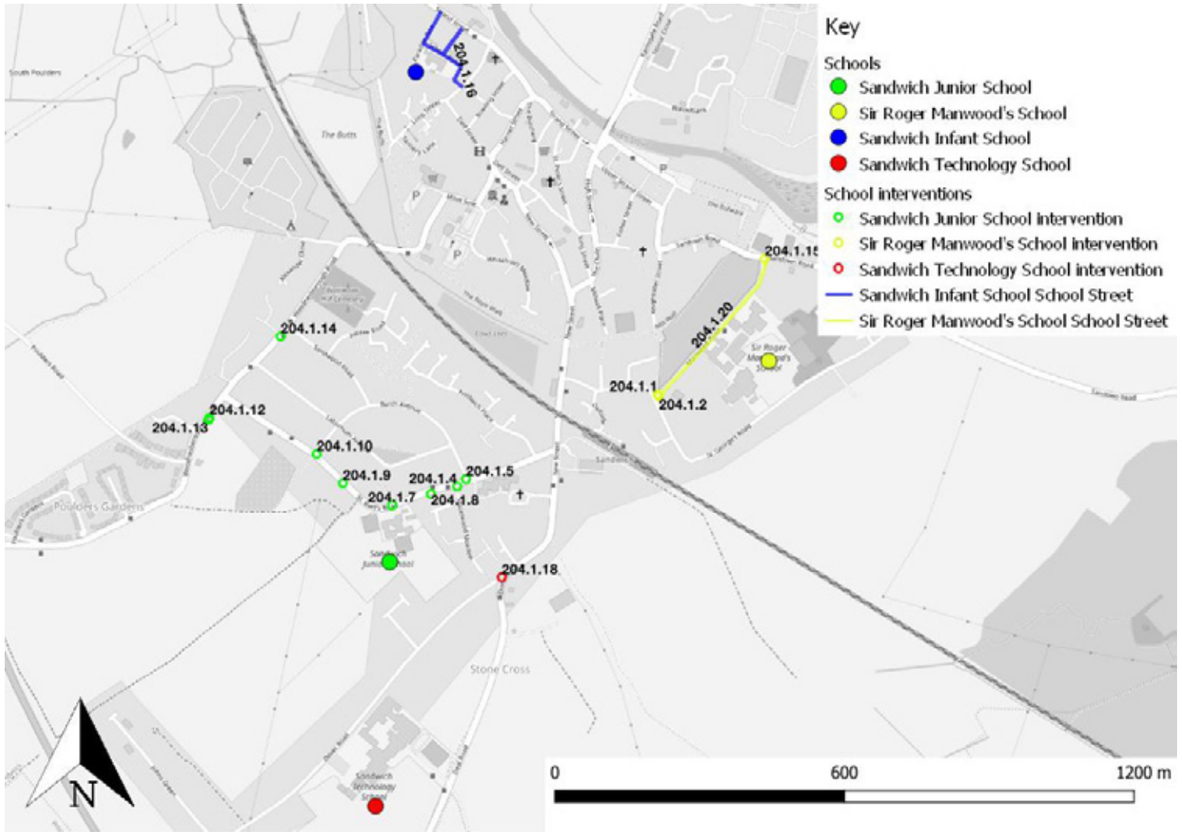
202.1.6, 202.1.7 † Narrow footway



203.1.2 Narrow footway (poor pedestrian provision)

202.1.8 † Light of protected right turn for cycles

† Image Sourced from Google Street View



Focus area 204 – Improving Sustainable Access to Schools

Description

The interventions set out in School Accessibility seek to provide safe routes to Sandwich Junior School, Sir Roger Manwoods School and Sandwich Infant school. School Streets are recommended outside Sir Roger Manwood's School, Sandwich Junior School and Sandwich Infant School, restricting vehicle movements outside the schools, during drop-off and pick-up in term time.

Existing conditions

Schools in Sandwich currently have little to no provision for children's safety on the streets outside the schools, nor are there child-focused spaces offering opportunities for play and physical activity. However, the easily walkable size and flat gradient of the town, should enable walking, cycling and scooting to school as primary modes.

School commute PCT data demonstrates high propensity for cycling to school throughout the town (over 35 cycles per der), but very little currently occurring (5-15 per day). The interventions explored in this chapter would enable increased modal share and safer, more accessible routes to and from school.

Barriers to Walking

The most severe barrier to walking to school in Sandwich is the absence of safe crossing points at key locations, e.g. on Woodnesborough Road, Dover Road and Strand Street. Controlled crossings are proposed in 202 and 203 that serve Strand Street and Dover Road however additional pelican crossings are proposed to help pedestrians cross Woodnesborough Road to reach Sandwich Junior School. An additional barrier to walking is junction layouts which prioritise vehicle movements and speed.

Recommendations

204.1.1 Reduce junction width/flair/corner radii and introduce level continuous footway at Manwood Road/St George's Road junction.-

204.1.4 Reduce junction width/flair/corner radii and introduce level continuous footway at Hazelwood Road/St Bart's Road junction

204.1.5 Reduce junction width/flair/corner radii and introduce level continuous footway at Burch Ave (east end)/St Bart's Road junction

204.1.7 Remove railings at entrance to footpath between 77 and 79 St Bart's Road

204.1.8 Introduce Zebra crossing across St Bart's Road, at Hazelwood Meadows Bus Stop

204.1.9 Introduce Zebra crossing across St Bart's Road,outside number 55

204.1.10 Reduce junction width/flair/corner radii and introduce level continuous footway at Burch Ave (west end)/St Bart's Road junction

204.1.12 Extend double yellow line on Woodnesborough Road heading south towards Poulders Round

204.1.13 Introduce Pelican crossing across Woodnesborough Road at bus stop/ number 98

204.1.14 Introduce Pelican crossing across Woodnesborough number 52

204.1.15 Filter Manwood Road at junction with Sandown Road to prevent rat-running. Redirect traffic along St George's Road.

204.1.16 Propose School Street for Sandwich Infant School on Cottage Row

204.1.18 Reduce junction width/flair/corner radii and introduce level continuous footway at Dover Road/Deal Road junction

204.1.20 Designate Manwood Road as a School Street. If required, install disabled parking bays and accessible school entrance at St George's Road side the school.

204.1.1 † Lack of continuous level footway

† Image Sourced from Google Street View

Focus area 205 – Reducing Severance by Providing Pedestrian and Cycle Bridges

Description

The railway line that passes through Sandwich creates a significant barrier for those who reside in the housing estate to the west of the town. Currently there are only three points entry points to the town centre for pedestrians and cyclists; all via level crossings. As a result, residents who live to the west of the railway line are forced to travel substantial distances to reach goods and services. For example, a resident of Brightlingsea Road wishing to access the Coop supermarket on foot is required walk approximately 800m, despite the supermarket being located 350m away as the crow flies.

The map shows the street network in Sandwich, ranked in terms of Choice value. Choice in this context means:

'How likely [...] a street segment is to be passed through on all shortest routes from all spaces to all other spaces in the entire system or within a predetermined distance (radius) from each segment.'[1]

Put simply, this relates to how connected a street is to other streets within the network. In the map, the warmer the colour, the more connected it is; the cooler the colour, the more isolated it is. The map shows that the streets immediately east and west of the railway line are ranked among the most isolated in the network.

Providing bridges at the proposed locations would achieve the following:

- Increase connectivity of the residents west of the railway line to the rest of the town
- Incentivise people to walk and cycle rather than to drive by reducing the distance between homes and services/the town centre
- Increase access to green space
- Provide a connection to the proposed route 101 and other routes

Recommendations

- Investigate feasibility of introducing walking and cycling bridge over railway line, with western landing located between Honfleur Road and Fordwich Place
- Investigate feasibility of introducing walking and cycling bridge from Cows Lees to The Rope Walk, to land in close proximity to Fellowship Walk

1 Hillier, B., Burdett, R., Peponis, J., Penn, A. (1987), Creating Life: Or, Does Architecture Determine Anything? Architecture et Comportement/Architecture and Behaviour, 3 (3) 233 - 250. pp.237

Focus area 206 –Converting Toll Bridge into Walking and Cycling Only

Description

From Sandwich the only crossing point over the River Stour is the toll bridge, connecting the town to the Sandwich Industrial Estate and Discovery Park – both major employment sites in the area. The toll bridge also provides an alternative north-south route for those choosing to avoid the A256.

Maintaining this vehicle access point incentivises vehicles to pass through Sandwich when heading to Discovery Park and other locations, and disincentives those who live in Sandwich to travel by sustainable means. Closing the toll bridge would not impede vehicular access to the Discovery Park and the Sandwich Industrial Estate, as this would remain accessible via the A256.

The conversion of the toll bridge to walking and cycling only would reduce the amount of traffic passing through the town and create a safer, more pleasant crossing point for pedestrians and cycle users. Furthermore, closing the bridge to vehicle movements may lengthen the life of the structure.

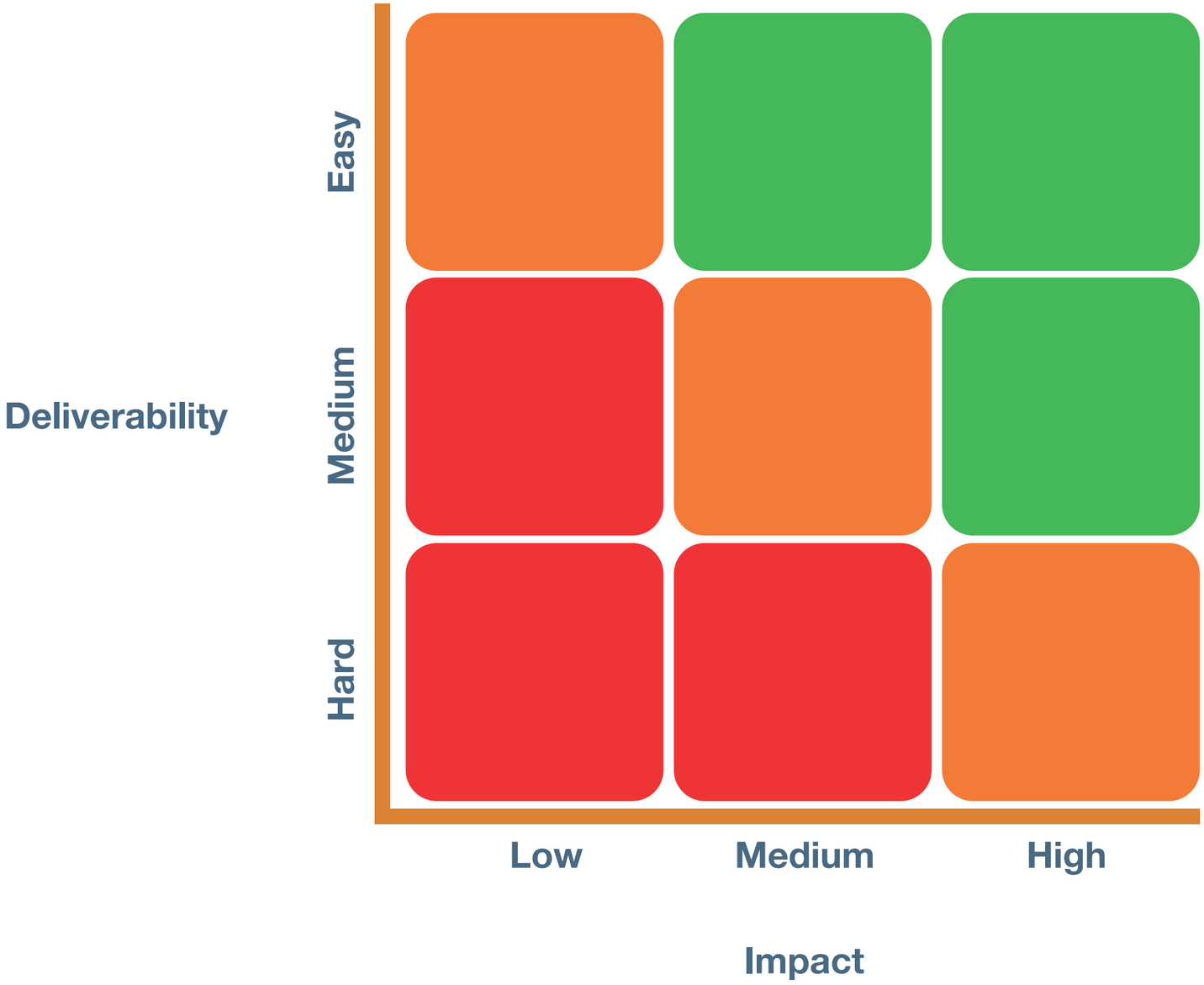
The upcoming essential maintenance works planned for the toll bridge provides a unique opportunity to monitor how such a closure will impact on traffic volumes and speeds in and around Sandwich. Traffic counts and monitoring are strongly recommended for the duration of the closure, in order to develop an understanding of how vehicles reroute when access via the toll bridge is prohibited, and whether the closure impacts the volumes of traffic within the town. Site visits and observations are also recommended, to evaluate the impact of the closure on the town, residents, visitors and local businesses.

† Image Sourced from Google Street View

Deliverability and Impact of Proposed Interventions

The following table details the potential deliverability and impact of the proposed interventions described in this report. The objective of this exercise is to differentiate the interventions from each other. This will enable decision-makers to identify 'Quick Wins' (interventions that are easy to deliver and high impact), as opposed to interventions that may be costly and/or challenging to install, and have limited impact. There are, of course, many in between, for example, interventions that offer high impact, but may require additional fundraising and/or more detailed feasibility study.

In order to visually represent deliverability and impact, each intervention has been assigned a colour of red, amber or green, accordingly. This is intended to rank the interventions against each other. Assessments have been made according to Sustrans Design Principles, however, it is recognised that an amount of subjectivity is inherent within the process. Deliverability status has been assigned according to best estimates of cost, ease of collaboration with stakeholders (including landowners) and other potential barriers. Impact status has been assigned according to PCT data and practitioners' experience of delivering impactful walking and cycling infrastructure.



Intervention	Description of the Intervention	Deliverability (Easy/Medium/Hard)	Impact (Easy/Medium/Hard)	RAG Score
	101: Town Quay to Gazen Saltz Nature Reserve			
101.1.1	Permit cycling on The Bulwark	Easy	High	
101.1.2	Introduce parallel zebra on Sandown Rd to connect The Bulwark to Millwall	Medium	High	
101.1.3	Remove barriers and brick pillars at existing crossing	Easy	High	
101.1.4	Permit cycling on Mill Wall	Easy	High	
101.1.5	Convert zebra crossing to parallel zebra crossing on New Street to connect Mill Wall to The Rope Walk	Medium	High	
101.1.6	Remove steps and introduce ramp/gradient	Medium	High	
101.1.7	Permit cycling on Rope Walk	Easy	High	
101.1.8	Address safety issue of steep bank on western side of the path	Medium	Medium	
101.1.9	Remove or reduce parking south of The Butts to provide space for crossing	Medium	Medium	
101.1.10	Introduce parallel zebra on Woodnesborough Rd connecting Rope Walk to The Butts	Medium	High	
101.1.11	Permit cycling on The Butts	Easy	High	
101.1.12	Introduce zebra crossing connecting the Butts to Gazen Saltz Nature Reserve	Medium	High	
101.1.13	Remove fence/barrier at entrance to Gazen Saltz Nature Reserve	Easy	High	
	102: NCN 1 Deal - Sandwich - Fordwich			
102.1.1	Introduce double yellows on western side of Sandown Rd	Easy	High	
102.1.2	Realign NCN 1 to continue on Sandown Rd and to join at entrance to The Bulwark/Mill Wall	Easy	High	
102.1.3	Realign NCN to follow alignment of 'Sandwich Arc'	Easy	High	
102.1.4	Introduce protected right turn on to The Butts for those travelling east on Ash Road/Strand St	Medium	High	
102.1.5	Introduce protected right turn on to Richborough Rd for those travelling west on Strand St/Ash Road	Medium	High	
	103: NCN 15 Whitfield - Sandwich - Ramsgate			
103.1.1	Introduce double yellows on both sides of the road between 69 and 54 Dover Road	Medium	Medium	
103.1.2	Dropped kerbs and barrier removal to allow cycle movements on to Hazelwood Meadow	Medium	High	
103.1.3	Double yellow lines, St Bart's Rd between 127 and junction with Dover Road	Medium	Medium	
103.1.4	Protected right turn from Dover road on to St Bart's Road	Hard	High	
103.1.5	Use route 101 alignment	Easy	High	
103.1.6	Cycle priority traffic lights	Medium	Medium	
103.1.7	Introduce parallel zebra	Medium	Medium	
103.1.8	Introduce parallel zebra	Medium	Medium	
103.1.9	Cut back vegetation	Easy	High	
103.1.10	Toucan crossing	Hard	High	
103.1.11	Toucan crossing	Hard	High	
103.1.12	Toucan crossing	Hard	High	
103.1.13	Realign NCN 15 to connect from A258 to Dover road	Hard	High	
103.1.14	Remove barriers and cut back vegetation. Formalise entrance for pedestrians and cycle users	Medium	High	
Intervention	**Description of the Intervention**	**Deliverability**	**Impact**	**RAG Score**

Intervention	Description of the Intervention	Deliverability (Easy/Medium/Hard)	Impact (Easy/Medium/Hard)	RAG Score
	104: Poulders Gardens - St Thomas's Hospital			
104.1.1	Create 20mph. Traffic counts to establish suitability as a quiet route. Traffic Calming Measures as necessary.	Easy	Medium	
104.1.3	Introduce protected turn between St Bart's and Woodnesborough Road	Hard	High	
104.1.6	Reduce parking on Woodnesborough Rd between St Bart's Rd and level crossing, to create space for cycling and reduce risk of close-passing.	Hard	Medium	
104.1.7	Village entry treatment	Medium	Medium	
	201a: Town Centre Improvements			
201a.1.1	Introduce level continuous crossings to meet pedestrian desire lines (a-i)	Medium	Medium	
201a.1.2	Prevent vehicle through access (a,b)	Medium	Medium	
201a.1.3	Introduce Zebra crossing (a-g)	Hard	High	
201a.1.4	Reduce junction width/flair/corner radii (a-e)	Medium	Medium	
	201b: Town Centre Pedestrianisation			
201b	Town Centre Pedestrianisation	Hard	High	
	202: Improve access to Sandwich Station			
202.1.1	Introduce continuous footway	Hard	High	
202.1.2	Convert traffic island to zebra crossing	Medium	High	
202.1.3	Introduce Pelican crossing	Hard	High	
202.1.4	Formalise access through private road to southern platform at Sandwich Station	Medium	High	
202.1.5	Introduce continuous footway	Medium	Medium	
202.1.6	Narrow southbound carriageway on New Street and increase footway width adjacent to southbound carriageway on New Street	Hard	High	
202.1.7	Extend double yellow lines	Easy	Medium	
202.1.8	Introduce protected turn for cycle users from New Street to St George's Road	Medium	High	
202.1.9	Protected transition for cycle users from St Bart's Road to southern platform at station	Hard	High	
	203: Level Crossings			
203.1.1	Narrow southbound carriageway on New Street and increase footway width adjacent to southbound carriageway on New Street and across level crossing	Hard	High	
203.1.2	Widen the footway on the level crossing to make accommodate all users.	Hard	High	
203.1.3	Investigate tactile paving requirements for tactile paving on level crossings	Medium	Medium	
	204: Improving sustainable access to Schools			
204.1.1	Reduce junction width/flair/corner radii and install continuous level footway	Medium	Medium	
204.1.4	Reduce junction width/flair/corner radii and install continuous level footway	Medium	Medium	
204.1.5	Reduce junction width/flair/corner radii and install continuous level footway	Medium	Medium	
204.1.7	Remove railings	Medium	Low	
Intervention	**Description of the Intervention**	**Deliverability**	**Impact**	**RAG Score**

Intervention	Description of the Intervention	Deliverability (Easy/Medium/Hard)	Impact (Easy/Medium/Hard)	RAG Score
204.1.9	Introduce Zebra crossing	Medium	High	
204.1.10	Reduce junction width/flair/corner radii and install continuous level footway	Medium	Medium	
204.1.12	Extend double yellow line on southbound carriageway	Easy	Medium	
204.1.13	Introduce Pelican crossing	Hard	High	
204.1.14	Introduce Pelican crossing	Hard	High	
204.1.15	Filter Manwood Road at junction with sandwood Road. Redirect traffic along St George's Road.	Easy	Medium	
204.1.16	Propose School Street for Sandwich Infant School	Medium	High	
204.1.18	Reduce junction width/flair/corner radii and install continuous level footway	Medium	High	
204.1.20	Propose School Street for Sir Roger Manwood School	Medium	High	
	Area-wide recommendations			
	Expand 20mph zone	Easy	High	
	Centre line removal in 20mph zone	Medium	Medium	
	Review accessibility of bus stops	Medium	High	
	Signage review and update	Medium	High	
	Review of cycle parking provision	Medium	High	
Intervention	**Description of the Intervention**	**Deliverability**	**Impact**	**RAG Score**