SHARING THE SPACE:

A study of four shared-use paths in London

We are Living Streets, the UK charity for everyday walking. We want to create a walking nation where people of all generations enjoy the benefits that this simple act brings, on streets fit for walking.

LIVING STREETS

PREFACE

The Mayor of London's ambition is to increase cycling levels in London by 400 per cent by 2026 (from 2001). This has necessitated the introduction and rapid expansion of segregated cycle superhighways, quietways and shared spaces, particularly in Central London where space is at a premium.

The City of London is keen to understand the impact this may have on pedestrians, particularly where people on foot and bicycles are required to share the same spaces.

Living Streets is the national charity for everyday walking and we work with partners in the public and private sector to help make this happen. Living Streets has a Service Level Agreement with the City of London Corporation to help the authority to promote an excellent quality public realm and to encourage more people to choose walking as their preferred mode of transport.

The result was a collaboration between Living Streets, the City of London and Westminster University's Travel Planning and Management Masters programme. Living Streets devised a research question for a student to undertake for their Masters thesis. We would like to thank Dr Rachel Aldred the course leader and Chris Hambridge for undertaking the research reported here. The City of London and the Borough of Southwark helped to identify the case study locations.

This report has been prepared by Living Streets to present the research findings to a public audience. The discussion and recommendations necessarily reflect this organisation's understanding and prioritisation of pedestrian issues and reflect the viewpoint of Living Streets. We hope that it will inform thinking about making space for pedestrians and cycling, not only in London but in other busy urban centres.

Joe Irvin
Chief Executive, Living Streets

CONTENTS

EXECUTIVE SUMMARY

This report explores pedestrian's and cyclist's experience of sharing spaces. With London's population set to soar to 11 million by 2050, increasing the proportion of people walking and cycling could be the answer to many of the city's transport problems. A substantial increase in active travel could not only to reduce congestion on London's road and rail networks, but also improve the city's air quality and benefit people's health. However, persuading more people to travel actively will depend on the infrastructure being fit for purpose.

Just like motorists, pedestrians and cyclists want to feel comfortable and safe in their environment. Shared use pedestrian-cyclist pathways have the advantage of removing the risk of collisions between cyclists and motor vehicles. Nevertheless, the potential for pedestrian-cycle conflict still remains when footpaths and footways are shared. Interaction between the two modes of transport is inevitable. What is less well understood is how it feels to be a pedestrian or a cyclist in that situation.

Four sites were selected: St Bride Street and Queen Street in the City of London, and; St Mary's Churchyard and Burgess Park in the London Borough of Southwark. In each case, the objective was to find out:

- How common and how severe were pedestrian-cyclist interactions?
- What is the quality of the user experience? Are there particular reservations or concerns? And,
- What could be done to improve the situation?

Direct observations at peak commuter times were used to assess the direction of flow and to quantify the degree of interaction (from mild to severe) between the two modes. Snapshot counts recorded the volume of users during a ten minute period. In addition, survey cards were distributed to pedestrians and cyclists inviting them to take part in an online survey to describe their user experience. Focus groups with pedestrian access and campaign groups were a later addition when it was realised that disabled and older pedestrians were not represented among survey respondents.

Of course each site was different, but it is these differences which help to reveal aspects of the user experience. For example, the Place function of St Bride Street lends itself to slower cyclist speeds and more considerate behaviour. In contrast the high volume of pedestrians and cyclists using Queen Street led to high levels of discomfort for both modes. Encouraging people to walk along neighbouring streets, such as Bow Lane and Wallbrook, by improving the pedestrian environment there could help to reduce the tension.

St Bride Street shows that where there is sufficient space and visibility shared spaces are tolerated better. However, St Mary's Churchyard and Burgess Park demonstrate that, after volume, speed is the next most important issue. Given the opportunity, cyclists will go faster than a walking pace and pedestrians do not enjoy being in the way.

Pedestrian-cyclist interactions commonly occur in shared spaces. The majority observed in this study were very mild – consisting of natural adjustments and considerate behaviour as cyclists and pedestrians accommodate to each other's relative speed and direction of travel. However, the survey results suggest that quality of the user experience were impacted more deeply.

This report has shown that:

- Sharing spaces affects both modes. Interactions are frequent and appear mild, but pedestrians experience more conflict than cyclists.
- There is a disproportionate impact on disabled people, who may prefer to avoid an area completely.
- Both volume of users (of both modes) and ratio of cyclist to pedestrians can affect comfort
- Cycle speed is the key issue for pedestrians. Cyclists should be slowed down, for example, through the use of street furniture or if possible alternate routes provided.
- Where sharing is unavoidable, signage should make the situation clear. However, it must be recognised that insufficient space (as in Queen Street) significantly reduces user comfort. Improving adjacent alternate routes for pedestrians and cyclists may help to diffuse the pressure and tension on key routes.

Comfort is key to encouraging and supporting growth in walking and cycling, therefore, in the long term the logical solution to will be to reallocate road space to increase capacity for walking and cycling.

INTRODUCTION

Increasing walking and cycling – active travel – is the answer to many of London's transport problems: an overcrowded road network, public transport systems at capacity and the forecast growth in population (expected to reach 11 million by 2050)[1]. The attractions are obvious, such as: the public health benefits of being physically active, reduced congestion, improved air quality. Walking in particular is cheap and easy to fit into everyday lives. Nearly a quarter (24%) of all journeys, in London, are made on foot (70% of those under a kilometre)[2].

- Motorised road traffic is a key source of air pollution, contributing 60 per cent of PM_{10}* and 47 per cent of nitrogen oxide (NO_x) emissions in London
- Exposure to particles in the long term (years) causes deaths from cardiovascular and respiratory diseases
- In 2008 there were over 4,000 „deaths brought forward' attributable to long-term exposure to small particles

Source: Transport for London (2014). 'Improving the health of Londoners: transport action plan'
**small particles below 10 micrometres in diameter*

The Mayor of London's ambition is to increase cycling in the city by 400 per cent by 2026[3] and to increase the proportion of people walking from 24 to 25 per cent by 2031 (an additional 1 million walking journeys per day)[4]. However, if these targets are to be met it is essential to provide pedestrians and cyclists with a comfortable and safe environment in which to travel. The infrastructure must be fit for purpose – a difficult challenge to initiate and maintain in a period of limited funding.

There is no doubt that the use of shared pedestrian-cyclist pathways reduces the risk of collisions between cyclists and motor vehicles. Nevertheless, conflicts between pedestrians and cyclists are less well understood. Segregated or unsegregated shared use paths are relatively common in the UK, for example: in parks, along canal towpaths and in a variety of city and

[1] BBC (2015). „London's population high: Top metropolis facts', http://www.bbc.co.uk/news/uk-england-london-31056626 [Accessed 15/06/2015]
[2] GLA (2010) and TFL (2010) ibid.
[3] TfL (Transport for London) (2010). „Cycle Safety Action Plan', https://tfl.gov.uk/cdn/static/cms/documents/cycle-safety-action-plan.pdf [Accessed 19/06/2015]
[4] GLA (Greater London Authority) (2010). „Walk This Way: Making walking easier and safer in London, Transport Committee', http://www.london.gov.uk/sites/default/files/Walking%20Report.pdf [Accessed 24/06/2015]

town street locations. Living Streets' view is that any form of shared use is inappropriate where there are large numbers of pedestrians[5].

It has been suggested that unsegregated shared use paths lead to more considerate behaviour[6]. On the other hand, there is very little difference in likelihood of a collision on unsegregated versus segregated routes; the key determinant is route capacity[7]. Pedestrian and cyclists flows, journey purpose (utility or leisure), visibility, and cyclist speed are all important considerations[8]. As is the fact that all people move differently, whether it is older people, children, disabled people, parents with push chairs, people walking dogs or running or skating[9].

Pedestrians are much less likely to be killed or injured by a cyclist than by a motor vehicle[10]. A forensic reconstruction of three fatal collisions drew the conclusion that the cyclist usually causes the collision, but the pedestrian suffers the more severe injuries[11]. The same research noted that the majority of fatalities involve older and frail pedestrians[12].

Interactions between pedestrians and cyclists on shared use routes are inevitable. Although studies suggest that actual conflicts and collisions on shared use paths are rare[13]. However, even if there are no observable conflicts occurring, pedestrians and cyclists may still experience unwanted frustrations just because they are sharing a path with one another[14]. The perceived conflict between pedestrians and cyclists in London is still an emerging area of research.

This report adds to our understanding of pedestrian and cyclist interactions by looking at four shared space locations in London and asking:

- How common and how severe are pedestrian-cyclist interactions?
- What is the quality of the user experience? Are there particular reservations or concerns? And,
- What could be done to improve the situation?

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[5] Living Streets (2009). „Policy Briefing 03/09: Pedestrians and Cyclists', http://www.livingstreets.org.uk/sites/default/files/content/library/Policy_briefings/pb0309pedcycle.pdf [Accessed 12/07/2015]

[6] Atkins (2012). „Shared Use Operational Review', https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9181/atkins-shared-use-operational-review.pdf [Accessed 10/06/2015]

[7] Atkins (2012) ibid.

[8] Sustrans (2011). „The Merits of Segregated and Non-Segregated Traffic-Free Paths: A literature based review', http://www.sustrans.org.uk/sites/default/files/images/files/migrated-pdfs/Phil%20Jones%20Associates%20report%20-%20September%202011.pdf [Accessed, 28/06/2015]

[9] Grzebieta, R., McIntosh, A., and Chong, S. (2011), „Pedestrian-Cyclist Collisions: Issues and Risk', Australasian College of Road Safety Conference

[10] DfT (Department for Transport) (2013b). „STATS 19 – personal injury road traffic accidents', https://www.gov.uk/government/uploads/.../dft-statement-stats-19.pdf [Accessed 12/08/2015]

[11] Graw, M. and Konig, H. (2002). „Fatal Pedestrian-Bicycle Collisions', Forensic Science International, Vol. 126, pp. 241-247

[12] Graw and Konig (2002) ibid.

[13] Atkins (2012) ibid.

[14] Delaney, H. (2014). „Walking and cycling interactions on shared-use paths', RGS-IBG Annual Conference 2014, Session: Current and Emerging Research in Transport

METHODOLOGY

Site selection

A total of four sites were selected based on advice from transport officers or reported complaints from users. These were: Queen Street and St Bride in the City of London, and; St Mary's Churchyard and Burgess Park in the London Borough of Southwark. Each site has different characteristics – from busy pedestrian through routes in the City to the residential location of St Mary's Churchyard and recreational space of Burgess Park. However, each location has something in common as a platform to explore the shared experiences of pedestrians and cyclists.

Research methods

The limited research available on pedestrian-cyclist conflicts dictated the need to collect primary data. A combination of direct site observations, pedestrian and cyclist counts, as well as online user surveys were used to establish the direction and number of pedestrian-cyclist movements, the level of interaction between pedestrians and cyclists, and their perceptions of the user experience. Additional focus groups with key stakeholders provided an opportunity to take into account wider issues (e.g. related to age or disability).

The approach adopted is based on the sites selected and the resource available.

1) Site observations

- Direct visual observations took place on a Tuesday, Wednesday or Thursday, either in the morning (07:30hrs-09:30hrs) or the afternoon (16:30hrs-18:30hrs). Lunchtimes were avoided. The observations took place during the school summer holidays which may be a limitation.
- Observation points were chosen where there were the largest number of pedestrians and cyclists passing each other, together with frequent opposing or perpendicular movements. The observer had to have an unobstructed view, but not interfere with path user's usual behaviour.
- Interactions were counted and ranked according to severity – ranging from 'A' the mildest (e.g. an early change of direction) to 'H' the most severe (a physical collision between users). See table 1.

2) Pedestrian and cyclist counts

- Snapshot counts of pedestrians and cyclists (recorded in a tally format) were carried out over 10 minutes at the mid point of each morning or afternoon observation period.
- The observers noted the direction of travel and movements of users in order to identify the main desire lines.

3) Online survey

- 1000 survey cards were distributed to pedestrians and cyclists at the four sites inviting them to complete an online user survey. 203 responses were received for both surveys (101 from pedestrians and 102 from cyclists) as a result. A further 40 responses were received in relation to Burgess Park following an article about this research in the Friends of Burgess Park newsletter. There were two questionnaires, one for pedestrians and one for cyclists. The same questions were adapted to each user group.
- Survey results are reported in each case study as percentages for ease of comparison. However, sample sizes for each site are quite small so the numbers should be treated with some caution. Full results are given in the appendices. Another limitation is that respondents did not always answer every question.
- The survey questions covered 5 topics – users' experiences of pedestrian-cyclist conflict, their opinions on the suitability of the path for shared use, their particular concerns about shared use, the quality of the user experience, and finally, any suggestions for change or improvements to the route. Some basic demographic data were also collected.

4) Focus groups

The potential for pedestrian-cycle conflicts and user experience at the selected sites were discussed with:

- The City Access Group
- Age UK London
- Southwark Living Streets
- Friends of Burgess Park

Some of their feedback is included in the Queen Street and Burgess Park case studies.

The data collected for each site are listed in the appendices.

Table 1: Categories of interaction used for the site observations

Interaction Type	Description
A- Early change of direction or slowing down	A cyclist or pedestrian noticing the presence of another user on the path and adjusting their position accordingly or slowing down in a controlled manner
B- Negotiation or inconvenience	Hesitation, waiting for the other user to proceed or mild irritation as identified verbally, with body language or gestures
C- Warning	A vocal warning or alert, such as bell ringing, given to another path user to announce one's presence. (This could also occur out of courtesy as well as in frustration)
D- Late swerve/change of direction	An uncontrolled, sudden or uncomfortable last minute movement. The user had clearly not anticipated the need to change course early enough

E- Sudden stop	Coming to a halt at a late stage or sudden braking/stopping that is largely uncontrolled
F- Verbal (or physical) exchange	An argument, shouting or swearing A physical assault (likely to be a rare occurrence)
G- Near miss	A near collision where two or more users are alarmed by the incident and may take emergency action to ensure an impact is avoided
H- Collision	A physical collision between users

Pedestrian and Cyclist profiles

Overall, female and male survey respondents are equally distributed (see table 2). In the City (St Bride Street and Queen Street), there were more male pedestrians and cyclists which could be representative of a higher proportion of men in the workplace. In St Mary's Churchyard and Burgess Park, the situation is reversed with more female pedestrians. There were more female cyclists at St Mary's Churchyard, but not at Burgess Park.

Table 2: Gender breakdown for pedestrians and cyclists by location

	Pedestrians			**Cyclists**		
Site	**Female**	**Male**	**Prefer not to answer**	**Female**	**Male**	**Prefer not to answer**
St Bride Street	46%	54%	0%	45%	55%	0%
Queen Street	43%	57%	0%	40%	60%	0%
St Mary's Churchyard	58%	38%	4%	53.5%	43%	3.5%
Burgess Park	53%	43%	4%	41%	53%	6%
Overall	**51%**	**48%**	**1%**	**45%**	**53%**	**2%**

Figures 1 and 2 show how respondent's ages range across the four case study locations. As might be expected from site observations and distribution of survey cards at peak times (with the exception of extra responses for Burgess Park), the majority of pedestrians and cyclists are of working age. There are relatively few young people (0-17 years old) and older people (over 60 years old). No one responding to the survey said that they had a disability; two people preferred not to say.

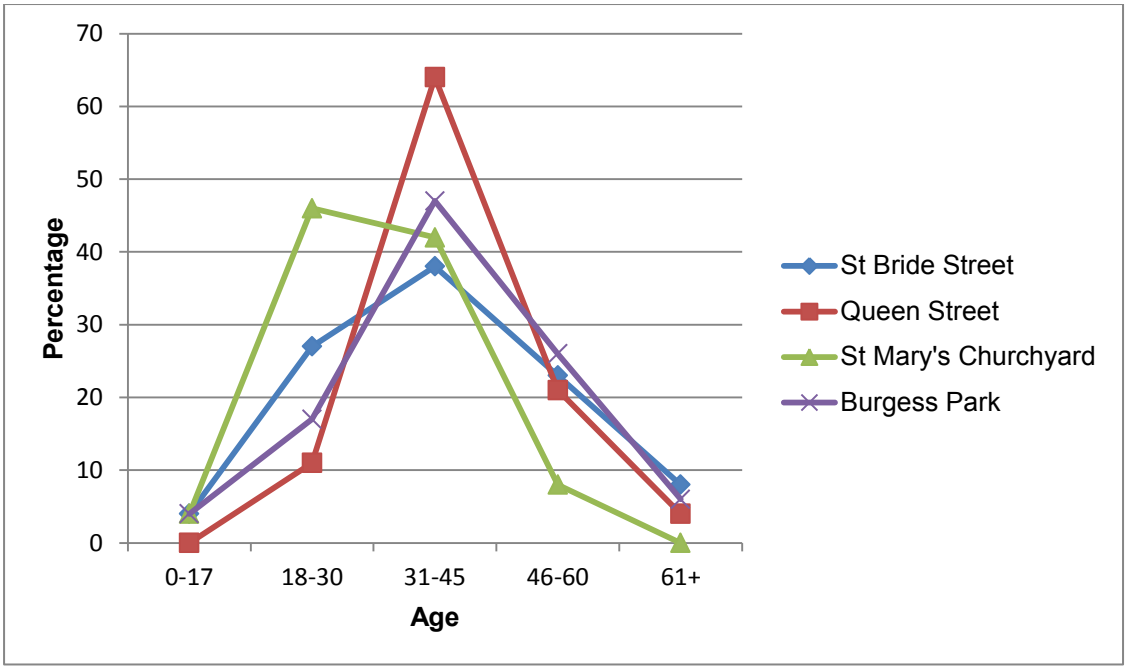


Figure 1: Pedestrian age range by location

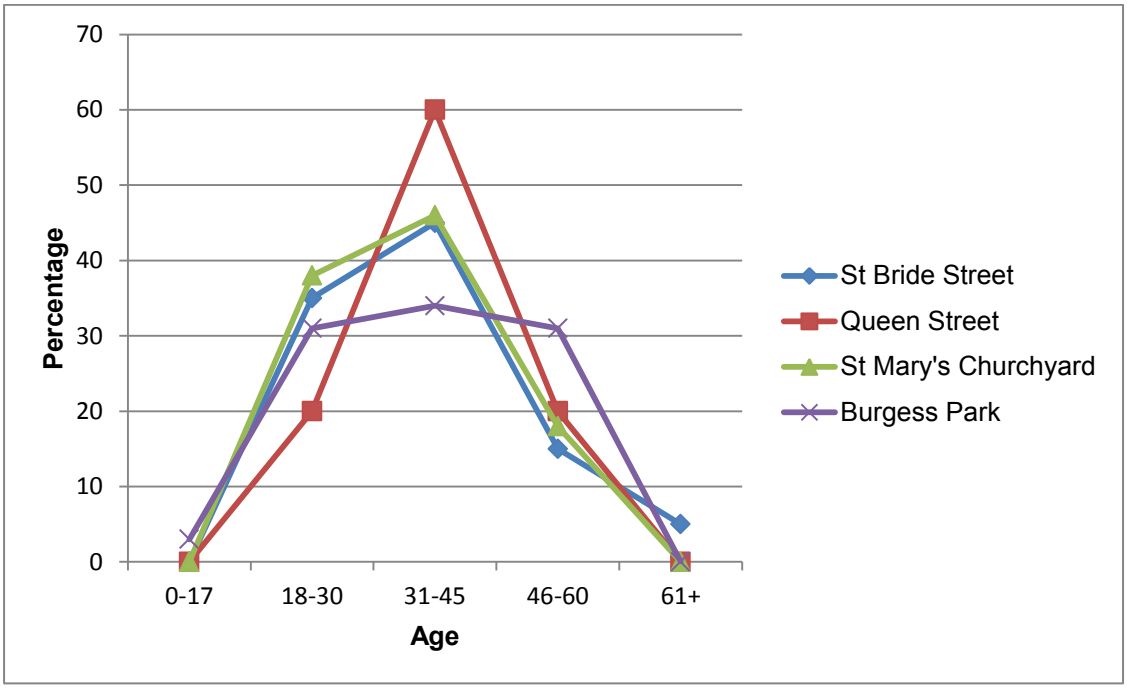


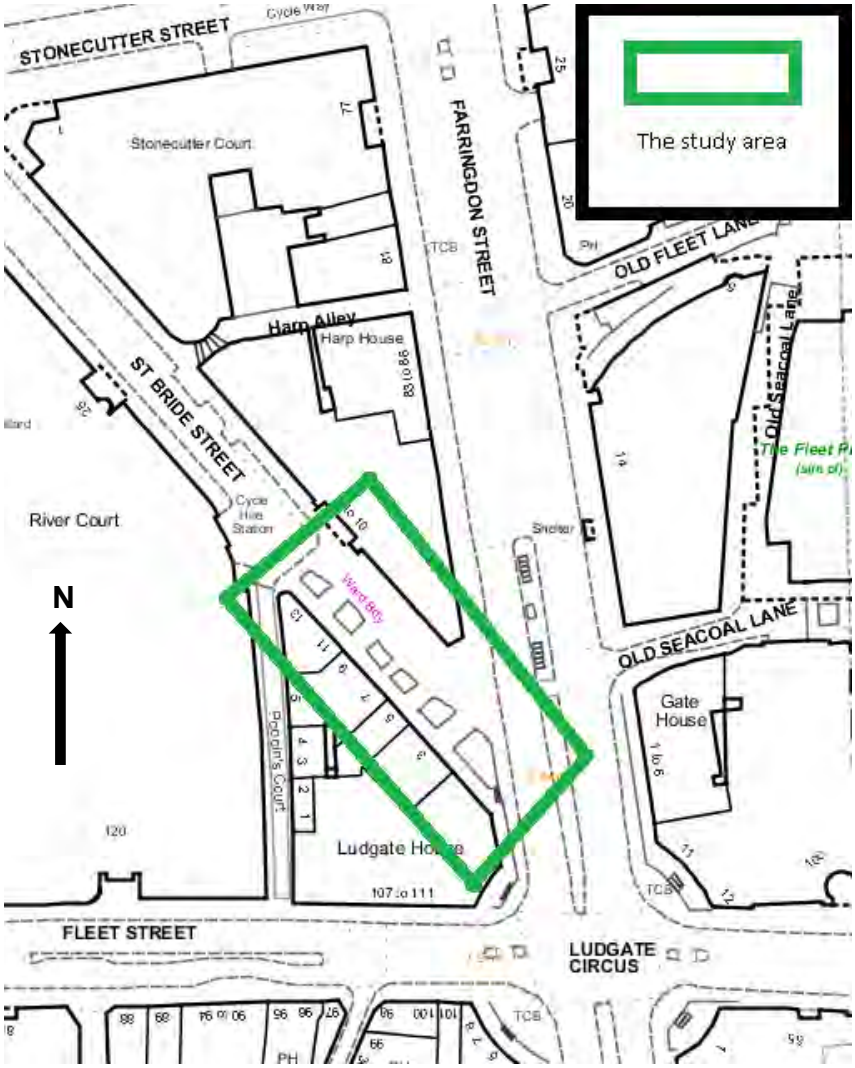
Figure 2: Cyclist age-range by location

CASE STUDY 1:

St Bride Street
St Bride Street is in the City of London. Linking Farringdon Street and Shoe Lane, it includes a shared use area for exclusive use by pedestrians and cyclists. The study area is illustrated below. At peak periods, the street is busy with pedestrians walking to and from work in nearby offices to the City Thameslink Station; numerous shops and cafes cater to a lunch crowd. Cyclists were observed largely travelling in the same direction as pedestrians (northwest bound in the morning, southeast bound in the afternoon), but volumes were not as high as at Queen Street. 62 per cent of pedestrians use this route everyday or at least once a week, compared to 85 per cent of cyclists. The completion of the North-South Cycle Superhighway in 2016 (along Farringdon Street) could have an impact on the volume of cyclists using St Bride Street.

Two thirds of the observed interactions (64 per cent; almost equal morning and afternoon) were experienced by cyclists, and many involved cyclists approaching pedestrians from behind. Cyclists usually occupied the north side of the street, whereas pedestrians used the entire width. Benches are located in the centre of the street and create more of a „place function'. The majority of the observed interactions (category A plus category B; 92 per cent pedestrians; 96 per cent cyclists) were mild. In fact this is the only site where pedestrians reported fewer conflicts (11 per cent) compared to cyclists (25 per cent). Reported conflicts included: weaving, sudden stopping, verbal abuse, being startled, a near miss and swearing. Nevertheless, more cyclists reported feeling comfortable (65 per cent) with their journey experience than pedestrians (43 per cent; see figure 5). More pedestrians (53 per cent) also reported being at least occasionally frustrated at having to share the path than cyclists (40 per cent; see figure 4).

Of the four sites studied, survey responses indicate that St Bride Street is the most suitable for shared use by cyclists (75 per cent) and pedestrians (46 per cent; see figure 6). When asked how pleasant they found the route, the majority of pedestrians (58 per cent) and cyclists (65 per cent) said it was equal to the rest of their journey.



View of St Bride Street from Farringdon Street

Figure 3: St Bride Street snapshot pedestrian and cyclist counts

	Pedestrian flows	Cyclist flows
Morning peak	95	27
Afternoon peak	81	20
Total	176	47

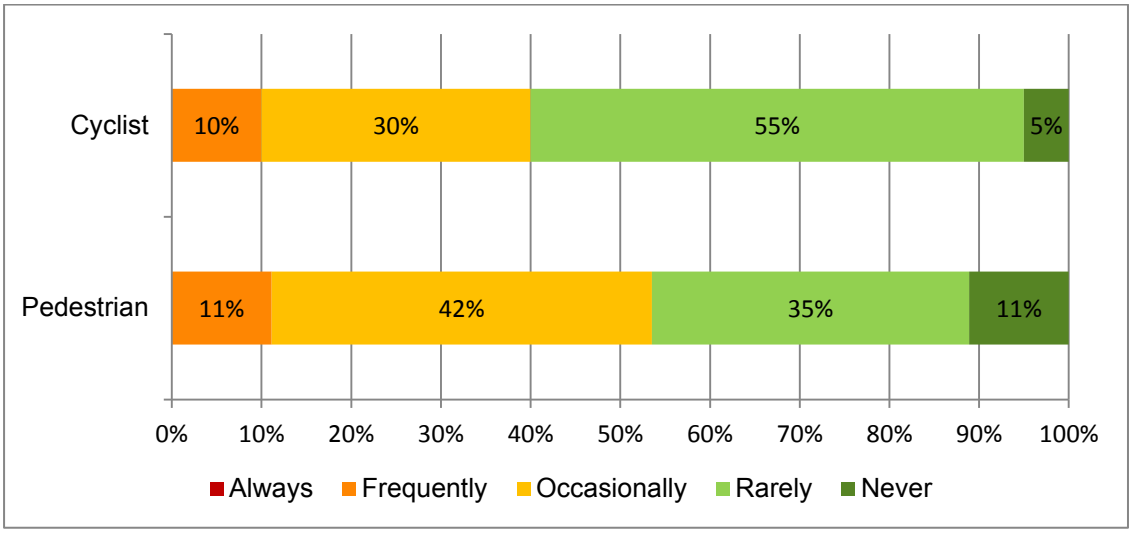


Figure 4: Frequency of frustration felt by surveyed users at sharing the path on St Bride Street

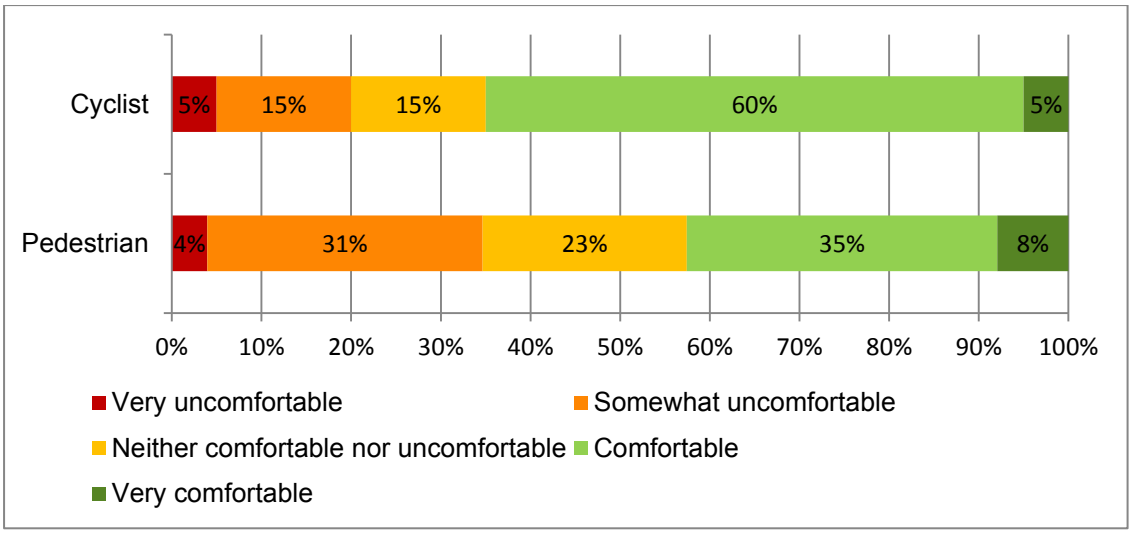


Figure 5: Level of comfort felt by surveyed users at sharing the path on St Bride Street

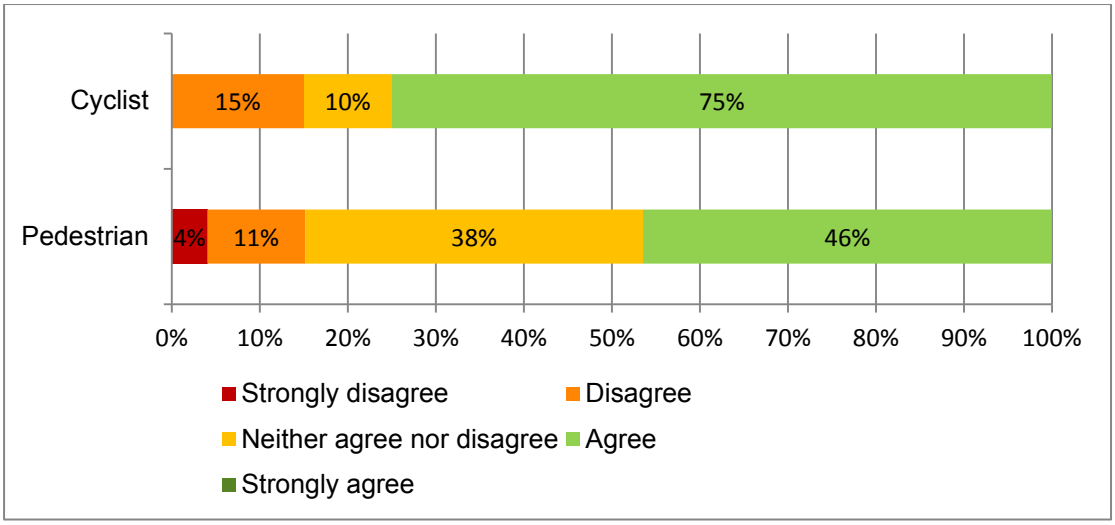


Figure 6: Whether surveyed users felt St Bride Street is suitable to be shared use

Recommendations

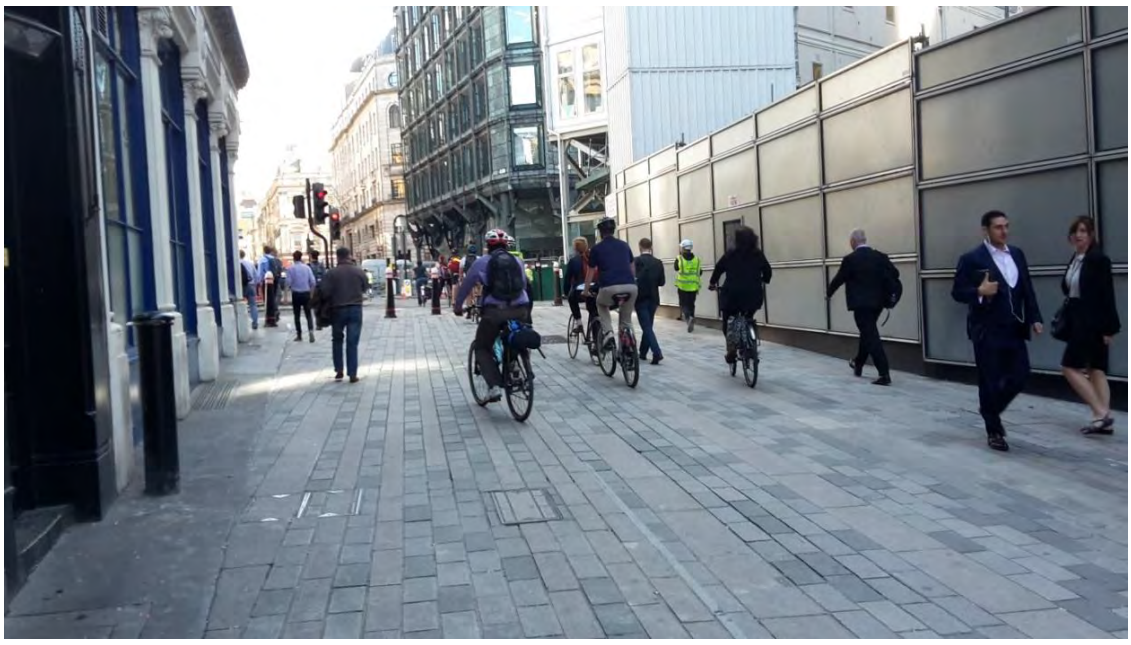
St. Bride Street is an example of a shared-use path which seems to work relatively effectively. Cycle flows are lower than the three other sites surveyed and there appears to be a natural separation of pedestrians and cyclists.

- It is recommended that the current high standard of street cleanliness and repair is maintained, including street furniture and paving.
- Is it also suggested that the street is monitored in the longer term when Cycle Superhighway Route 6 is completed to ensure that any increase in pedestrian and cyclist flows does not lead to a higher incidence of conflict.

CASE STUDY 2:

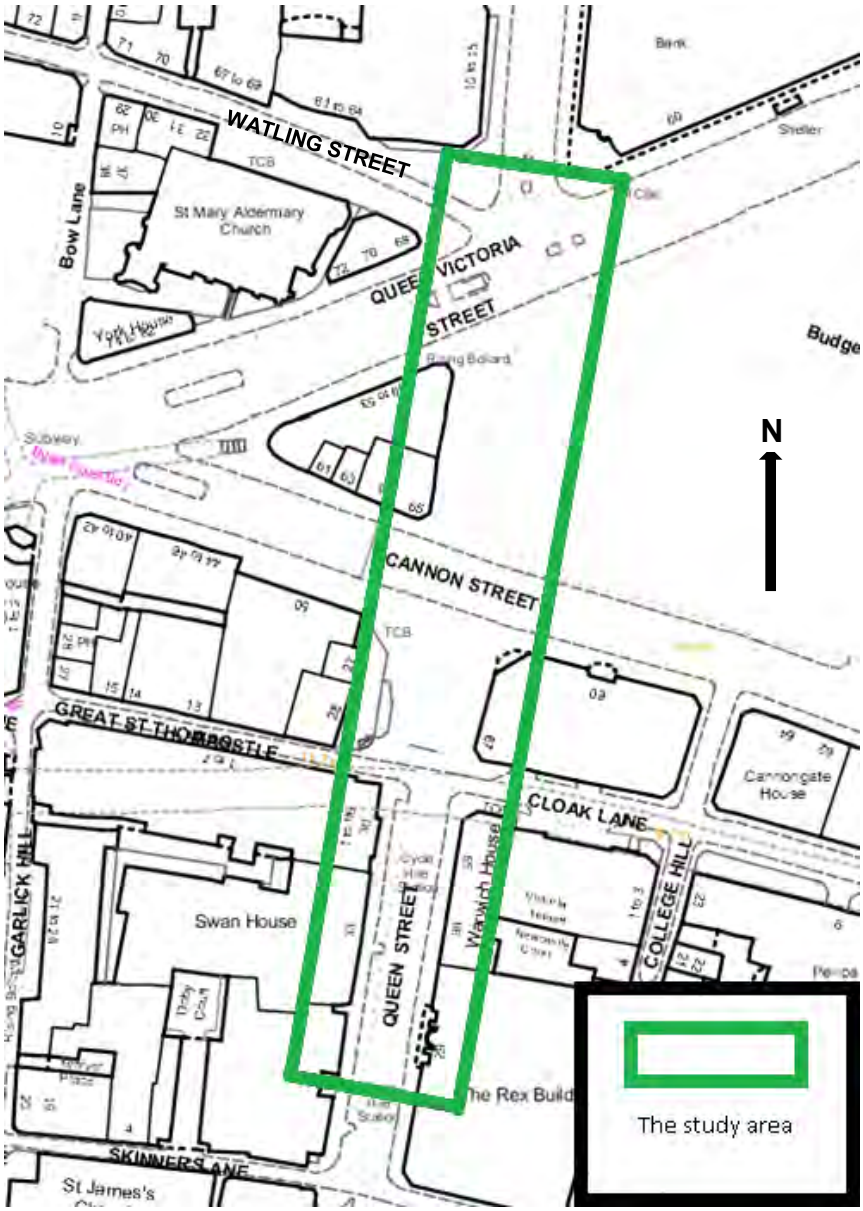
Queen Street
Queen Street is in the City of London where it links Cheapside and Upper Thames Street. An observation point was selected on the shared use section between Queen Victoria Street and Cloak Lane (see map below; the blank area on the right hand side is currently a building site). There is a toucan crossing over Cannon Street for pedestrians and cyclists; large plant pots feature on both sides of the road and provide an informal waiting space for cyclists. At the Queen Victoria Street junction pedestrians must cross the road in two stages to the west via Watling Street, whereas cyclists cross directly and re-join the carriageway on Queen Street as they head north.

At peak periods, the street is very busy with pedestrians walking to and from Cannon Street and Mansion House underground stations on their way to or home from work. A high volume of cyclists also use the street in peak periods. Most cyclists were observed travelling northbound in the morning towards the City. In the afternoon they were observed travelling southbound towards the river Thames and Cycle Superhighway Route 7 on Southwark Bridge. 89 per cent of the pedestrians and 90 per cent of the cyclists who responded to the survey use this route every day or at least once per week.



View of Queen Street, from Canon Street looking towards Queen Victoria Street

Pedestrians and cyclists were seen to occupy the full width of the shared space between the intersection at Cloak Lane and the toucan crossing on Canon Street. At Queen Victoria Street separate crossings for pedestrians and cyclists require users to negotiate their positions. The majority of interactions observed were mild in nature (category A plus category B; 90 per cent pedestrians; 89 per cent cyclists). However, this is the site where the highest numbers of conflicts were reported by both pedestrians (62 per cent) and cyclists (50 per cent). Conflicts reported included near misses, barging, shouting and a foot being run over by a cyclist. 78 per cent of pedestrians and 63 per cent of cyclists said that this portion of their journey was less pleasant than the rest.



More pedestrians felt uncomfortable with their journey experience (89 per cent) than cyclists (70 per cent) at Queen Street (see figure 9). A high proportion of pedestrians (92 per cent) and cyclists (81 per cent) also reported

becoming at least occasionally frustrated at having to share the street with the other user group (see figure 8). Queen Street is the site where the greatest proportion of both user groups felt uncomfortable and frustrated with their journey experience. Focus group respondents also reported finding the presence of cyclists „stressful' and „disconcerting' (see box out).

Focus group respondents:

"I'm registered blind and avoid Queen Street like the plague. I'd rather take my chances at Walbrook and Bucklersbury where there is no green man. I've been sworn at by cyclists even though I was using a white stick"

"I am a wheelchair user. Crossings streets is always stressful as I have to enter into an unsafe environment which temporarily becomes safer. I have to commit once I get to the top of the dropped kerb and there's no going back. I rely on the signals much more than non-disabled people and as a result have to focus on the lights and the countdown – which gives me less peripheral vision. I find cyclists cut in front or pass closely [which] is very unnerving and stressful – though I am sure 99 per cent of cyclists aren't aware of the impact they have on me"

More pedestrians (68 per cent) than cyclists (37 per cent) felt that Queen Street was not suitable to be a shared use path (see figure 10). In fact only 11 per cent of pedestrians surveyed felt that Queen Street was suitable to be shared use. Some of the key concerns raised were: user behaviour, the sheer volume of pedestrians and cyclists and the lack of clear signage to indicate the shared use nature of the street.

The toucan crossing on Canon Street, with a large plant pot in the foreground

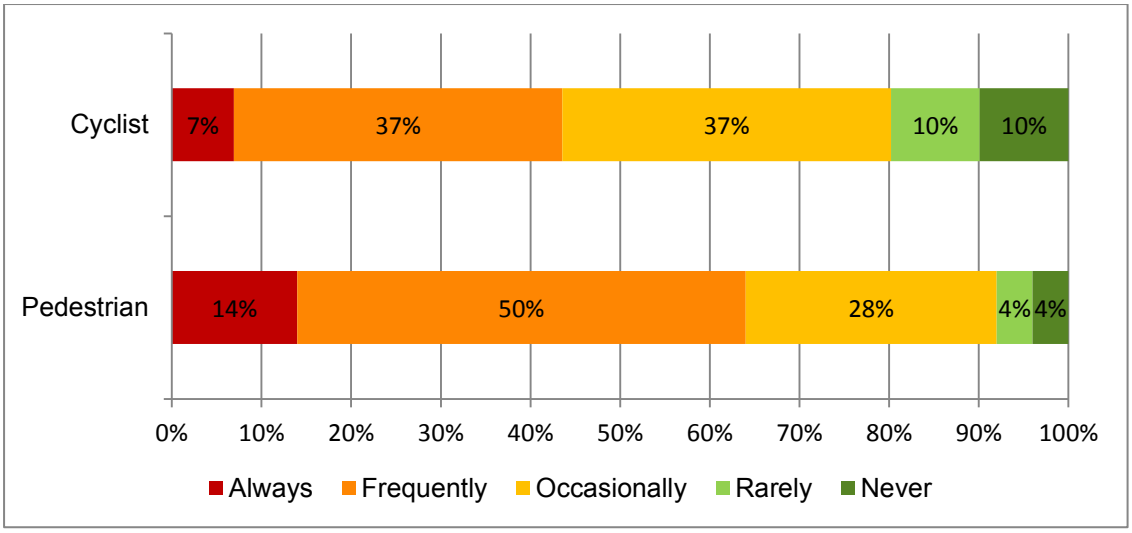


Figure 7: Frequency of frustration felt by surveyed users at sharing the path on Queen Street

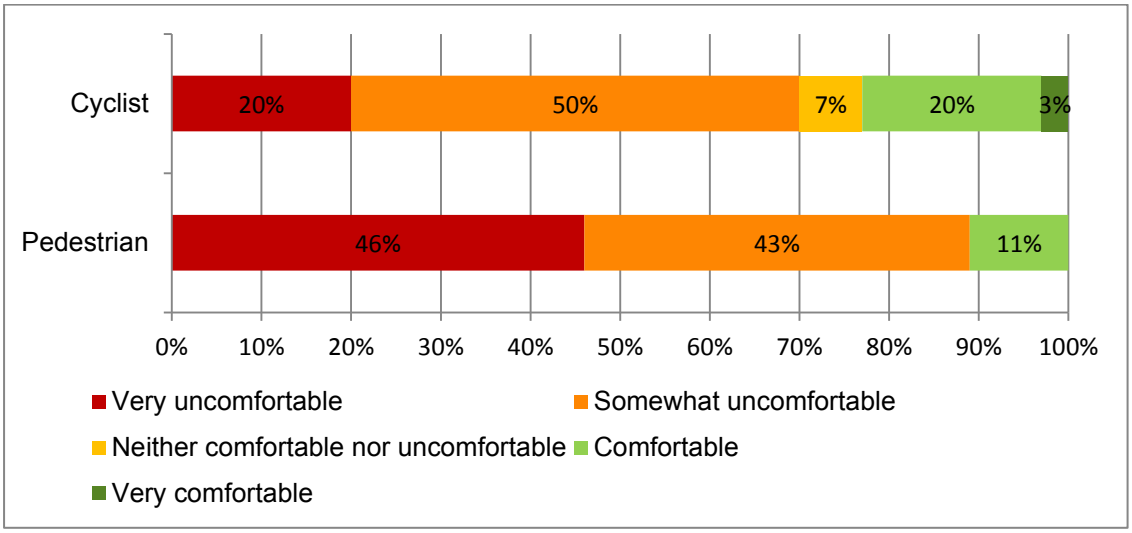


Figure 8: Level of comfort felt by surveyed users at sharing the path on Queen Street

Figure 9: Queen Street snapshot pedestrian and cyclist counts

	Pedestrian flows	Cyclist flows
Morning peak	480	83
Afternoon peak	449	78
Total	929	161

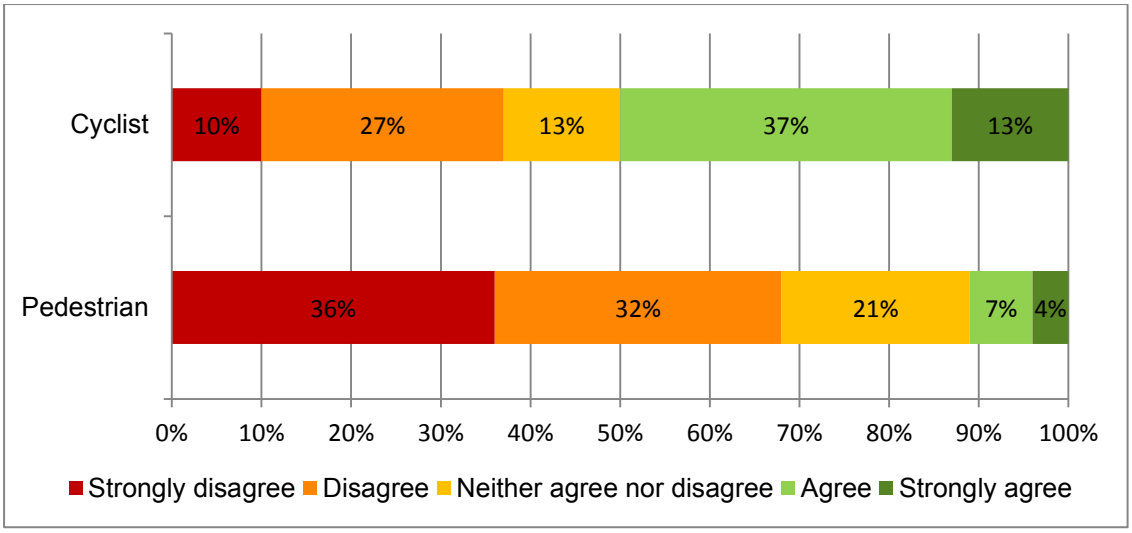


Figure 10: Whether surveyed users felt Queen Street is suitable to be shared use

Recommendations

A number of mitigations are suggested to help reduce the likelihood of conflict occurring and to improve the journey experience of all users:

- Align the planters to the South of Cannon Street to encourage cyclists to wait back from the crossing and to keep a clear path for the east – west movement of pedestrians on Cannon Street. This could also be encouraged through the use of line markings on the footway.
- Discourage motor vehicles from queuing back over the toucan crossing on Cannon Street to ensure the full width of the crossing will be fully usable. This could be through enforcement or road markings.
- Introduce shared-use signage to indicate the presence of cyclists.
- Explore options to encourage cyclists to stick to the eastern side of Queen Street to align with their crossing on Queen Victoria Street and preventing crossover on the narrow section north of Cannon Street.
- Improve on-carriageway provision for cyclists in the longer term and increasing permeability through the City.
- Improve surrounding streets for pedestrians to offer north-south routes, for example along Bow Lane and Walbrook (not on the map above).

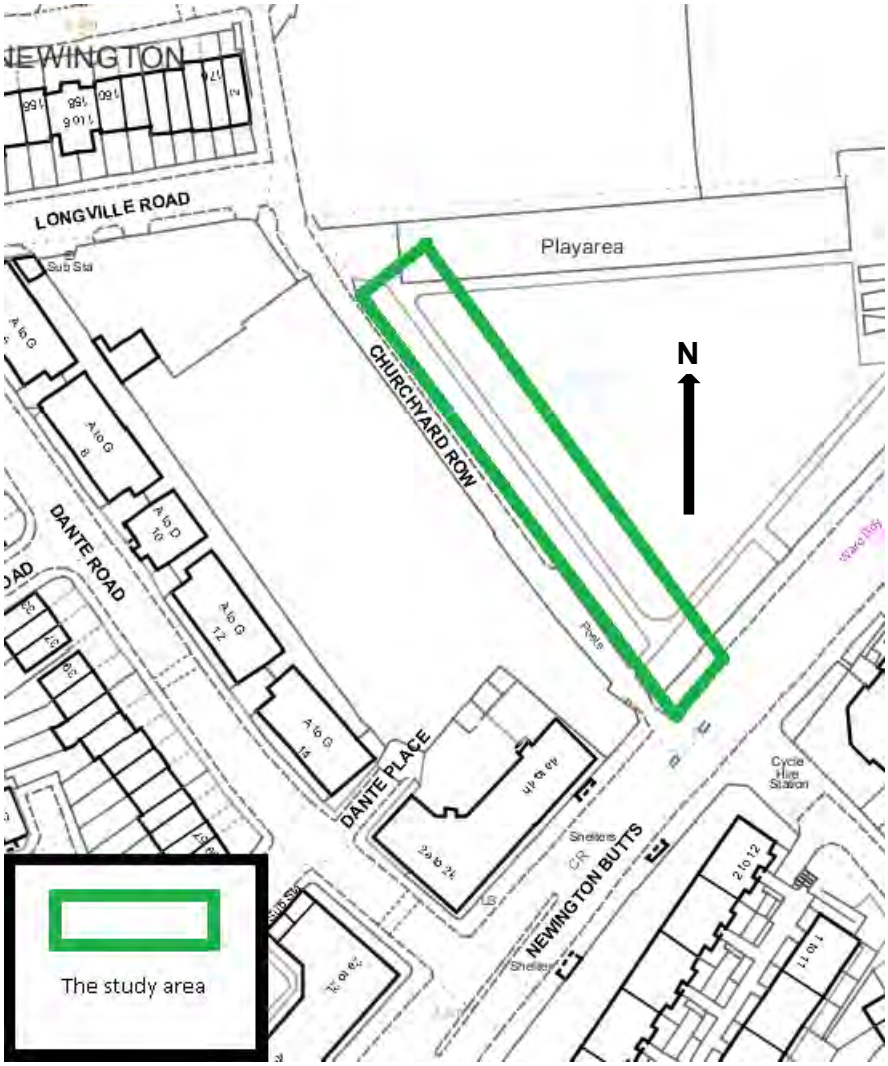
It is anticipated that once the construction work on the corner of Queen Street/Cannon Street is complete, the path will return to full width. This may assist with reducing the likelihood of conflicts occurring on the section between Cannon Street and Queen Victoria Street.

Informal waiting point for cyclists by the planters

CASE STUDY 3:

St Mary's Churchyard
St Mary's Churchyard is a small stretch of recreational space in a largely residential area in the London Borough of Southwark. There is a footpath running along the boundary which links the A3 Newington Butts with Longville Road. The footpath lies parallel to Churchyard Row which accommodates Cycle Superhighway Route 7.

Safety concerns over construction works on Churchyard Row have led to the temporary diversion of the Cycle Superhighway along the footpath, which now accommodates both pedestrians and cyclists. At peak periods the path is busy with cyclists who use the Cycle Superhighway in order to bypass the Elephant and Castle roundabout. In contrast, pedestrian flows are lower here than at the three other study sites. Cyclist flows are particularly tidal, with the majority travelling north bound towards the City in the morning and returning in the afternoon. Nearly all of the cyclists surveyed, 96 per cent, use the path at least once per week, compared to 71 per cent of pedestrians. Once construction work is complete it is envisaged that cyclists will return to using Churchyard Row.



View of the temporary shared use route running parallel to Churchyard Row, towards the A3

Interactions observed at this site generally occurred when cyclists approached pedestrians from behind. They were mild interactions (category A plus category B), such as cyclists changing direction or slowing down as they approached pedestrians. There were some instances of more severe interactions (e.g. braking hard) at the tight corners, when pedestrians and cyclists would need to be cautious and considerate. Inconsistencies in signage – indicating segregation and no segregation (see photos) – and lack of markings may have confused users. Reported conflicts (pedestrians 38 per cent; cyclist 14 per cent) included sudden braking and swerving.

Figure 11: St Mary's Churchyard snapshot pedestrian and cyclist counts

	Pedestrian flows	Cyclist flows
Morning peak	15	74
Afternoon peak	14	65
Total	29	139

St Mary's Churchyard had the smallest number of pedestrians and was the only site at which cyclists outnumbered pedestrians. During the observation periods cyclists often had an unobstructed journey through the churchyard.

Half of the cyclists (50 per cent) who responded to the survey reported feeling frustrated at least occasionally about sharing the path with pedestrians. This is compared to 84 per cent of pedestrians, of whom 13 per cent said they were always frustrated and 42 per cent frequently frustrated at sharing the path with cyclists (see figure 12). Just 4 per cent of the pedestrians who responded to the survey felt comfortable sharing the path with cyclists – the lowest proportion across all four sites. By comparison, almost half of the cyclists surveyed felt comfortable sharing the path (see figure 13). Similarly, 57 per cent of the cyclists reported that this portion of their journey was more pleasant than the rest, compared to only 8 per cent of pedestrians.

Over half of cyclists (57 per cent) felt that the path was suitable for shared use, compared to 17 per cent of pedestrians (see figure 14).

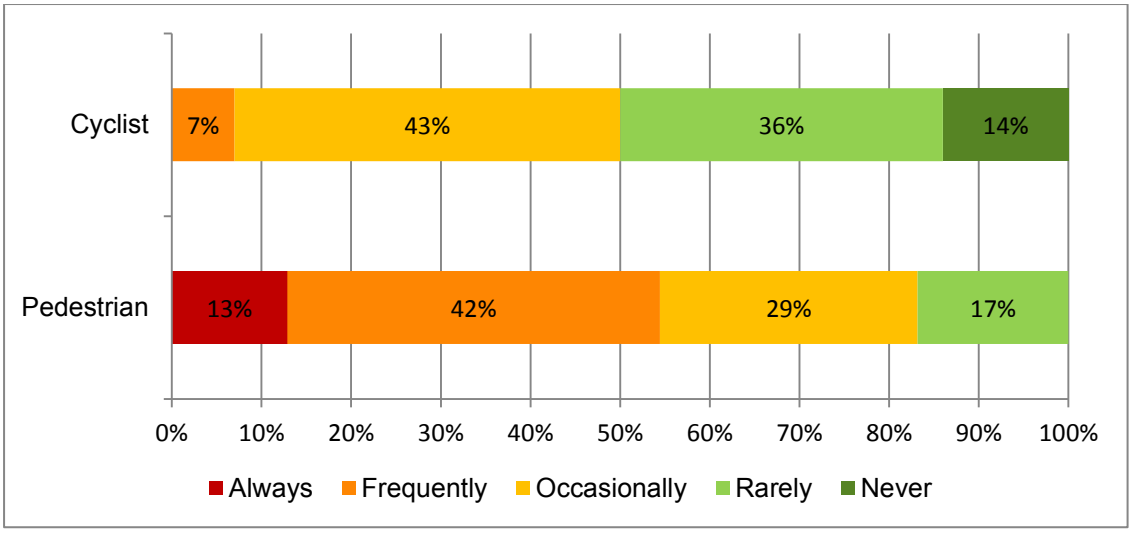


Figure 12: Frequency of frustration felt by surveyed users at sharing the path in St Mary's Churchyard

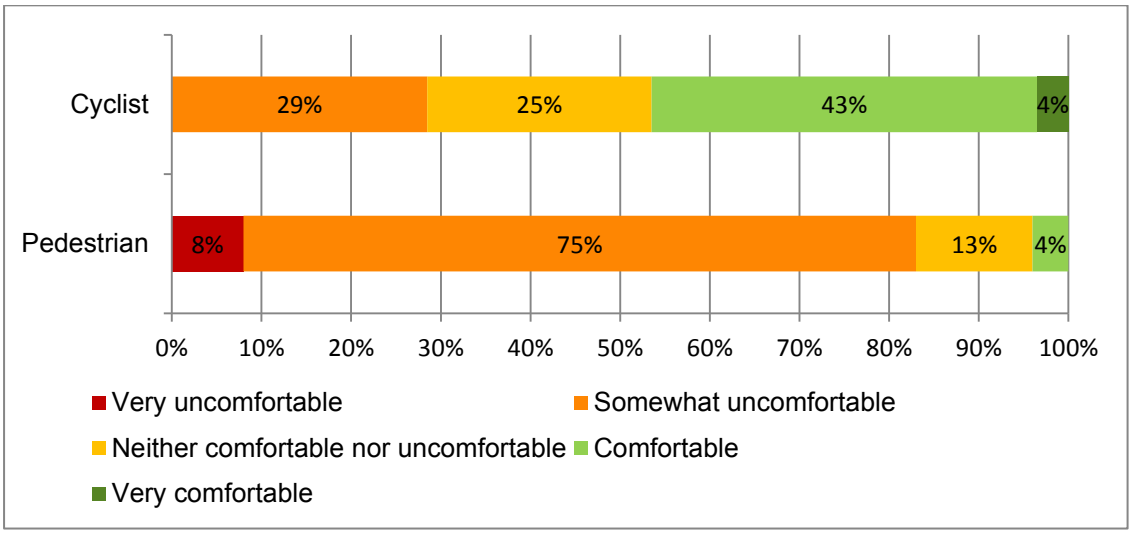


Figure 13: Level of comfort felt by surveyed users at sharing the path on St Mary's Churchyard

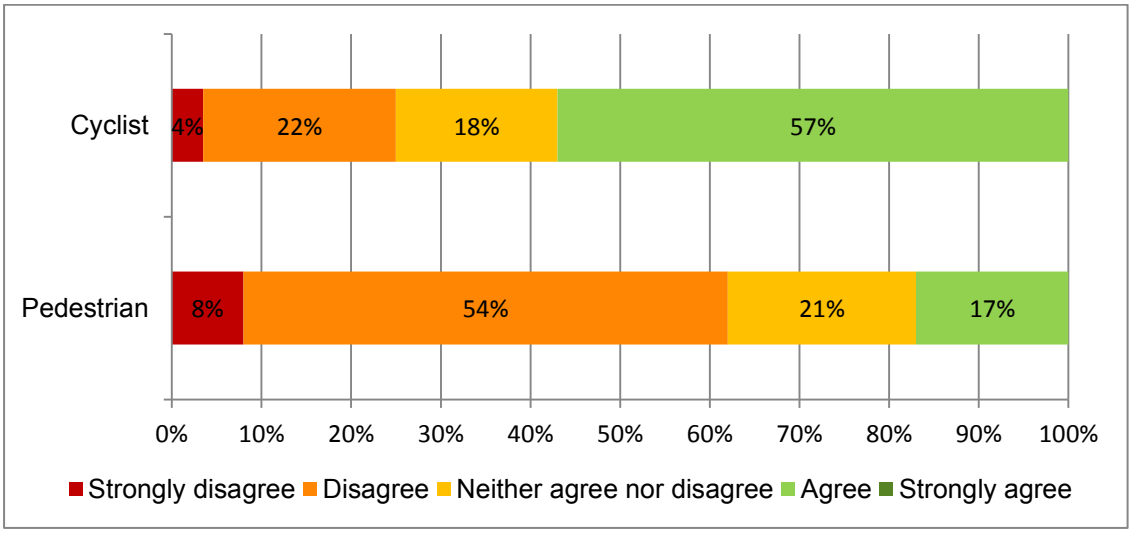


Figure 14: Whether surveyed users felt St Mary's Churchyard is suitable to be shared use

Recommendations

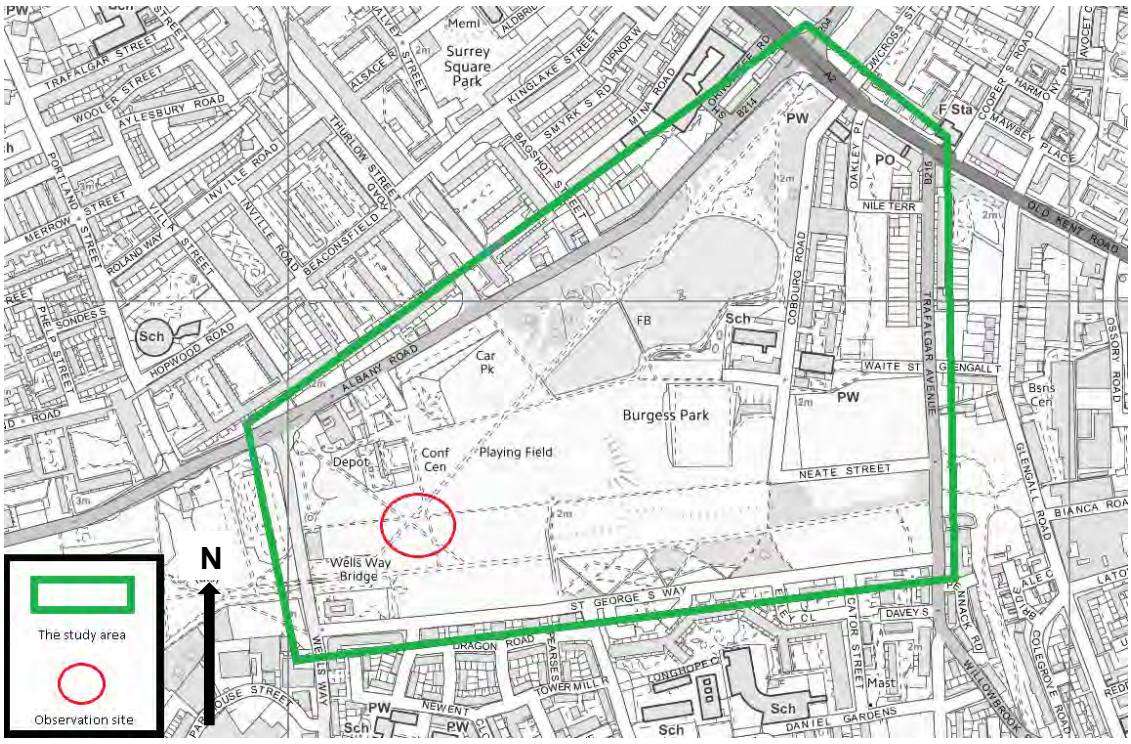
Once the construction work is complete on Churchyard Row, Cycle Superhighway 7 will return to its previous route and no longer pass through the Churchyard itself. Therefore, no significant changes are recommended. However, this case study highlights the disproportionate impact that the presence of cyclists can have when pedestrians are outnumbered and unaware of (or startled by) their presence. The difficulty in this case was the lack of a safe alternative route to enable cyclists to avoid the Elephant and Castle junction. In view of current investment in cycling infrastructure in London and the constant redevelopment taking place in the city, pedestrian comfort must be taken into account. For example, this particular site could widen the footpath (e.g. with temporary surfacing), address the inconsistencies in signage and introduce „slow/beware pedestrian' markings on the footpath.

CASE STUDY 4:

Burgess Park

Burgess Park is a large recreational area in the London Borough of Southwark. It extends from the Old Kent Road in the east to Camberwell New Road in the west and is served by a network of paths shared by pedestrians and cyclists. This case study focuses on the area to the east of Wells Way and observations were taken at a busy intersection – circled in red on the map. More than two thirds of the cyclists (69 per cent) who responded to the survey use routes through the park to commute to work or college[15]. 19 per cent of cyclists use the park for recreational purposes – for example, riding around the park or cycling to it to use its leisure facilities.

Most pedestrians who responded to the survey (62 per cent) use the park for leisure and recreation. A minority commute through the park (19 per cent) on their journeys to and from work or to nearby schools. From the results it appears that cyclists travel through the park a little more frequently than pedestrians (69 per cent of cyclists versus 60 per cent of pedestrians use the park at least once a week and most days).



[15] As discussed in the methodology, the survey respondents for this case study were invited to take part either by being given a survey card or via the article in the Friends of Burgess Park newsletter.

Figure 15: Burgess Park snapshot pedestrian and cyclist counts

	Pedestrian flows	Cyclist flows
Morning peak	45	26
Afternoon peak	38	23
Total	83	49

With a network of shared paths available to pedestrians and cyclists, Burgess Park is very different to the other sites in this report. Observed movements were less concentrated and less tidal in nature. Pedestrian and cyclist behaviour was less predictable and consequently could have contributed an element of uncertainty to interactions at the intersection.

Nevertheless, the majority of observed interactions were mild (category A plus category B; 90 per cent pedestrians; 82 per cent cyclists). In common with the other sites (except St Bride Street) more pedestrians (43 per cent) reported conflicts with cyclists than cyclists with pedestrians (22 per cent). Respective conflicts included near misses with cyclists or with children and dogs. Cycling speeds along straight stretches of footpath were also an issue for pedestrians.

An increased number of responses were received from users of Burgess Park as a result of an article about this study in the Friends of Burgess Park newsletter. This led to a revision of the initial figures reported elsewhere[16]. However, the distribution remained shown in the charts below remained broadly the same, which is encouraging. However, there was a significant difference in the degree of comfort felt by cyclists. Previously 27 per cent of cyclists felt very comfortable, whereas the revised figures report that 3 per cent felt very comfortable – with a proportionate increase in the percentage who felt uncomfortable (from 20 per cent to 41 per cent). This change is a reminder that small sample sizes can only provide a snapshot, and not lead to broad generalisations.

The majority of cyclists (72 per cent) agreed or strongly agreed that Burgess Park is suitable for shared use by pedestrians and cyclists; they overwhelmingly considered this the most pleasant portion of their journey (94 per cent). Almost half of the pedestrians considered the park suitable for shared use and the most pleasant part of their journey (47 per cent in both cases). Nevertheless, concerns were raised about the presence and speed of commuter cyclists, the need for wider footpaths and a lack of signage to warn pedestrians that cyclists are present.

[16] In the MSc dissertation of Christopher Hambridge for the University of Westminster.

View of pedestrians and cyclists at the location in Burgess Park where observations were undertaken

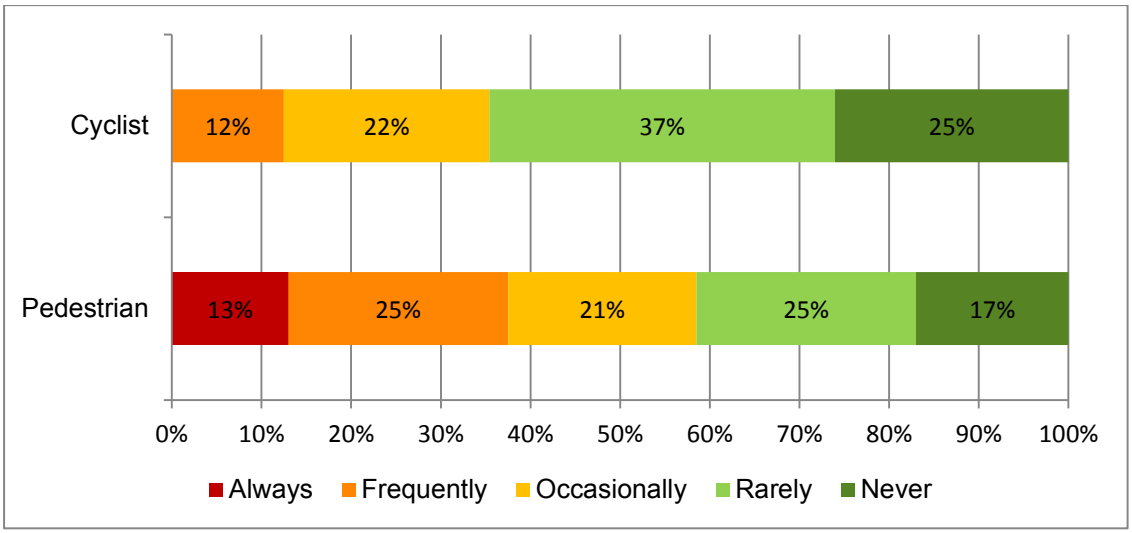


Figure 16: Frequency of frustration felt by surveyed users at sharing the paths in Burgess Park

Focus group comments:
"Because of cyclists coming up behind me, I am always having to look over my shoulders"

"Burgess Park is essentially a giant cyclist interchange, and the [proposed] spine route will make it even busier"

"Are park users pedestrians in the classic sense? People strolling in parks wander around slowly, they turn, walk to the sides… There are also people walking with children and dogs and they are disproportionately affected by

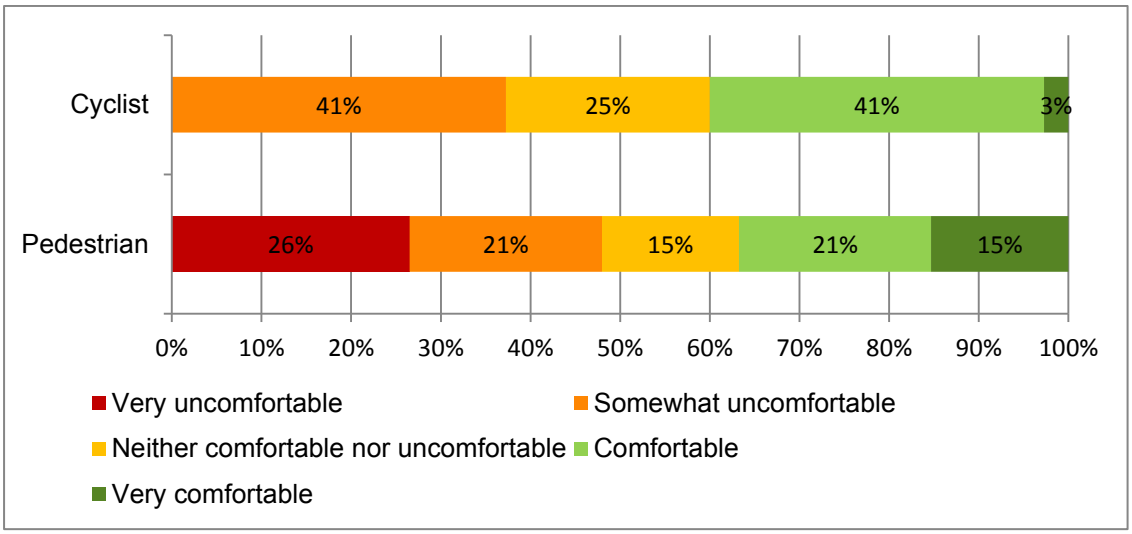


Figure 17: Level of comfort felt by surveyed users at sharing the paths in

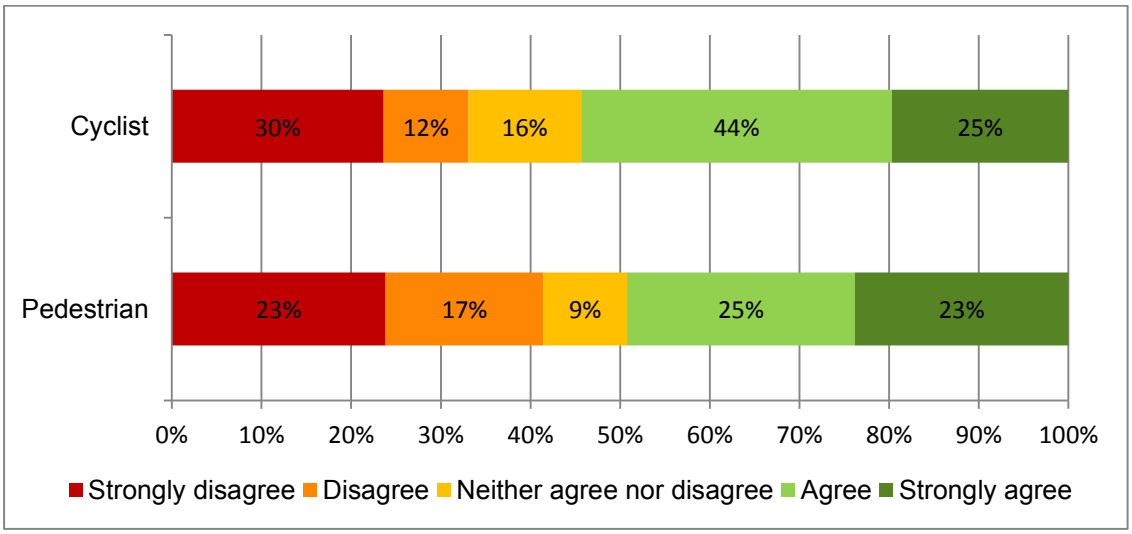


Figure 18: Whether surveyed users felt Burgess Park is suitable to be shared use

Recommendations

A number of mitigations are suggested to help reduce the likelihood of conflict occurring and to improve the journey experience of all users:

- Focus on designing an on-carriage facility for the Southwark Spine cycle route e.g. along Wells Way.

- Introduce a small amount of signage to notify park users to the presence of cyclists.
- Encourage slower cycling speeds in the park.
- Continue to prioritise the place function of Burgess Park and the leisure facilities.
- In the longer term it is suggested to focus on providing improved facilities for cyclists on Old Kent Road, Walworth Road and surrounding roads to provide for commuting cyclists.

DISCUSSION

More than a thousand people were invited to take part in an online questionnaire about their experience as a pedestrian or a cyclist using shared spaces at four locations in the City of London and Southwark. Approximately 20 per cent responded. It could be argued that this is a relatively small number of people, but the survey responses (supported by visual observations) provide a useful insight into users' experiences, their unseen thoughts and feelings. The purpose of this report is not to make broad generalisations. Its intention is to better understand how pedestrians and cyclists interact and to try to answer the following three questions:

- How common and how severe are pedestrian-cyclist interactions?
- What is the quality of the user experience? Are there particular reservations or concerns? And,
- What could be done to improve the situation?

The case studies have already provided some of these answers, such as mitigation measures for specific sites. In this discussion, the aim is to see what patterns (if any) emerge.

Respondent profiles reveal that gender was not a significant issue. Approximately the same number of women and men participated. Pedestrians and cyclists fell within a mid-age range; they were neither very young nor very old. Perhaps most importantly, nobody was disabled (two people preferred not to answer this question). This is why it was important to invite wider views in the form of focus groups discussing the views of older people, disabled people and pedestrian campaigners. Most pedestrians and cyclists were familiar with the shared use routes and used them at least once a week.

As described in the introduction to this report, each of the sites in this study are different. What they have in common is their shared use by pedestrians and cyclists. St Bride Street and Queen Street are both in the City of London and are busy commuter routes for pedestrians and cyclists. St Mary's Churchyard is a small recreational space in a residential area where cyclists are temporarily sharing the footpath (often on their commute). In contrast Burgess Park is largely a place of recreation for pedestrians and a commuter route for cyclists.

Pedestrians outnumber cyclists on St Bride Street, where there are about four times as many pedestrians as cyclists. They determine the pace of movement and, together with the trees and benches which furnish the street, act to slow cyclists down. This is the only street where pedestrians experienced less conflict than cyclists. Nevertheless, the number of conflicts was low and

survey responses suggest that cyclist's levels of comfort are highest at this location. Similar proportions of pedestrians and cyclists thought the shared space on St Bride Street was more pleasant (about a quarter) or at least equal (58 per cent and 65 per cent respectively) to the rest of their route.

St Bride Street and Queen Street had the same ratio of pedestrians to cyclists – about four to one. However, on Queen Street the observed volume of pedestrians and cyclists is much greater; there are almost four times the number of pedestrians and the number of cyclists as there are on St Bride Street in approximately the same amount of space. This makes a significant difference in the user experience for both modes. It is unsurprising that Queen Street is the location where pedestrians and cyclists felt the most frustration.

For disabled people, the volume of people on Queen Street is even more stressful. A wheelchair user described how the need to concentrate at signalised crossings reduced their peripheral vision and increased the impact of interacting with cyclists. A blind pedestrian with a white stick described being sworn at by cyclists and now avoids Queen Street „like the plague'. Volume is one of the key determinants of whether spaces can be shared successfully of not, although perhaps not in the way expected. If a Dutch approach were to be adopted, then sharing occurs only where the „volumes of people walking are low enough that conflict will not be a problem'[17].

St Mary's Churchyard is the only site where cyclists outnumber pedestrians. Overall, the snapshot counts show that the number of people walking and cycling there is low. During the observation period, cyclists often had an unobstructed journey through the churchyard. Interactions between pedestrians and cyclists, here as elsewhere, were mild. For example, cyclists approaching pedestrians would slow down and change direction, occasionally breaking hard at tight corners. In response to the survey, 57 per cent of cyclists agreed that this location was suitable for shared use. In contrast, 54 per cent of pedestrians disagreed.

There are a number of factors which could explain these opposing views. Perhaps the most obvious reason is that pedestrians at St Mary's Churchyard have been used to having exclusive use of the footpath. The fact that pedestrians are outnumbered may also increase feelings of exposure and vulnerability. In St Bride Street and Queen Street pedestrian volumes force cyclists to slow down the entire length of the shared space. Here, considerate behaviour requires cyclists to slow down to pass pedestrians as they pass by, but speeds as they approach and the element of surprise may be greater.

Additional concerns about the narrowness of the path and confusing signage may be why 55 per cent of the pedestrians who responded to the survey were frequently or always frustrated by the presence of cyclists at St Mary's Churchyard. If this were a Dutch cycle road, it would be wider.

[17] See https://aseasyasridingabike.wordpress.com/2015/11/19/against-shared-use/

Burgess Park is interesting because the same number of cyclists who responded to the survey felt „comfortable' as felt „uncomfortable' riding through the park (41 per cent). Although the increase in survey responses for Burgess Park also changed the distribution of the results for this topic. One of the focus group respondents even questioned if „park users [are] pedestrians in the classic sense?'. Recreational walking is different to commuter walking. People are likely to walk more slowly, they may change direction or mill about getting in the way of cyclists. During the observation period few children were observed, but it can be imagined that children and dogs running or playing would also cause cyclists to pay more attention. Responses from focus group participants suggest that the park's recreation function is undermined by the presence of cyclists – one even described the park as a „giant cyclist interchange' likely to get even busier.

From a pedestrian perspective the annoyance is reciprocated. The pleasure of walking is reduced by the need to look over your shoulder in case a cyclist is behind you[18]. Commuter cyclists' speed was a particular issue on long stretches of footpath through the park. Proportionately twice as many cyclists (94 per cent) thought the park was suitable for shared space than pedestrians (47 per cent). However, the fact that many pedestrians still thought the park could accommodate both users may be due to good visibility and the width of the footpaths.

In each case, the levels of frustration reported by pedestrians exceed those reported by cyclists. Moreover, they exceed the observed mildness of the interactions. Of course, it is impossible to see all the altercations. The subtlety of an eye roll or a muttered imprecation may easily pass unnoticed. This is a limitation of the methodology rather than the research budget. It may be that a diary approach such as that used in the Near Miss Project[19] – which recruits individuals and asks them to record details of their journeys, details of incidents, other road user involvement, and how scary or annoying the incident was (0-3 scales) – may be more appropriate for future research.

[18] This is similar to cyclists' dislike at being used as a traffic calming measure e.g. a cycle contraflow on a one way street.
[19] See here http://www.nearmiss.bike/wp-content/uploads/2014/12/Nearmissreport-final-web-2.pdf

SUMMARY

Based on the experiences and observations reported in this study, pedestrian-cyclist interactions commonly occur in shared spaces. The majority are very mild – consisting of natural adjustments and considerate behaviour as cyclists and pedestrians accommodate to each other's relative speed and direction of travel. However, the survey results suggest that quality of the user experience is impacted more deeply. People feel more than they show.

This report has shown that:

- Sharing spaces affects both modes. Interactions are frequent and appear mild, but pedestrians experience more conflict than cyclists.
- There is a disproportionate impact on disabled people, who may prefer to avoid an area completely.
- Both volume of users (of both modes) and ratio of cyclist to pedestrians can affect comfort
- Cycle speed is the key issue for pedestrians. Cyclists should be slowed down, for example, through the use of street furniture or if possible alternate routes provided.
- Where sharing is unavoidable, signage should make the situation clear. However, it must be recognised that insufficient space (as in Queen Street) significantly reduces user comfort. Improving adjacent alternate routes for pedestrians and cyclists may help to diffuse the pressure and tension on key routes.

The case studies in this report suggest that shared spaces work better for pedestrians where pedestrians outnumber cyclists, where there is sufficient space and visibility – and where there is more emphasis on a „place' function rather than movement. St Bride Street with its benches and street trees seems to work well in this regard, whereas St Mary's Churchyard revealed how vulnerable pedestrians can feel when they are out numbered by cyclists. Burgess park shows the benefits of space and visibility, but highlights the need to segregate cyclists from pedestrians where commuting speed is a priority. Queen Street proved uncomfortable for both cyclists and pedestrians. Comfort is key to encouraging and supporting growth in walking and cycling, therefore, in the long term the logical solution to will be to reallocate road space to increase capacity for walking and cycling.

APPENDIX 1:

St Bride Street

		Pedestrians	%	Cyclists	%
Gender	**Male**	14	54	11	55
	Female	12	46	9	45
	Other	0	0	0	0
	Prefer not to answer	0	0	0	0
Age Category	**0-17**	1	4	0	0
	18-30	7	27	7	35
	31-45	10	38	9	45
	46-59	6	23	3	15
	60+	2	8	1	5
	Prefer not to answer	0	0	0	0
Journey Purpose	**Commute to place of work**	14	54	15	75
	Leisure	4	15	2	10
	Business	7	27	3	15
	Other	1	4	0	0
Disability	**Yes**	0	0	0	0
	No	25	96	20	100
	Prefer not to answer	1	4	0	0

Cyclist interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	10	1	0	1	0	0	0	0	**12**
PM (16:30-18:30)	9	2	0	0	0	0	0	0	**11**
									23

Pedestrian interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	4	1	0	0	1	0	0	0	**6**
PM (16:30-18:30)	5	2	0	0	0	0	0	0	**7**

13

Totals AM/PM peaks

Interaction Type	A	B	C	D	E	F	G	H	Total
Cyclist interactions	19	3	0	1	0	0	0	0	23
Pedestrian interactions	9	3	0	0	1	0	0	0	13
									36

		Pedestrians	%	Cyclists	%
How frequently do you travel through this location	First time	1	4	0	0
	Less than once a month	5	19	1	5
	More than once a month but less than every week	4	15	2	10
	At least once per week	9	35	8	40
	Most days/weekdays	7	27	9	45
How comfortable do you feel sharing this path with pedestrians/cyclists?	Very uncomfortable	1	4	1	5
	Somewhat uncomfortable	8	31	3	15
	Neither comfortable nor uncomfortable	6	23	3	15
	Comfortable	9	35	12	60
	Very comfortable	2	8	1	5
Have you experienced a conflict with a pedestrian/cyclist at this location?	Yes	3	11	5	25
	No	23	88	15	75
Do you consider this portion of your journey to be more or less pleasant than the rest in	More pleasant	7	27	5	25
	Less pleasant	1	4	2	10

terms of the pedestrian/cyclist environment?	Equal to the rest	15	58	13	65
	Unsure	3	11	0	0
Do you ever feel frustrated sharing this path with pedestrians/cyclists?	Never	3	11	1	5
	Rarely	9	35	11	55
	Occasionally	11	42	6	30
	Frequently	3	11	2	10
	Always	0	0	0	0
To what extent do you agree that this location is suitable to be a shared use pedestrian/cyclist path?	Strongly disagree	1	4	0	0
	Disagree	3	11	3	15
	Neither agree nor disagree	10	38	2	10
	Agree	12	46	15	75
	Strongly agree	0	0	0	0

APPENDIX 2:

Queen Street

		Pedestrians	%	Cyclists	%
Gender	**Male**	16	57	18	60
	Female	12	43	12	40
	Other	0	0	0	0
	Prefer not to answer	0	0	0	0
Age Category	**0-17**	0	0	0	0
	18-30	3	11	6	20
	31-45	18	64	18	60
	46-59	6	21	6	20
	60+	1	4	0	0
	Prefer not to answer	0	0	0	0
Journey Purpose	**Commute to place of work**	25	89	28	93
	Leisure	3	11	0	0
	Business	0	0	2	7
	Other	0	0	0	0
Disability	**Yes**	0	0	0	0
	No	28	100	30	100
	Prefer not to answer	0	0	0	0

Cyclist interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	98	62	5	7	5	0	0	0	**177**
PM (16:30-18:30)	73	53	3	6	6	1	2	0	**144**
									321

Pedestrian interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	59	40	2	3	4	1	0	0	**109**
PM (16:30-18:30)	56	32	0	5	4	0	2	0	**99**
									208

Totals AM/PM peaks

Interaction Type	A	B	C	D	E	F	G	H	Total
Cyclist interactions	171	115	8	13	11	1	2	0	321
Pedestrian interactions	115	72	2	8	8	1	2	0	208
									529

		Pedestrians	%	Cyclists	%
How frequently do you travel through this location	First time	0	0	0	0
	Less than once a month	2	7	2	7
	More than once a month but less than every week	1	4	1	3
	At least once per week	2	7	3	10
	Most days/weekdays	23	82	24	80
How comfortable do you feel sharing this path with pedestrians/cyclists?	Very uncomfortable	13	46	6	20
	Somewhat uncomfortable	12	43	15	50
	Neither comfortable nor uncomfortable	0	0	2	7
	Comfortable	3	11	6	20
	Very comfortable	0	0	1	3
Have you experienced a conflict with a pedestrian/cyclist at this location?	Yes	17	62	15	50
	No	10	36	15	50
Do you consider this portion of your journey to be more or less pleasant than the rest in terms of the pedestrian/cyclist environment?	More pleasant	0	0	5	17
	Less pleasant	22	78	19	63
	Equal to the rest	4	14	5	17
	Unsure	2	7	1	3

Do you ever feel frustrated sharing this path with pedestrians/cyclists?	Never	1	4	3	10
	Rarely	1	4	3	10
	Occasionally	8	28	11	37
	Frequently	14	50	11	37
	Always	4	14	2	7
To what extent do you agree that this location is suitable to be a shared use pedestrian/cyclist path?	Strongly disagree	10	36	3	10
	Disagree	9	32	8	27
	Neither agree nor disagree	6	21	4	13
	Agree	2	7	11	37
	Strongly agree	1	4	4	13

APPENDIX 3:

St Mary's Churchyard

		Pedestrians	%	Cyclists	%
Gender	**Male**	9	**38**	15	**53.5**
	Female	14	**58**	12	**43**
	Other	1	**4**	0	**0**
	Prefer not to answer	0	**0**	1	**3.5**
Age Category	**0-17**	1	**4**	0	**0**
	18-30	11	**46**	10	**38**
	31-45	10	**42**	13	**46**
	46-59	2	**8**	5	**18**
	60+	0	**0**	0	**0**
	Prefer not to answer	0	**0**	0	**0**
Journey Purpose	**Commute to place of work**	13	**54**	26	**93**
	Leisure	4	**17**	1	**3.5**
	Business	3	**12**	1	**3.5**
	Other	4	**17**	0	**0**
Disability	**Yes**	0	**0**	0	**0**
	No	24	**100**	28	**100**
	Prefer not to answer	0	**0**	0	**0**

Cyclist interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	14	6	1	3	1	0	0	0	**25**
PM (16:30-18:30)	13	5	2	2	1	0	1	0	**24**
									49

Pedestrian interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	4	5	0	1	1	0	0	0	**11**
PM (16:30-	3	7	0	0	0	0	1	0	**11**

18:30)									
									22

Totals AM/PM peaks

Interaction Type	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**Total**
Cyclist interactions	27	11	3	5	2	0	1	0	**49**
Pedestrian interactions	7	12	0	1	1	0	1	0	**22**
									71

There are a number of no responses to the question about the experience of conflict

		Pedestrians	%	Cyclists	%
How frequently do you travel through this location	First time	1	**4**	0	**0**
	Less than once a month	2	**8**	0	**0**
	More than once a month but less than every week	4	**17**	1	**3.5**
	At least once per week	7	**29**	11	**39**
	Most days/weekdays	10	**42**	16	**57**
How comfortable do you feel sharing this path with pedestrians/cyclists?	Very uncomfortable	2	**8**	0	**0**
	Somewhat uncomfortable	18	**75**	8	**28.5**
	Neither comfortable nor uncomfortable	3	**13**	7	**25**
	Comfortable	1	**4**	12	**43**
	Very comfortable	0	**0**	1	**3.5**
Have you experienced a conflict with a pedestrian/cyclist at this location?	Yes	9	**38**	4	**14**
	No	6	**25**	23	**82**
Do you consider this portion of your journey to be more or less pleasant	More pleasant	2	**8**	16	**57**

than the rest in terms of the pedestrian/cyclist environment?	Less pleasant	10	**42**	6	**21.5**
	Equal to the rest	5	**21**	6	**21.5**
	Unsure	7	**29**	0	**0**
Do you ever feel frustrated sharing this path with pedestrians/cyclists?	Never	0	**0**	4	**14**
	Rarely	4	**17**	10	**36**
	Occasionally	7	**29**	12	**43**
	Frequently	10	**42**	2	**7**
	Always	3	**13**	0	**0**
To what extent do you agree that this location is suitable to be a shared use pedestrian/cyclist path?	Strongly disagree	2	**8**	1	**3.5**
	Disagree	13	**54**	6	**21.5**
	Neither agree nor disagree	5	**21**	5	**18**
	Agree	4	**17**	16	**57**
	Strongly agree	0	**0**	0	**0**

APPENDIX 4:

Burgess Park

		Pedestrians	%	Cyclists	%
Gender	**Male**	23	**43**	17	**53**
	Female	28	**53**	13	**41**
	Other	0	**0**	0	**0**
	Prefer not to answer	2	**4**	2	**6**
Age Category	**0-17**	2	**4**	1	**3**
	18-30	9	**17**	10	**31**
	31-45	25	**47**	11	**34**
	46-59	14	**26**	10	**31**
	60+	3	**6**	0	**0**
	Prefer not to answer	0	**0**	0	**0**
Journey Purpose	**Commute to place of work**	10	**19**	20	**63**
	Leisure	33	**62**	6	**19**
	Business	3	**6**	2	**6**
	Other	6	**11**	3	**9**
Disability	**Yes**	0	**0**	0	**0**
	No	52	**98**	31	**97**
	Prefer not to answer	1	**2**	1	**3**

Cyclist interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	25	11	4	2	0	0	0	0	**42**
PM (16:30-18:30)	27	10	5	3	1	1	0	0	**47**
									89

Pedestrian interaction type

Interaction Type	A	B	C	D	E	F	G	H	Total
AM (07:30-09:30)	8	7	0	1	0	0	0	0	**16**
PM (16:30-18:30)	9	6	0	1	0	1	0	0	**17**
									33

Totals AM/PM peaks

Interaction Type	A	B	C	D	E	F	G	H	Total
Cyclist interaction	52	21	9	5	1	1	0	0	89
Pedestrian interactions	17	13	0	2	0	1	0	0	33
									122

		Pedestrians	%	Cyclists	%
How frequently do you travel through this location	First time	2	**4**	2	**6**
	Less than once a month	2	**4**	2	**6**
	More than once a month but less than every week	17	**32**	6	**19**
	At least once per week	10	**19**	7	**22**
	Most days/weekdays	22	**41**	15	**47**
How comfortable do you feel sharing this path with pedestrians/cyclists?	Very uncomfortable	14	**26**	0	**0**
	Somewhat uncomfortable	11	**21**	13	**41**
	Neither comfortable nor uncomfortable	8	**15**	8	**25**
	Comfortable	11	**21**	13	**41**
	Very comfortable	8	**15**	1	**3**
Have you experienced a conflict with a pedestrian/cyclist at this location?	Yes	23	**43**	7	**22**
	No	30	**57**	25	**78**
Do you consider this portion of your journey to be more or less pleasant than the rest in terms of the pedestrian/cyclist environment?	More pleasant	25	**47**	30	**94**
	Less pleasant	16	**30**	1	**3**
	Equal to the rest	8	**15**	1	**3**
	Unsure	4	**8**	0	**0**

Do you ever feel frustrated sharing this path with pedestrians/cyclists?	Never	9	**17**	8	**25**
	Rarely	13	**24.5**	12	**37**
	Occasionally	11	**21**	7	**22**
	Frequently	13	**24.5**	4	**12**
	Always	7	**13**	0	**0**
To what extent do you agree that this location is suitable to be a shared use pedestrian/cyclist path?	Strongly disagree	12	**23**	0	**0**
	Disagree	9	**17**	4	**12**
	Neither agree nor disagree	5	**9**	5	**16**
	Agree	13	**24.5**	14	**44**
	Strongly agree	12	**23**	8	**25**