

Transport for London

Blaze Laserlight Trial
Santander Cycle User Report
November 2015
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V3.0

future
thinking

MAYOR OF LONDON

Transport for London





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Background and methodology



Background

Santander Cycles is the second largest cycle hire scheme in Europe and since the launch of the scheme in London in July 2010 (originally known as the Barclays Cycle Hire scheme) the bicycles have become a familiar part of the London landscape

Blaze Laserlight Trial

As part of TFL's commitment to improving cycle safety they are always looking for new and innovative ways to improve the scheme and are currently in the process of trialling the Blaze Laserlight, with a view to rolling this out across the cycle hire scheme. The Blaze Laserlight is an additional safety feature which projects a green bicycle-shaped laser image onto the ground around 6 meters ahead of the bicycle.

Objectives of the trial

The trial will be judged a success by TfL if:

- The unit works as specified, i.e. battery life must ensure that product remains functional at all times, must operate in all weathers, not be affected by knocks or vibration
- Customers perceive that their safety is improved by the presence of the unit
- The addition of the unit to the bikes improves their visibility to other road users

Research objectives

Research is required among Cycle Hire scheme users to judge the success of the Blaze Laserlight trial from a user perspective and to provide detailed feedback on the reception of the new feature. Feedback is required from Santander Cycle users who have used the bikes fitted with Blaze Laserlight and those who haven't yet.





Methodology

In order to provide a detailed understanding of attitudes and perceptions we carried out a two staged approach to the research

On street trial with Cycle Hire bikes fitted with the Blaze Laserlight

To understand the user experience we recruited a sample of 50 Cycle Hire users who took a journey on a Santander Cycle fitted with the new light at night. All completed a questionnaire to record their experiences and views of the Blaze Laserlight feature straight afterwards. All recruits cycled on a pre-determined route for c20 minutes in the Clerkenwell area of London. Fieldwork took place 21st Sep –7th Oct 2015.



N=50

Online survey with Cycle Hire users

An online survey with Cycle Hire users was carried out to gain a broader view of awareness of and reactions to the Blaze Laserlight among those who have not yet used a bike fitted with the light. TfL sent invites to 10,000 Santander Cycle users (this sample was targeted towards those who have used the Santander Cycles at night) and we received 690 responses including 58 who had used a bike fitted with the Blaze Laserlight. Fieldwork took place 14th Oct–4th Nov 2015.



N=690

NOTE: When reporting on those who have used a bike fitted with the Blaze Laserlight we have grouped the responses from the f2f and online surveys giving a base of 108 users and 632 non-users



Summary of key findings

Summary of key findings

Currently cyclists feel significantly less confident, safe and visible when using Santander Cycles at night

01

During the day most Santander Cycle users feel confident, safe and visible to other road users, but this significantly declines when using the bikes at night - especially among female Santander Cycle users

Blaze Laserlight increases feelings of safety, confidence and visibility

02

Among those who have used a bike fitted with the Blaze Laserlight the vast majority say that it made them feel more safe, more confident and that it made them feel more visible

Blaze Laserlights appear to be functioning well

03

Very few reported problems or issues with the functioning of the lights. Nine in ten say that the light was clearly visible on the road at all times during their cycle

The majority of Santander Cycle users are positive about the Blaze Laserlight

04

The vast majority think that the light makes cyclists more visible to other road users, it would make cycling in London safer and that the Blaze Laserlight should be rolled out across London. Some do think that the light is an unnecessary distraction but they are in the minority

Fitting Santander Cycles with the Blaze Laserlight has the potential to increase use at night

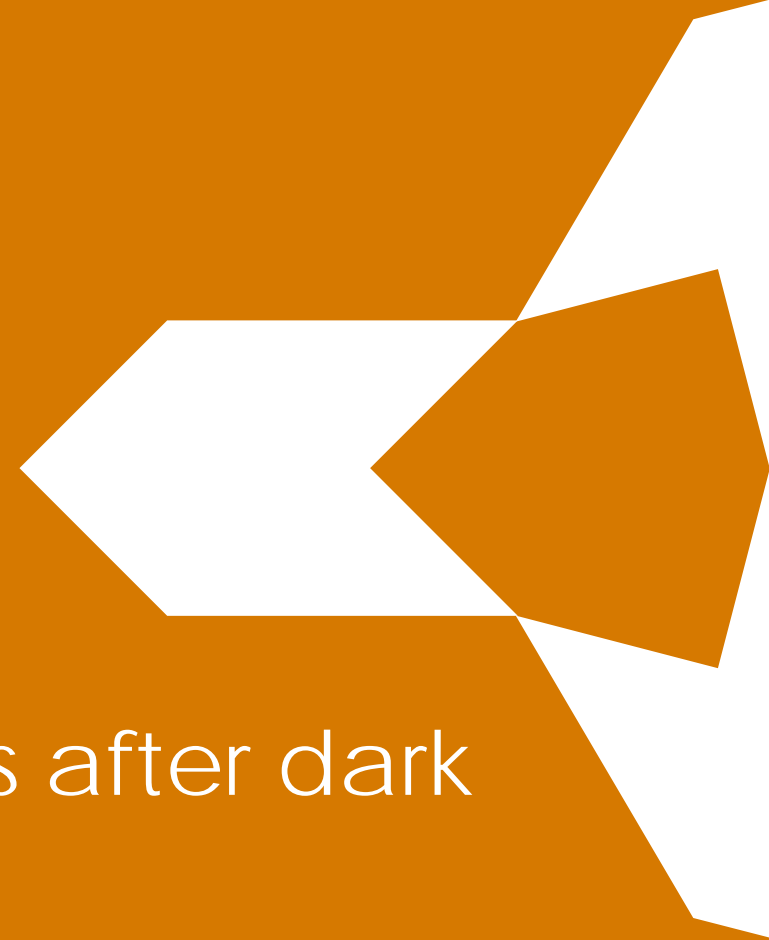
05

A large proportion of Santander Cycle users say that they would be more likely to use the bikes at night if fitted with the Blaze Laserlight - especially female Santander Cycle users, younger users and non-members

However, there is an indication that the Blaze Laserlight could encourage negative cycling behaviours

06

Riders are more likely to say they would pass a vehicle indicating left quickly on the inside if riding with Blaze Laserlight and less likely to say they would wait until a vehicle has moved a safe distance ahead



Using Santander Cycles after dark
in London

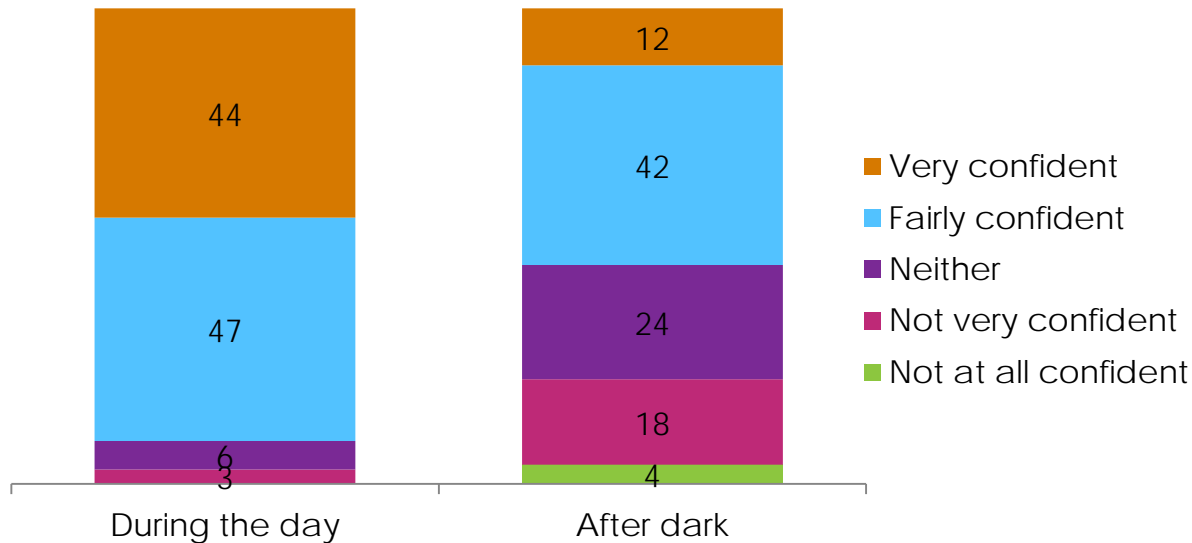


Confidence is significantly lower when using the cycle hire scheme in London after dark

Nine in ten Santander Cycle users are confident during the day compared to just over half after dark

Net: Confident **91%**

54%



Women are significantly less likely than men to feel confident when using Santander Cycles both during the day and at night

	Confident riding in day	Confident riding after dark
Men (583)	93% (528)	59%
Women (157)	83% (138)	36%

Q5.How confident do you feel when using a cycle hire scheme bike (Santander Cycle) in London during the day? Base: All respondents (740)
 Q9.How confident do you feel when using a cycle hire scheme bike (Santander Cycle) after dark in London? Base: All using bikes after dark(666)



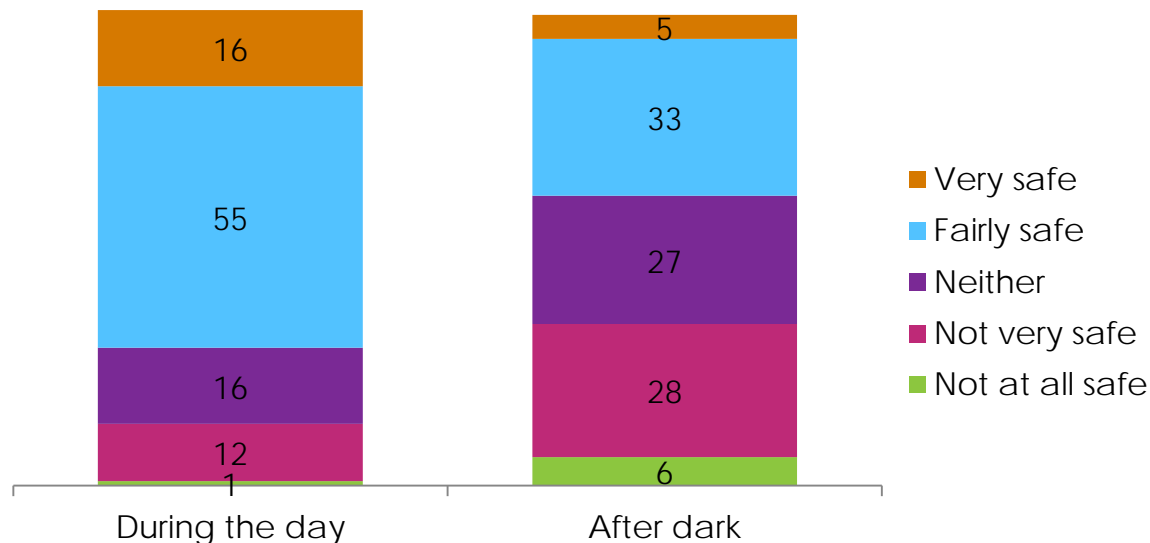
Feelings of safety are also significantly lower when using a Santander Cycle after dark than during the day

Seven in ten feel safe during the day compared to four in ten after dark

Net: Safe

71%

39%



Feelings of safety are similar during the day but women are significantly less likely than men to feel safe when using Santander Cycles at night

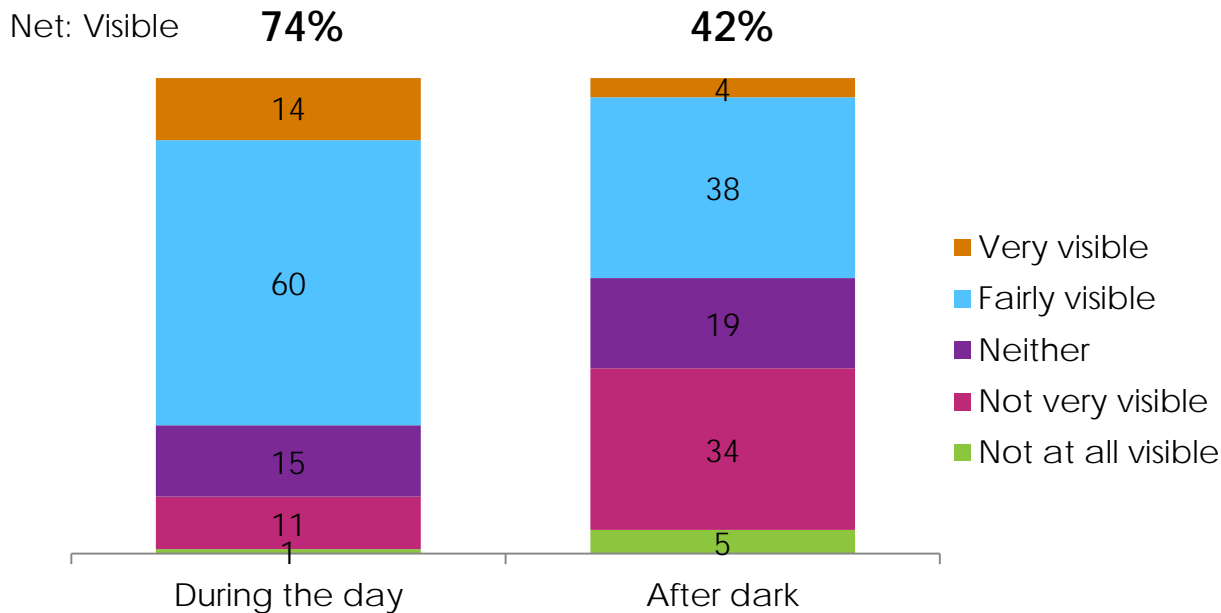
	Safe riding in day	Safe riding after dark
Men (583)	72%	(528) 42%
Women (157)	66%	(138) 26%

Q6.How safe do you feel when using a cycle hire scheme bike (Santander Cycle) in London during the day? Base: All respondents (740)
Q10.How safe do you feel when using a cycle hire scheme bike (Santander Cycle) after dark in London? Base: All using bikes after dark(666)



As we might expect Santander Cycle users feel significantly less visible when using the bikes after dark

Three quarters feel visible during the day compared to just two in five after dark



Perceptions of visibility are similar during the day but women are significantly less likely than men to feel visible when using Santander Cycles at night

	Visible riding in day	Visible riding after dark
Men (583)	75% (528)	45% (203)
Women (157)	68% (107)	28% (44)

Q7.How visible do you feel when using a cycle hire scheme bike (Santander Cycle) in London during the day? Base: All respondents (740)
 Q11.How visible do you feel when using a cycle hire scheme bike (Santander Cycle) after dark in London? Base: All using bikes after dark(666)





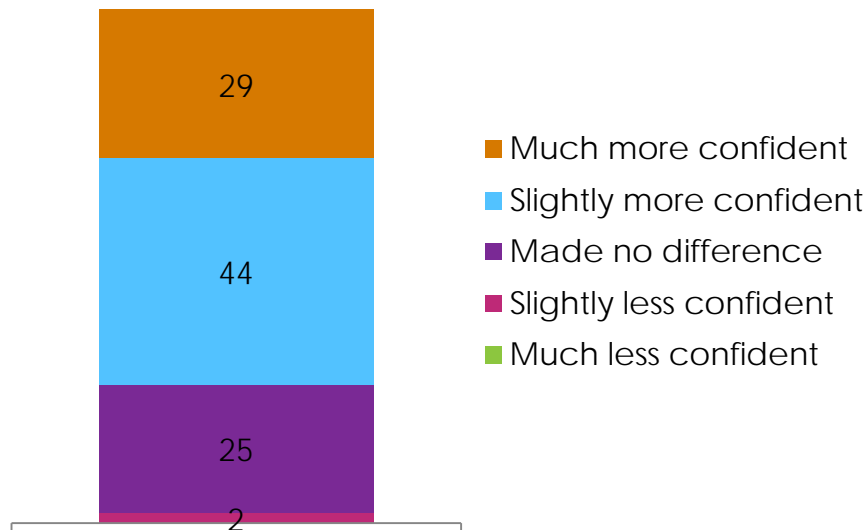
Impact of Blaze Laserlight on cycling experience

Blaze Laserlight makes cyclists feel more confident when riding a Santander Cycle after dark

Nearly three quarters of those riding a Santander Cycle fitted with the Blaze Laserlight say that it made them feel more confident

Net: More confident

73%



Blaze Laserlight has biggest impact on confidence among non-members and less regular users. It improves confidence among both men and women

% feeling more confident

Use of Santander Cycles				
5 or more days a week (33)	3-4 days a week (20)	1-2 days a week (20)	Once a fortnight (6)	Less often (28)
61%	65%	75%	83%	89%
Member (64)		Non-member (43)		
66%		84%		
			Male (72)	Female (36)
			74%	72%

Q19. What impact, if any, did the Blaze Laserlight have on how confident you felt when riding the bike? All Using Santander Cycle fitted with Blaze (108)

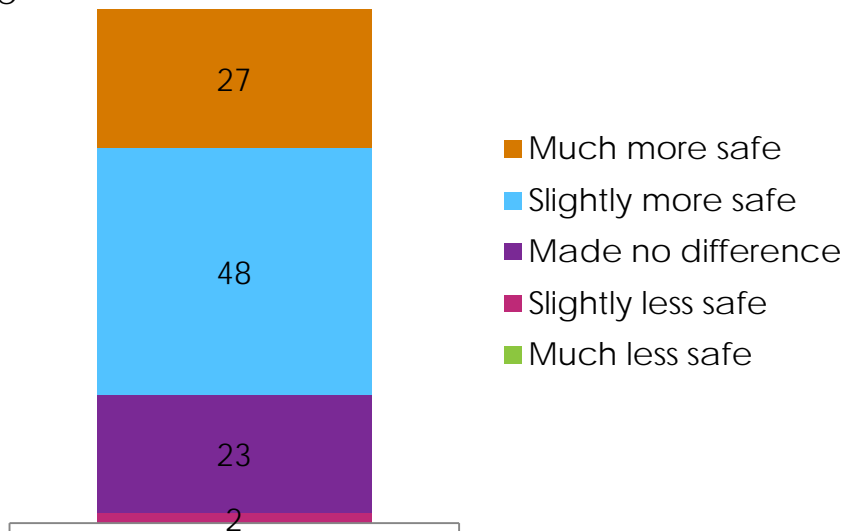


Blaze Laserlight also makes cyclists feel more safe when riding a Santander Cycle after dark

Three quarters of those riding a Santander Cycle fitted with the Blaze Laserlight say that it made them feel more safe

Net: More safe

75%



Blaze Laserlight has biggest impact on feelings of safety among non-members and less regular users. It improves feelings of safety among both men and women

% feeling more safe				
Use of Santander Cycles				
5 or more days a week (33)	3-4 days a week (20)	1-2 days a week (20)	Once a fortnight (6)	Less often (28)
58%	55%	100%	83%	89%
Member (64)	Non-member (43)		Male (72)	Female (36)
67%	86%		75%	75%

Q20. What impact, if any, did the Blaze Laserlight have on how safe you felt when riding the bike? All Using Santander Cycle fitted with Blaze (108)



There were lots of positive comments about improved feelings of safety...

"Cars stopped at traffic light intersections were slightly more aware, as well as other cyclists ahead could see there was another cyclist near them."

"Vehicles and pedestrian reacted to an unusual light – something green on the road. It made them realise that a bike was approaching as they look for the source of the light. Really good idea, but some additional lights in the bike would be also desirable."

"The light on the road in front of cars made drivers much more aware of my presence."

"It is very useful to warn pedestrians ahead trying to cross without looking."

"Gave advance warning to nearby vehicles and pedestrians of my approach."

"The drivers were able to see the light on the street, therefore they knew there was a bike nearby."

Q21/Q22. Please explain why the light made you feel more/less safe? All Using Santander Cycle fitted with Blaze (108)

And some less positive comments...

"I think the green takes away from the flashing white light at the front which I think makes you quite visible."

"It is not visible to a driver coming from behind me up until they go past me which is perhaps too late."

"Most danger is from behind I feel, when cycling in London so an extra light doesn't change how I feel."

"Too much traffic means it can rarely be seen."

"I had no idea what it was, and I kept looking at it rather than concentrating on the road ahead and traffic."

"Just looked gimmicky."

"Because I know pedestrians and car users would not see it so what's the point of having it."

Q21/Q22. Please explain why the light made you feel more/less safe? All Using Santander Cycle fitted with Blaze (108)

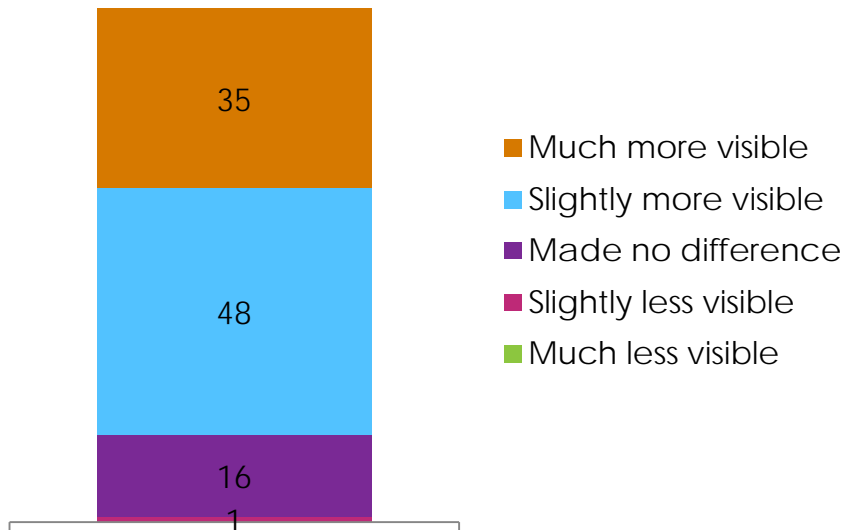


Using Santander Cycle fitted with a Blaze Laserlight makes cyclists feel more visible when riding the bike

Over four in five of those riding a Santander Cycle fitted with the Blaze Laserlight say that it made them feel more visible

Net: More visible

83%



Blaze Laserlight has biggest impact on perceptions of visibility among non-members and less regular users. It improves perceptions of visibility among both men and women

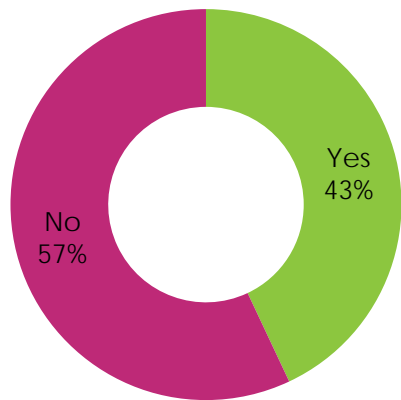
% feeling more visible

	Use of Santander Cycles				
	5 or more days a week (33)	3-4 days a week (20)	1-2 days a week (20)	Once a fortnight (6)	Less often (28)
	73%	65%	100%	83%	96%
Member (64)	Non-member (43)		Male (72)	Female (36)	
	77%	93%	85%	81%	

Q23a. What impact, if any, did the Blaze Laserlight have on how visible you felt when riding the bike? All Using Santander Cycle fitted with Blaze (108)



Two in five say that there were specific situations where other road users paid more attention to them



"Other cyclists notice it, I'm not sure if cars notice it."

"At junctions in which I have priority the cars on the side roads could see the projection just before me approaching the junction which ensured they stopped before I crossed the junction."

"Other cyclists noticed immediately and became aware I was there."

"Drivers and people crossing the streets would notice me quite quickly."

"pedestrians more aware, cars in queue could see me better."

"Cars that noticed the light tended to give me more room and some waited for me to pass before they turned left."

Q23b. Were there any instances during your ride on a bike with a Blaze Laserlight that you noticed other road users being more aware or paying more attention to you than normal? All Using Santander Cycle fitted with Blaze – online survey only excluding DK (46)

Q23c. Please explain in what situations you felt other road users were more aware or paying more attention to you than normal?



Functionality of Blaze Laserlight



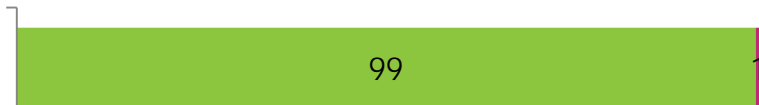
Blaze Laserlights appear to be functioning well

Very few reported problems or issues with the functioning of the lights

% Did the Blaze Laserlight...

■ Yes ■ No ■ Don't know

Project a visible green light on the road ahead of you



Remain on but flashing when stationary at junctions



Turn on within 5 seconds of starting your ride



Was the Blaze Laserlight...

Clearly visible on the road at all times during your cycle



Q16. When cycling on a cycle hire scheme bike (Santander Cycles) that had been fitted with a Blaze Laserlight did the Blaze Laserlight...?
Q17. Was the Blaze Laserlight clearly visible on the road at all times during your cycle? Base: All using bike fitted with Blaze Laserlight (108)



One in ten said the light was not clearly visible at all times though...

"It wasn't always in the right place when making turns (I cycle along the towpath, so quite narrow). Also it wasn't clearly visible in slightly better lit areas. Which, to be fair, probably makes sense."

"The cycle sign is not clearly visible when road surface is uneven and bike is shaking. It is a improvement on visibility but I would prefer having a standard head light and more and brighter lights installed on the bike."

"Tended not to show up so well on poor (i.e. non-smooth) road surfaces or areas covered with leaves etc."

"Flashed on off in dusk not very good better the darker the surroundings."

"It would be on for a while but when road became bumpy it would turn off."

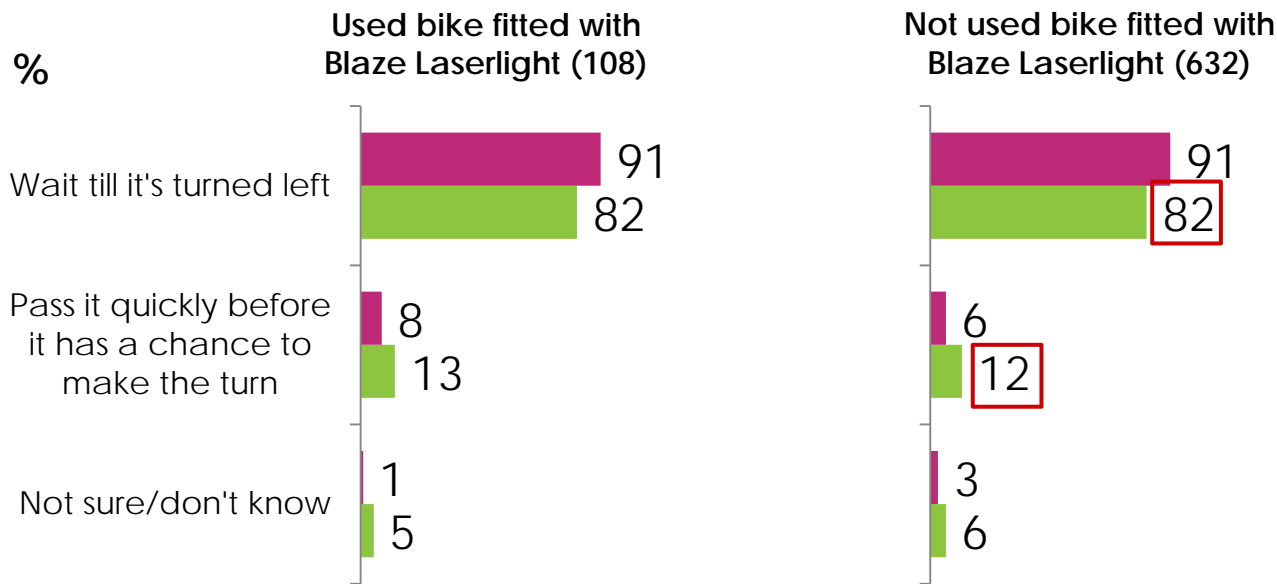
"It wasn't quite dark and when the bike went over speed bumps and raised parts of the road - it was no longer visible."

"...I think the green takes away from the flashing white light at the front which it think makes you quite visible. I don't think drivers would see it on the road surface as their eye level is much higher, might work to warn pedestrians from stepping out into the road though."



Impact of Blaze Laserlight on behaviours

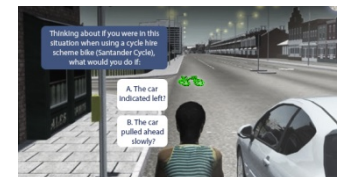
Riders are more likely to say they would pass a vehicle indicating left quickly on the inside if riding with Blaze Laserlight



Without Blaze light



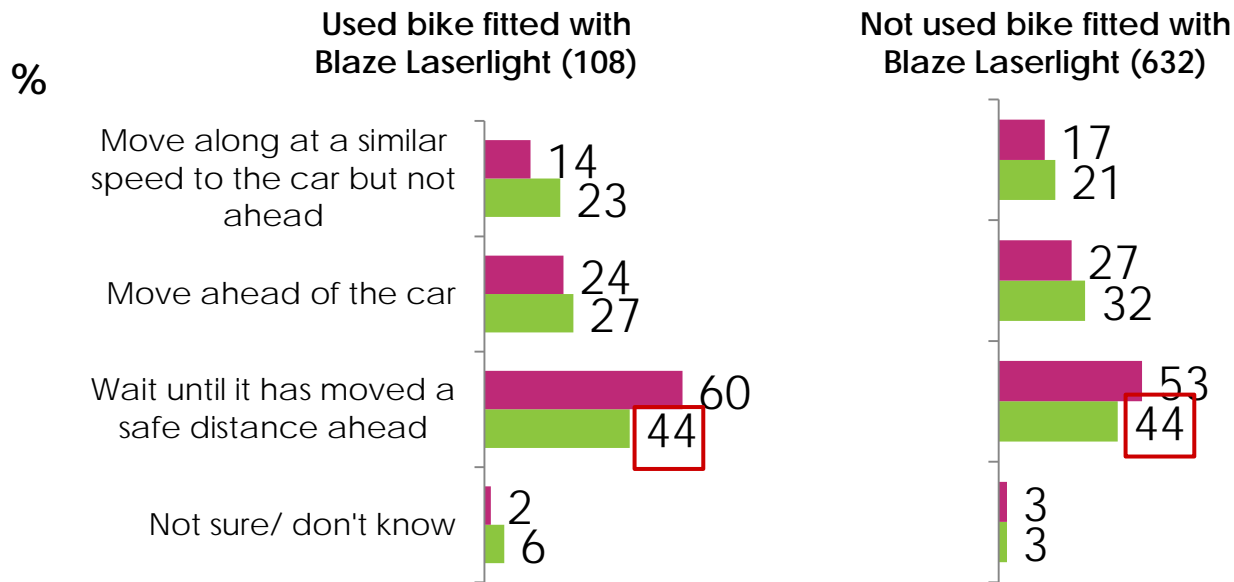
With Blaze light



 =significant difference in planned behaviour to riding without Blaze Laserlight

Q13a. Please look at picture A. Thinking about if you were in this situation when using a cycle hire scheme bike (Santander Cycle), what would you do if the car indicated left: Q24a. Please look at picture B. Thinking about if you were in this situation with a Blaze Laserlight on your bike, what would you do if the car indicated left: Base: All respondents (base size in brackets)

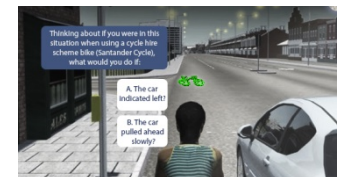
Riders are significantly less likely to say they would wait until the vehicle has moved a safe distance ahead if on bike with Blaze Laserlight



■ Without Blaze light



■ With Blaze light



□ =significant difference in planned behaviour to riding without Blaze Laserlight

Q13b. Please look at picture A. Thinking about if you were in this situation when using a cycle hire scheme bike (Santander Cycle), what would you do if the car moved ahead slowly: Q24b. Please look at picture B. Thinking about if you were in this situation with a Blaze Laserlight on your bike, what would you do if the car moved ahead slowly: Base: All respondents (base size in brackets)

Some interesting comments related to undertaking...

"Looks a good idea but I worry that it may make cyclists feel more confident they can be seen which might not be the case especially inside HGV's."

"I feel it's better to spend the money on training riders to ride safely (e.g. Don't overtake moving vehicles on the inside near junctions)."

"I realise the most accidents happen when cars are turning left the answer is for cyclists not to ride up the inside."

"If I move up the inside of a car there's a chance the driver will see the green light."

"Anyone jumping a light or cycling down the inside of moving traffic should have their bike taken off them and crushed in front of them, simple."

Impact of the light on driving behaviours...

"I felt much more visible and the glances from some drivers confirmed this."

"The light attracts attention of people and drivers around, making the cycle more visible."

Not quite sure what a driver is supposed to DO about a ghostly green bike projected onto the road in front - is there a risk that it might even be a dangerous distraction? Quite a lot of publicity needed, certainly, to explain what is going on, and I wonder if it will be worth what it would cost."

"I think it's a terrible idea! There's so much visual noise on London streets anyway, having an entire junction of these things swaying about is going to distract and annoy drivers at best."

"I felt safer as riders and drivers took notice and were aware of the light. Because they could see the light they immediately gave me extra space as well as allowances."

"The light made me feel slightly more safe because it makes drivers particularly lorry drivers aware that you are behind them or approaching."

"Projecting the green bike will just confuse the driver, they'll panic because they won't see me off their back corner, they'll hesitate, we'll both get annoyed at each others' hesitance, and that can lead to accidents."

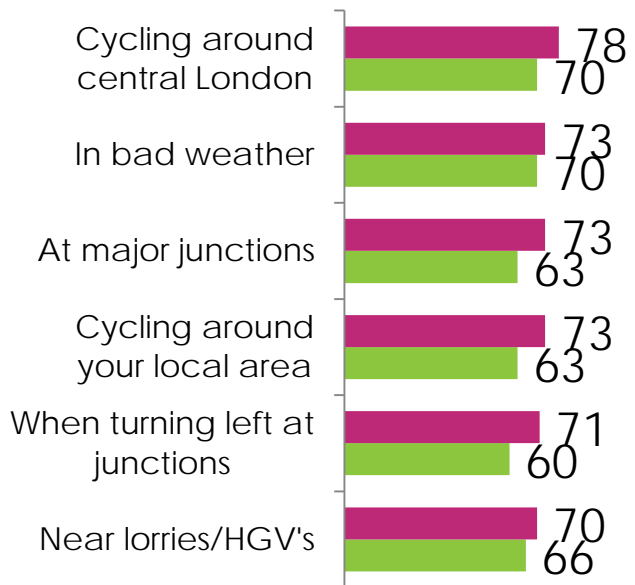


Attitudes towards the Blaze Laserlight



Santander Cycle users think that the Blaze Laserlight would make them feel safer in a variety of situations

Positive views amongst those who have used the bikes fitted with Blaze Laserlight and those who haven't yet



% saying they would feel more safe as a result of Blaze Laserlight...

- Used bike fitted with Blaze Laserlight (108)
- Not used bike fitted with Blaze Laserlight (632)

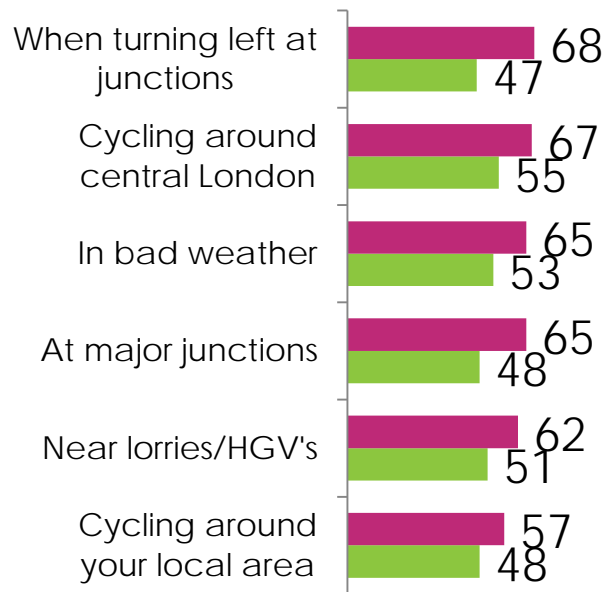


Q25. Do you think the Blaze Laserlight would have any impact on how safe you felt in the following situations? Base: All respondents (base size in brackets)



Santander Cycle users also think that the Blaze Laserlight would make them more confident in a variety of situations

Increased confidence amongst those who have used the bikes fitted with Blaze Laserlight and those who haven't yet



% saying they would feel more confident as a result of Blaze Laserlight...

- Used bike fitted with Blaze Laserlight (108)
- Not used bike fitted with Blaze Laserlight (632)

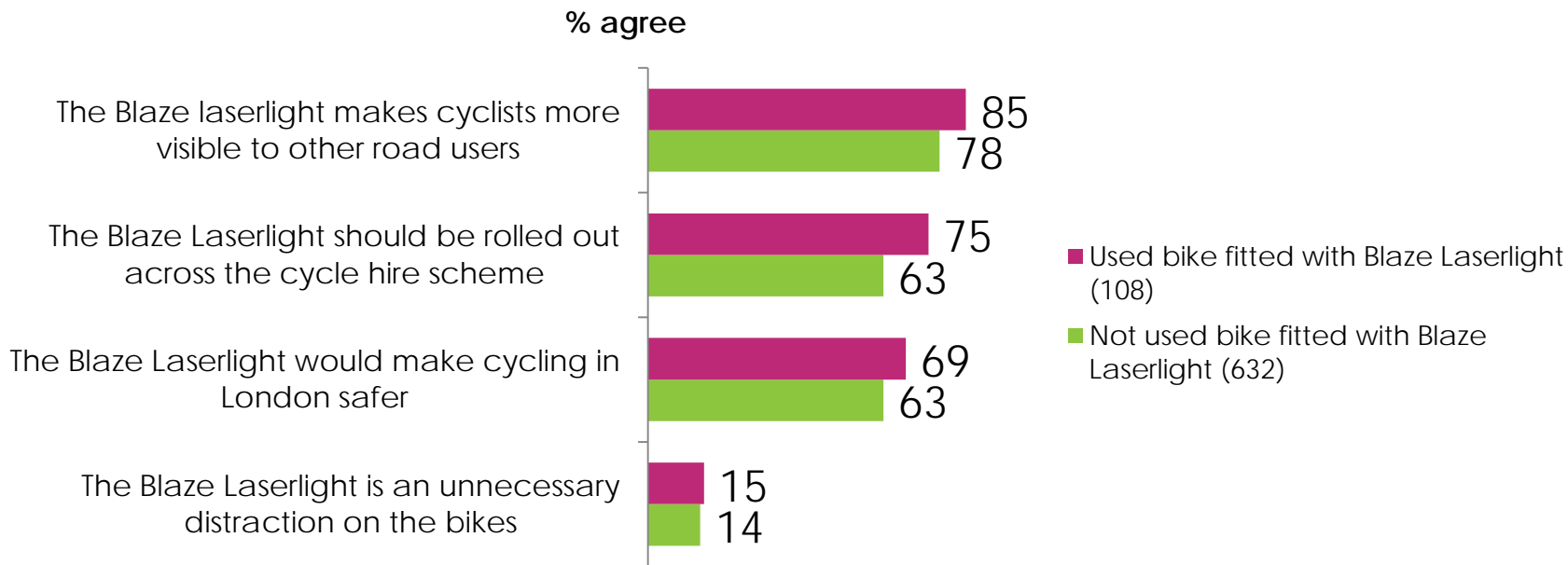


Q26. Do you think the Blaze Laserlight would have any impact on how confident you felt in the following situations? Base: All respondents (base size in brackets)



The majority of Santander Cycle users are positive about the Blaze Laserlight

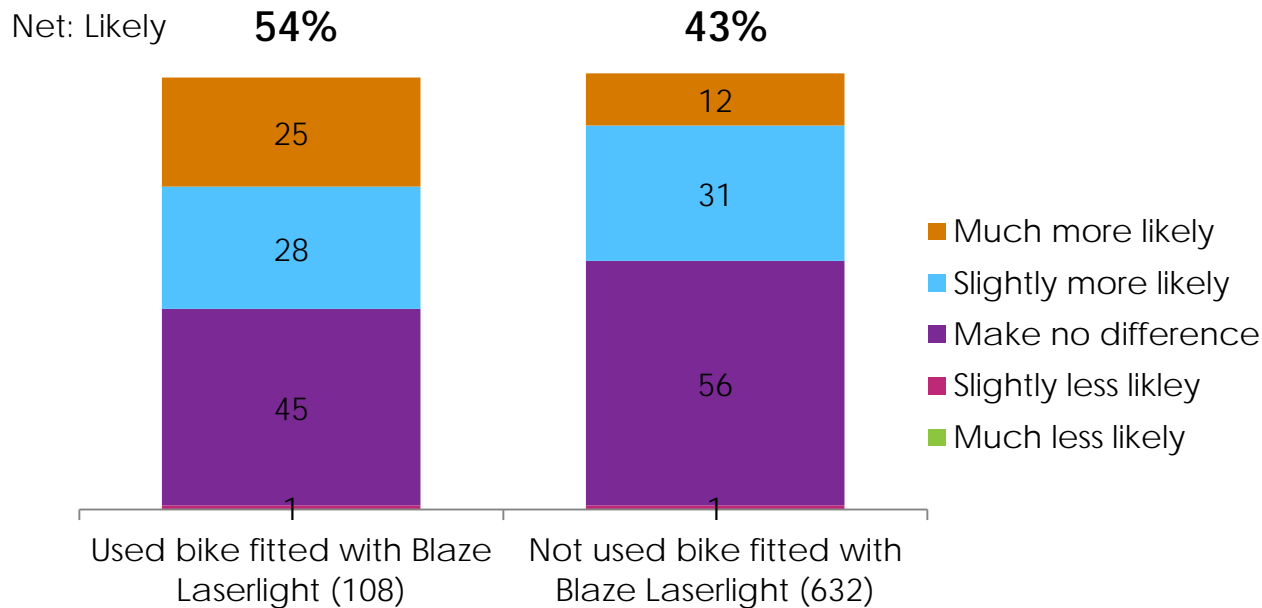
Some do think that the light is an unnecessary distraction but they are in the minority



Q27. To what extent do you agree or disagree with the following statements about the new Blaze Laserlight? Base: All respondents (base size in brackets)

Fitting Santander Cycles with the Blaze Laserlight has the potential to increase use at night

Increased likelihood to use the bikes at night amongst those who have used the bikes fitted with Blaze Laserlight and those who haven't yet



Women, riders aged 18-24 and non-members of the scheme are the most likely to say that they would use the bikes more at night if fitted with the Blaze Laserlight

% More likely

	18-24 (46)	25-34 (217)	35-44 (207)	45+ (254)
	65%	42%	45%	42%
Member (614)	Non-member (110)		Male (572)	Female (153)
	43%	53%	42%	55%

Q28. Realistically, if all cycle hire scheme bikes were fitted with the Blaze Laserlight, would it have any impact on your likelihood to use them at night?
All respondents (base size in brackets)



Top suggestions for improvement

Various suggestions for improvements among both users and non-users

Used bike fitted with Blaze Laserlight	
Improve projection	21%
Make the light brighter	16%
Rear light needs improving	11%
Light should highlight the space around cyclists	11%
Light is/could be confusing/distraction	7%
Make the light flash	7%
Not visible enough	5%
Use different colour	5%
General comments that lights need improving	4%
Information/ need more information (eg not sure what it does)	4%
Need to find out what drivers think	4%

Not used bike fitted with Blaze Laserlight	
Needs to be publicised/campaign to make people aware	14%
Rear light needs improving	13%
Improvements to cycle lanes, road surfaces, better infrastructure	12%
Light is/could be confusing/distraction	9%
Not visible enough	8%
Make the light flash	8%
Make the light brighter	7%
Bikes need to be more reflective	7%
False sense of security/safety	6%

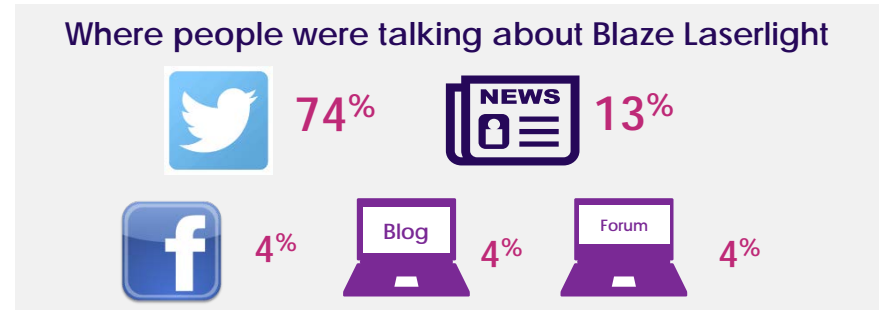
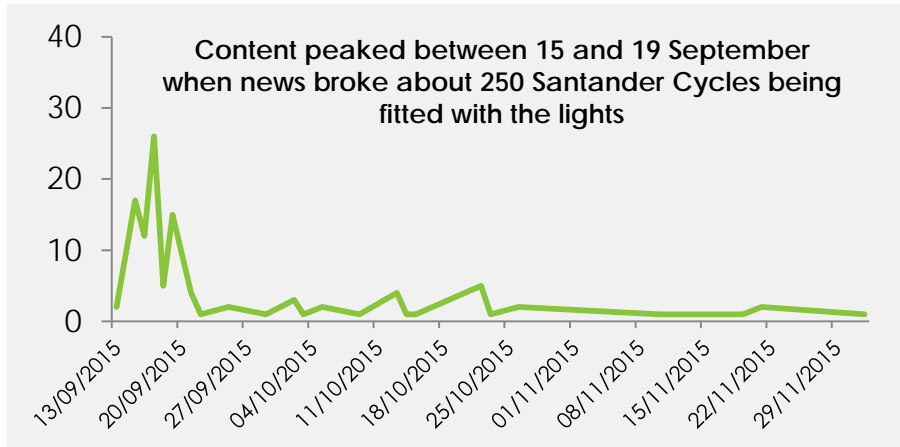
Q29. Do you have any suggestions for how the Blaze Laserlight could be improved? Base: All suggesting improvements
 Used bike fitted with Blaze Laserlight and made suggestions (57)
 Not used bike fitted with Blaze Laserlight and made suggestions (192)



The background features a solid orange color with a large, white, abstract geometric shape on the right side. This shape consists of several overlapping polygons, including a large white arrow-like shape pointing left, and other angular forms in orange and white that create a layered, architectural effect.

Social media monitoring

112 mentions collated on social media between 12 September and 2 December



Miami Valley RPC
@mvrpc

Follow

BBC News — London's Santander Cycles participate in the Blaze Laserlight trail to increase cyclists' safety. bbc.com/news/uk-englan...

David Rowan
@Rowan

Follow

London @SantanderCycles bike scheme now using @blazefeed Laserlight to save lives. Great work, @buzzbrooke and team. blaze.cc/blaze-santande...

Evans Cycles
@EvansCycles

Follow

Just heard 250 @SantanderCycles in #London now have the fab @blazefeed #laserlight we sell! How good is that? @TfL



CronFlakes @CronFlakes · Sep 14

They are adorning the @SantanderCycles with frikken laser beams! Not that it worked, mind

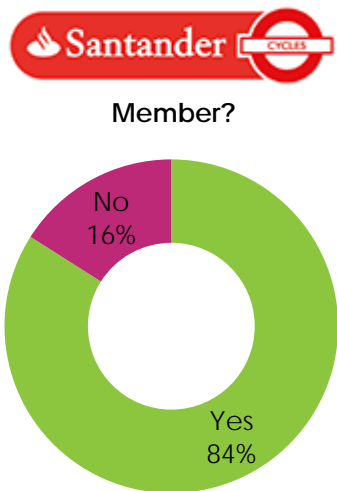
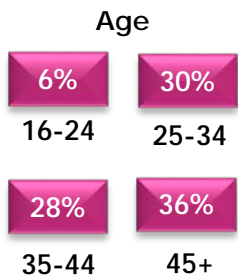
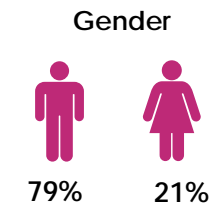
The findings in this report are based on the following search terms:
 (((barclay* OR boris OR santander) NEAR/of (cycle* OR bike*))OR (((cycle* OR bike*) NEAR/of (hire OR rent)) AND (london OR LDN OR TfL OR "transport for london"))OR
 at_mentions:santandercycles OR at_mentions:barclayscycle OR hashtags:(santandercycles OR barclayscycle) OR santandercycles OR barclayscycleNOT (Lahndahn OR whore OR slut) NOT
 (author:blamitbot OR at_mentions:blamitbot)) AND (((Blaze) NEAR/of (Laserlight OR "laser light" OR light))OR (laserlight OR "laser light"))



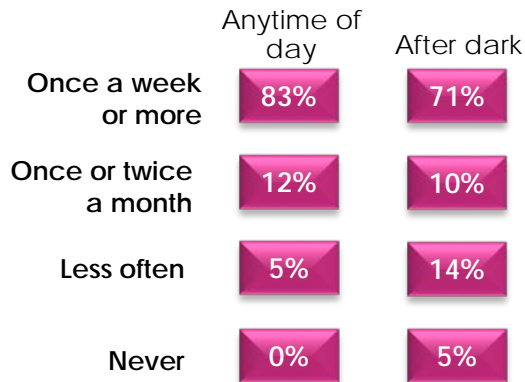
Appendix – Profile of respondents

Profile of those taking part in the research

All those taking part in the survey were Santander Cycle users. The vast majority were Santander Cycle Members and regular users of the scheme



Cycle frequency



Santander Cycle Hire frequency



Quality assured

Future Thinking complies with current legislation, industry & sector best practices in management of all research programmes



- Full certification to ISO 20252:2012, which establishes the terms and definitions as well as the service requirements for organisations and professionals conducting market, opinion and social research.
- Full certification to ISO 27001:2013, which specifies the requirements for establishing, implementing, maintaining and continually improving an Information Security Management System
- Corporate members of ESOMAR, the world association for market, social and opinion researchers
- Market Research Society (MRS) Company Partner
- IQCS Company Member (Interviewer Quality Control Scheme)
- ICO registered and compliant to the UK Data Protection Act 1998
- Future Thinking regularly pass external client compliance scrutiny
- Resource planning and internal project review meetings are held regularly and minuted. In addition, team meetings are held ad hoc, as appropriate
- Client satisfaction surveys are completed at the end of each project or at regular intervals through the lifecycle of tracking studies – consistently high scores received from this feedback loop
- Future Thinking manage sensitive projects for UK Police and other UK Government departments where secure systems and data management is fundamental

The logo for Future Thinking, featuring a stylized white 'f' on a magenta background. The word 'future' is in a smaller font above the word 'thinking', which is in a larger font. The background of the entire slide is magenta with two large white arrow shapes pointing towards the right.

future thinking

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