

# WOMEN'S FREEDOM AFTER DARK:

## ARE TFL'S CYCLEWAYS SAFE FOR EVERYONE, 24/7?

### METHODOLOGY AND DETAILED RESULTS

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## 1. SCOPE

The Cycleways assessed were those marked with a C on the [TfL Cycle Map](#) (not Q or CS, which do not have to meet the same quality criteria). Additional Cycleways on [these TfL maps](#) were also included, as were any other routes with TfL Cycleway signage observed by our assessors. While boroughs can and frequently do build cycle paths, cycle tracks, cycle lanes, shared space and so on, these were not included.

## 2. PROCESS

Volunteers from the LCC Women's Network assessed the Cycleways. A guide was developed to explain the approach and a webinar was held to train assessors. Assessors typically rode the routes, if possible at night, or if they were familiar with the route this could be done by memory supplemented by Google Streetview.

Assessors were provided a set of characteristics (see below) to aid identifying and analysing unsafe sections, but were first asked to consider if they personally felt unsafe and then to assess the Cycleway against those characteristics, in order to inform our understanding of what makes a Cycleway socially unsafe.

Results were recorded in a shared document and reviewed by another assessor. Any queries were discussed and a common view adopted. The characteristics of the unsafe sections were analysed, resulting in our guidance on what constitutes a socially unsafe section of Cycleway.

Characteristics of a socially unsafe Cycleway: Our assessors looked for two broad types of characteristics to identify whether or not a section was socially unsafe – type of area, and features of the route:

Type of area:

By/part of carriageway	Is the cycle route part of a carriageway or immediately beside one?
By railway	Is the cycle route adjacent to a railway?
Industrial areas	Is the area predominantly industrial?
Overgrown vegetation	Is there overgrown vegetation bordering or encroaching on the route?
Parks/green space	Is the cycle route beside or within a park or other green/undeveloped space?
Towpath/river	Does the cycle route run along a towpath or beside a river?

Features of the route:

Antisocial behaviour	Are you aware of crimes or antisocial behaviour on or near this route?
Blind corners/ambush points	Are there streets, footpaths or alleyways which a cyclist cannot see down until adjacent to them? Is there vegetation or other objects beside the cycle route where people could conceal themselves?
Feels neglected	Does the area feel run down or neglected e.g. buildings, path or street in poor condition, fly tipping or excessive rubbish in street, graffiti, nitrous oxide cylinders?
Lack of overlooking building doors/windows	Is there a lack of buildings adjacent to the cycle route with windows/doors close to the route (lack of 'eyes on the street')?
Lack of people using street/buildings	Is there a lack of people using the cycle route or the area around the route 24/7?
No escape route	Are there infrequent cyclable routes of exit from the cycle route (e.g. it is beside a railway, canal, solid wall, no side streets or paths)?
Poor lighting	Are the cycle route, adjacent space including street space and footpaths; and side street space, footpaths and alleyways not lit sufficiently to see where to cycle or to see people in the proximity of the route?
Tunnel	Does the route pass through a tunnel/underpass/overpass/under bridge? Note that these are not automatically socially unsafe, but underpasses and tunnels in the UK often have poor sight lines, ambush points, no escape routes and can be used for antisocial behaviour. Dutch tunnels and underpasses have better designs that avoid these features.

### 3. SOCIAL SAFETY CRITERIA

While there is a degree of subjectivity that determines what feels unsafe, based on our assessment, we recommend that a socially safe Cycleway:

- Has lighting that illuminates not just the Cycleway but also adjacent areas.
- Has eyes on the Cycleway – presence of people 24/7 or closely overlooking buildings populated 24/7.
- Has clear lines of sight, with no ambush points.
- Has viable escape routes.
- Does not have overgrown vegetation.
- Is not neglected.
- Has safe intersections/crossings of other roads, with under or overpasses designed and maintained to a high standard meeting all the requirements of the previous bullet points.

A socially safe Cycleway is unlikely to be:

- In a park/green space.
- Beside a railway line.
- Beside a river or canal.
- In or beside an industrial area.

### 4. RESULTS

The analysis considered two inputs: total network (from [cycling.data.tfl.gov.uk](https://cycling.data.tfl.gov.uk)) and the sections of the network deemed to be unsafe. The latter was assessed by importing the routes into a dedicated geographic information system application (QGIS). To obtain results for the percentage of each route deemed to be unsafe, both inputs were first dissolved by route name, which unified any unconnected sections of a route into a single feature for each route. The unsafe length of each route was then divided by the total length.

Using a [GIS file of London borough boundaries available from the GLA](#), a similar analysis was then performed on the portion of the total network and the unsafe sections that fell within each London borough. Due to the fact that a few route sections that pass over bodies of water fall outside of the supplied borough boundaries, the sum of lengths in the analysis by borough is slightly less than in the analysis by route name.

Finally, the processed route features and their derived statistical data were uploaded to [Felt.com](#) to create an interactive map.

Safe and unsafe sections of Transport for London Cycleways - by route

In total: 89 Transport for London Cycleway routes, of which 52 (58%) are at least partially socially unsafe ('have unsafe sections')

Route name	Label	Total length (km)	Unsafe length (km)	Safe length (km)	Percentage unsafe (%)	Rank - total length	Rank - safe length	Rank - percentage unsafe
C Blackheath to Eltham	C	4.66	2.88	1.78	61.8	23	40	12
C Brent Valley	C	2.59	1.19	1.4	45.9	37	47	16
C Burnt Oak to Colindale	C	1.41	0.81	0.6	57.4	56	66	13
C C1 to Liverpool Street	C	0.52	0	0.52	0.0	80	71	53
C C10 to New Cross Rd	C	1.21	1.05	0.16	86.8	63	82	8
C C2 to C3 via Mansell Street	C	0.5	0	0.5	0.0	81	72	53
C C5 to Battersea Power Station	C	1.28	0.22	1.06	17.2	59	58	31
C C61 to C60 via Ching Path	C	0.59	0.1	0.49	16.9	76	73	33
C Chalk Farm to Swiss Cottage	C	1.65	0	1.65	0.0	51	42	53
C Colliers Wood to Wimbledon	C	3.45	0.41	3.04	11.9	30	29	38
C Deptford to Lewisham	C	2.19	1.65	0.54	75.3	43	69	11
C Grand Union Canal	C	23.26	23.25	0.01	100.0	2	83	1
C Haggerston to Dalston	C	1.23	0	1.23	0.0	62	50	53
C Horseguards to Buckingham Palace	C	1.34	0	1.34	0.0	57	48	53
C Hoxton to Broadway Market	C	2.29	0	2.29	0.0	41	34	53
C Hyde Park to Belgravia	C	0.88	0	0.88	0.0	74	62	53
C Ilford to Gants Hill	C	2.23	0	2.23	0.0	42	35	53
C Kentish Town to Hampstead	C	1.83	0	1.83	0.0	49	39	53
C Lea Bridge to Forest Rd	C	2.57	0	2.57	0.0	38	32	53

Route name	Label	Total length (km)	Unsafe length (km)	Safe length (km)	Percentage unsafe (%)	Rank - total length	Rank - safe length	Rank - percentage unsafe
C Link Essex Road	Q	0.36	0	0.36	0.0	86	78	53
C LSP Kings Cross to Camden Road	C	2.15	0	2.15	0.0	45	36	53
C North Road to Broadway Market	C	0.58	0	0.58	0.0	77	67	53
C Old Paradise Street	C	0.32	0.06	0.26	18.8	88	81	29
C Oval to C5	C	1.27	0	1.27	0.0	60	49	53
C Palace Gate to Black Lion Gate	C	0.97	0.97	0	100.0	72	84	1
C Palace Rd Kingston	C	0.27	0	0.27	0.0	89	80	53
C Palace Walk	C	1.09	1.09	0	100.0	71	84	1
C Peckham Rye Links	C	0.36	0	0.36	0.0	86	78	53
C Pretoria Avenue	C	0.53	0	0.53	0.0	79	70	53
C Rotten Row and The Broadwalk	C	1.48	1.48	0	100.0	53	84	1
C Ruckhold Road	C	0.45	0	0.45	0.0	83	75	53
C St Marks Church to Claremont (Kingston)	C	0.95	0	0.95	0.0	73	60	53
C St Pancras to Kentish Town	C	1.2	0	1.2	0.0	64	51	53
C Stratford to Romford Rd	C	3.17	0	3.17	0.0	34	27	53
C Temple Mills	C	0.39	0.02	0.37	5.1	84	77	44
C Twickenham Road Syon House	C	1.13	0	1.13	0.0	68	55	53
C Upper Brook Street Gate	C	1.24	1.24	0	100.0	61	84	1
C Vauxhall Bridge	C	0.87	0.09	0.78	10.3	75	63	40
C Waterloo Bridge	C	0.49	0	0.49	0.0	82	73	53
C1 Freezy Water to the City	C1	23.16	1.16	22	5.0	3	1	45
C10 Bloomsbury to Greenwich	C10	10.15	2.69	7.46	26.5	8	8	21

Route name	Label	Total length (km)	Unsafe length (km)	Safe length (km)	Percentage unsafe (%)	Rank - total length	Rank - safe length	Rank - percentage unsafe
C11 Essex Road to Farringdon	C11	3.37	0.09	3.28	2.7	32	25	47
C13 Old Street to Hackney	C13	3.57	0.95	2.62	26.6	29	31	20
C14 Blackfriars to Rotherhithe	C14	6.97	1.96	5.01	28.1	13	17	19
C16 Olympic Park to Barkingside	C16	11.52	3.05	8.47	26.5	6	7	21
C17 Elephant to Dulwich	C17	4	0.67	3.33	16.8	28	24	34
C18 Greenwich to Kent House	C18	1.1	1.1	0	100.0	70	84	1
C2 Aldgate to Stratford	C2	6.37	0	6.37	0.0	16	11	53
C20 Enfield Town to Bowes Park	C20	6.08	0	6.08	0.0	17	13	53
C21 Edmonton Green to Bush Hill Park	C21	4.37	1.01	3.36	23.1	26	23	24
C22 Stratford to Beckton	C22	6.83	6.83	0	100.0	14	84	1
C23 Dalston to Whipps Cross	C23	9.29	1.84	7.45	19.8	9	9	26
C24 Blackhorse Road to Walthamstow	C24	5.28	0	5.28	0.0	21	16	53
C26 Blackhorse Lane to QEOP	C26	5.51	4.33	1.18	78.6	20	52	9
C27 East Acton to Walthamstow	C27	24.14	2.95	21.19	12.2	1	2	37
C28 Portsmouth Road	C28	1.64	0	1.64	0.0	52	43	53
C29 Kingston to Tolworth	C29	4.96	0.09	4.87	1.8	22	18	49
C3 Lancaster Gate to Barking	C3	22.46	4.21	18.25	18.7	4	3	30
C30 Kingston Road to Kingston Vale	C30	4.41	0	4.41	0.0	25	19	53
C31 New Malden to Raynes Park	C31	2.69	2.06	0.63	76.6	36	65	10
C32 Kingston to New Malden	C32	1.47	0	1.47	0.0	54	45	53
C33 Woolwich to Lea	C33	2.06	1.1	0.96	53.4	46	59	14
C34 Hammersmith to Fulham FC	C34	2.92	0.09	2.83	3.1	35	30	46

Route name	Label	Total length (km)	Unsafe length (km)	Safe length (km)	Percentage unsafe (%)	Rank - total length	Rank - safe length	Rank - percentage unsafe
C34 Wood Lane to Acton	C34	3.41	0.27	3.14	7.9	31	28	41
C35 Bermondsey to Peckham	C35	2.04	0.12	1.92	5.9	47	37	43
C37 Hackney to Westferry	C37	0.39	0	0.39	0.0	84	76	53
C38 Finsbury Park to Highbury Fields	C38	4.34	0.02	4.32	0.5	27	20	51
C39 Kensington High St to Shepherds Bush	C39	1.15	0.22	0.93	19.1	67	61	28
C4 London Bridge to Woolwich	C4	8.8	0.08	8.72	0.9	10	6	50
C40 Greenford to Twickenham	C40	13.48	2.69	10.79	20.0	5	5	25
C41 Euston to Holborn	C41	1.18	0	1.18	0.0	66	52	53
C41 Holborn to Euston	C41	0.56	0	0.56	0.0	78	68	53
C42 Ilford to Barking Riverside	C42	7.45	1.05	6.4	14.1	12	10	35
C44 Pembridge Square to Meanwhile Gardens	C44	2.3	0.39	1.91	17.0	40	38	32
C48 Brixton to Clapham High Street	C48	1.32	0.14	1.18	10.6	58	52	39
C48 Herne Hill to Brixton	C48	1.45	0	1.45	0.0	55	46	53
C49 Acton to Chiswick	C49	4.44	0.88	3.56	19.8	24	22	26
C5 Waterloo to Clapham	C5	8.49	2.55	5.94	30.0	11	14	18
C50 Camden Town to Finsbury Park	C50	1.13	0	1.13	0.0	68	55	53
C52 Covent Garden to Euston	C52	2.56	0	2.56	0.0	39	33	53
C55 Lancaster Gate to Hyde Park Corner	C55	2.16	1.09	1.07	50.5	44	57	15
C56 C5 to Westminster Bridge	C56	1.2	0.5	0.7	41.7	64	64	17
C57 Hammersmith to Barnes	C57	1.88	0.26	1.62	13.8	48	44	36
C58 Southgate to Meridian Water	C58	1.78	0	1.78	0.0	50	40	53
C6 Elephant and Castle to Hampstead	C6	11.12	0.05	11.07	0.4	7	4	52

Route name	Label	Total length (km)	Unsafe length (km)	Safe length (km)	Percentage unsafe (%)	Rank - total length	Rank - safe length	Rank - percentage unsafe
C60 Chingford to Walthamstow	C60	5.55	1.47	4.08	26.5	19	21	21
C61 Chingford to Walthamstow	C61	6.49	0.17	6.32	2.6	15	12	48
C8 Wandsworth to Lambeth Bridge	C8	3.28	0	3.28	0.0	33	25	53
C9 Hammersmith to Hounslow	C9	5.84	0.39	5.45	6.7	18	15	42



Safe and unsafe sections of TfL Cycleways - by borough

Borough name	Borough area (hectares)	Total length of network (km)	Length of unsafe segments (km)	Length of safe segments (km)	Percentage of network unsafe	Rank - total length of network	Rank - length of safe network	Rank - percentage of network unsafe	Difference in rank (total length rank - safe length rank)
Waltham Forest	3,880.793	33.86	7.60	26.26	22.4	1	1	18	0
Camden	2,178.932	21.23	0.05	21.18	0.2	8	2	33	6
Southwark	2,991.340	23.64	2.86	20.78	12.1	4	3	24	1
Enfield	8,220.025	22.56	1.91	20.65	8.5	6	4	27	2
Hackney	1,904.902	22.29	2.56	19.73	11.5	7	5	25	2
Westminster	2,203.005	25.70	7.73	17.97	30.1	3	6	15	-3
Newham	3,857.806	22.65	9.04	13.61	39.9	5	7	13	-2
Kingston upon Thames	3,726.117	15.09	1.49	13.60	9.9	9	8	26	1
Ealing	5,554.428	26.85	14.00	12.85	52.1	2	9	11	-7
Tower Hamlets	2,157.501	13.27	0.95	12.32	7.2	11	10	29	1
Islington	1,485.664	12.32	0.12	12.20	1.0	12	11	32	1
Lambeth	2,724.940	13.47	3.20	10.27	23.8	10	12	17	-2
Hounslow	5,658.541	10.38	1.94	8.44	18.7	14	13	20	1
Redbridge	5,644.225	9.77	1.50	8.27	15.4	15	14	22	1
Kensington & Chelsea	1,238.379	8.87	2.12	6.75	23.9	17	15	16	2
Greenwich	5,044.190	10.69	4.39	6.30	41.1	13	16	12	-3
Hammersmith & Fulham	1,715.409	9.73	3.46	6.27	35.6	16	17	14	-1
City of London	314.942	6.69	0.49	6.20	7.3	19	18	28	1

Borough name	Borough area (hectares)	Total length of network (km)	Length of unsafe segments (km)	Length of safe segments (km)	Percentage of network unsafe	Rank - total length of network	Rank - length of safe network	Rank - percentage of network unsafe	Difference in rank (total length rank - safe length rank)
Barking & Dagenham	3,779.934	6.29	0.98	5.31	15.6	21	19	21	2
Haringey	2,959.837	5.28	0.27	5.01	5.1	22	20	30	2
Merton	3,762.466	4.68	1.02	3.66	21.8	23	21	19	2
Lewisham	3,531.706	8.55	4.93	3.62	57.7	18	22	9	-4
Richmond upon Thames	5,876.111	2.63	0.13	2.50	4.9	25	23	31	2
Wandsworth	3,522.022	2.31	0.35	1.96	15.2	26	24	23	2
Barnet	8,674.837	1.41	0.81	0.60	57.4	27	25	10	2
Hillingdon	11,570.063	6.36	6.34	0.02	99.7	20	26	8	-6
Croydon	8,649.441	0.00	0.00	0.00	100.0	29	27	1	2
Havering	11,445.735	0.00	0.00	0.00	100.0	29	27	1	2
Harrow	5,046.330	0.00	0.00	0.00	100.0	29	27	1	2
Bexley	6,428.649	0.00	0.00	0.00	100.0	29	27	1	2
Sutton	4,384.698	0.00	0.00	0.00	100.0	29	27	1	2
Bromley	15,013.487	1.09	1.09	0.00	100.0	28	27	1	1
Brent	4,323.270	3.46	3.46	0.00	100.0	24	27	1	-3
Total	159,469.725	351.12	84.79	266.33					

Unsafe sections of TfL Cycleways - by characteristic

Percentage of unsafe sections of Cycleways according to characteristic. Note that some sections were coded under multiple characteristics.

Type of area:

By/part of carriageway	38%
By railway	12%
Industrial areas	19%
Overgrown vegetation	35%
Parks/green space	65%
Towpath/river	12%

Features of the route:

Antisocial behaviour	13%
Blind corners/ambush points	84%
Feels neglected	42%
Lack of overlooking building doors/windows	89%
Lack of people using street/buildings	92%
No escape route	83%
Poor lighting	84%
Tunnel	31%