

APPENDIX D – CYCLING ROUTE AUDITS

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

DIRECTNESS

Assessed for the entire route length

	Existing Route	Potential Route
Motor Vehicle Route Length (km)		
Cycle Route Length (km)		
Ratio	To Be Determined	To Be Determined
Directness Score for Route	0	0

Directness Scores Table	
Length Factor	Score
≤ 1.0	5
> 1.0, ≤1.2	4
>1.2, ≤1.4	3
>1.4, ≤1.6	2
>1.6, ≤1.8	1
>1.8	0

Length Factor: Length of the cycle route divided by the corresponding shortest motor vehicle route

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

GRADIENT

Assessed for sections of route of similar characteristics - max 1km each

Google Earth elevation profile is a useful tool for obtaining data for this section

Section Number	Section start point	Section end point	Existing Route				Potential Route			
			Section Length (km)	Max Slope (m)	Max Grade (%)	Score	Section Length (km)	Max Slope (m)	Max Grade (%)	Score
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Gradient Score for Route	Existing	Potential
		To Be Determined

Note - Gradient may vary between existing and proposed (e.g. if zig-zag ramps are introduced to reduce gradient)

Gradient Scores Table						
Maximum Grade along each section (%)	Maximum slope (m)					
	15m	30m	50m	80m	150m	exceeds 150m
<2	5	5	5	5	5	5
2	5	5	5	5	5	4
3	5	5	5	5	4	3
4	5	5	5	4	3	2
5	5	5	4	3	2	1
6	5	4	3	2	1	0
7	4	3	2	1	0	0
8	3	2	1	0	0	0
9	2	1	0	0	0	0
10	1	0	0	0	0	0
> 10	0	0	0	0	0	0

SAFETY

Assessed for sections of route of similar characteristics - max 1km each

AADT - Average Annualised Daily Traffic

Section Number	Section start point	Section end point	Existing Route				Potential Route			
			Section Length (km)	Motor Traffic Speed (mph)	Motor Traffic Volume (AADT)	Score	Section Length (km)	Motor Traffic Speed (mph)	Motor Traffic Volume (AADT)	Score
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Safety Score for Route	Existing	Potential
	To Be Determined	To Be Determined

Safety Scores Table		Motor Traffic Speed			
Mixed Traffic Table Scores	Motor Traffic Volume	<2500	20 mph	30 mph	>30 mph
				4	3
		2500-5000	3	2	1
		>5000	2	1	0
Route physically protected from motor vehicles or off highway completely	n/a	5			
Unlit routes	n/a	Deduct 1 point			
Routes without passive surveillance	n/a	Deduct 1 point			

Notes: Speed - Measured 85th percentile speed if known, otherwise speed limit
 Volume - AADT, two way on single carriageways, one way on dual carriageways.

CONNECTIVITY

Assessed as connectivity for sections of route of similar characteristics - max 1km each

Section Number	Section start point	Section end point	Existing Route				Potential Route			
			Section Length (km)	Total Connections (No.)	Connections per km	Score	Section Length (km)	Total Connections (No.)	Connections per km	Score
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Connectivity Score for Route	Existing	Potential
	To Be Determined	To Be Determined

Connectivity Scores Table	
Number of Accesses/Connections per Km	Score
> 4	5
> 3, < 4	4
> 2, < 3	3
> 1, < 2	2
> 0, < 1	1
0	0



Note - Accesses to be suitable for cycling and barrier-free

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

COMFORT

Assessed for sections of route of similar characteristics - max 1km each

Section Number	Section start point	Section end point	Existing Route				Potential Route			
			Section Length (km)	Surface Type	Available Width (m)	Score	Section Length (km)	Surface Type	Available Width (m)	Score
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										

Comfort Score for Route	Existing	Potential
	To Be Determined	To Be Determined

Comfort Scores Table		Available Width				
One-Way Track/Lane		≥ 2.1m	< 2.1m, ≥ 1.8m	< 1.8m, ≥ 1.5m	< 1.5m, ≥ 1.2m	< 1.2m
Two-Way Track/Lane		≥ 3.5m	< 3.5m, ≥ 3m	< 3m, ≥ 2.5m	< 2.5m, ≥ 2m	< 2m
Surface Type	Smooth, Machine-laid bituminous or	5	4	3	1	0
	Hand-laid bituminous or similar	4	3	2	1	0
	Concrete/stone pavements with filled level	3	2	1	0	0
	Concrete/stone flags	2	1	0	0	0
	Unbound graded	1	0	0	0	0
	Unsurfaced	0	0	0	0	0

Notes:
 Mixed traffic streets with less than 2500 vehicles per day should be assessed as two-way tracks with available width greater than 3.5m
 Mixed traffic streets carrying more than 2500 vehicles per day score zero
 Scores for Shared Use Paths (with pedestrians) are reduced:
 By 1 where pedestrian flows exceed 100 per hour
 By 2 where pedestrian flows exceed 300 per hour

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

CRITICAL JUNCTIONS

Critical Junctions	Existing	Potential
	No. of Junctions	No. of Junctions
Cycle movements in potential conflict with heavy motor traffic flows (>5000 vpd, or HGV/Bus >500 per day)		
Cycle movements mixed with or crossing traffic stream with 85th percentile speed >60kph		
Cycles need to cross more than one traffic lane to complete a movement (where the road has moderate or heavy traffic flows and where no refuge is provided)		
Cycle movement crosses very wide or flared side road junction, radii >9m, multi-lane entry, merge and diverge slip road, or acceleration and deceleration lanes		
Pinch points (widths between 3.2m and 3.9m inclusive) on junction entry or exit lanes		
Poor surface quality within path of cycle movement due to drainage grating, adverse camber, road debris, or poor reinstatement/maintenance		
Congested conditions restriction visibility to cyclists passing stationary traffic		
Any type of roundabout with >8000 vpd where cycles mix with traffic or cross without priority		
Multi-lane roundabout where cycles mix with traffic		

	Existing	Potential
Number of Critical Junctions/Crossings on Route with critical features requiring improvement	0	0

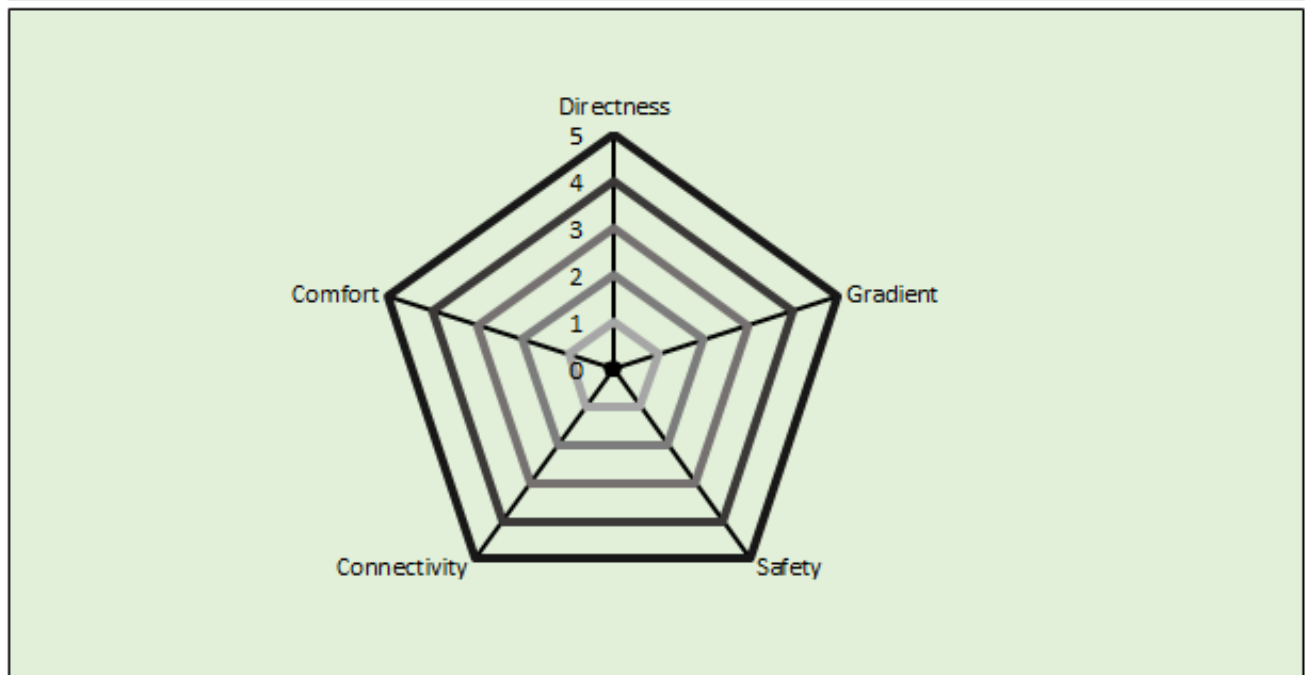
Note 1 – 'In potential conflict with' means where heavy motor traffic movements cross or run alongside cycle movements without being separated physically and/or in time
 Note 2 – Moderate or heavy traffic flows are those above 2500 vehicles per day and / or 250 HGVs per day

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	
Overall Length	
Name of Assessor(s)	
Date of Assessment	

Criterion	Performance Scores	
	Existing	Potential
Directness	0.00	0.00
Gradient	To Be Determined	To Be Determined
Safety	To Be Determined	To Be Determined
Connectivity	To Be Determined	To Be Determined
Comfort	To Be Determined	To Be Determined



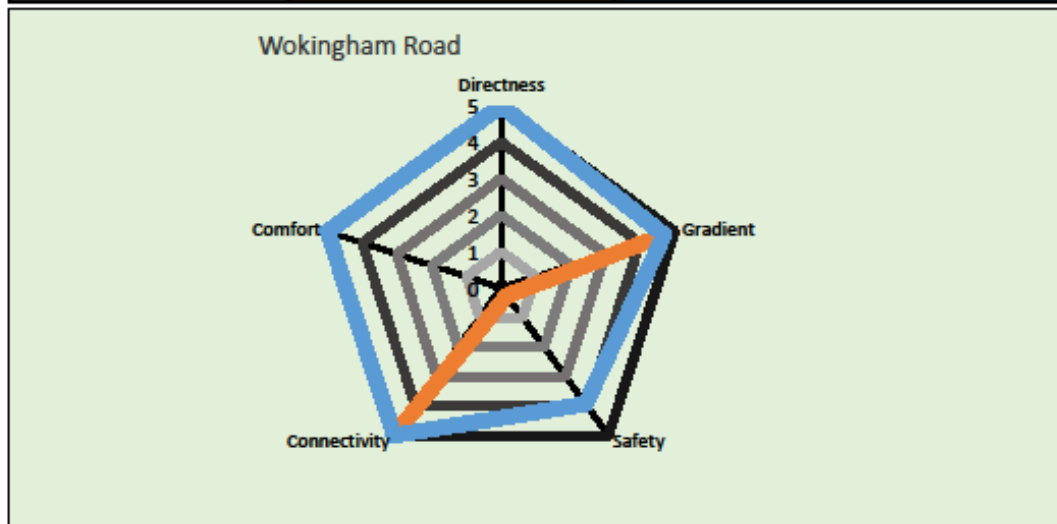
Number of Existing Critical Junctions/Crossings	0
Number of Potential Critical Junctions/Crossings	0
Description of Improvements	
Indicative Cost	

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Wokingham Road
Overall Length	6.7km
Name of Assessor(s)	Lucy Prismall (RBC) and James Turner (RBC)
Date of Assessment	2nd August 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	4.70	4.70
Safety	0.27	3.94
Connectivity	5.00	5.00
Comfort	5.00	5.00



Number of Existing Critical Junctions/Crossings	6
Number of Potential Critical Junctions/Crossings	0
Description of Improvements	Physically protect cyclists on 40mph roads Resurfacing through Local Centre. Provide segregated cycle lane through local centre, will require reallocating road space. Remove pinch point at refuge near fire station
Indicative Cost	TBC

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Alexandra Road
Overall Length	1.19
Name of Assessor(s)	Karen Stanbridge (UoR) and Lucy Prismall (RBC)
Date of Assessment	17 June 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	4.16	4.16
Safety	4.00	5.00
Connectivity	5.00	5.00
Comfort	3.00	4.00



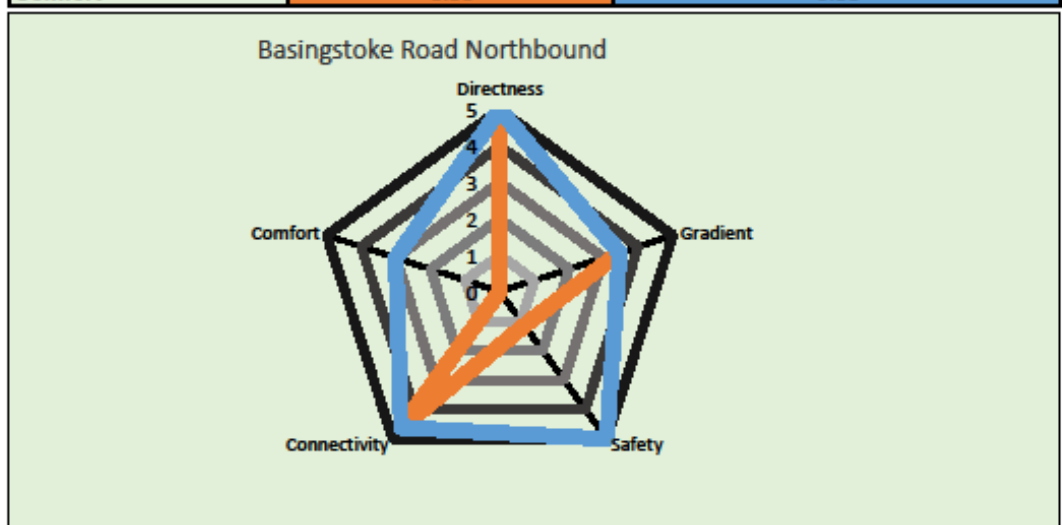
Number of Existing Critical Junctions/Crossings	13
Number of Potential Critical Junctions/Crossings	10
Description of Improvements	Removal of pinch points, cut back vegetation, provision of shared use facilities, improvements to road surface, signage, on-carriageway cycle facilities, reduce flare at crossroad junctions, advanced stop lines at key junctions. Remove parking on one side along Elmhurst Road
Indicative Cost	Low - Medium cost

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Basingstoke Road Northbound
Overall Length	2.6
Name of Assessor(s)	Tom Holcroft, Lucy Prismall, West Berks and Wokingham Officers
Date of Assessment	28 February 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	3.46	3.46
Safety	1.15	5.00
Connectivity	4.62	4.62
Comfort	0.00	3.00



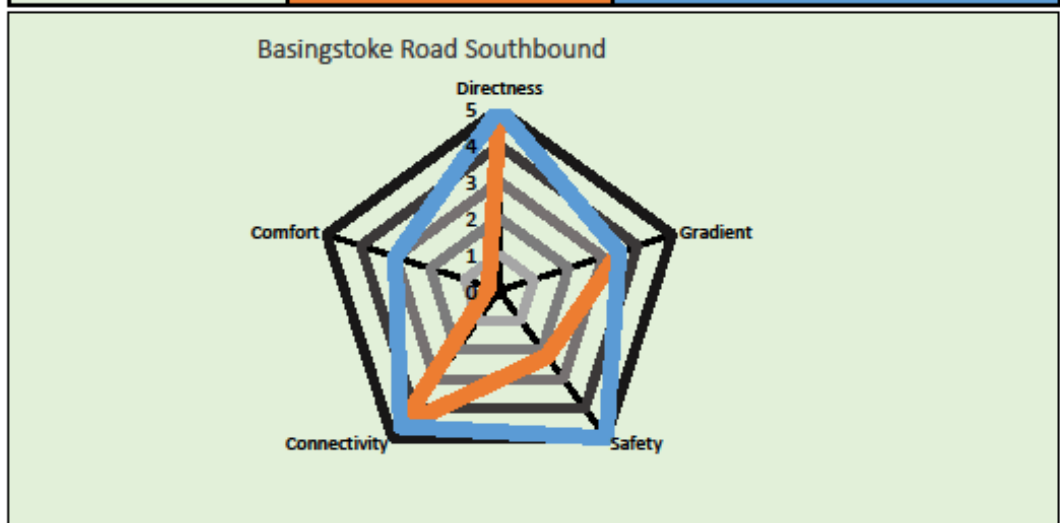
Number of Existing Critical Junctions/Crossings	30
Number of Potential Critical Junctions/Crossings	9
Description of Improvements	See powerpoint
Indicative Cost	TBC

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Basingstoke Road Southbound
Overall Length	2.6
Name of Assessor(s)	Tom Holcroft, Lucy Prismall, West Berks and Wokingham Officers
Date of Assessment	28 February 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	3.46	3.46
Safety	2.23	5.00
Connectivity	4.62	4.62
Comfort	0.31	3.00



Number of Existing Critical Junctions/Crossings	30
Number of Potential Critical Junctions/Crossings	9
Description of Improvements	See powerpoint
Indicative Cost	TBC

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

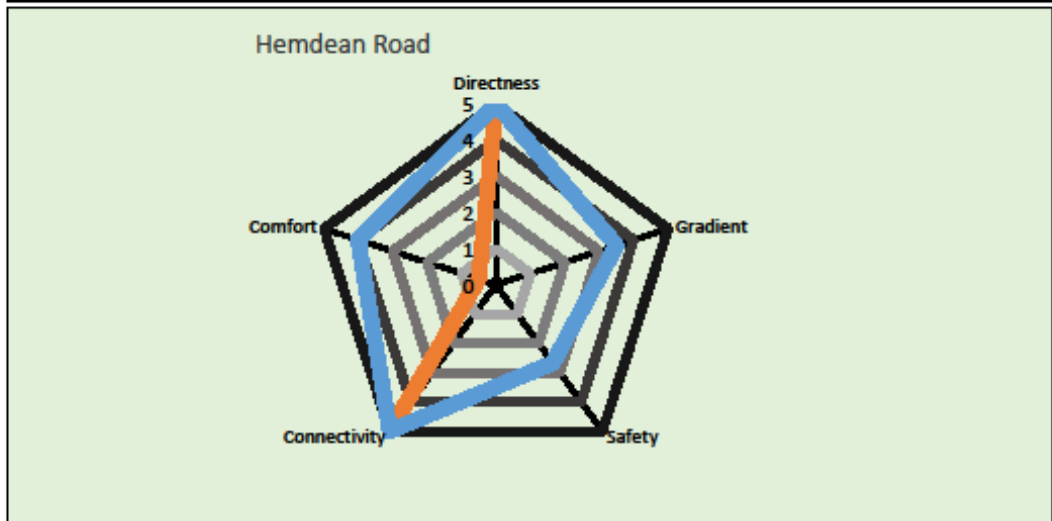
Route Name	Bath Road																			
Overall Length	7.98km																			
Name of Assessor(s)	Lucy Prismall and James Turner (RBC)																			
Date of Assessment	02 July 2019																			
	Performance Scores																			
Criterion	Existing	Potential																		
Directness	4.00	4.00																		
Gradient	4.28	4.28																		
Safety	4.18	4.54																		
Connectivity	4.78	4.78																		
Comfort	3.40	5.00																		
<p style="text-align: center;">Bath Road</p> <table border="1"> <caption>Performance Scores from Radar Chart</caption> <thead> <tr> <th>Criterion</th> <th>Existing</th> <th>Potential</th> </tr> </thead> <tbody> <tr> <td>Directness</td> <td>4.00</td> <td>4.00</td> </tr> <tr> <td>Gradient</td> <td>4.28</td> <td>4.28</td> </tr> <tr> <td>Safety</td> <td>4.18</td> <td>4.54</td> </tr> <tr> <td>Connectivity</td> <td>4.78</td> <td>4.78</td> </tr> <tr> <td>Comfort</td> <td>3.40</td> <td>5.00</td> </tr> </tbody> </table>			Criterion	Existing	Potential	Directness	4.00	4.00	Gradient	4.28	4.28	Safety	4.18	4.54	Connectivity	4.78	4.78	Comfort	3.40	5.00
Criterion	Existing	Potential																		
Directness	4.00	4.00																		
Gradient	4.28	4.28																		
Safety	4.18	4.54																		
Connectivity	4.78	4.78																		
Comfort	3.40	5.00																		
Number of Existing Critical Junctions/Crossings	7																			
Number of Potential Critical Junctions/Crossings	2																			
Description of Improvements	Physically protect cyclists on faster roads or where volumes are high. Remove potential for vehicles to park half on segregated cycle path between Old Bath Road and West Drive. Improve surface through Theale, and at critical junction with Station Road. Provide cycle provision at IDR junction																			
Indicative Cost	TBC																			

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Hemdean Road
Overall Length	2.55
Name of Assessor(s)	Lucy Prismall and James Turner (RBC)
Date of Assessment	26 June 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	3.50	3.50
Safety	2.67	2.67
Connectivity	5.00	5.00
Comfort	0.50	4.00



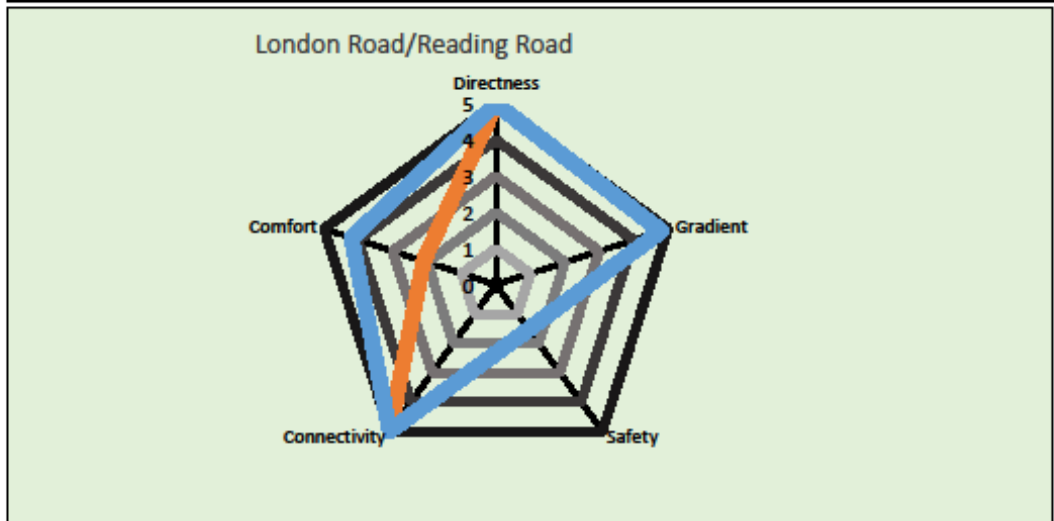
Number of Existing Critical Junctions/Crossings	3
Number of Potential Critical Junctions/Crossings	2
Description of Improvements	Provision of some form of cycle facilities throughout route, generally quiet residential/leisure route. Vegetation to be cut back and surfacing improvements required at Gravel Hill.
Indicative Cost	Low

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	London Road/Reading Road
Overall Length	4.94
Name of Assessor(s)	Lucy Prismall (RBC) and James Turner (RBC)
Date of Assessment	02 August 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	4.80	4.80
Safety	1.52	1.52
Connectivity	5.00	5.00
Comfort	2.11	4.20



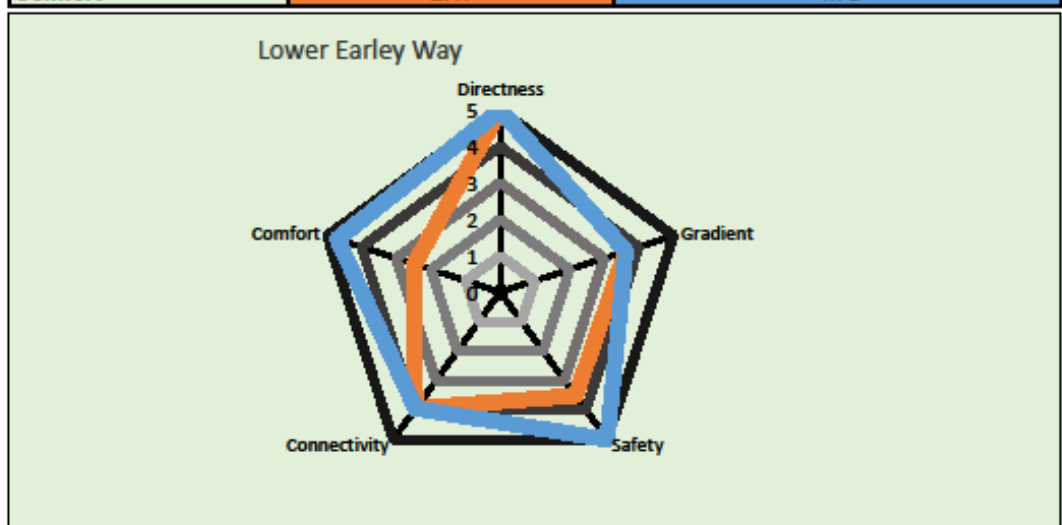
Number of Existing Critical Junctions/Crossings	9
Number of Potential Critical Junctions/Crossings	1
Description of Improvements	Priority for cyclists/peds when crossing side arms of Aldi roundabout.
Indicative Cost	TBC

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Lower Earley Way
Overall Length	5.45km
Name of Assessor(s)	Lucy Prismall (RBC) and James Turner (RBC)
Date of Assessment	2nd August 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	3.62	3.62
Safety	3.51	5.00
Connectivity	3.95	3.95
Comfort	2.47	4.70



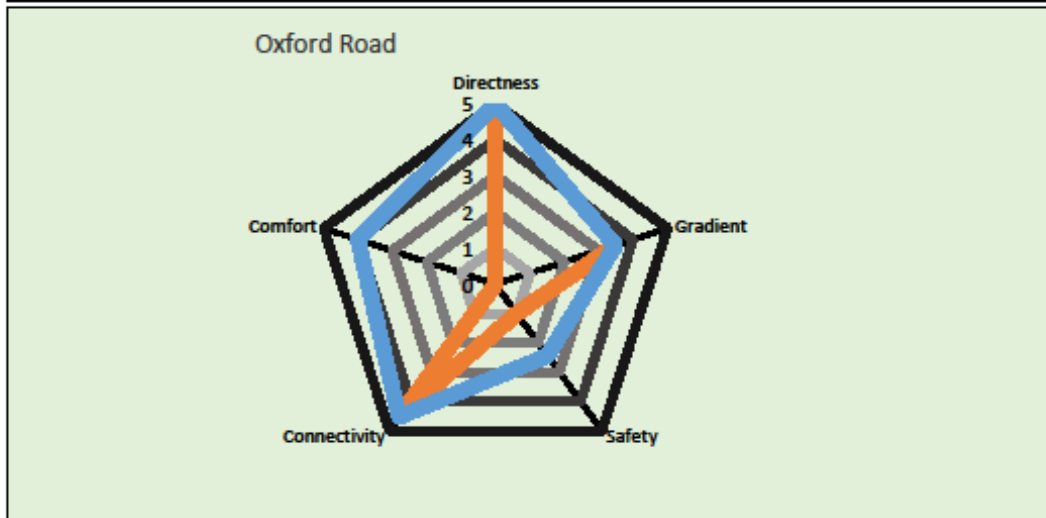
Number of Existing Critical Junctions/Crossings	14
Number of Potential Critical Junctions/Crossings	6
Description of Improvements	Protect cyclists on high speed sections. Upgrade existing footway to shared path between Black Boy Roundabout and M4 J11, widen where possible and resurfacing is required. Add link from Whitley Wood Lane to M4 J11 and provide dropped kerbs at
Indicative Cost	TBC

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Oxford Road
Overall Length	8.50 km
Name of Assessor(s)	Lucy Prismall and James Turner (RBC)
Date of Assessment	02 July 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	3.48	3.48
Safety	1.00	2.45
Connectivity	4.54	4.54
Comfort	0.00	4.00



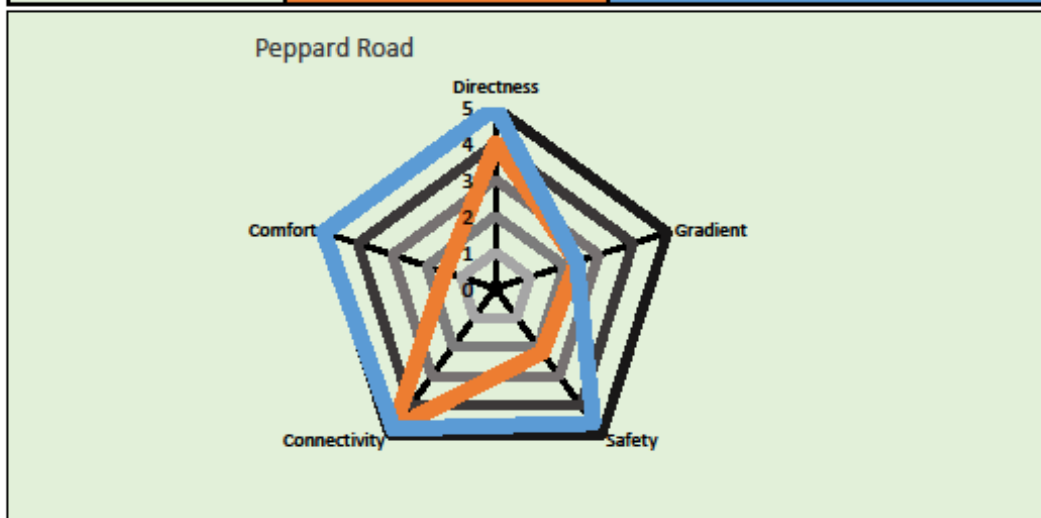
Number of Existing Critical Junctions/Crossings	8
Number of Potential Critical Junctions/Crossings	8
Description of Improvements	Physically protect cyclists at busier, faster sections between Overdown Road and Sulham Lane. Signage along entire route, provision for cycle lane towards middle to end of route. Surfacing improvements required on footway.
Indicative Cost	Medium to high

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Peppard Road
Overall Length	4.03
Name of Assessor(s)	Lucy Prismall and James Turner (RBC)
Date of Assessment	26 June 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	4.00	5.00
Gradient	2.36	2.36
Safety	2.19	4.61
Connectivity	4.80	4.80
Comfort	1.46	5.00



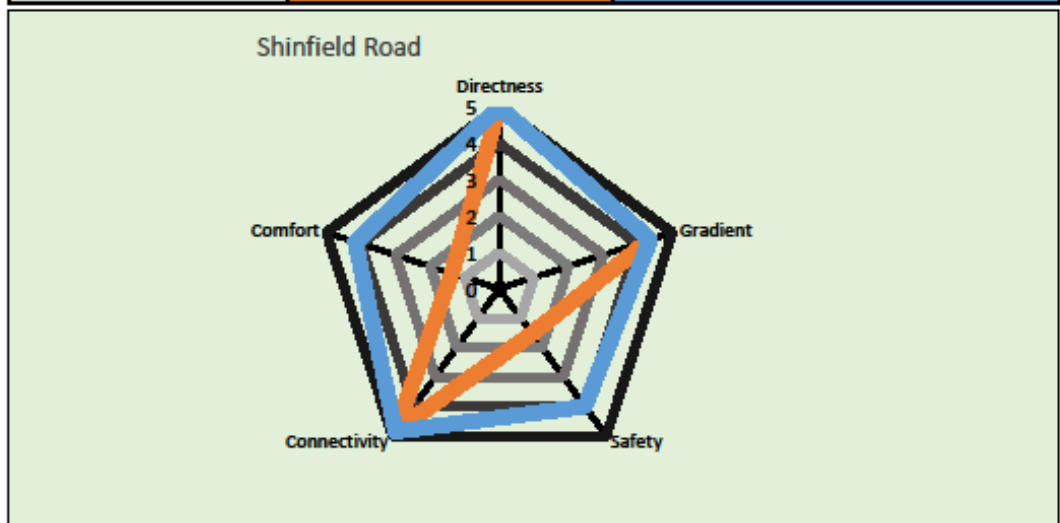
Number of Existing Critical Junctions/Crossings	9
Number of Potential Critical Junctions/Crossings	5
Description of Improvements	Signage at Gosbrook Road junction, improve surface and widening alongside The Heights Primary School. Continue cycle lane at top of Peppard Road hill, refresh advisory. Install dropped kerbs on side roads and provide cycle facilities up to borough boundary as there are currently none.
Indicative Cost	TBC

Local Cycling and Walking Infrastructure Plan: Route Selection Tool

ROUTE SUMMARY

Route Name	Shinfield Road
Overall Length	4.36km
Name of Assessor(s)	Lucy Prismall (RBC) and James Turner (RBC)
Date of Assessment	2nd August 2019

Criterion	Performance Scores	
	Existing	Potential
Directness	5.00	5.00
Gradient	4.36	4.36
Safety	1.53	4.00
Connectivity	4.86	4.86
Comfort	1.38	4.16



Number of Existing Critical Junctions/Crossings	5
Number of Potential Critical Junctions/Crossings	0
Description of Improvements	THIS RST DOES NOT COVER BEYOND ESSO GARAGE, DUE TO ROUTE NOT YET BUILT. Provide more direct crossing across London Road or upgrade existing toucan crossing. Cycle lane heading inbound and shared use (will required widening) heading
Indicative Cost	TBC