CORBY CYCLE AUDIT

DATE:	01 August 2022	**CONFIDENTIALITY:**	Public
SUBJECT:	Corby Cycle Audit		
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1. OVERVIEW

1.1. WSP has been commissioned to prepare a Local Cycling and Walking Infrastructure Plan (LCWIP) for the town of Corby in North Northamptonshire. The project seeks to identify where walking and cycling infrastructure could be delivered in the town to encourage increased active travel mode usage.

1.2. As part of the Data Gathering stage, members of the project team undertook site visits to familiarise themselves with the local conditions and to assess the existing provision. This report provides finding from the high-level assessment of the quality of the cycling provision in Corby and includes details of over 114km of routes across the town.

1.3. It draws out the nature and suitability of the infrastructure provided and will feed the emerging Corby LCWIP which will recommend both broad strategic priorities for investment as well as targeted interventions in specific sections of the network in need of enhancement.

1.4. The report details the methodology by which the network was assessed and outlines the characteristics of provision within the town. It does not provide recommendations and priorities for where and how future investment might be targeted.

2. METHODOLOGY

Audit

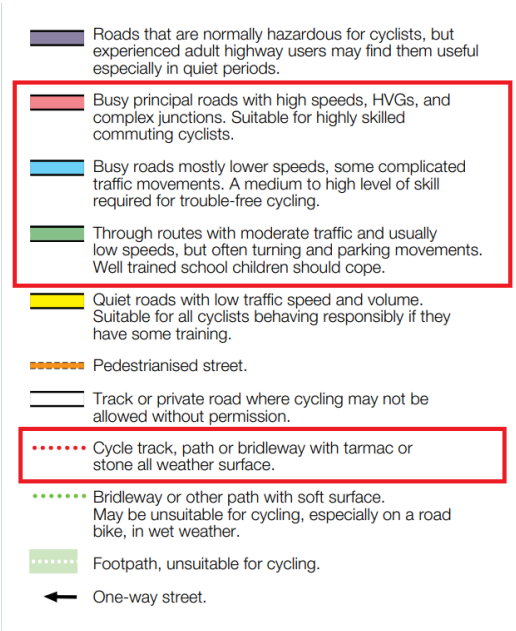
2.1. The audited network has been based on the Corby Cycle Network map produced by Northamptonshire County Council (NCC) in 2016 (included in **Appendix 1**).

2.2. The following links have been selected for the audit:

- Busy roads suitable for middling to highly experienced cyclists;
- Through routes suitable for well-trained school children; and
- Paved cycle tracks.

2.3. The following roads have been excluded:

- Roads that are normally hazardous (too busy and cycling on them should not be recommended as it is not their primary function);
- Quiet roads suitable for all cyclists (these are normally residential streets with low traffic speeds and volumes where no dedicated cycle infrastructure is required); and
- Unpaved bridleways (these can be used only in dry weather and are not suitable for all bikes).



2.4. The audit focused on the physical infrastructure in place on each link and the nature of the route itself. Individual sections were identified based on changes in the characteristics of the route or changes in route treatment. These were then allocated a unique code for ease of reference.

2.5. **Appendix 2** contains a database of the assessed links. A GIS shapefile of the same is also provided to NNC.

Quality Assessment

2.6. The 'quality' element of the assessment was based on a combination of the findings of the audit and our professional judgement as to the suitability of the provision in place for cyclists, given the characteristics of the environment and the needs of different users.

2.7. For each link the following information was recorded:

- Length;
- Route type;
- Route treatment;
- Width (of off-road paths);
- Surfacing (material);
- Main junction treatment;
- Directional signage for cyclists;
- Lighting;
- Surveillance; and
- Speed limit.

2.8. The attributes have been populated based on site visit observations (64km) and a desktop study with use of Google Streetview (51km).

2.9. The audit team undertook a site visit on Tuesday 26th July 2022 and covered almost 70km in total by the following modes of transport:

- Cycling 60km;
- E-Scooter 3km;
- Walking 6km.

2.10. A snapshot of on-site observations along a part of the cycled route can be viewed in the following video recording: https://youtu.be/eMqyw2ZLf9o

2.11. Based on the parameters set out above, each link was assigned an overall quality score. A rating of the quality of each section of the cycle network was then determined, ranging from 1 (very poor) to 5 (very good), based on the criteria and characteristics listed in **Table 1**.

Table 1. Criteria for Quality Assessment

Score	Route Characteristics
5 – Very Good	A safe, attractive, and well-maintained route for cyclists of all ages and abilities in all weather conditions, at all times of the year. The route is convenient and legible, free of obstacles, obstructions and hazards, with the potential presence of cyclists clearly obvious to general traffic, which itself is either segregated or slowed to 20mph.
4 – Good	A safe, reasonably attractive and reasonably well-maintained route for cyclists of most abilities in all weather conditions, at most times of the year. However; there is room for improvements in its design or condition.
3 – Acceptable	A reasonably safe route for cyclists of most abilities in all weather conditions, at most times of the year. The route may require maintenance but is convenient and legible, mostly free of obstacles or obstructions, and with the potential presence of cyclists reasonably obvious to general traffic, which may be travelling 30mph.
2 – Poor	A potentially unsafe, unattractive, and poorly maintained route, unsuitable for inexperienced cyclists. Concerns could be exacerbated by poor weather conditions and dark nights. The route may be inconvenient and subject to obstacles or obstructions, with the potential presence of cyclists not obvious to general traffic, which itself is fast moving and/or high in number.
1 – Very Poor	An unsafe, unattractive, and poorly maintained route, unsuitable for all but the most experienced cyclists. Concerns are exacerbated by poor weather conditions and dark nights. The route may be inconvenient and subject to obstacles or obstructions, with the potential presence of cyclists not obvious to general traffic, which itself is fast moving and/or high in number.

2.12. These characteristics seek to reflect the fact that on some routes a lot of investment isn't required in cycling infrastructure to make them safe and attractive, whilst on others, infrastructure may be in place, but the route is still in need of further measures to make it more accessible to cyclists of all abilities.

2.13. It should be noted that the scoring is not entirely compliant with the guidance provided in LTN 1/20 and the outputs cannot be transferred and used for comparison with different towns. The scoring provides an insight in which locations the network is comparatively better and where it is in need of urgent improvements.

3. NETWORK CHARACTERISTICS

3.1. While both Corby's recently regenerated town centre west of George Street and the originally designated New Town centred on Corporation Street boast a number of pedestrianised and shared space streets which are safe and attractive for cycling, the majority of the town's network has been categorised with a quality score of 'poor' or 'very poor' (60.9%), as shown in the summary in **Table 2**.

3.2. A plan visualising the score is included in **Appendix 3.**

Table 2. Quality Assessment Summary

Score	Network Length	% of Network	Examples
5 – Very Good	0.79 km	0.7%	• Path through central park (047) • Corporation Street between George Street and Corby Library (117)
4 – Good	15.86 km	13.9%	• A6116 Steel Road (010) • Station Road between Corby Station and the Station Road Junction (071)
3 – Acceptable	28.13 km	24.6%	• Arnsley Road (005) • Ribblesdale Avenue (043)
2 – Poor	45.90 km	40.1%	• Rockingham Road between Corby Old Village and Stanier Road (017) • Lewin Road between Brooke Road and A6014 (070)
1 – Very Poor	23.75 km	20.8%	• Phoenix Parkway between A6086 and Courier Road (016) • Mill Hill (203)
Total	**114.43 km**	**100.0%**	

3.3. Although this is a legacy of the town's redevelopment from the 1950s onwards which prioritised travel by private vehicle, an unintended consequence has been that footpaths along major roads are typically separated from the main carriageway by grass verges and there is no shortage of space along arterial routes for retrofitting segregated cycling infrastructure, some of which provide the opportunity to be developed without the need to narrow major roads if so desired.

3.4. Many town centre routes have been identified as such, even though many are also traffic free. A number of traffic free routes, which often pass through parks or green space, can be considered some of the most attractive routes on the network but are frequently unlit and informally allocated.

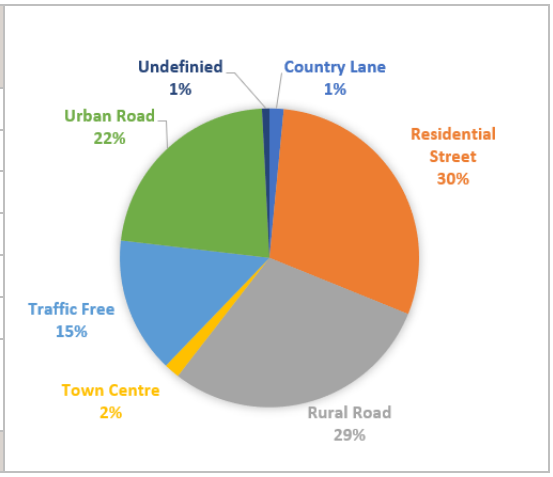
3.5. A considerable percentage of Corby's route network consists of heavily trafficked urban roads. The ring road in particular is difficult and often dangerous to cross but provides sufficient space adjacent to it to provide segregated infrastructure beyond the existing shared use paths. Formalisation of cycling infrastructure and improved junction treatments are likely to make a considerable difference.

3.6. Residential streets across the town are often lightly trafficked and provide an acceptable level of safety for experienced cyclists, however, inconsiderately parked cars and poorly lit routes constitute some of the main hazards that may preclude residents from cycling.

3.7. A summary of the route categories is provided in **Table 3**. It should be noted that the categories refer to a character of the routes, not necessarily their geographical location.

Table 3. Route Category Summary

Route Category	Network Length	% of Network
Country Lane	1.75 km	1.5%
Residential Street	33.88 km	29.6%
Rural Road	33.59 km	29.4%
Town Centre	1.93 km	1.7%
Traffic Free	16.80 km	14.7%
Urban Road	25.56 km	22.3%
Undefined (alleyways or informal servicing yards)	0.92 km	0.8%
Total	**114.43 km**	**100.0%**



4. COMFORT

Route Treatment

4.1. The majority of the promoted network in Corby comprises on-road routes, with some off-road shared space provision. There is at present only one piece of segregated cycling infrastructure in the town (on Weldon Road between the A6806 and UK Timber) and the first town centre routes are planned for Oakley Road and Elizabeth Street to connect Corby Station to the town centre.

4.2. The shared space off-road links typically follow busy and high-speed roads and are separated from the carriageway by grass verges. They provide a number of reasonably comfortable and attractive links for cyclists, but junction treatments are invariably absent, requiring users to give way to vehicular traffic at uncontrolled two-stage crossings at wide bell-mouth junctions.

4.3. Some off-road shared space routes pass through Corby's many green spaces and parks. These are frequently wide but maintenance varies and the routes are usually unlit making them feel unsafe during the evenings for both pedestrians and cyclists.

4.4. In a number of locations, particularly along the 33.9 km of quiet residential streets (**Table 3**), the absence of on-road provision is not an issue, however, pavement parking and tight bends affect visibility.

4.5. A breakdown of the route treatment of the audited network within Corby is provided in **Table 4, Table 5 and Table 6**.

Table 4. Length of On/Off-Road Network

Route Treatment	Network Length	% of Network
On-Road	76.99 km	67.3%
Off-Road	37.44 km	32.7%
Total	**114.43 km**	**100.0%**

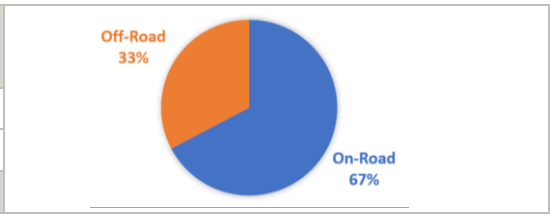


Table 5. Treatment of On-Road Network

Route Treatment	Network Length	% of Network
On-Road (traffic calmed)	17.05 km	22.1%
On-Road (no treatment and/or signage only)	59.94 km	77.9%
Total	**76.99 km**	**100.0%**

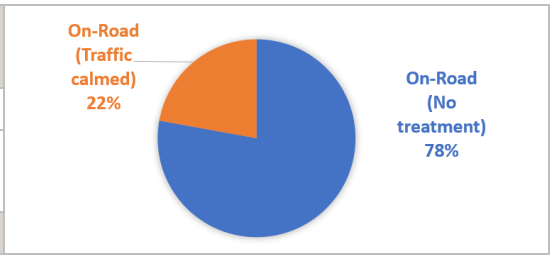
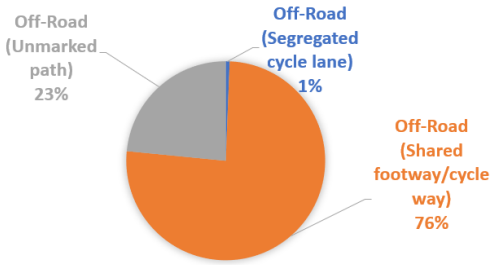


Table 6. Treatment of Off-Road Network

Route Treatment	Network Length	% of Network
Off-Road (Segregated cycle lane)	0.24 km	0.6%
Off-Road (Shared footway/ cycleway)	28.42 km	75.9%
Off-Road (Unmarked path)	8.78 km	23.5%
Total	**37.44 km**	**100.0%**

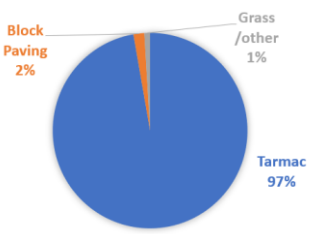


Surfacing

4.6. The comfort of the network can also be quantified in terms of the quality of the surfacing used. 97.25% of Corby's assessed network utilises tarmacked surfaces, 0.08% of the network is either concrete or gravelled, 1.8% is paved and 0.87% is grassed or other as shown in **Table 7**. Whilst the proportion of tarmacked routes is high, on closer inspection there is considerable room for improvement as the surface is often in poor condition due to lack of maintenance which makes cycling uncomfortable.

Table 7. Surfacing

Surfacing	Network Length	% of Network
Tarmac	111.29 km	97.3%
Block paving	2.06 km	1.8%
Grass/other	1.08 km	0.9%
Total	**114.43 km**	**100.0%**



4.7. The width of off-road shared infrastructure should be at least 3m. Wider paths can bring a number of benefits such as:

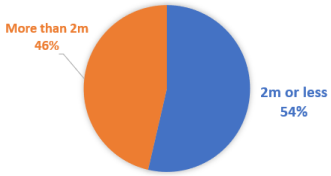
- Increased capacity: Wider paths can accommodate more cyclists at once, reducing congestion and improving the flow of traffic.
- Improved safety: With more space, cyclists can pass each other more easily, reducing the risk of collisions. Wider paths can also allow for better separation between cyclists and other users, such as pedestrians.
- Greater accessibility: A wider path can make it easier for cyclists with disabilities or those using adapted cycles, such as cargo bikes or trikes, to use the infrastructure.

- More comfortable and enjoyable riding: A wider path can provide a more comfortable and less stressful riding experience, with less chance of getting too close to other users or obstacles.

4.8. As shown in **Table 8**, more than half of the off-road links are not even 2m in width, which is insufficient for shared use paths which dominate the off-road provision.

Table 8. Width of Off-Road Provision

Path width	Network Length	% of Network
More than 2m	17.36 km	46.4%
2m or less	20.08 km	53.6%
Total	**37.44 km**	**100.0%**



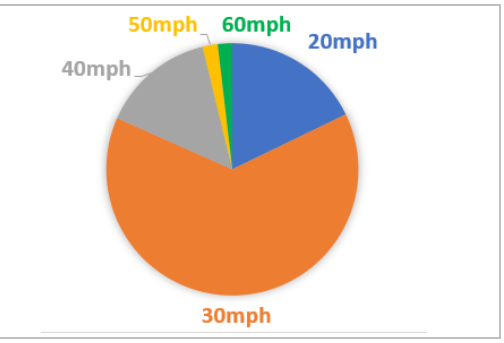
5. SAFETY

Speeds

5.1. Whilst most of the on-road provision is on roads with 30mph speed limit, there are also a number of links located on residential streets with 20mph limits. However, there are also more than 14km of the network with speed limits 40mph or higher. These links are generally not well suited for cyclists and would benefit from a dedicated provision. A summary of the speed limits on the on-road network can be found in **Table 9**. (Links where off-road infrastructure is provide along roads with high speed limits are not included. However, such links might feel intimidating too if there is no verge between the road and the path.)

Table 9. Speed limit on Roads with On-Road Provision

Speed limit	Network Length	% of Network
20mph	13.72 km	17.8%
30mph	49.15 km	63.8%
40mph	11.20 km	14.5%
50mph	1.49 km	1.9%
60mph	1.43 km	1.9%
Total	**76.99 km**	**100.0%**

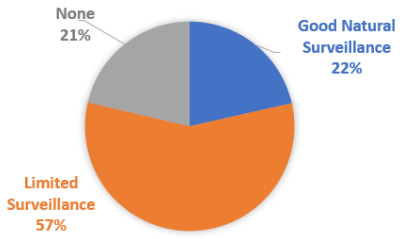


Surveillance

5.2. Natural surveillance has been assessed based on judgment of the auditing team (**Table 10**). Only 21% of the assessed network benefits from good natural surveillance. About 90km of the network have limited or poor natural surveillance which might discourage some users, especially females.

Table 10. Natural Surveillance

Form of treatment	Network Length	% of Network
Good Natural Surveillance	24.57 km	21.5%
Limited Surveillance	65.46 km	57.2%
None	24.40 km	21.3%
Total	**114.43 km**	**100.0%**

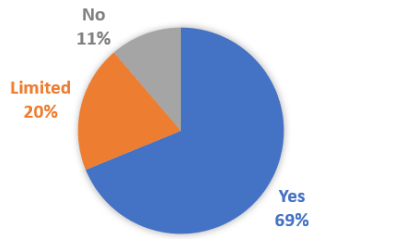


Lighting

5.3. The presence of street lighting also has a significant effect on users' sense of safety and personal security (**Table 11**). 68.82% of the network is lit, 11.28% unlit and lighting on the rest of the network is limited (19.90%). Although much of the network is lit, the unlit sections often run through parks and green spaces. Given the absence of traffic along these routes, they ought to be some of the most attractive for cyclists, however, insufficient lighting may deter users, particularly in the evenings.

Table 11. Street Lighting

Lighting	Network Length	% of Network
Yes	78.75 km	68.8%
Limited	22.77 km	19.9%
No	12.91 km	11.3%
Total	**114.43 km**	**100.0%**



Junction treatment

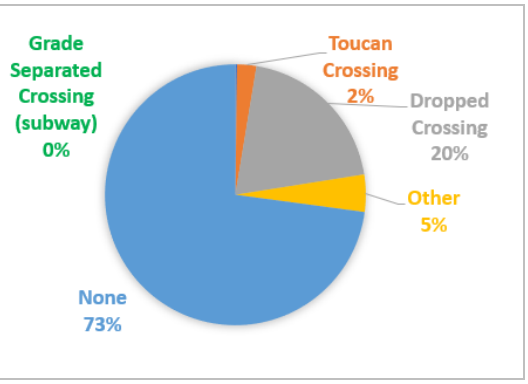
5.4. On heavily trafficked routes where off-road provision of varying quality is in place, junctions pose the biggest danger to cyclists. Many junctions include a dropped kerb and un uncontrolled crossing. As the highway design often encourages higher vehicles speeds at junctions joining larger urban roads, these crossing points are wide and intimidating.

5.5. Some locations include a grade separated crossings (such as Cottingham Road / Beanfield Avenue). However, on-site observations indicate that these are not well used due to their poor conditions and lack of maintenance.

5.6. The links without off-road provision have almost always no junction treatment. There are no advanced stop lines, 'Dutch' roundabouts, CYCLOPs junctions, etc.

Table 12. Main Junctions Treatment

Form of treatment	Network Length	% of Network
Grade Separated Crossing (subway)	0.24 km	0.2%
Toucan Crossing	2.74 km	2.4%
Dropped Crossing	22.77 km	19.9%
Other	5.28 km	4.6%
None	83.40 km	72.9%
Total	**114.43 km**	**100.0%**



6. CONSISTENCY

6.1. It is recognised that different types of routes require different types of interventions to make cycling attractive. Notwithstanding this, there is a lack of consistency in provision across the promoted network in terms of the use of cycle infrastructure, junction treatments and signage. This creates confusion amongst cyclists and other road users and has implications for safety and journey experience. In particular:

- **Junctions:** A variety of treatments are used both at major road junctions, where cyclists are on-road, and at side road junctions, where cyclists are on shared use paths. Many of these treatments are insufficient at fostering confidence in the safety of the routes.

- **Signage:** The use of signage can help knit the cycle network together, but all too often it is absent or inconsistent. While regular users may not rely on signage, it is an important factor in encouraging less regular users and those unfamiliar with the area to cycle by providing reassurances and confidence. It also helps to raise awareness amongst motorists of the potential proximity of cyclists. On some routes provision is completely absent or missing at key junctions.

7. MAINTENANCE

7.1. Large sections of the network appear to be in need of maintenance, the lack of which negatively affects the comfort and safety of cyclists. Damage to shared route surfaces poses additional hazards to cyclists who may as a result choose to cycle in the main carriageway where the surface is smoother but vehicular traffic poses a danger.

7.2. Ongoing maintenance requirements should therefore be at the heart of the design process for new schemes. Materials which are durable should be utilised and options prioritised which reduce future revenue commitments to maintain provision. In the event of adverse weather, cycle routes should also be prioritised for gritting and snow clearance.

8. SUMMARY

8.1. The overall impression garnered from the thorough cycle audit is that Corby is poorly served by its current cycle network but that considerable opportunities exist for ‘quick wins’ as well as strategic enhancements. Maintenance, lighting and signage of the existing shared use paths needs to be improved and can be achieved relatively inexpensively.

8.2. Upgrading key junctions to provide cycling and pedestrian priority crossings controlled by sensor-enabled traffic signals to minimise the need for cyclists to stop and give way would ensure that the existing shared footways/cycleways are made safer and more direct as well as reducing journey

times for users. Introducing raised tables at junctions may also reduce the likelihood of motorists blocking these crossings.

8.3. Spacious verges alongside a number of Corby's major arterial routes enable the expansion of cycling infrastructure without necessitating politically fraught carriageway narrowing where opposition may be difficult.

8.4. Future development in the town centre must consider the needs of cycle users from the outset. Development so far has introduced attractive pedestrian and cycle routes with ample cycle parking and future development should replicate these recent successes and grow this people-first network further.

8.5. This audit provided a high-level overview of the current cycle infrastructure provision across Corby. Further walking and cycling site visits are scheduled for Stage 3 and 4 of the LCWIP process in order to identify potential improvements.

APPENDIX 1
Corby Cycle Network (2016)

APPENDIX 2
Database of the Audited Links

APPENDIX 3
Quality Assessment