



Active
Travel
England

Active Travel England

Route Check User Manual



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Route Check User Manual

Publication date: February 2024

All Active Travel England tools and user manuals will be reviewed regularly and updated as needed.

1. Introduction

- 1.1 This user manual is a desktop guide for the **Route Check**. The tool is a ‘scheme review’ tool used for assessing the design quality of linear street or path schemes. This tool can be used in both urban and rural contexts. It is similar in style to the ‘Cycling Level of Service’¹ and ‘Healthy Streets Check for Designers’² tools released by the Department for Transport (DfT) and Transport for London (TfL). This user manual allows you to assess and score streets and paths against various metrics under the categories of safety, accessibility, comfort, directness, attractiveness and cohesion. However, unlike the ‘Cycling Level of Service’ tool, it also accounts for the user experience of people walking and wheeling, including people with disabilities.
- 1.2 The Route Check is used by ATE for assessing the design quality of linear schemes. However, it may also be used by local authorities and others wishing to assess the design quality of schemes against ATE’s quality criteria.
- 1.3 When ATE uses the Route Check to assess the design quality of active travel infrastructure, the main goal is not to pass or fail schemes. Rather, its primary purpose is to remind designers of key active travel policies, promote best practice and prompt discussions about design solutions.
- 1.4 The Route Check is also intended for use throughout the scheme design process, meaning that you can identify critical issues and other problems at the feasibility stage and design them out in later stages before construction.
- 1.5 This document is divided into 13 chapters. The next chapter is an overview of the Route Check tool’s structure, and subsequent chapters (3–13) give more information on each different section of the tool (see Figure 1).

1 Local Transport Note 1/20 Cycle Infrastructure Design (DfT) Appendix A

2 <https://tfl.gov.uk/corporate/about-tfl/how-we-work/planning-for-the-future/healthy-streets>

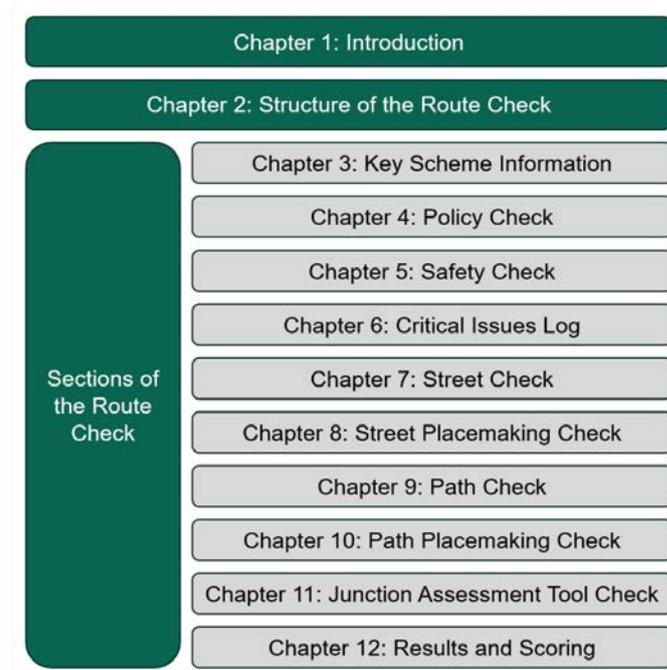


Figure 1 – Route Check User Manual Structure

- 1.6 The Route Check tool includes a Policy Check section (*described in [Chapter 4](#)*) and accompanying Policy Conflict Log (*described in [Chapter 5](#)*). In these sections of the Route Check, you can assess schemes against six active travel policy principles and log any instances of policy conflicts. These six principles, derived from [Inclusive Mobility](#), [LTN 1/20](#) and [Gear Change](#), are key to making sure that active travel schemes are inclusive for everyone walking, wheeling and cycling, including people with disabilities.
- 1.7 [Chapter 6](#) introduces the Safety Check section, where you can score the scheme against 16 safety metrics and check for the presence of safety-related critical issues. You can then log any critical issues you find in the Critical Issues Log, which is dealt with in [Chapter 7](#).
- 1.8 When assessing a street-based scheme, you must fill in the Street Check (introduced in [Chapter 8](#)) and the Street Placemaking Scheme (introduced in [Chapter 9](#)). When assessing a traffic-free path, you must fill in the Path Check (introduced in [Chapter 10](#)) and the Path Placemaking Check (introduced in [Chapter 11](#)).
- 1.9 The Route Check also introduces a new version of the Junction Assessment Tool (JAT), a framework for assessing pedestrian and cycle movements at junctions. LTN 1/20 introduced a version of the JAT nationally, but that version of the JAT only covered cycle movements at junctions. The Route Check introduces an expanded version of this framework, which also accounts for pedestrian movements. You must assess and score cyclist and pedestrian movements on certain types of junction along the route. You can find more information on this section, including which junction types must be assessed in the JAT, in [Chapter 12](#).
- 1.10 [Chapter 13](#) introduces the Results tabs and explains how to interpret results and what might happen after a Route Check has been completed. It also contains information on how the Route Check calculates scores.

2. Route Check Structure

- 2.1 The Route Check, being an Excel-based tool, uses various tabs to categorise and organise the design assessment process. These tabs are divided into input tabs and output tabs. Some input tabs are mandatory, and others are optional. Every tab corresponds to a chapter in this user manual.
- 2.2 The input and output tabs are summarised in Figure 2 below, which shows them in the order they appear in the spreadsheet, as well as which tabs are optional depending on whether a street or path is being assessed.

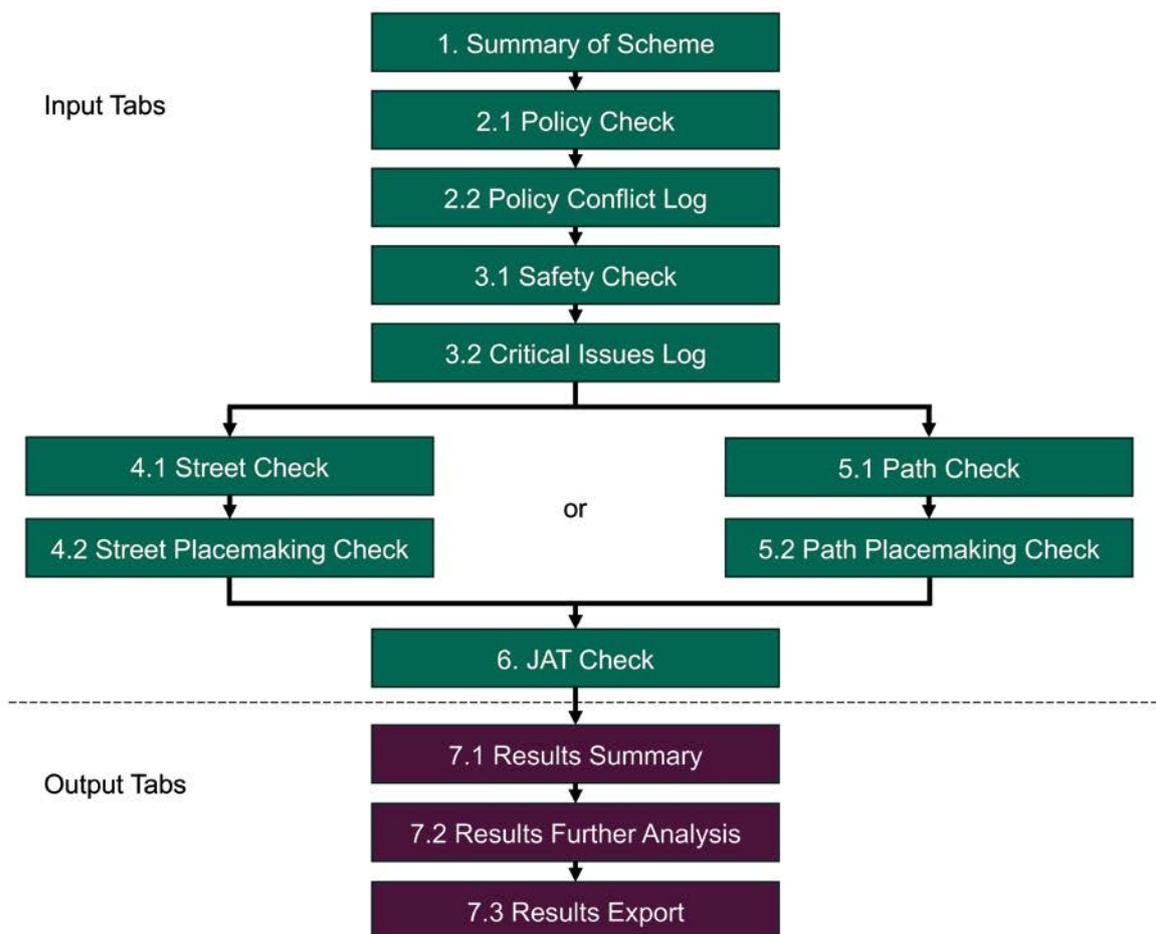


Figure 2 – Summary of the Route Check workflow in terms of the tabs in the spreadsheet

2.3 This chapter explains these tabs in more detail.

Input tabs

2.4 The first five tabs are all mandatory input tabs (Figure 3). These are coloured green, and must be completed regardless of whether your scheme is based on streets or traffic-free paths.



Figure 3 – The first five input tabs, which are mandatory to complete for all schemes.

- 2.5 The **Summary of Scheme** tab must be completed. Here, you fill in details of the scheme such as its name, length, design stage and wider network context. It is also traffic-free paths. It is highly important that you select this correctly as it affects how the spreadsheet works. More information can be found in [Chapter 3](#) of this user manual.
- 2.6 The **Policy Check** tab asks you to answer six questions about how well the existing situation and proposed design align with six active travel policy principles. You must complete this tab for all schemes. You can find more information in [Chapter 4](#) of this user manual. All Route Check questions and metrics have a unique code which references the relevant section of the tool. The 'PO' prefix is used for the six **Policy Check** questions (**PO01–PO06**).
- 2.7 The **Policy Conflict Log** tab is where you are asked to log each existing policy conflict as well as any thrown up by the proposed scheme design. This section is separate from the Policy Check because there may be multiple instances of the same policy conflict on the same route. You must log each of these individually, adding location and other information. If there are no policy conflicts in the existing scheme or design, you can leave this section blank. You can find more information on the Policy Conflict Log section of the tool in [Chapter 5](#) of this user manual.
- 2.8 In the **Safety Check** tab, you must assess and score the existing situation and proposed design against 16 safety metrics, each of which could potentially score as a 'critical issue'. This tab must be completed for all types of scheme. Some safety metrics may be less applicable to traffic-free path schemes. If this is the case, you can choose 'not applicable' as your answer if the metric doesn't apply. The **SA** prefix is used for the 16 **Safety Check** metrics (**SA01–SA16**). You can find more information on the Safety Check in [Chapter 6](#) of this user manual.
- 2.9 The **Critical Issues Log** tab is where you are asked to log every critical issue present in the existing situation as well as in the proposed scheme design. This section is separate from the Safety Check because there may be multiple instances of the same safety conflict on the same route. You must log each of these individually, adding location and other information. If there are no critical issues in the existing scheme or design, you can leave this section blank. You can find more information on the Critical Issues Log section of the tool in [Chapter 7](#).
- 2.10 The next two Route Check tabs (Figure 4) are also input tabs. You must complete them if the scheme is based on a street and leave them empty if it is based on a traffic-free path.


 4.1. Street Check

4.2. Street Placemaking Check

Figure 4 – The two 'street' input tabs, which are mandatory to complete for street-based schemes.

- 2.11 The **Street Check** tab asks you to assess and score the existing situation and proposed scheme design against 26 metrics categorised under accessibility, comfort, directness, attractiveness and cohesion. You must complete this tab for all street-based schemes. The **ST** prefix is used for the 26 **Street Check** metrics (**ST17–ST42**). You can find more information in Chapter 8 of this user manual.
- 2.12 The **Street Placemaking** tab asks you to assess and score the existing situation and proposed scheme design against 26 street placemaking metrics, categorised under social activity, personal security, character and legibility and the environment. The **SP** prefix is used for the 26 **Street Placemaking Check** metrics (**SP1–SP26**). You can find more information in *Chapter 9* of this user manual.
- 2.13 The next two Route Check tabs (Figure 5) are also input tabs and you must complete them if the scheme is based on a traffic-free path and leave them empty if it is based on a street.



Figure 5 – The two ‘path’ input tabs, which are mandatory to complete for schemes based on traffic-free paths.

- 2.14 The **Path Check** tab asks you to assess and score the existing situation and proposed scheme design against 30 metrics categorised under accessibility, comfort, directness, attractiveness and cohesion. This tab must be completed for all schemes based on traffic-free paths. The **PA** prefix is used for the 30 **Path Check** metrics (**PA17–PA46**). You can find more information in *Chapter 10*.
- 2.15 The **Path Placemaking Check** tab asks you to assess and score the existing situation and proposed scheme design against 19 path placemaking metrics, categorised under social activity, personal security, character and legibility, and the environment. The **PP** prefix is used for the 19 **Path Placemaking Check** metrics (**PP01–PP19**). You can find more information in *Chapter 11* of this user manual.
- 2.16 The final input tab in Route Check is the **JAT Check** tab (Figure 6), which must be completed if there are specific junction types along the route, regardless of whether the scheme is based on streets or traffic-free paths. The **JAT Check** tab contains the Junction Assessment Tool Check, which asks you to assess and score pedestrian and cycle movements at certain types of junction for both the existing situation and proposed scheme design. You must complete the JAT Check if the scheme has any of these types of junctions. You can find more information on the JAT Check, including which junction types you must assess and score, in *Chapter 12*.



Figure 6 – The final input tab, which is mandatory to complete for any schemes which contain signal-controlled junctions or roundabouts.

2.17 It sometimes happens that while you are filling in the later tabs in Route Check and getting into the design details, you may reconsider scores in the earlier tabs, or notice extra policy conflicts or critical issues that you did not log previously. You can always go back to earlier tabs and amend or add to them.

Output tabs

2.18 The final three Route Check tabs (Figure 7) are all **output tabs**, which are coloured purple and give the results of the Route Check assessments in three different forms. You can find more information on these tabs in [Chapter 13](#).



Figure 7 – The three output tabs

- 2.19 The **Results Summary** tab gives a concise snapshot of key results by section. It focuses on how many issues remain in the proposed design and the changes in scores between the existing situation and the proposed design.
- 2.20 The **Results Further Analysis** tab gives a full summary of the quantitative results of the Route Check assessment, with some additional analysis. For example, you can see how schemes score by mode of active travel.
- 2.21 The **Results Export** tab gives a full summary of both the qualitative and quantitative results of the Route Check assessment, optimised for export into PDF file format.

3. Summary of Scheme

- 3.1 The **Summary of Scheme** tab is where you fill in scheme details like its name, length, type (street or path), design stage and wider network context.
- 3.2 It has three sub-sections:
- A. **Summary of Scheme**, which you must fill in with as much information as possible to ensure a complete and accurate record of the key scheme information. For example, if the scheme forms part of a funding bid and ATE are reviewing it, then inputs such as 'scheme information reviewed' and 'design stage' will be important for tracking the scheme through the funding bid process.
 - B. **Route Check Type (Street or Path)**, which must be answered for the spreadsheet to work correctly.
 - C. **Network Map**, which you must fill in to allow the scheme to be located and defined in its wider context.

Summary of Scheme

- 3.3 You should populate as many of the fields in the Summary of Scheme table as you can before moving on. If you don't have some of this information, you can contact the relevant member of ATE's Regional Management team for it.
- 3.4 The fields in the first table in the Summary of Scheme tab are as follows:
- **Date of Design Review** is for the date (or dates) over which the design review took place.
 - **Scheme Reference** is for the relevant funding programme scheme reference, if applicable.
 - **Scheme Name** means the name of the scheme according to the funding programme.
 - **Scheme Summary** can be used to give a brief description of the scheme, including any relevant programme-level information.
 - **Scheme Information Reviewed** is where you should give information about the documents the review is based on. For example, if a General Arrangement drawing has been reviewed, you should enter details here.
 - **Authority** means the provisioning authority for the scheme.
 - **Transport/Combined Authority** means the combined authority, if the scheme is in a combined authority area.
 - **Region** is the part of England where the scheme is located. There are also options for Scotland, Wales, and Northern Ireland.
 - **Funding Programme** means the main funding source for the scheme.
 - **Design Stage** is the current design stage of the scheme.

- **Funding Conditions** are any conditions on infrastructure attached to the relevant funding programme.
- **Inspector Email Address** means the email address of the ATE inspector who completed the design review. If someone outside of ATE completed the spreadsheet, then you should leave this section blank, and put details in the 'Notes' field.
- **Route Length Assessed in this File (km)** is where you should enter the length of route being assessed in the file in kilometres.
- **Total Route Length (km)** is where you can enter the total length of the scheme, if the route is too long and varied to assess in a single Route Check file.
- **Notes** is a space where you can add any other relevant notes on the scheme or design review.

3.5 The reason for these two separate route length inputs is that sometimes longer corridor schemes may need to be split up into smaller sections for assessment. We recommend you do this if there is a big change in the characteristics of the street (for example, if a route goes from a quiet residential street onto a busy dual carriageway). However, in many cases, it will be possible and preferable to assess the entire route in a single file. In such cases, the length you enter in the boxes for **Route length assessed in this file (km)** and Total route length (km) will be the same.

Route Check Type (Street or Path)

3.6 Once you have filled in all the relevant boxes in the **Summary of Scheme** table, you can move on to the **Route Check Type (Street or Path)**. Here, you will be asked whether the scheme you are reviewing is on a street (i.e. mixed with or next to motor traffic for most of its length) or on a traffic-free path. If the scheme is on a street, you should choose the **Street Check** option. If the scheme is on a traffic-free path, you should choose **Path Check**.

Network Map

3.7 Finally, the **Network Map** section will ask you for information on the location and context of the scheme.

3.8 First, there is a table for you to enter the latitude and longitude points for the start and end of the route, along with a link to an online map for context if this is available.

3.9 Second, we recommend that you copy a drawing or plan into this tab as a quick reference within the file. If the section of route you are assessing in the spreadsheet is part of a longer route contained in several different files, you should make this clear in this drawing or plan.

4. Policy Check

- 4.1 This section of the Route Check asks you to assess schemes against six active travel policy principles taken from Inclusive Mobility, LTN 1/20 and Gear Change. Following these principles helps make sure that routes are suitable for everyone walking, wheeling, and cycling, including people with disabilities. The policy principles are formulated as six questions:

- PO01. Are cyclists separated from pedestrians?**
- PO02. Is the route free from barriers, such as chicane barriers, steps or dismount signs?**
- PO03. Does the route feel direct, logical and intuitive to understand for all road users?**
- PO04. Are surfaces suitable for all users?**
- PO05. Is appropriate lighting provided?**
- PO06. Does the route join together, or join other facilities together, as part of a holistic, connected network?**

- 4.2 The themes these policy principles address reoccur in metrics in other sections of the Route Check. For example, metric ST38 in the Street Check is about shared-use cycle tracks and toucan crossings and goes into more detail about the first policy principle on whether cyclists are separated from pedestrians. However, as these six policy principles are key to making sure that active travel schemes are inclusive for all people walking, wheeling and cycling, they are given greater prominence in the Route Check by including them in a dedicated section at the front end of the tool.
- 4.3 ATE selected these six policy principles from [Inclusive Mobility](#), [LTN 1/20](#) and [Gear Change](#) based on recurring problems seen in schemes submitted to ATE in its first year. They are particularly relevant to the needs of people walking and wheeling, including people with disabilities. You can find more information on this in the sub-sections of this chapter below.
- 4.4 The Policy Check section of the Route Check consists of a simple table. The first two columns contain the policy principle number and policy principle as a question. You must answer these questions in the third column for the existing situation on the street or path by choosing 'yes' or 'no'. You must then answer these questions again in the fourth column, this time for the design proposal. You should add a comment in the last column to explain your answers.
- 4.5 The aim is for the proposed design to comply with all six policy principles, and be able to enter 'yes' in all the rows in the fourth column. Anywhere you have answered 'no' is considered a policy conflict. You must also log every policy conflict in the Policy Conflict Log section of the Route Check (see [Chapter 5](#)). Whenever a policy conflict appears in your design, you should think about how you might redesign the scheme to achieve compliance. In cases where ATE is involved with reviewing the scheme, policy conflicts will be discussed during correspondence and meetings. Wherever possible,

ATE will provide local authorities with design advice on how to achieve compliance with the policy principles.

- 4.6 In some cases, you may not be able to achieve compliance with all six policy principles. While this is not ideal, it may be acceptable in certain contexts. Please also note that, in some cases, failing to comply with certain policy principles may mean that the scheme does not meet certain requirements under the Equality Act (2010).
- 4.7 The next sections of this chapter discuss the six policy principles in more detail.

Are cyclists separated from pedestrians? (PO01)

- 4.8 A key design principle listed on page 21 of Gear Change is that “cyclists must be separated from pedestrians”. LTN 1/20 builds on this on pages 9 and 67 and states that “in general, shared use facilities in streets with high pedestrian or cyclist flows should not be used and in urban areas the conversion of a footway to shared use should be regarded as a last resort”.
- 4.9 Shared-use provision affects the attractiveness and desirability of the route, particularly for pedestrians and people with disabilities. If the scheme design does not comply with this policy principle, you should use the commentary column to give a summary of how you have considered the guidance in LTN 1/20.

Is the route free from barriers, such as chicane barriers, steps or dismount signs? (PO02)

- 4.10 Another key design principle listed on page 21 of Gear Change is that “barriers, such as chicane barriers and dismount signs, should be avoided”. These kinds of features make routes inaccessible for a large range of potential users, especially people with disabilities, in terms of walking, wheeling and cycling. LTN 1/20 builds on this on pages 9 and 12, and on page 30 it gives steps as an example of a feature that does not meet accessibility standards in certain contexts. Steps are therefore included in this policy principle.
- 4.11 In line with the above, schemes to allow all forms of active travel should seek to remove barriers wherever possible to allow more destinations to be served by the walking, wheeling and cycling network. If you are considering barriers either for retention or installation as part of a design, this will be picked up in the Policy Check and taken forward as a discussion point. ATE will help local authorities find design solutions for removing such barriers wherever possible.

Does the route feel direct, logical and intuitive to understand for all road users? (PO03)

- 4.12 Another key design principle listed on page 21 of Gear Change is that “routes must feel direct, logical and be intuitively understandable by all road users”. Anyone choosing to walk, wheel or cycle, including people with disabilities, must be confident and clear about how any part of a route links into a coherent whole. If people trust the

network to get them to their destination, they are more likely to choose to walk, wheel or cycle.

4.13 Routes for people walking, wheeling and cycling should be direct and not involve unnecessary and difficult turns, especially for people in wheelchairs, on cycles or on horses. This applies to the route as a whole and to desire lines at junctions and crossings.

4.14 The needs of neurodiverse people walking, wheeling and cycling should also be considered as part of this policy check. The British Standards Institution's Designing for the Mind guide provides information on how to consider the needs of such users.

Are surfaces suitable for all users? (PO04)

4.15 Paragraph 8.1.2 of LTN 1/20 states that "for year-round utility cycling, a sealed surface is necessary", and that "loose gravel surfaces can be difficult or inaccessible for people in wheelchairs and some types of adapted cycle". ATE's main objectives relate to year-round utility trips and therefore a sealed surface is the surfacing standard expected.

4.16 Sealed walking, wheeling and cycling surfaces help make sure that routes are accessible, attractive and safe all year round for anyone choosing to walk, wheel and cycle. If a design proposes an unsealed, unbound surface, this will be picked up in the Policy Check and elsewhere in the tool, and taken forward as a discussion point. ATE will help local authorities find design solutions for such surfacing issues wherever possible.

Is appropriate lighting provided? (PO05)

4.17 Paragraph 8.1.2 of LTN 1/20 states that "for year-round utility cycling... street lighting should be provided". It is important that routes are lit if they are to be useable by the full range of people walking, wheeling and cycling at all times of year, including people with disabilities. Lighting is a very important factor for both safety and perceived safety. Suitable lighting will help people see walking, wheeling and cycling routes as viable for year-round travel, especially for more vulnerable user groups.

4.18 On many routes, particularly on streets, it is likely that existing street lighting will be satisfactory. However, extra lighting or improvements may still be necessary.

4.19 Routes away from lit streets may need dedicated lighting installed to become useable. It is important, however, that you do not then create 'black spots' or shadows which may become 'ambush points'. There may be difficulties with lighting routes away from streets due to a lack of electricity supply or environmental considerations. In some cases, short stretches without lighting, or with solar-powered lighting, may be considered appropriate and acceptable.

4.20 When considering this policy principle, you should take into account the needs of everyone walking, wheeling and cycling, including people with disabilities. You should also consider how this policy principle aligns with mode shift targets and whether

missing or uneven lighting is likely to dissuade people from walking, wheeling and cycling. You should give a summary of the situation, your conclusions and how your design meets this principle, in the commentary column.

Does the route join together, or join other facilities together, as part of a holistic connected network? (PO06)

- 4.21 This policy principle comes from LTN 1/20 summary principle 8. Creating a holistic connected network of active travel routes is a key part of rolling out high-quality walking, wheeling and cycling infrastructure in line with local LCWIPs and national ambitions. New infrastructure that connects to existing routes and desirable destinations is more likely to be used and will return more benefits on investment.
- 4.22 Through the inclusion of this policy principle in the Policy Check, you are encouraged to consider the wider network context of your scheme. Furthermore, it acts as a prompt for a discussion with ATE on how to best link the route with other routes and destinations.

5. Policy Conflict Log

- 5.1 If you identify any policy conflicts in the Policy Check (see [Chapter 4](#)), you must also complete the Policy Conflict Log tab.
- 5.2 In the Policy Check, you are asked to assess the scheme (both the existing situation and the proposed design) against six active travel policy principles. If any of these six principles are not met across the length of the route, then you must record a policy conflict. However, the Policy Check tab does not record multiple instances of the same policy conflict across a scheme.
- 5.3 For example, PO01 asks if cyclists are separated from pedestrians. If there are two discrete sections of a route where its design asks cyclists and pedestrians to share the same facilities, then this will not be captured in the Policy Check tab.
- 5.4 Therefore, the Policy Conflict Log's purpose is to record every instance of a policy conflict.
- 5.5 When you fill in the Policy Check tab, start with the existing street or path. Enter every existing policy conflict in the Policy Conflict Log. Then check the whole length of the street or path for every policy conflict, as the same policy conflict can appear multiple times.
- 5.6 When you identify a policy conflict in the existing situation, you should choose the conflict type from the dropdown in the Policy Conflict column (column F). This will automatically generate a Policy Conflict Reference ID in the preceding column (Figure 8).

Policy Conflict Reference ID	Policy Conflict
ATE0001_PO01_01P	1 - Cyclists are not separated from pedestrians

Figure 8 – The first two columns of the Policy Conflict Log

- 5.7 The next column (column H) asks the user to enter the Stage ('Existing' or 'Design'). In the worked example, the user should select 'Existing' from the drop down. Next, the user should enter information about the location of the policy conflict in the Latitude and Longitude column (column I) and the Location Name column (column J).

Stage	Latitude and Longitude	Location Name
Existing	51.18092044705756, -4.669950807111906	6m length of shared use cycle track opposite the church on Tully Lane

Figure 9 – The middle three columns of the Policy Conflict Log

- 5.8 Recording latitude and longitude aids in plotting the location on software packages or recording it elsewhere on ATE's systems. You can easily get latitude and longitude from a free online tool such as Google Maps or Bing Maps by right-clicking on the location. While latitude and longitude are easily processed by computers, they are hard for humans to understand, so you should enter a more easily understood location in Column J. This should be easily understood by anyone picking up the tool to look at the issues, which could be an ATE inspector, an LA officer or a local councillor. For example, "footway section outside the entrance to The Red Lion public house" would be a suitable entry in the Location Name column. You should give as much information as you can to locate an issue. A village name or a street name on its own is not usually enough. When assessing a path, well-known path landmarks are better (such as "in front of stile to Public Right of Way at White Church farm", which is a clearer example).
- 5.9 The point at which one instance of a policy conflict ends and another begins can be ambiguous. You should follow the guidance below when identifying discrete policy conflicts and logging their locations:

- **PO01 (Are cyclists separated from pedestrians?)**
 - You should log each continuous section of shared use facilities (e.g., a shared use cycle track and/or toucan crossing) individually.
 - For example, if a route has a section where a shared use cycle track on one side of the street connects with another shared use cycle track on the other side of the street via a toucan crossing, this would be logged once as the shared use facilities are continuous. However, if there is a shared use cycle track that transitions into separate pedestrian and cycle facilities and then back into a shared use cycle track again, this would be logged twice.
 - As sections of shared-use facilities cannot easily be represented by points, you can pick any latitude and longitude point as long as it is on the facility. The location name should describe the full facility in more detail.
- **PO02 (Is the route free from barriers, such as chicane barriers, steps or dismount signs?)**
 - Every individual barrier, set of steps, or 'cyclists dismount' sign should be logged individually, with its own latitude, longitude and location name.
- **PO03 (Does the route feel direct, logical and intuitive to understand for all road users?)**
 - Every indirect, illogical or unintuitive section of the route should be logged individually.
 - Users can select any latitude and longitude point on the route section to represent it but you should enter a description of the section and why it is indirect, illogical or unintuitive the Location Name and Commentary & Feedback columns.

- **PO04 (Are surfaces suitable for all users?)**
 - You should log every continuous section of surfacing which is not suitable for all users individually.
 - You can pick any latitude and longitude point on the section of poor surfacing to represent it. You must also enter a description of the section and why it is unsuitable for all users in the Location Name and Commentary & Feedback columns.

- **PO05 (Is appropriate lighting provided?)**
 - You should log every continuous section of unsuitable lighting individually.
 - You can pick any latitude and longitude point on the section of inappropriate lighting to represent it. You must also enter a description of the section and why the lighting is inappropriate in the Location Name and Commentary & Feedback columns.

- **PO06 (Does the route join together or join other facilities together, as part of a holistic, connected network?)**
 - You should log every instance where a route doesn't quite connect with another route or nearby origin/destination individually.
 - You can pick any latitude and longitude point to represent the missed connection. You must also enter a description of the missed connection in the Location Name and Commentary & Feedback columns.

5.10 Once you have entered its location information, you should fill in the final Commentary & Feedback column (column L) with more information about the policy conflict. Once you have added all the policy conflicts present in the existing situation, you should check whether the proposed design removes or resolves these conflicts and put this information into the Resolved by Design column (column K).

Resolved by Design	Commentary & Feedback
No	With the introduction of the new separated facility, there is a potential opportunity to replace the existing section of shared use with a separated facility. There is enough space available.

Figure 10 – The final two columns of the Policy Conflict Log

- 5.11 You must also check whether the proposed design introduces any new policy conflicts to the street or path and enter these in the Policy Conflict Log, choosing 'Design' in the Stage column (and 'No' in the Resolved by Design column).
- 5.12 Once you have added all policy conflicts (for both the existing situation and the proposed design), it may be appropriate to revisit the Commentary and Feedback column to add comments on potential solutions that might remove the policy conflict (or where particular help might be needed from ATE).
- 5.13 Any policy conflicts flagged as unresolved by the proposed design (existing policy conflicts which are not resolved by the proposed design or new policy conflicts introduced by the proposed design) will be highlighted in Route Check outputs (in the Results tabs).

6. Safety Check

- 6.1 The Safety Check section in the Route Check prompts you to check for the presence of 16 'critical issues' by assessing and scoring schemes against 16 safety metrics. A critical issue is defined as a street layout or condition associated with an increased risk of collision for pedestrians and cyclists.
- 6.2 Using the Route Check, you can identify and remove any critical issues during the design process, while also improving the general quality of schemes. This will help reduce the risks of collisions for pedestrians and cyclists, while also improving other important aspects of the walking, wheeling and cycling experience, such as comfort, directness and accessibility.
- 6.3 You must assess the 16 Safety Check metrics on any street or path scheme. There are four possible scores for each metric. You must mark each metric as 'not applicable' or score it as either 'C' (to indicate a critical issue), '0', '1' or '2.' Your score should reflect the 'rule of worst', in that it should reflect the worst conditions on the route.
- 6.4 For example, you would score metric SA02 (Conflict at Roundabouts and Signal Junctions) as follows:
- A roundabout/signal-controlled junction scores 2 points if all pedestrian and cyclist movements are separated from all motor traffic movements.
 - A roundabout/signal-controlled junction scores 1 point if the main pedestrian and cyclist movements are separated from motor traffic movements.
 - A roundabout/signal-controlled junction scores 0 points if there are main pedestrian and/or cyclist movements in conflict with motor traffic flows of under 2,500 vehicles per day.
 - A roundabout/signal-controlled junction is considered to have a critical issue if there are over 2,500 vehicles per day cutting across main walking, wheeling or cycling streams.
- 6.5 The score for a street or path is the same as the score for its worst scoring roundabout or signal-controlled junction.
- 6.6 The 'rule of worst' is a very important concept in the Route Check and should be borne in mind when assessing every metric, especially safety metrics.
- 6.7 You must assess the scheme against the scoring criteria for each metric and enter a score for both the existing situation and the design proposals. You should provide any assumptions made (for example, if flows were estimated rather than measured) in the comments/assumptions boxes. Entering comprehensive comments and information in these boxes will help people reviewing the Safety Check to understand your justifications for your original scores.
- 6.8 The Safety Check tab does not allow recording multiple instances of the same critical issue. You must enter every critical issue identified in the existing situation or proposed design in the Critical Issues Log (see [Chapter 7](#)).

- 6.9 For example, excessive camber (>2.5%) on footways is a critical issue. If there are four instances of an excessive camber on an existing footway, then you must enter 'C' in the 'Existing' column for metric SA15 in the Safety Check, and create four entries in the Critical Issues Log – one for each time the critical issue occurs.
- 6.10 Critical issues are also known by the same names as their metrics in the Safety Check. They are as follows:

SA01.	Conflict at Side Roads and Priority Junctions
SA02.	Conflict at Roundabouts and Signal Junctions
SA03.	Lane Widths
SA04.	Trip Hazards
SA05.	Kerbside Activity
SA06.	Provision of Crossings
SA07.	Standard of Crossings
SA08.	Motor Traffic Speed
SA09.	Motor Traffic Volume
SA10.	Pedestrian Crossing Speed
SA11.	Footway Widths
SA12.	Effective Width next to Tram Lines
SA13.	Crossing Angle of Tram or Train Rails
SA14.	Cycling Surface and Maintenance Defects
SA15.	Walking/Wheeling Surface and Maintenance Defects
SA16.	Guard Railing

- 6.11 While you must consider all sixteen metrics when assessing a street or a path, some metrics are less likely to apply in a path context (unless the path interfaces with the road network). When reviewing a path, you can simply mark irrelevant metrics as 'not applicable'. On some streets, some metrics may not apply. For example, if there are no signal crossings for pedestrians, metric 10 will not apply. Likewise, if there are no interactions with trams on the route, metrics 12 and 13 will not apply.
- 6.12 Five of the 16 safety metrics and their associated critical issues only apply to cycling, while six only apply to walking and wheeling. The remaining five metrics apply to all three modes. You can find information on which metrics apply to which modes in the 'Mode' column in the Route Check spreadsheet.

- 6.13 People walking and wheeling sometimes have different needs. However, in the Route Check, walking and wheeling are often assessed using the same metrics. ATE has written these metrics in a way that aims to capture the needs of both modes, along with those of people with disabilities. The same is true for metrics which aim to capture the needs of cyclists, including the needs of cyclists with disabilities. Applying the rule of worst to the full range of metrics in the Route Check ensures that the most pertinent issues are identified for each user group.
- 6.14 The need to focus on identifying and removing critical issues was introduced nationally in Local Transport Note 1/20 for cycling, and regionally through approaches such as London's 'Healthy Streets Check' and Greater Manchester's "Streets for All Check", which introduced walking, wheeling and placemaking metrics. The reason for the focus on these 16 critical issues is that they have a stronger and more robust evidence base than some of the more context-specific metrics also included in the Route Check tool. Future ATE publications will set out this evidence base and provide further guidance on how to identify and remove critical issues, with worked examples.

7. Critical Issues Log

- 7.1 If you identify any critical issues in Safety Check (see [Chapter 6](#)), you must also complete the Critical Issues Log tab.
- 7.2 In Safety Check, you will assess and score the scheme (both the existing situation and the proposed design) against 16 safety metrics – all of which have potential critical conditions, called ‘critical issues’. The scoring process follows the rule of worst, which means that you must score any critical issue with ‘C’ even if there is only one instance on the street or path. However, there is only one row per metric – so if there are multiple issues of the same critical issue on a street or path, the metric score will be the same: ‘C’.
- 7.3 To give an example, the critical condition for SA01 is where there are more than 2,500 vehicles per day cutting across main walking, wheeling or cycling streams at side roads or priority junctions. If this condition is fulfilled at multiple side roads along a street, you would only record it once in the Safety Check, giving it a ‘C’ score for SA01.
- 7.4 As one of ATE’s key aims is identifying and reducing the number of critical issues in any scheme, it follows that a separate log is needed to record each one. The ‘3.1 Critical Issues Log’ tab contains this log.
- 7.5 When completing the Safety Check tab, start with the existing street or path layout, and enter every critical issue in the Critical Issues Log. Then check the whole length of the street or path for each critical issue, as the same critical issue can appear multiple times.
- 7.6 When you have identified a critical issue in the existing layout, choose the issue type from the dropdown column in the Critical Issue column (column F). This will automatically generate a Critical Reference ID in the preceding column (Figure 11).

Critical Reference ID	Critical Issue
ATE0001_SA01_01P	1 - Conflict at Side Roads and Priority Junctions: >2,500vpd cut across main walking, wheeling or cycling streams

Figure 11 – The first two columns of the Critical Issues Log

- 7.7 The next column (column H) asks you to enter the Stage (‘Existing’ or ‘Design’). In the worked example, you should select ‘Existing’ from the dropdown. Next, you should enter information about the location of the critical issue in the Latitude and Longitude column (column I) and the Location Name column (column J).

Stage	Latitude and Longitude	Location Name
Existing	53.38823179712068, -1.4810578601850557	School Road / Church Street

Figure 12 – The middle three columns of the Critical Issues Log

- 7.8 You should add location information for each critical issue. The way to do this is the same as how you add location information to policy conflicts in the Policy Conflict Log. This is set out in *Chapter 5*. In short, you must record latitude and longitude for each critical issue, as well as a description of the location to aid the understanding of anyone reviewing the tool, such as an ATE Inspector, an LA officer or a local councillor.
- 7.9 Once you have entered location information, you should fill in the final Commentary & Feedback column (column L) with more information about the critical issue. Once you have added all the critical issues present in the existing layout, you should check whether the proposed design removes or resolves them and put this information in the Resolved by Design column (column K).

Resolved by Design	Commentary & Feedback
No	The data shows that 3,000 vehicles per day make the turn into or out of School Road and there are no facilities for pedestrians or cyclists continuing straight along Church Street here. This means that there is a high risk of left hook collisions for pedestrians and cyclists. The design does not propose any changes at this junction and so the critical issue remains.

Figure 13 – The final two columns of the Critical Issues Log

- 7.10 You must also check whether the proposed design introduces any new critical issues to the street or path and enter these in the Critical Issues Log, choosing 'Design' in the Stage column (and 'No' in the Resolved by Design column).
- 7.11 Once you have added all the critical issues (for both the existing layout and the proposed design), you can revisit the Commentary and Feedback column to add comments on potential solutions that might remove the critical issue (or where particular help might be needed from ATE).
- 7.12 Any critical issues you flag as unresolved by the proposed design (i.e. critical issues from the existing layout which are not resolved by the proposed design or new critical issues introduced by the proposed design) will be highlighted in the outputs of the Route Check (in the Results tabs).

8. Street Check

- 8.1 The Street Check assesses streets against a further series of metrics categorised according to the other key active travel design principles: accessibility, comfort, directness, attractiveness and coherence. Designing according to these principles alongside safety, is essential in enabling more people to walk, wheel and cycle, including people with disabilities, according to researched best practice internationally and across the UK.
- 8.2 Many metrics in the Street Check relate to more than one key active travel design principle. For example, metric ST17 (Gradient) is in the accessibility category, however, route gradient can also affect people's experience in terms of comfort and attractiveness. Similarly, metrics in the Safety Check can also relate to other key active travel design principles beyond safety.
- 8.3 The design aspects that the metrics in the Street Check assess are not considered to have critical conditions, as they are less linked with safety and collisions risks than the metrics assessed in the Safety Check.
- 8.4 The Street Check works in the same way as the Safety Check. Each metric has a title and a description. You must assess the scheme against the scoring criteria for each metric and enter a score for both the existing layout and the proposed design. The scores possible are '0', '1' or '2'. It is possible to mark certain metrics as not applicable ('N/A') but there is no 'C' option as these metrics do not have critical conditions. An example of where 'N/A' might be selected is metric ST32 (pedestrian delay at standalone signal crossings). If there are no standalone signal crossings on the street, then you should choose 'N/A'.
- 8.5 As an example, you would score metric ST34 (Places to Rest) as follows:
- Score 2 points if it is less than 50m between resting points.
 - Score 1 point if it is between 50 and 150m between resting points.
 - Score 0 points if it is over 150m between resting points.
- 8.6 As with the Safety Check, the score entered should reflect the 'rule of worst,' that is, the score should reflect the worst conditions on the route. In the example above, if there are any instances along the street where it is over 150m between resting points, then you should give the metric a score of '0'. You should always provide any assumptions in the comments/assumptions boxes, along with comments and information to help anyone reviewing the scheme understand the justifications for your original scores.
- 8.7 There are 26 metrics assessed in the Street Check. These metrics are only relevant if you are assessing a street. If you are assessing a path, you should skip this tab and complete the '5.1 Path Check' tab, covered in [Chapter 10](#), instead.
- 8.8 Seven of the 26 street metrics apply only to cycling, while only six apply to walking and wheeling. Only one street metric (ST21) applies to wheeling alone and the remaining

12 metrics apply to all three modes. You can find information on which metrics apply to which modes in the 'Mode' column in the Route Check spreadsheet.

- 8.9 The 26 metrics in Street Check are given below, organised by category (key design principle). Note that numbering starts at 17 to reflect that you should already have scored the street against 16 metrics as part of your Safety Check.

Accessibility

- ST17. Gradient
- ST18. Tactile Information and Signal Equipment.
- ST19. Barriers
- ST20. Bus Stops
- ST21. Wheelchair Access
- ST22. Access to Taxis and Blue Badge Parking
- ST23. Access to Toilets

Comfort

- ST24. Cycling Surface Material
- ST25. Walking/Wheeling Surface Material
- ST26. Effective Width for Cyclists

Directness

- ST27. Deviation for Cycle Route
- ST28. Pedestrian Crossing Locations
- ST29. Cyclist Delay at Junctions
- ST30. Cyclist Delay on Links
- ST31. Pedestrian Delay at Junctions
- ST32. Pedestrian Delay at Standalone Signal Crossings

Attractiveness

- ST33. Wayfinding
- ST34. Places to Rest
- ST35. Places to Shelter
- ST36. Lighting
- ST37. Cycle Parking
- ST38. Impact of Cycling on Walking

Cohesion

- ST39. Impact of Motor Traffic on Pedestrians and Cyclists
- ST40. Transitions for Cyclists
- ST41. Route Continuity
- ST42. Consistency of Route

9. Street Placemaking Check

- 9.1 The Street Placemaking Check assesses streets against 26 metrics to assess design quality in terms of placemaking. Placemaking is an important part of how a street is used as it can increase the connection between people and the areas they share and travel through.
- 9.2 As with Street Check, Street Placemaking Check metrics do not have potential critical conditions, as they are less linked with collision risks than the metrics assessed by Safety Check.
- 9.3 As with Street Check, you should assess both the existing layout and the proposed design against the scoring descriptors for each metric and give a score of '0', '1' or '2.' Follow the rule of worst when scoring. You should always provide any assumptions in the comments/assumptions boxes, along with comments and information to help anyone reviewing the scheme understand the justifications for your original scores.
- 9.4 For example, you would score metric SP19 (Planting) as follows:
- The street scores 2 if there is a variety of suitable planting that provides habitats for fauna and wider experiential benefits.
 - The street scores 1 if there are some planted elements providing visual interest.
 - The street scores 0 if there is little or no planting, providing limited visual interest.
- 9.5 Unlike Street Check, there are no 'N/A' options possible when scoring metrics. Placemaking metrics are not associated with any particular transport mode – the quality of place will affect the experience of anyone travelling through or spending time in the space.
- 9.6 You should only assess these metrics if you are assessing a street. If you are assessing a path, then you should skip this tab. There is an equivalent Path Placemaking Check in the '5.2 Path Placemaking' tab, which is covered in [*Chapter 11*](#) of this user manual.
- 9.7 You can see the 26 metrics in the Street Placemaking Check below, organised into the following categories: social activity, personal security, character and legibility, and environment. The metrics have the SP prefix and numbering restarts at 1 to reflect the fact the Street Placemaking Check is a separate part of the Route Check assessment.

Social Activity

- SP01. Street Engagement for Children
- SP02. Social Space
- SP03. Diversity of Activities

Personal Security

- SP04. Surveillance and Activity
- SP05. Forward Visibility and Escape Routes
- SP06. Visibility of Others

Character and Legibility

- SP07. Maintenance and Upkeep
- SP08. Street Network Layout
- SP09. Place and Movement
- SP10. Impact of Street Design on Behaviour
- SP11. Enforcement of Loading and Parking
- SP12. Street Clutter
- SP13. Consistency of Materials and Street Furniture
- SP14. Visual Interest
- SP15. Cultural Significance
- SP16. Street Features that Support Walking, Wheeling and Cycling

Environment

- SP17. Drainage and Water
- SP18. Trees
- SP19. Planting
- SP20. Ancillary Features to Support Fauna
- SP21. Sustainable Materials
- SP22. Air Pollution – Exposure
- SP23. Air Pollution – Proximity
- SP24. Noise Pollution
- SP25. Light Pollution
- SP26. Sunlight

10. Path Check

- 10.1 Traffic-free paths are an important part of the walking, wheeling and cycling network in both urban and rural areas. However, given the differences compared to schemes based on streets, they need to be assessed against different criteria.
- 10.2 At this time, the Path Check is strictly for routes that are not shared with motor traffic (with the exception of minor access points).
- 10.3 The Path Check assesses traffic-free paths against a further series of metrics, categorized according to further key active travel design principles: accessibility, comfort, directness, attractiveness and coherence. Designing in line with these five principles, alongside safety, is essential in allowing more people to walk, wheel and cycle, including people with disabilities.
- 10.4 Many metrics in the Path Check relate to more than one key active travel design principle. For example, metric PA19 (Gradient) sits in the accessibility category, but the gradient of a route can also affect people's experience of it in terms of comfort and attractiveness.
- 10.5 The design aspects that these metrics assess are not considered to have critical conditions as they are less linked with safety and collision risks than the metrics assessed in the Safety Check.
- 10.6 Before scoring the metrics in the Path Check, you must first answer a question on whether horse riders are expected to use the route. This question is asked in the top left-hand corner of the tab. By default, the answer box will say 'unanswered' and be coloured red until you choose 'yes' or 'no' from the dropdown menu.
- 10.7 If horse riders are expected on the route and you choose 'yes', then a score for horse riding will be produced in the results tab alongside a score for walking, wheeling and cycling. You now have up to three extra metrics to score (PA25, PA29 and PA46). If no horse riders are expected on the route, you should choose the 'N/A' (not applicable) answer for these three metrics.
- 10.8 Apart from the first extra question about horses, the Path Check functions like other sections of the Route Check tool. You must assess the scheme against the scoring criteria for each metric and enter a score for both the existing situation and the design proposals. The possible scores are '0', '1' or '2'. There is no option 'C', as these metrics do not have critical conditions.
- 10.9 For example, you would score metric PA28 (Cycling Surface) as follows:
 - Score 2 points if the cycling surface is machine-laid asphalt or smooth, firm blocks.
 - Score 1 point if the cycling surface is hand-laid asphalt or smooth blocks.
 - Score 0 points if the cycling surface is unsurfaced/unbound or unstable blocks/sets.

- 10.10 As with the Safety Check, the score entered should reflect the ‘rule of worst’, in that it should reflect the worst conditions on the route. In the example above, if the cycling surface is unsurfaced anywhere along the path, then the metric should be given a score of ‘0’. You should always provide any assumptions in the comments/assumptions boxes, along with comments and information to help anyone reviewing the scheme understand the justifications for your original scores.
- 10.11 There are 30 metrics assessed in the Path Check. Some of these are similar to metrics in the Street Check and the Street Placemaking Check, however, many are different. Some Path Check metrics are based on the quality standards in Sustrans’s *Traffic-Free Routes and Greenways Design Guide*.³ There are also metrics relating to horse riding.⁴ You only assess the 30 Path Check metrics if you are assessing a path. If you are assessing a street, this tab should be skipped. There is an equivalent Street Check in the ‘4.1 Street Check’ tab, which is covered in *Chapter 8*.
- 10.12 Of the 30 path metrics, three only apply to cycling, while four apply to walking and wheeling. Three metrics only apply to horse-riding, three metrics only apply to walking, wheeling and cycling and 17 metrics apply to all active modes, including horse riders if they are expected on the route. Information on which metrics apply to which modes is included in the ‘Mode’ column in the Route Check spreadsheet.
- 10.13 The 30 Path Check metrics are given below and organised by category (key design principle). Note that numbering starts at 17 to reflect that you should already have scored the path against 16 metrics as part of the Safety Check.

3 <https://www.sustrans.org.uk/for-professionals/infrastructure/sustrans-traffic-free-routes-and-greenways-design-guide/sustrans-traffic-free-routes-and-greenways-design-guide-contents/2019-design-guidance/part-1-general-principles/2-quality-standards/>

4 Horse riding is explicitly included in active travel: House of Commons Transport Committee *Active travel: increasing levels of walking and cycling in England Eleventh Report of Session 2017–19 Report, together with formal minutes relating to the report* (London, 2019): “Active travel covers any journey that is made by physically active means, and covers such diverse activities as horse riding, skateboarding, roller skating, and riding a scooter.” p6.

Accessibility

- PA17. Barriers
- PA18. Steps
- PA19. Gradient
- PA20. Tactile Information and Signal Equipment
- PA21. Ability to Turn Around

Comfort

- PA22. Width of Shared Use Spaces
- PA23. Width of Walking and Wheeling Spaces
- PA24. Width of Cycling Spaces
- PA25. Width of Horse Riding Spaces
- PA26. Shared Use Surface
- PA27. Walking and Wheeling Surface
- PA28. Cycling Surface
- PA29. Horse Riding Surface
- PA30. Suitability of Crossings
- PA31. Accessibility of Access Points
- PA32. Drainage

Directness

- PA33. Deviation of Path Against Straight Line
- PA34. Deviation of Path Against Nearest Alternative Route
- PA35. Crossing Locations
- PA36. Delay at Crossings

Attractiveness

- PA37. Places to Rest
- PA38. Places to Shelter
- PA39. Lighting
- PA40. Cycle Parking
- PA41. Impact of Users on Each Other

Cohesion

- PA42. Ease of Navigation
- PA43. Wayfinding
- PA44. Proximity to Destinations
- PA45. Quality of Connections
- PA46. Connectivity with Other Horse Riding Routes

11. Path Placemaking Check

- 11.1 The Path Placemaking Check assesses paths against 19 metrics to evaluate design quality in terms of placemaking. Placemaking is an important part of how a path functions as it can increase the connection between people and the places they share and travel through. There is some overlap with the 26 Street Placemaking metrics, but they are not identical.
- 11.2 The metrics in the Street Placemaking Check do not have critical conditions, as they are less linked with collision risks than the metrics assessed in Safety Check.
- 11.3 As with other Route Check sections, you should assess both the existing layout and the proposed design against the scoring descriptors for each metric and give them a score of '0,' '1' or '2'. Follow the 'rule of worst' when scoring. You should always provide any assumptions in the comments/assumptions boxes, along with comments and information to help anyone reviewing the scheme understand the justifications for your original scores.
- 11.4 For example, you score metric PP06 (Visibility of Others) as follows:
- The path scores 2 if there is lighting that does not create high-contrast areas with shadows and the path environment does not create hiding or loitering places.
 - The path scores 1 if there is inadequate lighting, or bright lighting that creates high contrast areas with shadows.
 - The path scores 0 if there is no lighting and/or a path environment that creates potential ambush points.
- 11.5 No 'N/A' options are possible when scoring metrics. Furthermore, these placemaking metrics are not associated with any particular mode of transport. The quality of place will affect the experience of anyone travelling through or spending time in the space.
- 11.6 You should only assess these metrics if you are assessing a path. If you are assessing a street is being assessed, this tab should be skipped. There is an equivalent Street Placemaking Check in the '4.2 Street Placemaking' tab, which is covered in Chapter 9 of this user manual.
- 11.7 You can see the 19 metrics in the Path Placemaking Check below, organised into the following categories: social activity, personal security, character and legibility, and environment. The metrics have the PP prefix and numbering restarts at 1 to reflect the fact the Path Placemaking Check is a separate part of the Route Check assessment.
- 11.8 The three personal security metrics in the Path Placemaking Check (PP04, PP05 and PP06) are weighted double due to the importance of personal security on paths, where people are less likely to be near the activity and informal surveillance of a street. Paths can sometimes be isolated, with fewer 'escape points'. Things like this can influence how likely some user groups, such as women, are to want to walk, wheel or cycle on paths.

Social Activity

PP01. Engagement for Children

PP02. Social Space

PP03. Points of Interest

Personal Security

PP04. Surveillance and Activity

PP05. Forward Visibility and Escape Routes

PP06. Visibility of Others

Character and Legibility

PP07. Maintenance and Upkeep

PP08. Consistency of Materials and Path Furniture

PP09. Visual Interest

PP10. Features to Support Walking, Wheeling and Cycling

Environment

PP11. Trees

PP12. Planting

PP13. Ancillary Features to Support Fauna

PP14. Sustainable Materials

PP15. Air Pollution – Exposure

PP16. Air Pollution – Proximity

PP17. Noise Pollution

PP18. Light Pollution

PP19. Quality of Connections

12. Junction Assessment Tool Check

- 12.1 The **'6. JAT Check'** tab contains the Junction Assessment Tool (JAT) Check, which you must use to assess pedestrian and cycle movements at all junctions of a certain type along the route.
- 12.2 Junctions pose the greatest collision risk to all road users, including pedestrians and cyclists. Safety risks are often highest at junctions and the relationships between safety, comfort and directness are most complex.
- 12.3 Completing a Junction Assessment Tool Check lets you assess how well a junction caters for pedestrians and cyclists. It looks at all the potential movements at a junction, not just those associated with a designated active travel route. It also identifies the potential for conflicts and can help you consider what measures you might need to reduce them.
- 12.4 In 2020, a version of the JAT was introduced nationally via LTN 1/20. This version of the JAT was an adaptation of a similar tool originally published in the London Cycling Design Standards (2014). These earlier versions of the JAT only looked at cycle movements at junctions. However, with the publication of ATE's Route Check tool, a new version of the JAT is being rolled out which looks at pedestrian movements at junctions too. When you fill in a Route Check you must assess and score cyclist and pedestrian movements on all the types of listed below. Using this new version of the JAT, you will be able to make junction designs better for everyone, not just people cycling.

Applicability

- 12.5 You must use the JAT Check to assess and score pedestrian and cycle movements at junctions along the following route types:
- Signal-controlled junctions
 - Signal-controlled roundabouts
 - Roundabouts, including mini-roundabouts.
 - Large priority junctions, including four-arm crossroads junctions and three-arm T-junctions, but excluding small side road junctions and private driveways.
- 12.6 The reason that you do not need to assess side road junctions or private driveways is that any potential critical issues at these junction types will be picked up by SA01 and other metrics in the Safety Check.

Entering Information into the JAT Check

- 12.7 You must score all possible pedestrian and cycle movements at a junction for both the existing layout and the proposed design. In terms of scoring, each movement must be given a rating of X, 0, 1 or 2, based on its possible level of conflict, with the worst score of 0 representing the most conflict, and X a desire line that has not been

provided for. The next two sections of this chapter describe how to score cycle and pedestrian movements respectively.

- 12.8 In the JAT Check tab, the space for diagrams and entering scores in tables is organised in pairs, with each junction requiring two entries. Firstly, you must assess the existing junction layout on the left, and then the proposed design on the right. The junction name only needs to be entered once for each pair (on the left) and it will automatically populate on the right.
- 12.9 Satellite imagery from sources like Google Maps can be used as a template for the JAT diagram of the existing junction, as shown in Figure 14. Scheme drawings can be used as a template for the JAT diagram of the proposed design. Street names should ideally be visible in any satellite imagery or scheme drawings included.
- 12.10 You must enter all movements and associated scores into the tables in the JAT Check as well as adding arrows to the JAT diagrams to show movements at the junction. You can represent these movements and their scores of 0, 1, 2 and X with **red**, **amber**, **green** and **black** arrows respectively. Cycle movements are shown with solid arrows while pedestrian movements are shown with dashed double ended arrows.
- 12.11 Each pedestrian movement can be assigned a letter, and each cycle movement a number. You can then label the arrows representing these movements on the diagrams with these letters and numbers. Each row in the table has a comments box where you can enter justification for how you scored individual movements. It is recommended that you do this for all amber, red and black movements as a minimum.



Figure 14 – A completed JAT Diagram for the existing situation at a junction, using satellite imagery from Google Maps

12.12 Once you have entered scores for all these movements, the spreadsheet will calculate an overall score for the junction's pedestrian movements, an overall score for its cycling movements and finally, an overall JAT score for the junction combining the two. These scores are expressed as percentages of the maximum possible score (which is the total number of cycle and pedestrian movements at the junction multiplied by 2, which is the highest potential score for each movement).

$$\text{Total Sum of Scores} \div (\text{Total Movements} \times 2) = \text{JAT Score}$$

12.13 A completed table of pedestrian crossing movements for the example given above in Figure 14 is shown below in Figure 15. You should fill in the rows completely, adding a justification for the scoring in the comments column for at least all amber, red and black movements. The total score is calculated based on how many entries have been added. If you enter a crossing name in the crossing column without a score, the spreadsheet will record a zero score. The example junction has four possible pedestrian movements, so four rows have been filled (A-D).

Walking and Wheeling Movements	Crossing	Score	Comments
A	Hungerford Road (NE)	0	Uncontrolled crossing at a signal junction with no invitation to cross (green pedestrian signal). Also an example of a critical issue for metric SA07.
B	York Way (SE)	0	Uncontrolled crossing at a signal junction with no invitation to cross (green pedestrian signal). Also an example of a critical issue for metric SA07.
C	Cliff Road (SW)	0	Uncontrolled crossing at a signal junction with no invitation to cross (green pedestrian signal). Also an example of a critical issue for metric SA07.
D	York Way (NW)	2	Signal controlled crossing
E			
F			
G			
H			
I			
J			
	Total Score	25%	

Figure 15 – A completed table of pedestrian movements for a junction in the JAT check.

Scoring Pedestrian Movements

12.14 Unlike cycle movements, which are covered in LTN 1/20, pedestrian movements have no codified scoring resource elsewhere.

12.15 **Black pedestrian movements** are where an obvious pedestrian desire line is somehow blocked, or not accommodated by the physical presence of a crossing. For example, you should also mark desire lines blocked with guard railing as black pedestrian movements. Another example would be a pedestrian desire line on an arm of a junction with no controlled crossing, no dropped kerbs and no tactile paving to support pedestrians wishing to cross. Black pedestrian movements score zero.

12.16 **Red pedestrian movements** are where there is some form of crossing, but it is not fully accessible and/or does not sufficiently protect pedestrians. Red pedestrian movements therefore have high potential for conflict with motor traffic. Most red pedestrian movements will also appear in Route Check as critical issues. Red pedestrian movements score 0 and some examples include:

- Where a pedestrian desire line does not have adequate crossing provision. Adequate crossing provision means all the essential elements of a safe, fully accessible design, including dropped kerbs, visibility, surface condition and drainage, tactile paving, adequate waiting and passing space (particularly in shared-use situations) and gradients, etc.
- Pedestrian desire lines that conflict with more than 2,500 vehicles per day and have no controlled crossing provision.
- Pedestrian desire lines where pedestrians must cross at over 1.2 m/s to get across a crossing in time.

12.17 **Amber pedestrian movements** have some form of crossing provision, but it doesn't fully meet the needs of everyone walking and wheeling. For example, the provision doesn't fully meet desire lines and is less used by some pedestrians, who many instead cross on their desire lines at increased risk. Amber pedestrian movements score 1 and some examples include:

- Crossings located away from desire lines or which are not intuitive for the intended movement.
- Staggered crossings.
- Crossings with guard railing that encourages off-crossing movements.
- Crossings with excessive waiting times, either at individual crossings or cumulatively through a series of crossings.

12.18 **Green pedestrian movements** score 2. These are movements where the potential for conflict with motor traffic has been almost entirely removed by the provision of fit-for-purpose controlled crossings, or uncontrolled crossings that fully meet the requirements of traffic speed, volumes and geometry.

Scoring cycle movements

12.19 Scoring cycle movements in this version of the JAT Check is exactly the same as in the version of the JAT Check introduced in LTN 1/20. You can therefore refer to Section 5 of Appendix B of LTN 1/20 for guidance on scoring cycle movements.

JAT Results

- 12.20 On route-based schemes, movements along the corridor are sometimes known as 'principal' or 'golden thread' movements. These are key movements to get right on a route scheme and critical issues recorded for these movements should be removed as a priority.
- 12.21 When you complete JAT Checks for junctions, you are also assessing movements that are not necessarily on the 'golden thread.' This draws attention to potentially unsafe pedestrian and cycle movements which the scheme might be less likely to address.
- 12.22 A **red movement** at a junction that is not on the 'golden thread' could in some cases qualify as a critical issue, but would not be recorded in the critical issues log. In cases where ATE is involved with the scheme being removed, such red movements (and sometimes also amber movements) are discussed via correspondence and meetings. However, the removal of all such red movements is not necessarily a requirement of schemes assessed by ATE, especially if such movements are mitigated.

13. Results and Scoring

13.1 This chapter explains the three output tabs in the Route Check and then gives additional information about how scores are calculated in the Route Check.

Overview of the Results tabs

13.2 The output tabs in the Route Check summarise the results from the completed sections with some further analysis. They give insight into the quality of the route, highlighting the impacts that interventions are expected to have on the quality of the route for people walking, wheeling and cycling.

13.3 The outputs are split into three tabs:

- **Results Summary** – this tab gives a top-level overview of Route Check’s findings, focusing on the change in score between the existing layout and the proposed design, as well as any remaining issues.
- **Results Further Analysis** – this tab gives a full summary of the quantitative results of the assessment, with extra analysis into the strengths and weaknesses of the route and interventions.
- **Results Export** – this tab gives all the Route Check results, both qualitative and quantitative, and is optimised for export and printing.

Why is this important?

13.4 This section of the Route Check should be used to work out whether the interventions proposed will have the desired impact on the scheme’s objectives. If this is not so, then these tabs can help you decide which aspects of the scheme need strengthening to have more impact.

13.5 If scheme is already delivered and constructed, Route Check results can be used to help consider whether any remedial works are necessary and what lessons learnt you can take forward for future schemes.

13.6 On schemes where ATE is involved, ATE can use the results tabs to highlight any remaining issues it believes need more work. Recommendations for potential improvements and solutions will be summarised here.

Results summary tab

Overview table

13.7 This table contains all the key results of the Route Check and highlights where ATE recommend further action to remove issues.

13.8 As the table contains the key results and potential next steps from the Route Check, it can be used as a quick reference for scheme performance. It can also be used as a starting point to explore Route Check results further.

- 13.9 With the exception of the **‘Review Statement’** box, all the results in the table will populate automatically once you have filled in the various sections of the Route Check relevant to the review. The Policy Check and Critical Issues results simply return the number of remaining issues that Active Travel England believes should be investigated and resolved to deliver a quality route for people walking, wheeling and cycling, including people with disabilities. These results are pulled from the Policy Conflict Log and Critical Issues Log respectively.
- 13.10 The rest of the table goes through the next sections of the Route Check, giving the change in score percentage between the existing route and the intervention route. This is to emphasise the impact the scheme has had rather than give an overall score for the proposed scheme, which would indicate the quality of the route but not its impact.
- 13.11 The **‘Review Statement’** box is the only section in the tab that needs an input. You should use the space to give a qualitative overview of how the proposals in the Route Check process have performed and highlight any results, caveats or next steps to support the delivery of a quality intervention for people walking, wheeling and cycling on the route. When ATE carries out a Route Check assessment for a scheme submitted by a local authority, ATE will summarise its key recommendations here.

Level of service table and graph

- 13.12 Under the overview table in the **Results Summary tab**, another table and graph summarise the street or path level of service results for the scheme. The table and graph assess changes between the existing layout and the proposed scheme against the six core design principles of safety, accessibility, comfort, directness, attractiveness and cohesion.
- 13.13 The table and graph summarise the service level of the existing layout, the proposed scheme and the difference between the two. These results can be used to understand the existing level of service better and work out how much improvement is needed. You can also see how transformational the proposed scheme might be in terms of its different core design principles.
- 13.14 When you review the results, give consideration to whether they align with core design principles and intended scheme outcomes. For example, some schemes might have greater emphasis on improving safety, compared to improving the attractiveness of the route, whereas others might call for strong improvement against all core design principles. You can then use the results to work out further interventions that might deliver better outcomes against these objectives.
- 13.15 The level of service scores shown in this table represent the scores given for the metrics you gave in the Safety Check and Street or Path Check tabs. There are 16 Safety Check metrics, 26 Street Check metrics and 30 Path Check metrics.
- 13.16 The core design principles that each metric belongs to are listed at the top of each of the metrics shown in Safety Check, Street Check and Path Check, in the first column of the spreadsheet.

Results Further Analysis tab

13.17 This tab summarises the quantitative results of the Route Check. The results are given in the same order as the Route Check and you can use them to work out the strengths and weaknesses of the existing layout and the proposed scheme.

Summary of Scheme

13.18 This section simply gives you a condensed list of the information you entered in the Summary of Scheme tab to contextualise the results. The table is populated through the Summary of Scheme tab but needs the route map to be copied manually from the Summary of Scheme tab and pasted in.

Policy Check Results

13.19 The table in this section summarises the number of policy conflicts logged in the Policy Conflict Log. From left to right, it shows:

- How many policy conflicts there are in the existing layout.
- How many policy conflicts there are in the proposed design.
- How many policy conflicts were removed. That is, how many policy conflicts were present in the existing layout that the proposed design removed.
- How many policy conflicts were introduced. That is, how many policy conflicts were not present in the existing layout but were introduced by the proposed design.
- The number of policy conflicts remaining in the proposed design.

13.20 If there are any remaining potential policy conflicts, the local authority or ATE should add comments in the Policy Conflict Log tab, along with an overall comment in the Policy Check tab. These comments are not shown in the Results Further Analysis tab, but pull through into the Results Export tab.

Safety Check Results (Critical Issues Only)

13.21 The table in this section summarises the number of Critical Issues logged in the Critical Issues Log. From left to right, these are:

- How many critical issues are present in the existing layout.
- How many critical issues are present in the proposed design.
- How many critical issues were removed. That is, how many critical issues were present in the existing layout that the proposed design removed.
- How many critical issues were introduced. That is, how many critical issues were not present in the existing layout but were introduced by the proposed design.
- The number of critical issues remaining in the proposed design.

- 13.22 If there are any remaining critical safety issues, the local authority or ATE should add comments in the Critical Issues log. These comments are not shown in the Results Further Analysis tab, but do pull through into the Results Export tab.
- 13.23 The Level of Service scores for the metrics in the Safety Check are not shown here but are shown instead in the Street Check Results or Path Check Results tables below, depending on the type of scheme you are assessing.

Street Check Results

- 13.24 This section summarises the results of the Street Check (if you are assessing a street rather than a path) in three tables with accompanying graphs and charts.
- 13.25 First, you will see the same table and graph showing the level of service described in the Results Summary tab, specifically for the Street Check (if you have done a Path Check, this section should be empty). For the six core design principles, the table shows the existing level of service, the level of service provided by the proposed design and the difference between the two. It also gives the overall scores for levels of service. The 'spider chart' graph shows the two sets of levels of service for the core design principles.
- 13.26 It should be noted that in terms of the overall score, Safety Check metric scores (i.e. those with potential critical conditions) are weighted more strongly than the other metrics. You can find more information on this later in this chapter.
- 13.27 The second table and chart break down the levels of service for each of the active travel modes: walking, wheeling and cycling. It does this for both the existing layout and the proposed design. You can use these results to understand the level of service for different modes better and work out whether the intervention delivers against its intended aims.
- 13.28 The third table and chart summarise the Street Placemaking Check results, giving the score for the existing layout and proposed design against the four placemaking categories (social activity, personal security, character and legibility, and environment). You can use these results to understand the scheme's quality of placemaking better and check whether it successfully achieves any placemaking objectives.

Path Check Results

- 13.29 This section summarises the Path Check results (if you are assessing a path rather than a street) in two tables with accompanying graphs and charts.
- 13.30 First, you will see the same table and graph showing the service level described in the Results Summary tab, specifically for the Path Check (if you have done a Street Check, this section should be empty). For the six core design principles, the table shows the existing level of service, the level of service provided by the proposed design and the difference between the two. It also gives overall scores for all the levels of service. The 'spider chart' graph shows the two sets of levels for the core design principles.

- 13.31 The second table and chart break down the levels of service for each of the active travel modes: walking, wheeling, cycling and (if applicable) horse riding. It does this for both the existing layout and the proposed design. You can use these results to understand the level of service for the different modes better and work out whether the intervention delivers against its intended aims.
- 13.32 The third table and chart summarise the Path Placemaking Check results, giving the score for the existing layout and proposed design against the four placemaking categories (social activity, personal security, character and legibility and environment). These results can be used to understand the placemaking quality of the scheme better and check whether it successfully achieves any placemaking objectives.

Junctions Assessment Check Results

- 13.33 A summary table is provided for up to five junctions if completed within the Junction Assessment Tab. The table gives overall scores for each junction (including scores for the existing layout, proposed layout and the difference between the two), as well as a breakdown by mode: walking and wheeling (combined) and cycling. You can use the table can be used to understand the strengths and weaknesses of the junctions along the route better and work out if any one mode is receiving a higher level of service than the others.
- 13.34 Average scores across up to five junctions are given at the bottom of the table.
- 13.35 If you are assessing more than five junctions, a message will appear under the table to let you know that subsequent junctions are not included in the summary table.

Results Export tab

- 13.36 This tab summarises all the quantitative and qualitative results from Route Check in a single tab. You can use it as an authoritative review of Route Check showing the results from Route Check, along with any additional comments about potential policy conflicts and critical issues that Active Travel England believes should be further investigated to support the delivery of a quality route for people walking, wheeling and cycling.
- 13.37 It contains all the same tables, charts and graphs in the Results Further Analysis tab, with the following additions:
- The Overview Table from the Results Summary tab.
 - A table listing any remaining policy conflicts from the Policy Conflict Log, including their reference ID, type and location information plus any comments and feedback.
 - A table listing any remaining critical issues from the Critical Issues Log, including their reference ID, type and location information plus any comments and feedback.
- 13.38 The remaining policy conflicts and critical issues listed in the tables are simply those present in the proposed design, whether they are unresolved policy conflicts and critical issues from the existing layout, or new ones introduced by the proposed design.

Exporting the Results

13.39 The Results Export tab has been formatted so that Route Check results are optimised for printing, whether as a hard copy or a PDF.

How Scores are calculated in the Route Check

13.40 The following sections give extra detail on how the Route Check calculates scores. Scores are given as percentages in the Route Check but you can see here how these percentages are derived.

Safety Check Scoring

13.41 There are up to 16 metrics scored in the Safety Check, which can range in score from 0-2. Critical issues can also be scored as 0 but marked with a C and included in the Critical Issues log, which is subject to additional scrutiny.

13.42 Not all metrics are relevant to every scheme and the total possible score may be lower depending on the number of metrics that you review a scheme against.

13.43 As safety is an integral part of any active travel scheme, Safety Check scores are factored by three, which gives Safety Check metrics extra weighting in the overall level of service score compared with Street Check or Path Check metrics. As there are 16 Safety Check metrics, the total possible Safety Check score is therefore 96.

Street Check Scoring

13.44 There are up to 42 metrics scored in the Street Check. The first 16 of these are metrics in the Safety Check tab, while the remaining 26 are the metrics in the Street Check tab. The 26 metrics in the Street Check tab can range in score from 0-2.

13.45 Not all metrics are relevant to every scheme and scores may be lower depending on the number of metrics that you review a scheme against.

13.46 As noted in the previous section, the Safety Check level score is factored by three and included within the overall Street Check level of service score.

Category	Metrics	Total possible score
Safety	16	96 (16x2x3)
Accessibility	7	14
Comfort	3	6
Directness	6	12
Attractiveness	6	12
Cohesion	4	8
Summary	42	148

Street Placemaking Check Scoring

13.47 There are 26 metrics scored in the Street Placemaking Check, across four categories, with the possible score for each metric ranging from 0-2. Scores in the results tabs are presented as percentages.

Category	Metrics	Total possible score
Social Activity	3	6
Personal Security	3	6
Character and Legibility	10	20
Environmental	10	20
Summary	26	52

Path Check Scoring

13.48 There are up to 46 metrics scored for the Path Check. The first 16 of these are the metrics in the Safety Check tab, while the remaining 30 are the metrics in the Path Check tab. The 30 metrics in the Path Check tab can range in score from 0-2.

13.49 Not all metrics are relevant to every scheme and scores may be lower depending on the number of metrics that you review a scheme against. This is the main reason that scores are presented as percentages.

13.50 As noted in the 'Safety Check' section, the Safety Check level of service score is factored by three and included in the overall Path Check level of service score.

Category	Metrics	Total possible score
Safety	16	96 (16x2x3)
Accessibility	5	10
Comfort	11	22
Directness	4	8
Attractiveness	5	10
Cohesion	5	10
Summary	46	156

Path Placemaking Check Scoring

- 13.51 There are 19 metrics scored in the Path Placemaking Check, across four categories, with the possible score for each metric ranging from 0-2.
- 13.52 The three metrics in the Personal Security category are factored by two for reasons explained in *Chapter 11*.

Category	Metrics	Total possible score
Social Activity	3	6
Personal Security	3	12 (3x2x2)
Character and Legibility	4	8
Environmental	9	18
Summary	19	44