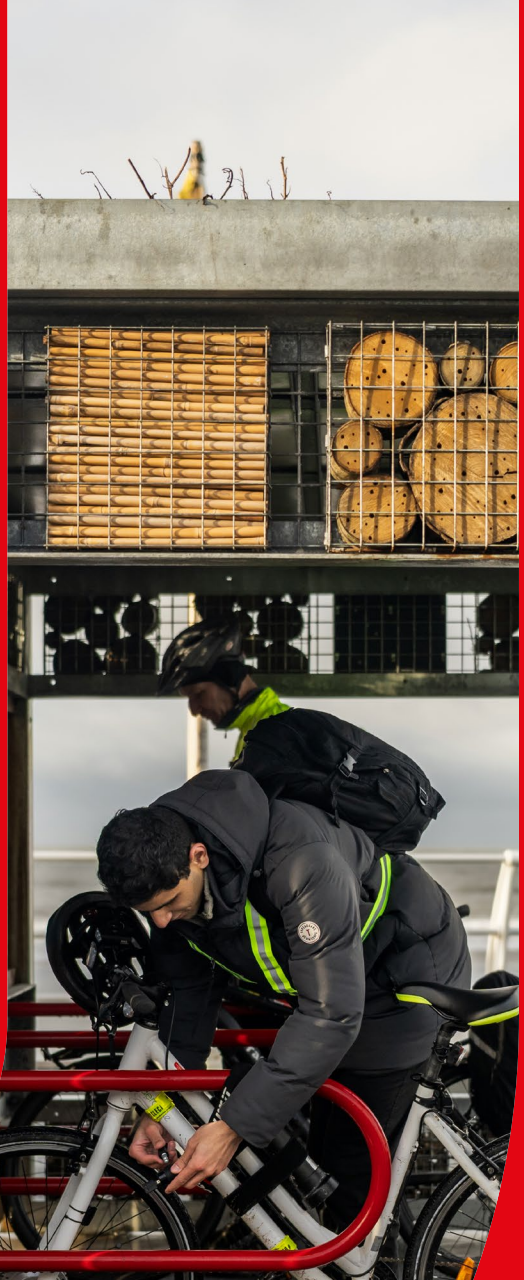
Monitoring and evaluating walking, wheeling and cycling schemes in Wales



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Contents

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Note: This toolkit has been developed by the Walk Wheel Cycle Trust's Strategy, Insight and Evidence Team (formerly known as Sustrans' Research and Monitoring Unit) for Transport for Wales, to support users, particularly local authority officers, with their monitoring and evaluation duties.

Introduction

What is this toolkit for?

This toolkit provides practical guidance to monitor and evaluate walking, wheeling and cycling (active travel) schemes in Wales. This will help improve the quality and consistency of data collection for active travel schemes.

The toolkit is available for use by anyone that plans or conducts monitoring, evalutaion and reporting activities in relation to such schemes but is primarily aimed to support local authority officers in fulfilling the requirements of the Active Travel (Wales) Act 2013 and Welsh Government transport grants.

These requirements are outlined in full in the Active Travel Act Guidance (ATAG)[1] and the material accompanying Welsh Government transport grants.

The toolkit covers:

- A summary of the reporting requirements of local authorities in relation to walking, wheeling and cycling routes and journeys.

Practical advice on using appropriate tools for monitoring and evaluating walking, wheeling and cycling, to support the fulfilment of the aforementioned reporting requirements. This includes:

- Detailed guidance on user surveys
- Guidance on other monitoring and evaluation tools
    - Specific guidance on the appropriate selection of equipment to monitor walking, wheeling and cycling route usage levels.

Relationship to existing guidance

The Active Travel Act Guidance (ATAG) provides an overview of the expected and recommended monitoring and evaluation of walking, wheeling and cycling schemes that local authorities should undertake. This toolkit builds on the ATAG by providing more detailed and practical guidance on how to implement these recommended approaches.

Chapter 16 of the ATAG.

1 The Active Travel Act Guidance is available at https://www.gov.wales/active-travel-act-guidance

This toolkit supplements ATAG by providing more practical information about the tools suggested in Section 16.5 of the ATAG, which may form part of a monitoring and evaluation plan.

The guidance includes information on what each tool can collect, how to use the tool, and what to do with the gathered data.

Transport for Wales are able to provide further guidance and support regarding different aspects of monitoring and evaluating walking, wheeling and cycling routes, such as developing a monitoring and evaluation plan or SMART objective setting.

Reporting responsibilities

This section outlines the scope and timeframe of the reporting requirements set out within the Active Travel (Wales) Act 2013 and the conditions of Welsh Government grant funding.

Annual reporting

Statutory annual reporting

Walking, wheeling and cycling outputs must be reported on an annual basis[2]. Table 1 presents a template of the information that must be submitted to the Welsh Ministers each year. This content replicates information found in Appendix F of the Active Travel Act Guidance[3].

Table 1: Active Travel (Wales) Act 2013 reporting duties for annual progress reports[4]

Output	Details of required submission
The actions taken to promote active travel journeys *	Actions taken by the various local authority departments, such as information provision, work undertaken with schools and other } organisations, signage, active travel challenges and competitions, events.
The actions taken to secure new active travel routes and related facilities and improvements *	Actions taken by the various local authority departments, such as directly funded or grant funded construction and improvement of routes and facilities, those negotiated as part of planning processes, support given to third parties.
Costs incurred for new active travel routes and facilities and improvements of existing active travel routes and related facilities carried out in the preceding full financial year *	Spend in previous financial year.
Indicative spending for new active travel routes and facilities and improvements of existing active travel routes and related facilities funded or part funded by third parties	Indicative spend and source of funding.
Length of new routes: • Walking and Wheeling • Cycling • Shared Use	Length (in metres) of new walking, cycling and shared-use routes.

2 See Active Travel Act Guidance (p56).
3 See Appendix F in ATAG.
4 Source: Adapted from Appendix F in ATAG.

Output	Details of required submission
Length of improved routes: • Walking and Wheeling • Cycling • Shared Use	Length (in metres) of improved walking, cycling and shared-use routes.
Length of routes mapped on ATNM: • Walking and Wheeling • Cycling • Shared Use	Length (in metres) of routes currently on the local authorities Active Travel Network Map (ATNM), cycling and shared-use routes.
New and improved active travel facilities	Number and type of new and improved active travel facilities, for example cycle parking, toilets, seating along active travel routes.
Additional information	Optional additional information on active travel projects.

Note: An asterisk (*) against an output within table 1, denotes a statutory reporting duty as set out within the Active Travel (Wales) Act 2013.

Figure 1: Guide dog and partially sighted person walking across a pedestrian crossing

Annual performance reports

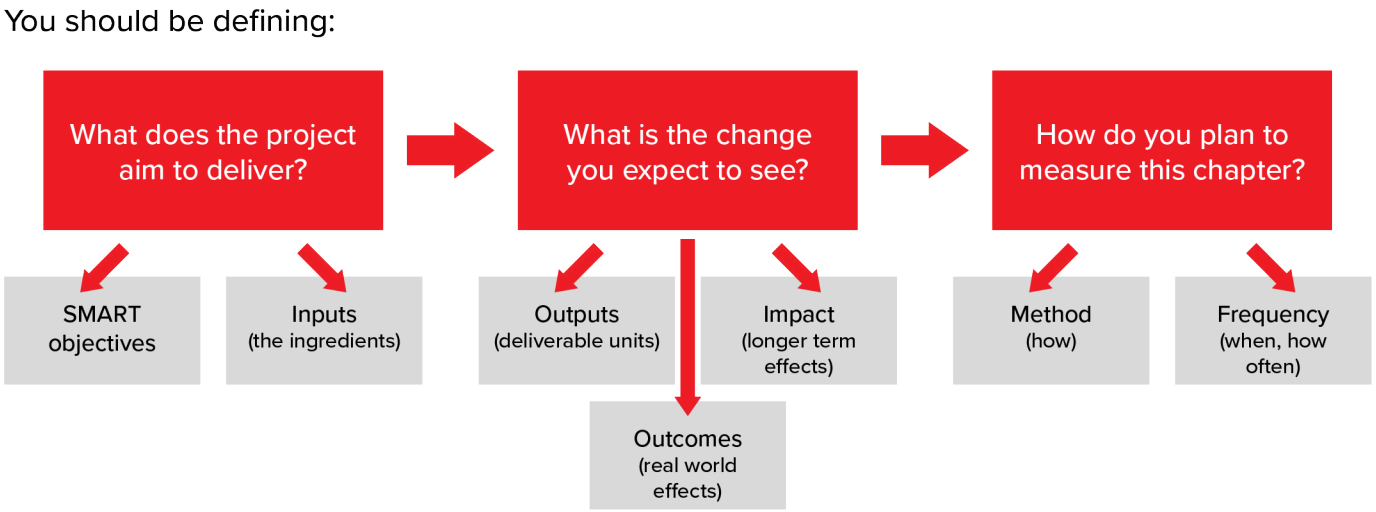
Local authorities receiving transport grants from Welsh Government must produce annual reports on the outcomes of walking, wheeling and cycling schemes.

These annual outcomes reports must be submitted for a period of 3 years following completion of each scheme as part of the annual reporting process. There is an expectation that these outcomes reports draw on both quantitative and qualitative data collection and will include both baseline data and post-scheme data.

As this reporting focuses on scheme-level outcomes, it should be structured around the specific objectives of the scheme and the associated changes in perceptions and behaviour that are expected as a result. Developing a scheme-level monitoring and evaluation plan is an essential step towards collecting relevant data that can report on the outcomes of a scheme.

Setting objectives and defining outcomes

The section 'Monitoring tools and approaches' presents the practical details of several data collection tools. Before you decide which to use, you should consider the following diagram which outlines the overarching approach to monitoring and evaluating walking, wheeling and cycling schemes:



Regarding the objectives of the scheme, these should be clearly defined, SMART (Specific; Measurable; Achievable; Realistic; Time-limited) and have a strategic fit that aligns with the objectives of the Active Travel (Wales) Act. The objectives will focus on what the scheme will do and why, while the outcomes are the medium-term real-world effects that arise from a scheme.

Below are two examples of SMART objectives for walking, wheeling and cycling schemes:

Example 1:

Connect communities and encourage modal travel shift by installing new pedestrian waymarking and improving lighting (specific, realistic) on 26km of the Three Wood Way between Armouth, Trimble and Ten House (measurable, achievable) by October 2024 (timed).

Example 2:

Increase the number of local hospital employees traveling to work using sustainable modes (realistic) by creating protected cycle infrastructure on 1.3km of Penglais Road (specific, measurable, achievable) by March 2026 (timed).

Appropriate monitoring will mean it is possible to measure any outcomes that are a result of the delivered scheme.

How do outcomes relate to SMART objectives?

SMART objectives are focused on what the scheme will do, how and why, whereas outcomes are the medium-term real-world effects that arise from a scheme.

Outcomes of walking, wheeling and cycling schemes – the changes you expect to see – are typically about increasing the number of pedestrians and cyclists travelling in a particular location. They should also consider:

- Improving the journey experience
- Facilitating access to essential services or green space
- Increasing perceived or actual safety of different travellers
- Improving air quality
- Increasing footfall in town centres.

These outcomes illustrate some of the ways in which walking, wheeling and cycling can contribute to the wellbeing goals of the Well-being of Future Generations (Wales) Act 2015.

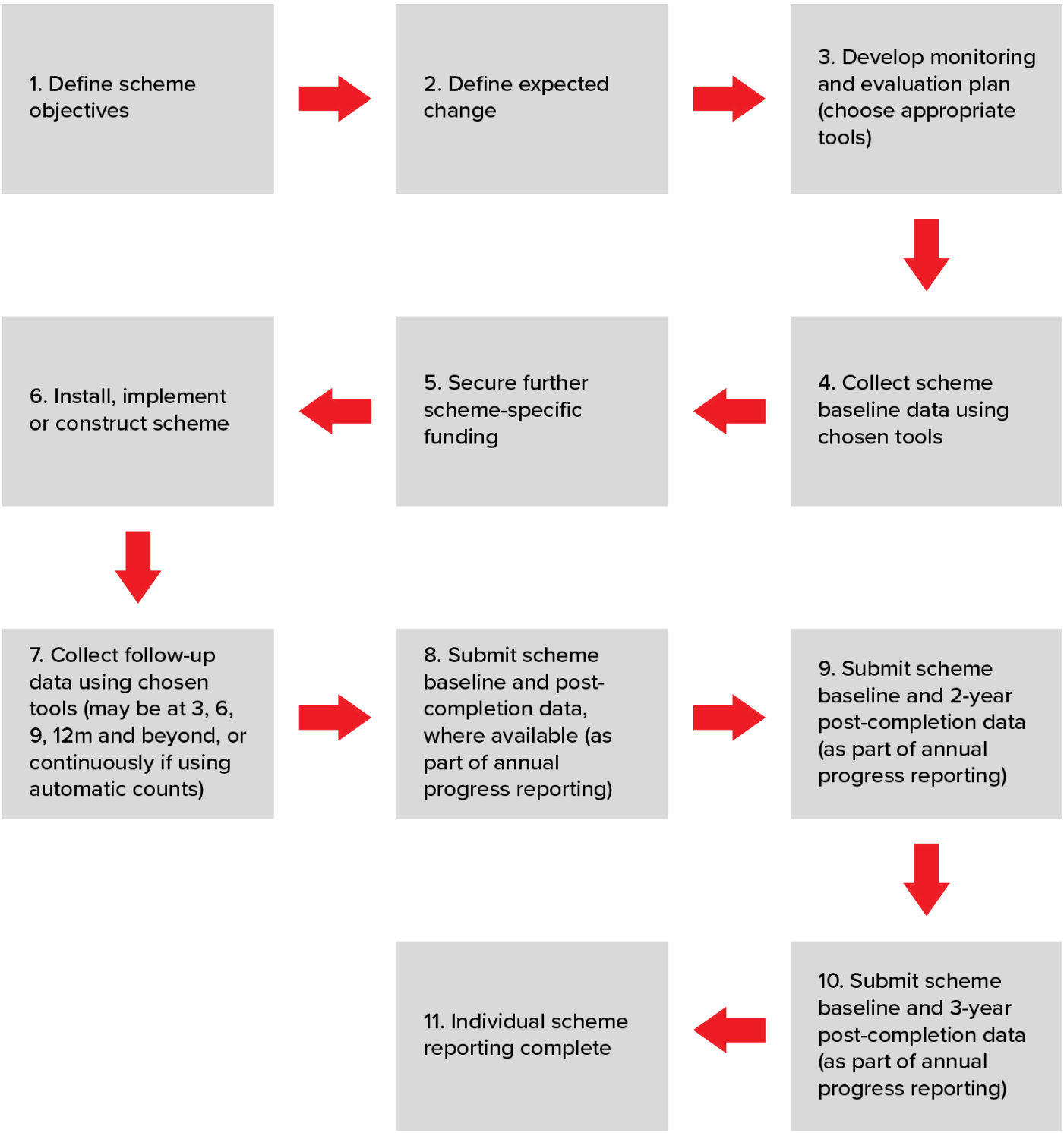
Scheme objectives and outcomes should therefore consider opportunities to deliver wider non-transport impacts that could make a positive contribution to the aims of other strategies such as green infrastructure, decarbonisation and air quality.

Different outcomes require different data collection methods. It is worth considering your scheme's targeted outcomes before choosing your data collection tools.

We present practical guidance on the ATAG's key recommended tools in the section 'Monitoring tools and approaches'.

Figure 2 provides a basic guide for approaching the planning, production and submission of your grant monitoring annual reporting for individual walking, wheeling and cycling schemes.

Figure 2: Guide to planning your grant monitoring annual reporting on individual walking, wheeling and cycling schemes



Outcomes reporting as part of the annual reporting process is expected to cover:

- What the anticipated scheme outcomes were, as defined in the scheme monitoring and evaluation plan (WelTAG Stage 5)
- What the realised outcomes were, or have been so far (using data collected from your chosen monitoring and evaluation methods)
- How stakeholders were engaged in the monitoring and evaluation of the scheme[5]
- A summary of any relevant events and changes in context that occurred after scheme implementation, which may have affected the scheme impact (such as changes in fuel prices, land-use, travel patterns, or weather events)
- The impact of any such events or engagement
- Lessons learnt for future schemes.

As per the Welsh Government's annual reporting guidance, for schemes that were completed in the previous year, information should also be provided on:

- scheme costs and funding, scheme planning and design (WelTAG Stages 1-3)
- scheme delivery (WelTAG Stage 4)
- pre- and post- completion route audit scores, along with an updated Active Travel Network Map, to capture the impact of funding on route and network quality.

Figure 3: Walking and cycling to school

5 **Note:** Information on realised outcomes and engagement is not expected until years two and three post-scheme completion.

3-yearly reporting

In addition to annual reporting, the Active Travel Act requires local authorities to make a 3-yearly report on active travel outcomes alongside submission of an updated Active Travel Network Map (ATNM)[6].

Table 2 presents a template of the information that must be submitted to the Welsh Ministers along with the ATNM[7].

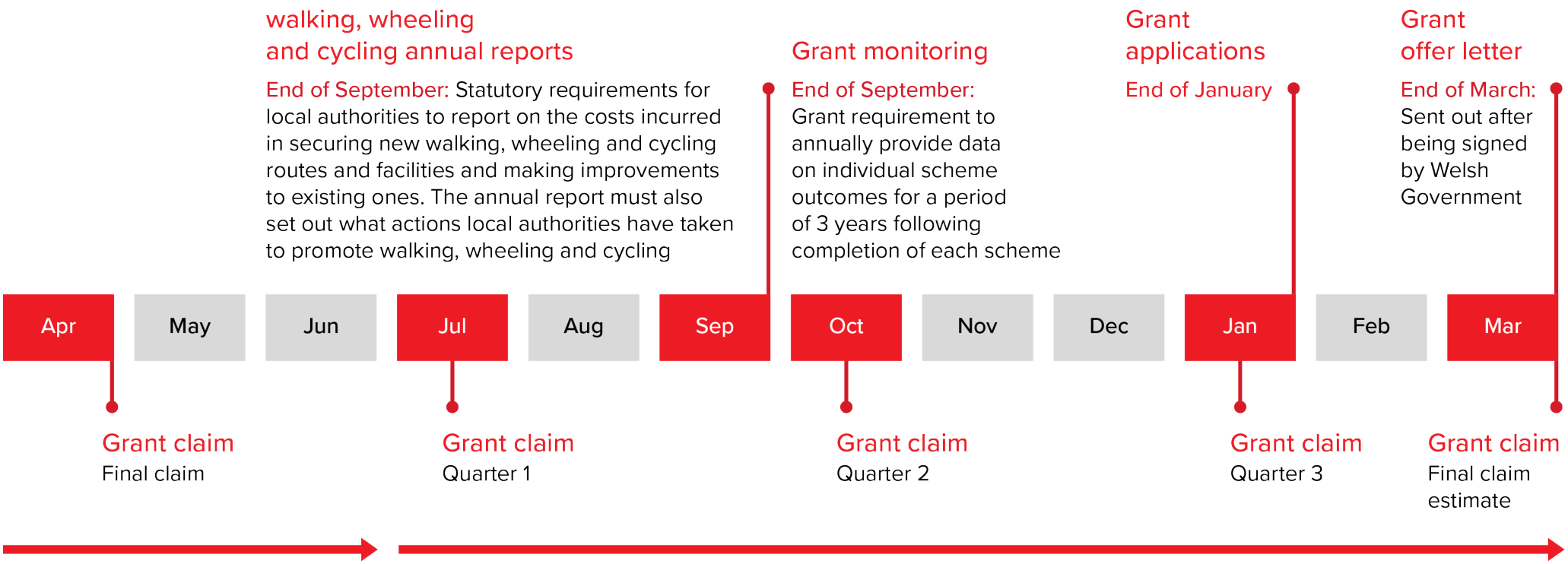
Table 2: Active Travel (Wales) Act 2013 reporting duties for reports to accompany submission of Active Travel Network Maps[8]

Reporting requirements	Submission
Number of existing Active Travel Routes	Number and length of walking routes in your authority.
Number of existing Active Travel Routes	Number and length of cycling routes in your authority.
Number of existing Active Travel Routes	Insert number and length of shared use routes in your authority.
Baseline (2016) and new data	Number of active travel trips recorded.
Baseline (2016) and new data	Percentage of children walking or cycling to school.
Baseline (2016) and new data	Percentage of travel to work trips by walking or cycling.
Baseline (2016) and new data	Percentage of people making active travel journeys.
Baseline (2016) and new data	If specific data is available for existing active travel routes, please indicate which routes and their usage levels.
Baseline (2016) and new data	An indication as to the extent usage data is available. Has a baseline been recorded? Has there been follow up monitoring?
Steps taken to promote active travel as a way of reducing or limiting air pollution	Report specifying the steps taken in performance of the duty to promote active travel as a way of reducing or limiting air pollution in their area.
What data was available in your local authority to record usage?	Other data to record usage.
What data will be available to support the next iteration of this report?	Insert anticipated methods. For example, counters on new routes.

Figure 4 summarises the active travel annual reporting timeline, showing submission dates as well as grant timelines.

6 See Active Travel Act Guidance (p56).
7 This is based on the template in Appendix F of the Active Travel Act Guidance.
8 Source: Appendix F in ATAG

Figure 4: Walking, wheeling and cycling reporting yearly indicative timeline



Monitoring tools and approaches

How to choose monitoring tools

Selecting the right data collection tools to monitor your scheme(s) is important to make sure that the relevant outcomes data is collected.

The information you collect about a scheme and its users can be used as evidence to measure and demonstrate progress against not only the objectives of the scheme itself, but also relevant measures in the Welsh Transport Strategy[9] and points of focus in the Active Travel Act Guidance (ATAG).

The ATAG recommends four key monitoring and evaluation tools as part of a minimum advised approach for a scheme's monitoring and evaluation plan. These are:

- User surveys
- Counts – pedestrian and cycle
- Resident surveys
- Hands-up surveys in schools.

Each of these options has their specific uses and should be used as a minimum option for monitoring, if relevant to the walking, wheeling and cycling project. Table 3 details when each monitoring tool should be used, the outcomes it can collect data on, the rationale for its selection, and a link to the tool section in this toolkit. It is adapted from table 16.3 in ATAG[10].

Appendix 1 – Monitoring tools and reporting requirements summarises how user surveys, counts, hands-up surveys and resident surveys can help fulfil the three-yearly reporting requirements of the Active Travel (Wales) Act.

9 The Welsh Transport Strategy: https://tfw.wales/projects/monitoring-and-evaluation/wales-transport-strategy/monitoring-measures

10 Note: these are not the only methods that can be used to monitor and evaluate walking, wheeling and cycling schemes. Table 16.2 in the ATAG lists some further methods to consider, such as cycle parking counts, interviews, focus groups and data from mobile apps. However, these methods are not covered by this toolkit.

Table 3: Recommended minimum level of monitoring for walking, wheeling and cycling schemes[11]

Tool	When required	At baseline or follow-up	Monitoring outcome	Rationale	Toolkit link
User surveys	This will be relevant to all schemes.	Applicable both at baseline and after scheme construction, as long as some section of route exists at baseline. Where not applicable, consider using resident surveys or counts (see below).	Levels of walking, wheeling and cycling route use. Provides additional data relating to walking, wheeling and cycling journeys, including wider benefits, and can be used to validate automatic counts.	**Pre- and post-scheme** To provide a detailed measure of route usage at different points in time, including a user count and additional information about the usage observed, specific to the location where the survey is carried out.	User surveys
Resident surveys	This will be relevant to all route and network proposals (not for minor works).	Applicable both at baseline and after scheme construction.	Stakeholder perceptions and expectations around an intervention. Can capture quantitative and qualitative data on travel behaviour.	**Pre-scheme** To help understand user needs and aspirations, inform the scheme objectives and provide baseline data pre-construction. **Post-scheme** To provide evidence of impact of the intervention post-construction. Should consider the relevant household or community area to include in data collection as being near to the scheme, including whether any schools, activity clubs, community centres or local businesses should be targeted in the data collection.	Resident surveys

11 Source: Adapted from ATAG table 16.3

Tool	When required	At baseline or follow-up	Monitoring outcome	Rationale	Toolkit link
Pedestrian and cycle counts	All infrastructure schemes expected to influence levels of walking and cycling trips through new or improved provision.	Applicable both at baseline and after scheme construction.	Levels of walking, wheeling and cycling use.	**Pre-scheme** To understand existing levels of walking, wheeling and cycling, use and potential demand for interventions. **Post-scheme** To capture the realised levels of usage.	Pedestrian and cycle counts
Hands-up surveys, or travel tracker tools	To be used where a project is near to a school (within 2 miles for primary schools, 3 miles for secondary schools) and/ or expected to influence travel behaviour to/ from a school.	Applicable both at baseline and after scheme construction.	Mode of travel to school.	**Pre- and post-scheme** To understand travel patterns and behaviour associated with schemes based around schools.	Hands-up surveys in schools

For a more detailed view of the specific indicators and measures that each of these monitoring tools collects data for, please see table 7, table 8 and table 10 in appendix 1 – Monitoring tools and reporting requirements.

Proportionality

There is not a one-size-fits-all approach for which monitoring tools are right for monitoring which scheme. To make the decision-making process easier, table 4 provides information on whether a monitoring tool is required for various category schemes.

Table 4: Proportionality of various monitoring tools for scheme categories

Scheme category	Baseline monitoring of any type	User surveys	Resident surveys[12] Household surveys (aka household travel behaviour surveys)	Resident surveys[13] Postal surveys (aka perception surveys)	Pedestrian and cycle counts	Hands-up surveys
Category. 1	Yes, required	Not required	Not required	Not required	Yes, required	Yes, required (if a school is likely to be impacted by the scheme)
Category. 2	Yes, required	Decide on a case-by-case basis	Not required	Not required	Yes, required	Yes, required (if a school is likely to be impacted by the scheme)
Category. 3	Yes, required	Yes, required	Decide on a case-by-case basis	Decide on a case-by-case basis	Yes, required	Yes, required (if a school is likely to be impacted by the scheme)
Category. 4	Yes, required	Yes, required	Yes, required	Yes, required	Yes, required	Yes, required (if a school is likely to be impacted by the scheme)

12 One type of survey (a household survey or a postal survey) should be sufficient for a single scheme.
13 One type of survey (a household survey or a postal survey) should be sufficient for a single scheme.

User surveys

This guidance will support your organisation in running or commissioning a user survey. This is a tool that is relevant to all walking, wheeling and cycling schemes.

In addition to the basic guidance below, we also provide:

- a survey template (downloadable as a separate document)
- a data entry template (downloadable as a separate document)
- detailed instructions for surveyors (Appendix 2 – User survey and manual count instructions).

What is a user survey?

User surveys involve surveying people who pass by a meaningful selected location along an walking, wheeling and/or cycling route.

The survey questions, answered by those people who can stop and take part, are often accompanied by a manual count of people using the route. This manual count is produced by a surveyor(s) who captures the number and basic characteristics of people using the route over the course of four 12-hour days.

User surveys capture data on people's attitudes and perceptions towards the route they are using, as well as trip information (such as journey destination) and demographic information. Running two surveys, one before and one after route changes, makes it possible to understand changes in route usage types, user characteristics and user perceptions when route changes are made.

Why do user surveys?

User surveys provide lots of information about a route and its users, including how and why people are travelling, the distance they are travelling, why they chose the route and their impressions of the route itself.

A user survey is a useful monitoring tool and can be used for baseline monitoring and to assess wider scheme impacts and benefits once a new or improved route is in place. Information on site selection is included below.

User surveys can also be used as a qualitative tool, where participants can provide personal testimony if there is the opportunity for an 'open text' response.

User surveys used in conjunction with manual counts of users on-site can give a sense of route usage levels and the impact of route interventions on this.

Manual counts and user surveys are usually carried out over a short time-period. This means that the data generated does not account for seasonality, limiting the methods' validity for assessing annual route usage without a further established statistical process. However, user surveys and manual counts in isolation are still useful for understanding route users and usage at the surveyed times of year.

What questions are used in a user survey?

A user survey template that has been developed for use by Welsh local authorities is available as a downloadable document to accompany this guidance.

Every question on a survey must have a purpose. We have listed the purposes for the survey questions we have provided for you in Appendix 2 – User survey and manual count instructions. Below, we go through several key question types and their purposes in more detail.

Survey metadata

The first part of the survey contains fields for the survey metadata. This helps to collect important information used for organising, cleaning and analysing the survey. The surveyors should fill these out for each survey:

- Survey site number
- Interview number
- Location
- Date
- Time interview started
- Interviewer initials
- Day type
- School holiday/term time
- Direction of travel
- Infrastructure type.

Travel information

User surveys normally include questions about different facets of a journey. These include questions on:

- Current travel mode and other travel modes that may be used as part of the respondent's journey
- Reason for the journey and doing multiple journeys in succession
- Start and end locations
- Travel distance and time
- Travel choices if the current route did not exist
- Journey frequency.

Opinions on the route

A user survey also contains questions that investigate the respondent's views on the route itself, the services it provides and its quality. These include:

- Whether a respondent would recommend the route
- Route connectivity
- Services provided by the route e.g. "I save money by using the route" or "I like the surroundings on this route"
- The quality of the route e.g. "Has a high-quality surface" or "Signed well enough to navigate easily".

Data protection

If the survey template is followed, personal data concerning postcode, age, gender, health, physical activity, employment status and ethnicity may be captured.

If you choose to collect this data, you will need to conduct your own data protection assessment and decide the lawful basis on which this data is being collected.

- If collecting sensitive personal data, you may need to collect the participant's consent as well as using another lawful basis
- If only collecting basic personal data, you can explain what lawful basis they are using at the top of the survey or via the surveyors.

You can consult the Information Commissioner's Office[14] for advice on this topic. The privacy notice used should be your own data controller's. The materials sent to the surveyors should include a link to your data controller's broader privacy policy and the basis you are collecting the personal data on.

The user survey template supplied has a generic data protection and data privacy statement since it is being used for all local authorities across Wales. It is important to communicate to whoever is conducting the survey that it should be made specific. For example, 'data controller' should be replaced with the name of the local authority commissioning survey.

Respondent characteristics

The 'Respondent characteristics' section includes questions on health conditions, physical activity as well as standard demographic questions.

This data is useful for:

- Understanding how different parts of the population interact with route interventions
- Comparing survey respondent demographics to the known demographics of the local population to understand how representative the survey responses are.

14 Information Commissioner's Office: UK GDPR guidance and resources

How to plan a user survey

To carry out a user survey a standardised process should be followed. This will keep your data collection consistent and reliable.

Selecting a survey site

User surveys involve surveyors stopping route users to speak to them about their journey. This means that it's important to choose a safe location with sufficient space for users to stop without affecting others on the route.

There is often not a perfect place to locate a user survey, but your location should be chosen by weighing up several different factors:

- Site should be traffic-free or allow for cyclists to merge into a traffic-free area. (Avoid surveying users on-road unless it is very safe to do so for the user)
- Accessible for a survey team to get to
- Enough room for a survey to be conducted while allowing people to use the route as normal
- Safe for interviewers – for both physical features and perceived risks or personal safety (e.g. open, uncovered area and well lit)
- Have a good view of route traffic
- At a natural slowing or stopping point – so cyclists will be easier to stop
- If carrying out a manual count, consider monitoring intersections to capture the most route users
- If located near to an automatic counter, the survey should not interfere with traffic over the counter loop
- Be representative of usage along the section of route you are trying to monitor, as far as possible
- Represents the design changes. If there are different sections, consider using multiple surveys.

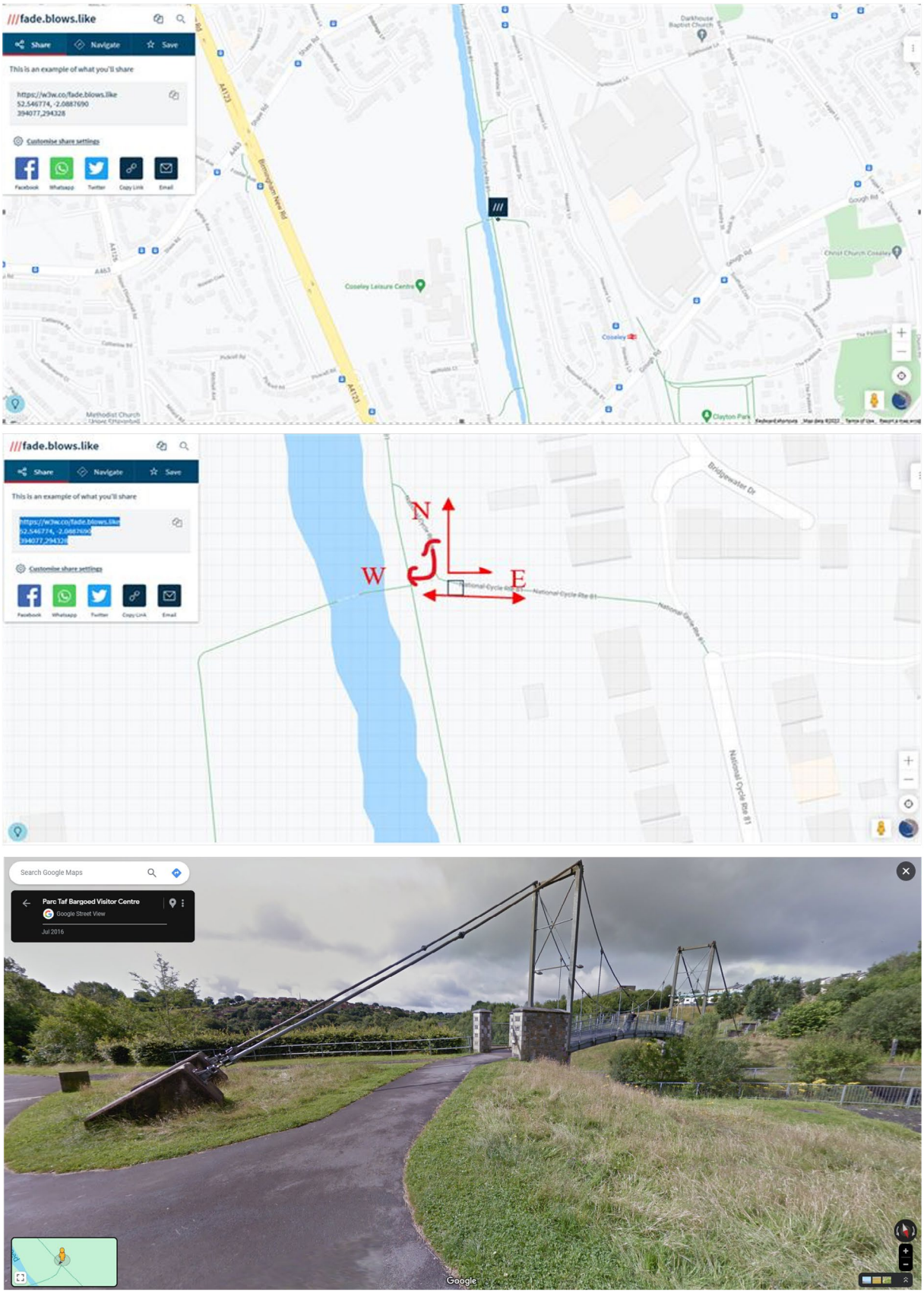
If you can't find a suitable site, manual or automatic video counts may provide an alternative method for collecting route user insights. See the 'Pedestrian and cycle counts' section for further information.

Google Street View and satellite imagery can help you find a suitable location, with Google Maps pins providing a latitude/longitude. An alternative locator tool is What3words.

Figure 5 displays an example of an appropriate site for a user survey, at a natural slowing or stopping point that is wide and allows for unimpeded movement of other route users.

The red arrows on the second map indicate instructions for the counting of users moving in different directions (such as north to west, east to north and west to east).

Figure 5: Example of appropriate site selection for a user survey (note: photograph displays different site to maps)



Sources: What3Words app using Google Maps basemap © 2024; Google Maps © 2024.

Selecting survey dates

User surveys should ideally take place between April and September, though February, March and October can also be possibilities if there is no other option.

User surveys are not recommended to be completed over winter months, as travel by active modes reduces, and this makes it difficult to get a large sample.

Surveys and counts are usually carried out over 4 separate days from 7am to 7pm, including a mix of week and weekend days and term-time or holiday days depending on whether school or holiday usage is relevant for your sites.

If you are surveying school holidays, pick one weekday and one weekend during the holidays, and one weekday and one weekend day during term-time. If surveying only during term-time, pick three weekdays and one weekend day.

Weekday counts usually take place on a Tuesday, Wednesday, or Thursday, and weekend days are usually on a Saturday. Table 5 summarises the suitable days.

Table 5: Day types for user surveys

Day type	Acronym	Suitable days
Weekday term-time	WDTT	Any Tues, Wed or Thurs when school is in session.
Weekend term-time	WETT	Any Saturday where the preceding and following week are at least majority school days.
Weekday school holiday	WDSH	Any Tues, Wed or Thurs where there is no school (for at least most of the week).
Weekend school holiday	WESH	Any Saturday where there is no school for at least the majority of the preceding and/or following week (e.g. at the start/end of half term).

Consider the following points when deciding which days to pick:

- Is the route likely to be used as a route to or from a school?
- Do you expect high leisure usage that would see increased use during holidays?
- Are there any big events scheduled that might affect usage?

Pre-and post-monitoring

To monitor change and impact at a site, you will need to do a user survey before and after any changes. The user survey location, time of year and day types should be the same for both pre- and post-monitoring.

If a scheme is introducing a brand-new route where no provision existed previously, then a resident survey may be used for baseline data collection. See 'Resident surveys' for more information.

How to commission a user survey

As an ideal package, the user survey should be carried out alongside a manual count of route users. We recommend commissioning a research supplier to carry out the user survey and manual count. These suppliers will have experience carrying out this type of data collection and have strong procedures in place to ensure a standardised high level of data collection quality and reliability.

Names of suppliers who are able to carry out user surveys and counts are available and can be provided by contacting your regional lead.

Confirmation of specifics and survey materials

When using a third-party supplier to carry out a user survey, you will need to send them:

- The survey template (downloadable as separate document)
- Information about the chosen survey site
- The dates chosen for the survey
- A data entry form for the survey (downloadable as separate document)
- A data entry form for the manual count (if applicable)
- Contracts and financial information required.

Without a count, it would be possible to carry out a user survey in-house with less expertise requirements, though it would mean that the data may have less reliability and validity and would not be able to be weighted by population.

How to conduct a user survey and manual count

Appendix 2 – User survey and manual count instructions show how to carry out a user survey and a manual count. These instructions can be given to suppliers to ensure that data collection is consistent. This can, and should be, edited to make it specific for your project.

How to analyse user survey data

Cleaning the data

Before analysis of a user survey and manual count data, you will need to check and clean the data. Some suggested steps to follow are:

- Checking the survey logic has been followed and response codes are consistent with the answer options
- Checking that dates, locations and directions are consistent with those requested
- Looking for extreme highs or lows in the daily count totals and journey times which might indicate errors or unusual events
- Checking days are correctly coded (weekday/weekend, school holiday/term time).

Analysing the data

Once the data is ready, you can analyse and visualise the data. Analysis involves summarising your results to gain insights about route users and the route itself. Many programmes are available for analysing and presenting data, such as Excel and Power BI.

It is worth producing a summary of each question in the survey, and if there is a count completed alongside.

You can also summarise the qualitative data from open text responses. It can be helpful to tag repeated topics to find patterns in the responses, such as if most respondents mention other places the route helps them to access.

It is also possible to use the postcode data collected from respondents to produce interesting maps of where people come from, where they are going, how far they are travelling, and how locally they live.

You can also explore how behaviours and perceptions differ among the different demographic groups that have responded to the survey.

Using the results

You are now ready to use the results of the user survey and count.

This might be to produce a simple report, a visualisation of users or for use within annual grant reporting.

Remember to include the context: how many people responded, what proportion of the count population this is, and which sections of the local population are over or under-represented in the results. To do this, you will need to gather secondary data on the local population from sources such as the Census.

Figure 6 shows an example of some of the visualisations or outputs you can produce from the results.

To ensure best practice for creating visualisations are considered, we would recommend the Royal Statistical Society as a reference point[15].

Figure 6: Example of analysis outputs and visualisations[16, 17]

Trip details

21% of route users said they have a physical or mental health condition. Of these, 30% and 38% said this reduces their ability to carry out day-to-day activities a lot or a little, respectively

94% of route users said that this route has helped them to increase the amount of physical activity they regularly take

50% of route users achieved 30 minutes or more physical activity on 5 or more days in the past week

88% of route users said that using this route has helped improve their wellbeing

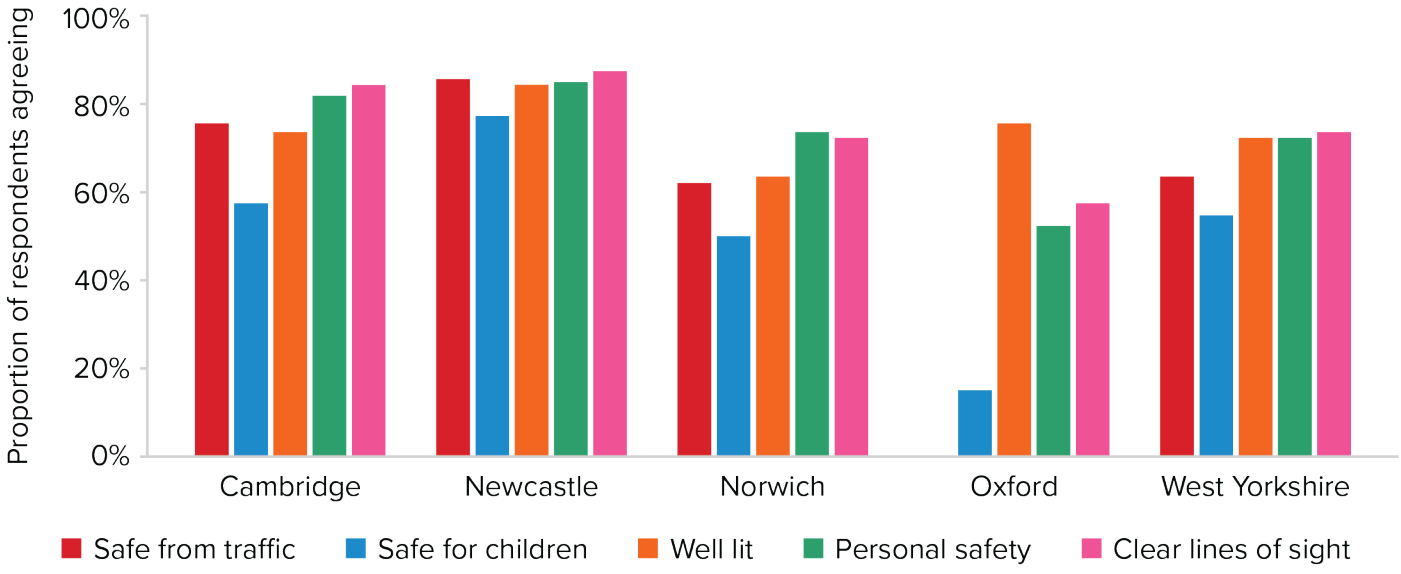
5% of route users said that if this route did not exist, they would have used a car or van for the trip instead

60% of route users said that this route has helped them to access retail

25% of route users said that this route has helped them to access family & friends

77% of route users said that they used this route because they have environmental concerns

99% of route users said that they used this route to appreciate nature



15 Royal Statistical Society Best Practice for Data Visualisation, found here: Best Practices for Data Visualisation (royal-statistical-society.github.io)
16 Source 1: A Sustrans user survey report visualisation example from a project in Leicestershire.
17 Source 2: Cycle City Ambition 2013 – 2018 synthesis report, found here: Summary and Synthesis of Evidence: Cycle City Ambition Programme 2013-2018 (publishing.service.gov.uk)

Resident surveys

What are resident surveys?

Resident surveys are data collection methodologies that collect behaviour and perceptions data from local people.

The surveys can be conducted as a household survey or a postal survey.

Household surveys (referred to as 'household travel behaviour surveys' on page 279 of the Active Travel Act Guidance) involve one or more surveyor's visiting residents in their home and asking them questions. These types of surveys may be more suitable when delivering a larger, area-wide programme of interventions.

Postal surveys (referred to as 'perception surveys' on page 279 of the Active Travel Act Guidance; also known as 'community perception surveys') are circulated via a mail drop with respondents having the option to answer by post or fill out an online version of the survey. These can be appropriate for schemes of different sizes to enable collection of local community perceptions for residents or businesses affected by a particular scheme, or as part of data collection over a large geographic area where a more extensive programme of activities is being delivered.

Why use resident surveys?

As noted in table 3, resident surveys could be relevant to all route and network proposals apart from minor works, as they are an excellent way of gathering travel behaviour and perceptions data from local residents before and after a scheme is implemented. That is not to say they have to be used for every scheme. For schemes where a resident survey is relevant, postal surveys are sufficient for gauging the perceptions of local beneficiaries. It is only when a larger scheme, with an extensive programme of walking, wheeling and cycling interventions, is being delivered should a household travel behaviour survey with a surveyor be considered.

Resident surveys can be used to assess local people's feelings and behaviour related to walking, wheeling and cycling, and how these vary according to different demographics.

Resident surveying provides an opportunity to gather data from people who may not already know about or use walking, wheeling and cycling routes, so can provide valuable insight into non-usage and barriers to usage. They are also useful in contexts where a walking, wheeling and cycling route may not already exist, but where you want to collect information about people's travel choices in the locations that may be affected by the new route.

Resident surveys can also be used as a form of community engagement and can help inform the direction and objectives of the scheme itself if carried out at the early stages of the project.

What kind of resident survey to use?

Household surveys

Household surveys provide excellent granularity of data and can collect qualitative data alongside more traditional quantitative survey data. However, due to the more intensive nature of surveyors visiting residents, there is a limit on the number of households that can be surveyed in a certain timeframe. Additionally, this method of data collection is more expensive than postal resident surveys. At time of writing, the cost of these would usually fall between £40,000-90,000 per iteration.

Postal surveys

Postal surveys can be distributed to a large number of households across a project area at comparatively little cost (<£10,000), providing an opportunity to collect a large number of responses. A larger number of responses can provide more validity to the data gathered. However, to boost response rates, surveys are often short in length, meaning the detail of the data gathered can be somewhat surface level and may not drill down into the motivations/reasons of respondents.

The aims and qualities of your walking, wheeling and cycling project can help you to decide upon which type of resident survey to use if using this method. For most projects, some form of postal resident survey to local people and businesses likely to be affected by a scheme will be sufficient.

How to do resident surveys

Household surveys

For large programmes of interventions where it may be more appropriate to undertake household surveys, we would recommend commissioning an external monitoring supplier, as there is a high level of expertise required to gather robust data. These suppliers can also help to craft the research design of the household survey based on your needs or just carry out the data collection on your behalf.

In terms of content, we would recommend some focus areas:

- Current travel behaviour for different journey purposes
- Barriers/facilitators to walking, wheeling and cycling (e.g. safety, path quality, accessibility issues)
- Feelings about local walking, wheeling and cycling routes and current scheme/existing route (if applicable)
- Access to green space/community destinations and whether these have been facilitated by walking, wheeling and cycling routes
- Any themes relevant to the project that would benefit from more in-depth qualitative questions
- Demographic questions.

Household surveys can be carried out at baseline (pre-completion) and once after the walking, wheeling and cycling project is completed, to consider the infrastructure and its impact both prior to, and after, the project. Surveyors will typically record the answers of the resident on a digital device when conducting the survey eliminating the need to make paper copies of the survey.

Postal surveys

Postal surveys are relatively straightforward to carry out with the help of a third-party mailroom or mail house, something that your authority will likely already use in different capacities. A third-party mail-house can also host a freepost return address and provide data entry if required. Postal surveys can be carried out at baseline and after the project has been completed or can be developed to be retrospective in nature if no baseline was possible.

When developing a postal survey, there can be merit to developing a mirror online survey so the two can be run in tandem, giving residents the option to complete the survey either via freepost return postage or online[18]. In this way it is possible to circulate surveys in a way that reduces paper use and minimises environmental impact.

If deciding to survey online, it is important to be mindful of the different implications around the protection of personal and private data, as well as to think about accessibility of these surveys. For example, circulating an online survey using email addresses for households, where these were collected for a different purpose and residents have not consented to having their email addresses used in that way, would be a violation of GDPR. Social media presents an option to reach a wide audience digitally but comes with risks, such as whether it is effectively reaching the target residences and encountering negative feedback.

Address data meanwhile is not private information and there are opensource databases for UK postal addresses. Sending surveys out in the post can ensure that surveys reach residents who might not use smart phones, email or social media. The use of a mail-house ensures a local authority can deliver paper postal surveys whilst still operating 'paper free' in their offices.

The survey should be crafted to assess the opinions of residents about the walking, wheeling and cycling infrastructure project as well as to understand their demographic information and views and behaviour relating to active travel. The themes investigated should be largely like those listed above in the household survey section. Additionally, the survey should:

- Have information about the walking, wheeling and cycling project
- Be short and simple
- Provide a link or QR code giving respondents the option to complete the survey online instead
- Aim to collect as little personally identifying data as possible
- Consider a prize draw to boost response rates
    - If a prize draw is used, data protection would need to be considered in more detail as you would need to collect personal identifying information such as email addresses or telephone numbers.

Once the survey has been developed, you will need to make a proportionate decision on which residents to send the survey to or conduct the survey with. There are a number of options in how you can choose a research area, for example:

- A sample all residents who live within a certain radius of a route (see figure 7). As outlined above, for most walking, wheeling and cycling projects this approach will be the most appropriate

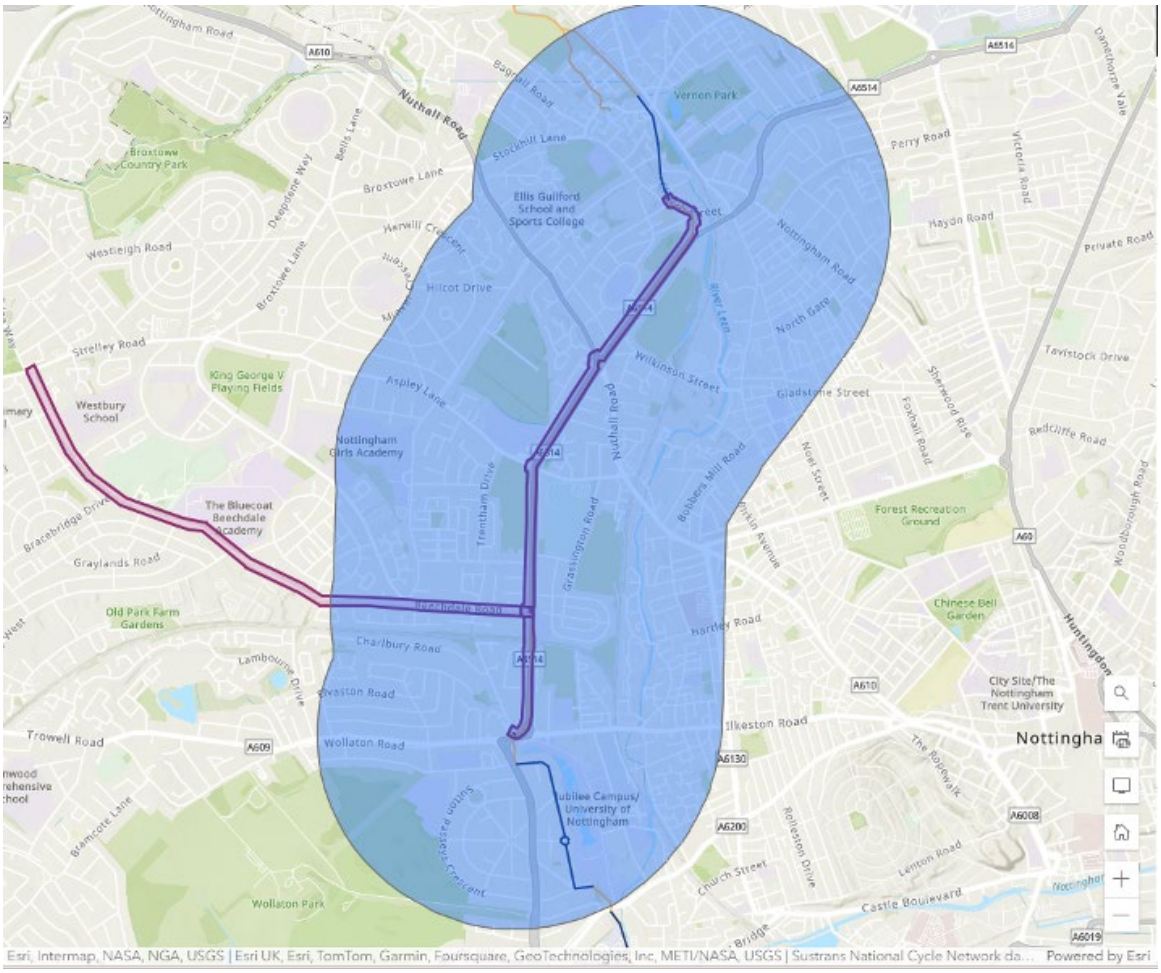
18 Argymhelliad y Swyddfa Ystadegau Gwladol yw cynhyrchu arolygon sydd ar-lein yn gyntaf. Designing the future of ONS surveys | National Statistical

- A random sample of all residents within a chosen administrative geography if appropriate
- A sample of several urban areas along the walking, wheeling and cycling route
- A section of a wider conurbation nearby the walking, wheeling and cycling route.

The qualities of the walking, wheeling and cycling project and the local area can help you to decide the research area. For larger schemes or programmes of interventions, your GIS team or GIS software along with an address finder software should be able to produce a large address list from your chosen research area. From this large list, if seeking the views of many respondents we would suggest that at least 1,000 addresses are chosen to send the postal survey to, increasing this in size depending on the size and nature of the project, the project budget and how densely populated the area is. The addresses chosen should be geographically spread over the entire research area. If there are fewer than 1,000 addresses in the whole research area, then all residential addresses should have surveys sent to them.

A general rule of thumb for a good response rate is 10% of the total surveys sent out.

Figure 7: An example of a 1km buffer zone around an walking, wheeling and cycling route, used to gather postcodes of local residents for developing a survey sample[19]



19 Image credit: Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS | National Cycle Network data supplied by Sustrans and contains Ordnance Survey data © Crown copyright and database right (2020). Also contains OpenStreetMap contributors. | Esri Community Maps Contributors, Esri UK, Esri, TomTom, Garmin, Foursquare, GeoTechnologies, Inc, METI/NASA, USGS.

How to analyse resident surveys

Households surveys

Household surveys can be analysed in-house or by the company chosen for the work.

Qualitative (free text) responses will give you detailed insight into the reasons behind walking, wheeling and cycling infrastructure usage and opinions, as well as providing interesting data to produce case studies.

The standard quantitative survey questions in the survey can be analysed using Excel to produce response percentages that can be compared from baseline to follow-up.

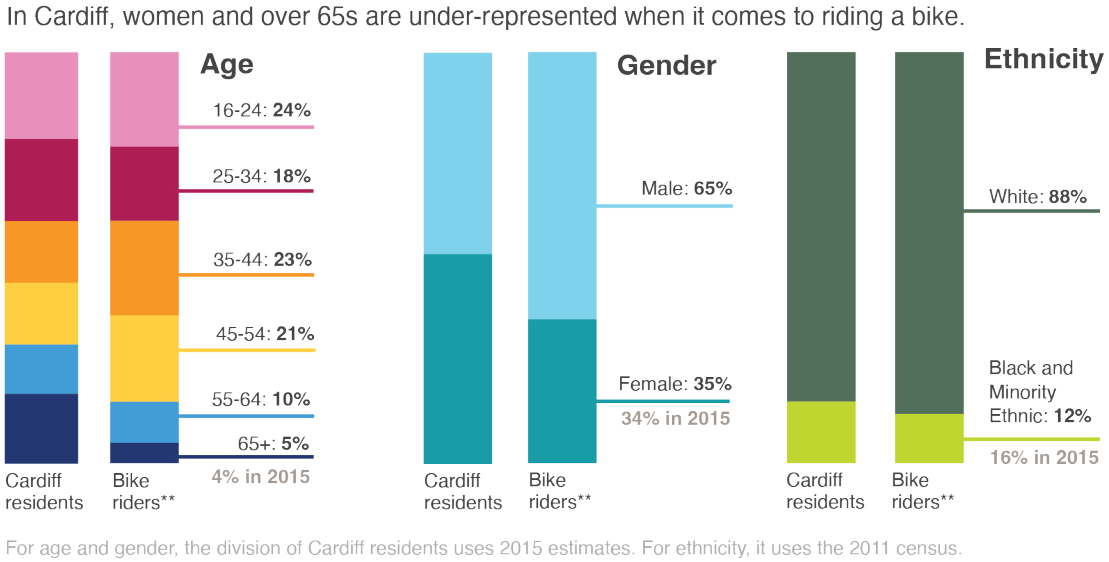
Depending on the response rate, it may be possible to look at differences in opinions and behaviour across different demographic groups, helping you understand the impact of a scheme on people with different characteristics.

Postal surveys

Responses should be added to an Excel spreadsheet or returned in an Excel format if data is collected online. Procuring external support, such as a third-party mail-house, may be appropriate to provide additional resource if internal capacity is not available. Each question should be analysed to create percentages of each response option. These can then be assessed for change from baseline to follow-up and reported on.

Figure 8 shows an example of analysis of Cardiff data collected as part of a survey in Cardiff for the Bike Life project (now the Walking and Cycling Index).

Figure 8: An example of analysis outputs and visualisations for postal surveys[20]



Results from resident surveys are valuable in making the case for walking, wheeling and cycling scheme investment and should be shared with the public where possible. However, it is up to the local authority how to go about doing this, and how they manage the responses in their promotional and engagement work.

20 Source: Sustrans Bike Life (now Walking and Cycling Index) Cardiff 2017 report.

Pedestrian and cycle counts

What are pedestrian and cycle counts?

Pedestrian and cycle counts are counts of people and cycles at specific locations on a walking, wheeling and cycling route. The counts can give an indication of the usage levels of a route, and dependent on data collection method, can provide more detailed evidence on the types of users. Data collection methods include:

- Automatic counts using sensor equipment (long term)
- Automatic counts using video equipment (long term)
- Video manual counts (usually done over 7 or 10 days)
- Manual surveyor counts (usually done over 4 days).

If the method chosen is counting users over a long period, e.g. automatic counters, it is possible to produce monthly and annual usage estimates for the monitored route.

For short-term counts, it is also possible to extrapolate these counts to create monthly or annual usage estimates with the correct methodology in place. However, this methodology would need to be able to account for seasonality and weather, as these have a strong impact on usage levels.

Why use pedestrian and cycle counts?

Route usage counts, whether long-term or short-term in nature, can give a strong numerical indication of the impact that improvements to walking, wheeling and cycling infrastructure have on usage levels of the infrastructure. Usage data is one of Welsh Government's walking, wheeling and cycling reporting requirements, with the ATAG stating it should be collected for: "All infrastructure schemes expected to influence levels of walking and cycling trips through new or improved provision".

This usage data is also useful for feeding into economic appraisal tools, such as the Active Mode Appraisal Toolkit[21] (AMAT), which models the economic benefit of walking, wheeling and cycling improvements.

What kind of count to use?

Long-term counts

Long-term counts are the ideal option for gathering high-quality usage data showing seasonal variations. They require the installation of sensors or counters on a route. This can incur a high initial cost and possibly legacy costs for maintenance.

An electricity supply is required for some sensors, presenting some challenges in very rural contexts. Permanent counters may not be appropriate for all types of walking, wheeling and cycling infrastructure projects.

However, there may already be sensors or counters that are installed nearby the route itself and capturing data. These can be used to support scheme monitoring if it can be argued that user count changes are attributable to nearby walking, wheeling and cycling infrastructure changes.

21 The AMAT user guide can be found here: Active Mode Appraisal Toolkit User Guide (publishing.service.gov.uk)

Short-term counts

Short-term counts are useful for schemes where a more proportionate response is required (for example, smaller schemes) or need to collect baseline data at short notice.

For short-term counts, we recommend carrying out either:

- a 3-4-day surveyor count alongside a user survey, as noted in the User Surveys section. These are relatively inexpensive and can be put in place within a matter of weeks. Like user surveys, 3-4 days should be the minimum length of a surveyor count and ideally should be done across the different day types displayed in table 5. In order to cover all day types, often manual counts are not performed on consecutive days.

- a 7-10 day video manual count. This is where a temporary video camera is installed in the location of interest with a duration of 7 days seen as best practice. The days of footage are then reviewed, and the route users are manually counted by an analyst. Video manual counts do not require a surveyor on site, so it often costs less to commission them for a greater number of count days. Additionally, because video manual count days usually take place in one continuous period (to avoid having to takedown and remount the cameras) it is more difficult to perform counts over all day types. For both these reasons the minimum length of time of a video manual count should be 7 days.

Both types of counts can capture the number of people using the route, and the transport mode used, over the course of four 12-hour days. However, as noted above, these only give a snapshot of usage levels at a specific time of year and can be greatly impacted by weather conditions or events taking place at that time. These types of counts also require a follow-up count after the infrastructure project is completed, preferably completed at the same time of year as the baseline.

Local authority staff are not expected to act as the surveyors, on-site or off-site, for these counts. Professional third-party suppliers could be commissioned to conduct manual counts on-site or count video footage collected from video manual counts.

Either short-term count method would be considered suitable to address the minimum monitoring requirement for a category 1 or 2 scheme. Category 3 or 4 schemes would require a more detailed monitoring approach that would also include some sort of count data.

Table 6 below outlines the capabilities and pros and cons of each type of counting method.

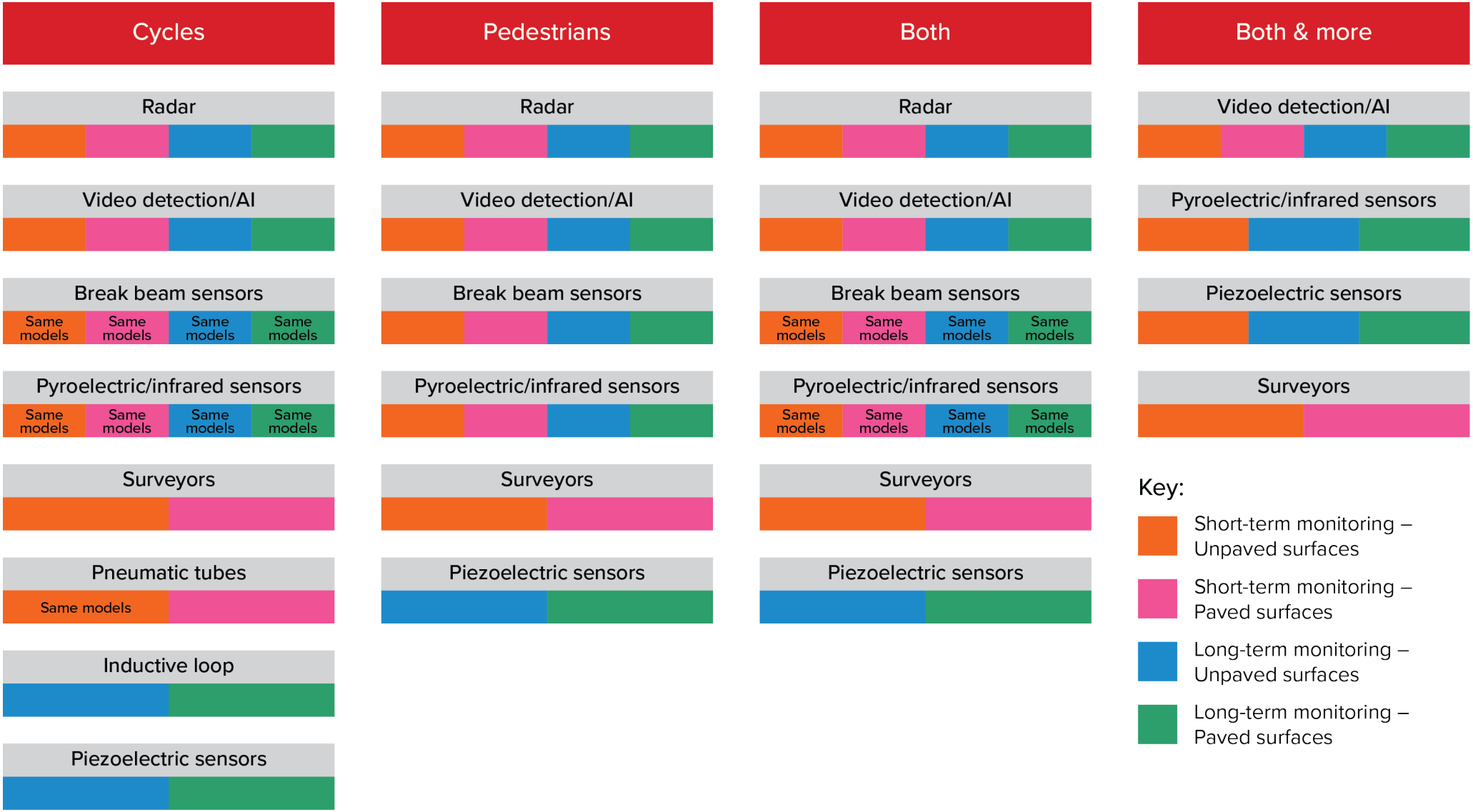
How to do pedestrian and cycle counts

Figure 9 highlights different kinds of equipment and tools that can be used to capture pedestrian and cycle count data depending on a short or long-term approach on paved or unpaved surfaces.

Table 6: The pros and cons of each count type

Type	Permanent	Temporary	Mains	Solar	Direction	Speed	Pedestrians	Cycles	Other user types
Automatic counts using sensors	Yes	No	Yes	Yes (some types)	Yes	Yes (some types)	Yes (some types)	Yes	No
Automatic counts using video	Yes	Yes	Yes	Yes (some types)	Yes	Yes (some types)	Yes	Yes	Yes
Manual count (on-site surveyors)	No	Yes	No	No	Yes	No	Yes	Yes	Yes
Video manual count (footage counted off-site)	No	Yes	Yes (can be battery powered)	No	Yes	Yes (some types)	Yes	Yes	Yes

Figure 9: A decision diagram to help select monitoring equipment for counts, adapted from WSP decision tree for selecting monitoring equipment



Automatic counters or sensors usually come with a user portal or dashboard where data can be accessed and downloaded once counters have been installed.

If there is limited experience selecting and using monitoring equipment in your authority, we would recommend contacting an external monitoring supplier. They will have expertise with many of these methods. A few examples of experienced suppliers are:

Names of suppliers who are able to install monitoring equipment are available and can be provided by contacting your regional lead.

Suppliers will usually send back count data in a format that can then be analysed internally, or they can perform analysis on the data for an extra cost.

How to analyse count data

The analysis of your data depends on the type of count(s) chosen. For long-term data collected using automatic counters or sensors, the data can be downloaded in multiple forms, e.g. hourly counts, daily counts. If receiving hourly or daily data, it would be wise to perform some cleaning to check for periods of very low or very high counts and assess whether these are abnormal and should be removed from the dataset. For example, if there were any events such as festivals or sporting events. After cleaning, the dataset can be analysed by producing daily and monthly averages that can be compared before and after the walking, wheeling and cycling infrastructure project.

For short-term data collection, such as video counts or surveyor counts, excel based analysis of totals per day/per monitoring period and route user demographics would be sufficient. Count levels before and after the intervention can then be compared.

Hands-up surveys in schools

What are hands-up surveys?

Hands-up surveys are quick and simple surveys conducted in the classroom. Teachers read out a list of modes of travel and children put up their hands when they hear the travel mode they normally take to and from school. Teachers then record the responses.

Why use hands-up surveys?

Hands-up surveys are useful for understanding pupils' travel behaviour and how it changes over time. If a project is located near a school, hands-up surveys can be used to help assess the impact of the project on school travel behaviour.

The data can also help to evidence sustainable transport activity at authority level, or inform local action on school travel planning.

How to do hands-up surveys?

Public Health Wales currently conduct an annual hands-up survey in Welsh primary schools of years 1-6[22]. This provides -level data for school travel across Wales, with the aim of contributing to future actions and planning to increase walking, wheeling and cycling to school by children. This national survey provides data at Local Authority level and covers the modes of:

- Walk
- Cycle
- Scoot/Skate
- Bus
- Train
- Car
- Other.

The School Health Research Network also conducts a Student Health and Wellbeing Survey with secondary schools every two years. This is a longer survey focussed on young people's health and wellbeing, but has previously collected data on students' physical activity and whether students walk or cycle to school.

On the local scale, we would recommend carrying out a hands-up survey or using the Public Health Wales national hands-up survey dataset if the walking, wheeling and cycling infrastructure project is nearby or involves a school.[23]

If the school does not already participate in the national hands-up survey scheme, we would advise collecting data for as many classes as possible at the start of the school year in the autumn term (September/October) and at the end of a school year in the spring term (April/May/June), ensuring there is at least one data collection period before the start of the infrastructure project and after the infrastructure project is complete.

We would recommend matching the travel modes asked for by the national hands-up-survey noted above.

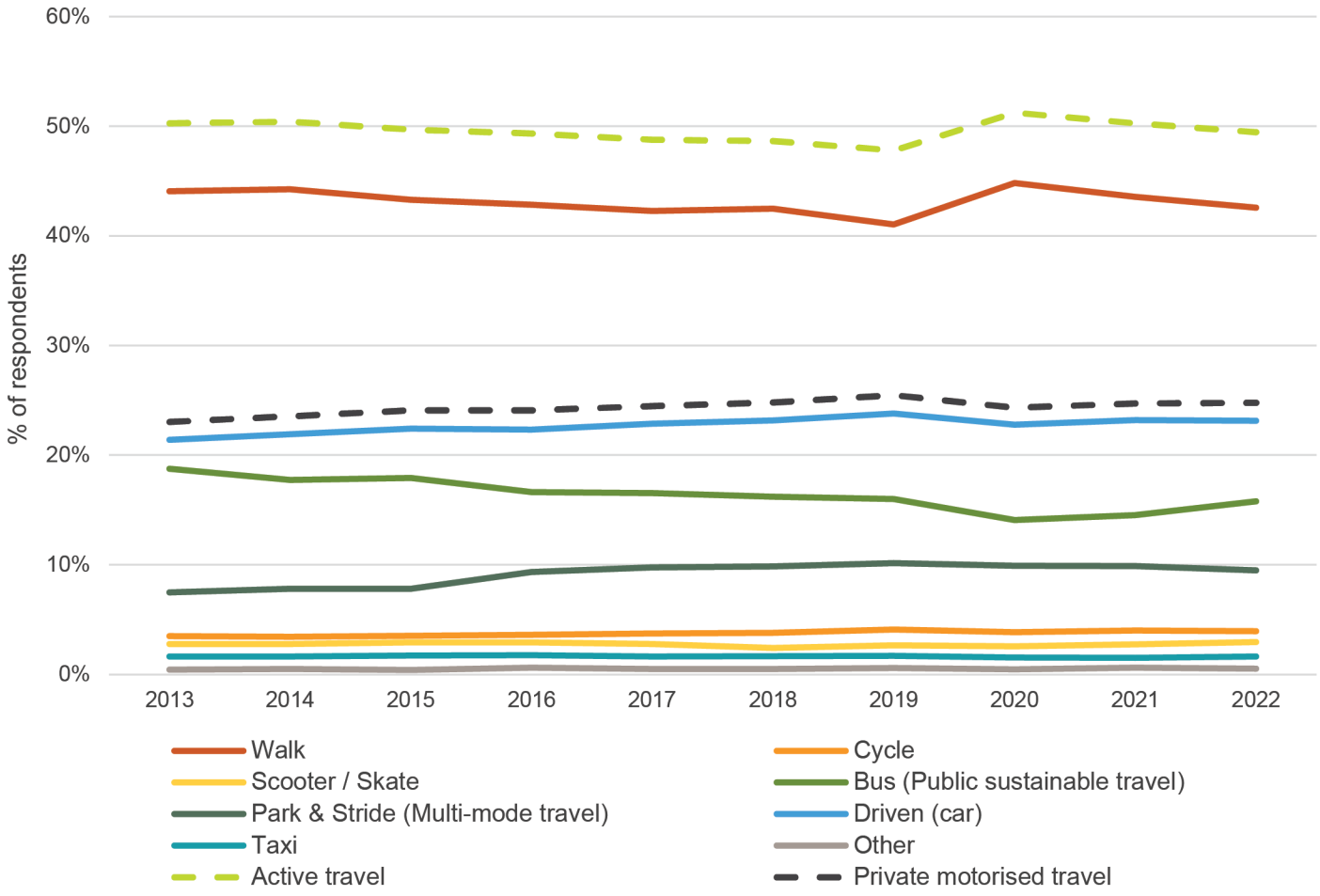
How to analyse hands-up survey data

Hands-up survey data can be analysed to create percentages of pupil travel mode by class, by year and by school. It is important to report what percentage of the school have responded to a hands up survey. For example, if the school has 1000 pupils and 500 pupils respond to the survey with100 pupils who cycle to school, then it's 20% of students cycle of the 500 out of 1000 students.

For an example of an analysis, see the Public Health Wales 2022 summary of local authority hands-up survey data[24]. Once analysed, the impact of a scheme on the travel mode can be assessed by comparing survey results before and after an walking, wheeling and cycling intervention.

22 The Public Health Wales survey information page can be found here: Travel to School Hands Up Survey - Public Health Wales (nhs.wales)
23 Specifically, the ATAG states that hands-up surveys are "to be used where a project is near to a school (within 2 miles for primary schools, 3 miles for secondary schools) and/or expected to influence travel behaviour to/from a school".
24 Summary of Public Health Wales hands-up survey data 2022: phw.nhs.wales/travel-to-school-hands-up-survey/travel-to-school-hands-up-survey-2022-summary-table/

Figure 10: An example of a hands-up-survey analysis[25]



25 Source: Hands Up Scotland Survey 2022: Overview Microsoft Word - Hands Up Scotland Survey 2022_Overview v2.0_embargoed until 25.05.2023 (sustrans.org.uk)

Appendix 1 – Monitoring tools and reporting requirements

Table 7 summarises which data collection tools can help fulfil the three-yearly reporting requirements to Welsh Ministers, as specified in the ATAG.

Table 7: Methods of data collection for walking, wheeling and cycling route reporting requirements

Reporting requirement	Content of reporting submission	User surveys	Counts	Resident surveys	Hands-up surveys
Baseline (2016) and new data	Number of active travel trips recorded.	Yes	Yes	Yes	Yes
Baseline (2016) and new data	Percentage of children walking or cycling to school.	No	No	Yes	Yes
Baseline (2016) and new data	Percentage of travel to work trips by walking or cycling.	No	No	Yes	No
Baseline (2016) and new data	Percentage of people making active travel journeys.	No	No	Yes	No
Baseline (2016) and new data	If specific data is available for existing active travel routes, please indicate which routes and their usage levels.	Yes	Yes	Yes	Yes
What data was available in your local authority to record usage?	Other data to record usage.	Yes	Yes	Yes	Yes
What data will be available to support the next iteration of this report?	Insert anticipated methods e.g. counters on new routes.	Yes	Yes	Yes	Yes

Table 8 summarises which data collection tools can help report on relevant Welsh Transport Strategy evaluation measures.

Table 8: Assessment of relevant Welsh Transport Strategy[26] monitoring measures and monitoring options

Measure	Measure title	User survey	Count	Resident survey	Hands-up survey
M1	Percentage of journeys by walking, cycling and public transport.	No	No	Yes	Yes
M4	Average distance travelled per person.	Yes	No	Yes	No
S1	Average travel time to education, health and leisure services.	No	No	Yes	No
S2	Percentage of people satisfied with their ability to access services in their local area.	No	No	Yes	No
S4	Percentage of people who walk or cycle at least once a week as a means of transport.	Yes	No	Yes	Yes
S5	Percentage of journeys to a rail station by walking, cycling or bus.	No	No	No	No
S6	Percentage of trips to visitor attractions by sustainable modes of transport.	No	No	No	No
S11	Percentage of people satisfied with their journey.	Yes	No	No	No
S12	Percentage of people satisfied with their ability to access public transport independently.	No	No	Yes	No
S18	Percentage of people who feel they can't afford to travel by public transport.	No	No	Yes	No
S20	Percentage of people who feel safe and welcome when travelling.	No	No	Yes	No
S24	Percentage of people regularly bothered by noise from outside the home caused by transport.	No	No	Yes	No

Table 9 summarises which data collection tools can help report on relevant Active Travel Monitoring Framework evaluation measures.

26 Source: https://tfw.wales/projects/monitoring-and-evaluation/wales-transport-strategy/monitoring-measures

Table 9: Assessment of relevant Active Travel Monitoring Framework monitoring measures and monitoring options

Measure	Measure title	User survey	Count	Resident survey	Hands-up survey
M1	Average distance travelled per person.	Yes	No	Yes	No
M2	Percentage of population living within 400m & 800m of an Active Travel Route.	Yes	No	Yes	No
M3	Length of Active Travel Network that meets or exceeds the Welsh Government 70% standard for route audit scores.	No	No	No	No
M4	Length of Active Travel Network that meets, or exceeds, the desirable 80% route audit score.	No	No	No	No
M5	Percentage change in average audit scores for Active Travel routes.	No	No	No	No
M6	Number of cycle parking spaces available at railway stations.	No	No	No	No
M7	Percentage journeys to a rail station by walking, cycling or bus.	Yes	No	Yes	No
M8	Increase levels of use on ATF routes.	No	Yes	No	No
M9	Percentage of journeys by walking, cycling and public transport.	No	No	Yes	Yes
M10	Percentage of short distance journeys by active travel (1 mile walking and 5 miles Cycling).	Yes	No	Yes	No
M11	Percentage of journeys to school by walking, wheeling and cycling.	No	No	Yes	Yes
M12	Percentage of people who feel safe and welcome when travelling.	Yes	No	Yes	No
M13	Pedestrians/cyclists killed or injured on the transport network.	No	No	No	No
M14	Levels of nitrogen dioxide pollution in the air.	No	No	No	No
M15	Percentage of people who walk or cycle at least once a week as a means of transport.	Yes	No	Yes	Yes
M16	Percentage of population who own or have access to a cycle.	Yes	No	Yes	Yes
M17	Percentage of schools with Active Travel School Plans (ATSPs).	No	No	No	No

Table 10 summarises which data collection tools can help assess and report on route quality as defined in the Welsh walking and cycling route audit tools.

Table 10: Assessment of relevant ATAG walking and cycling audit tools[27] and monitoring options

Principle	Factor	User survey	Count	Resident survey	Hands-up survey
Attractivenesss	Maintenance	Yes	No	Yes	No
Attractivenesss	Fear of crime	Yes	No	Yes	No
Attractivenesss	Traffic noise and pollution	Yes	No	Yes	No
Attractivenesss	Other attractiveness	Yes	No	Yes	No
Comfort	Condition	Yes	No	No	No
Comfort	Footway width	Yes	No	No	No
Comfort	Width on staggered crossings/refuges	Yes	No	No	No
Comfort	Other comfort	Yes	No	No	No
Directness	Footway provision (get to places)	Yes	No	Yes	No
Directness	Location of crossings in relation to desire lines	No	Yes	No	No
Directness	Impact of controlled crossings	Yes	Yes	No	No
Directness	Other directness	Yes	No	No	No
Safety	Traffic volume	No	Yes	No	No
Safety	Traffic speed	No	Yes	No	No
Safety	Visibility	Yes	No	No	No
Coherence	Dropped kerb and tactile paving	No	No	No	No
Coherence	Signage	Yes	No	No	No
Cohesion	Connections	Yes	No	No	No
Cohesion	Continuity/wayfinding	Yes	No	Yes	No
Directness	Time: frequency of required stops or give ways	Yes	Yes	No	No
Safety	Risk of collision (route)	Yes	No	No	No
Safety	Risk of collision (junction)	No	No	No	No
Safety	Avoid complex design	Yes	No	No	No
Comfort	Surface quality (defects)	Yes	No	No	No
Comfort	Effective width (w/o conflict)	Yes	No	No	No
Comfort	Wayfinding	Yes	No	Yes	No
Attractiveness	Social safety and vulnerability (lighting)	Yes	No	Yes	No

27 Source: ATAG Appendix H

Principle	Factor	User survey	Count	Resident survey	Hands-up survey
Attractiveness	Social safety and vulnerability (isolation)	Yes	No	Yes	No
Attractiveness	Impact on pedestrians incl. people with disabilities	Yes	Yes	Yes	No
Attractiveness	Minimise street clutter	Yes	No	No	No
Attractiveness	Secure cycle parking	Yes	No	No	No

Appendix 2 – User survey and manual count instructions

This appendix is for the benefit of the surveyor or supplier conducting a user survey. It is the data controller's responsibility to provide this appendix when commissioning or organising a user survey.

Supplied documents

The following should have been supplied ahead of time:

- Survey form
- Survey data entry template
- Count sheet/data entry template (manual count)
- Webpage for data controller's data protection information page.

User survey

Site set-up

The survey should take place in a safe location that does not disrupt the flow of non-motorised traffic. Set up any signs near the interview point asking people to stop and help with the survey. Make a note of anything unexpected about the site and contact the survey organiser about these – for example, if there are additional directions not previously identified, or construction works on site.

- One surveyor should count (see Manual Count section) while the other interviews. More surveyors may have been arranged for busier sites.
- Surveyors can swap roles provided:
    - It is the start or end of a half hour count slot
    - The site is not overly busy, e.g. peak times
- Take a selection of photographs of the site.

Who to interview

Interview the next legitimate user to reach you, including U-turns. However, **the safety of yourself and the route users must always be your first consideration.**

Respondents must have full legal capacity. This means that they must be aged 18 or over.

- Select the next person to pass you (or reach the survey point) aged 18 years or older

- If it is a group, select the first adult in the group to reach you. Do not interview the group
- Only interview each person once during the survey period. If you notice that someone passes you again during the four days of the survey, do not stop them
- Attempt to interview all legitimate route users. Avoid people using the path illegally
- If interviewing horse riders, take special care to avoid alarming the horse.

Introducing yourself

Once you have stopped someone, explain who you are carrying out a survey on behalf of and let them know that the survey will take approximately 10 minutes.

Read out the introductory text at the start of the survey, making it clear who the data controller is (i.e. the organisation that has commissioned you to conduct the user survey, for example the local authority or charity).

If you are unsure whether the person is aged 18 or over, politely let them know that they must be this age to complete the survey. If they refuse, stop the interview. If they agree, continue with the survey.

User survey forms

The user survey template form lists the questions you should ask and provides question-specific instructions. It also provides space for recording respondents' answers.

Response rate

You should aim to complete at least 30 surveys on each day, and more if the site is busy. This may involve agreeing on extra surveyors to facilitate this.

Conducting the interview

Some questions have additional instructions (in round brackets) for clarification. Routing instructions are also provided [in square brackets].

Questions that have an 'other' answer option feature both a tick-box and an open text box. Please cross the tick-box and fill in the open box where possible. If the respondent has simply stated 'other', encourage them to elaborate.

About the questions

Fill out the survey metadata if they are not already completed.

The infrastructure type should be recorded according to the following definitions:

Table 11: Infrastructure types

Infrastructure type	Definition
Shared Use	Any provision for mixed-use by cyclists and pedestrians; physically separated from traffic.
Pavement	Provision intended for pedestrians only; physically separated from traffic.
Road	Anywhere actually in the carriageway not physically separated from traffic, including painted cycle lanes.
Cycle track	Cycle provision physically separated from pedestrians and traffic (includes cycle lanes at road level separated by a barrier).

For the mode of travel question (Q1), the following definitions should be followed:

- **Bicycle (non-electric):** Standard two-wheel bicycles without electric assistance (anyone pushing a bicycle should be recorded as a pedestrian)
- **Electric bicycle:** Standard two-wheel electric bicycles (excluding e-cargo bikes or those with trailers, which should go under other cycles)
- **Other cycle (including cargo bike):** all cycles of non-standard layout including (but not limited to) tricycles, tandems, recumbent cycles, cargo bikes, hand bikes, adapted cycles, bicycles with a trailer, balance bikes, and electric versions of any of these
- **Walking with an aid (e.g. cane, walking frame, guide dog):** Including those with walking sticks, walking frames or crutches, white canes, service dogs, and others. Please do not record these under the 'walking' category
- **Walking:** Including anyone pushing a pushchair, cycle or wheelchair. Walkers using poles as fitness or trekking equipment should be recorded here. Children being carried should be included as 'pedestrian under 18'
- **Dog walking:** Including anyone walking a dog
- **Running:** Anyone jogging or running as they pass the survey point
- **Wheelchair:** Includes both powered and unpowered wheelchairs and powered mobility scooters
- **Other wheeled:** Including, but not limited to, scooters, electric scooters, skateboards, roller-skates/rollerblades and hoverboards. Do not include individuals using the path illegally
- **Other:** Please write in the mode in the space provided.

For the group size (Q3), the number of adults should INCLUDE the respondent.

Where 'main mode' is mentioned in a question (Q10), this is the mode that is used for the longest distance.

For the start and end journey boxes, a postcode is preferred. Landmarks or street names are also acceptable.

When estimating the journey time, distance, start and end locations, consider only the leg of their journey by their current mode of travel.

When asking about route features (e.g. on road sections in Q18), ask them to answer for the closest one.

When asking about refuges/crossings, only official mid-road stopping points should be counted that have enough space for a bike, e.g. a fenced island with a signal crossing.

For the 'About You' section, all questions are optional. Most have a 'prefer not to say' option. If there is no 'prefer not to say' option, simply leave the question blank.

When asking about physical or mental health conditions or illnesses, only ask any questions about the impact if they have answered that they have a condition or illness.

When asking about employment status, self-employed people should go under 'Employed'.

The last section of the survey asks about ethnicity and postcode. Because this is considered special category personal data, you are required to obtain informed consent. Please read out the privacy notice in full and obtain the respondent's consent before asking these questions.

If consent is not given, end the survey without asking these questions.

Table 12: Questions listed in the provided user survey, with an explanation of how the question should be used

Question	Use of question
Modes of travel, various journey details	Understanding respondent's use of the route, and how the route may fit into the broader transport network. Understanding respondent's journey details.
What sort of cyclist would you say you were?	Understanding a respondent's cycling experience and the type of cyclists using a route.
How likely is it that you would recommend this route to a friend?	Understanding whether a respondent would recommend the route.
If this route did not exist, how would you have made this trip today?	Understanding a respondent's travel mode if the route did not exist.
Has the presence of this route helped you to access any of the following? (route uses)	Understanding respondent's usage of the route for connectivity e.g. workplace, health services, green space.

Question	Use of question
To what extent have the following factors influenced your decision to use this route today? (route services)	Understanding respondent's feelings on various elements of route services e.g. exercise, wellbeing, convenience.
How much do you agree or disagree with the following statements about the route? (route qualities)	Understanding respondent's feelings on various elements of route qualities e.g. signage, surface, safety.
Has the presence of this route helped you to increase the amount of physical activity that you regularly take?	Understanding the physical activity of respondents.
In the past week on how many days have you completed 30 minutes or more of physical activity that was enough to raise your breathing rate?	Understanding the physical activity of respondents.
Demographic questions	Ensuring a representative cross-section of respondents have been surveyed. Understanding how different parts of the population interact with interventions.

Data entry

You should have been provided with an Excel data entry template to use for your user survey. Please contact the survey organiser if this is not the case.

Leave a cell blank if there is no data.

Email a selection of site photos to the organiser alongside the dataset. You should also inform the survey organiser if any of the following apply:

- low response rate (e.g. less than 30 surveys per day where the count is >300)
- any major difficulties encountered while surveying (e.g. unsafe location)
- any changes to the survey location (i.e. if the map provided differs from what the site looks like in-person)
- ongoing works or path closures
- ongoing events that may affect other count days (e.g. organised runs, severe weather)
- any other relevant details that may affect future survey dates.

Cover sheet

Add a map of the site. You can use the map provided to you by the organiser unless any changes have been made to the survey location after discussion with the organiser. Add any general notes about the user survey or observations from yourself or respondents in a 'Notes from surveyors' section.

Data entry – survey data

Fill out the survey metadata. Complete the day type and holiday type columns (if present) using the coding numbers (see table 13: Day and holiday type coding). Data should only be entered where an interview was completed **at least up to and including the question 'What is the purpose of your current journey?'**

- Include the direction in the format X FROM Y (e.g. EAST FROM WEST)
- Fill out each question column with a coded response (e.g. 1 for the first option in the question, 2 for the second)
- If a question is coded, include only a number in the cell (no spaces, punctuation, or letters)
- If a question was not answered, leave the cell blank
- For 'Other' questions, type in the response. The columns for open ended responses should follow the question where a respondent responded with 'Other'
- Questions where respondents can select more than one response to a question are split into separate columns for each answer option
    - If an option was ticked, type that number/code, otherwise, leave the cell bank.

Table 13: Day and holiday type coding

Code	Day type	Code	Holiday type
1	Weekday	1	School holiday
2	Weekend	2	Term time
3	Bank holiday	Blank cell	Blank cell

Manual count

The count sheet/data entry template

Each count sheet covers one half hour period and two directions. A new count sheet should be used for each separate half hour of the count, and if more than two directions are being monitored.

Site information

At the top of each count sheet, record the metadata and the basic information such as the half hour being recorded and direction:

- **Day Type:** (see table 14: Day types)
- **Weather Type:** cross the appropriate box at the end of the half hour. Select the prevailing weather during that time
- **Infrastructure**
- **Direction:** Enter the direction in the box next to 'Towards' in the format X FROM Y (e.g. EAST FROM WEST)
    - There are two boxes on each sheet, one for each direction, so that you can count two directions.

Table 14: Day types

Day type	Acronym	Suitable days
Weekday term-time	WDTT	Any Tues, Wed or Thurs on which school is in session.
Weekend term-time	WETT	Any Saturday where the preceding and following week are at least majority school days.
Weekday school holiday	WDSH	Any Tues, Wed or Thurs where there is no school on that day.
Weekend school holiday	WESH	Any Saturday where there is no school for at least the majority of the preceding and/or following week (e.g. at the start/end of half-term).

Recording users

Record the number of people to pass the count point in each half hour. Count everyone that has reached the point, including U-turns (record this as north from north, south from south, etc).

Use a separate count form for each of type of infrastructure.

To record a trip, place a diagonal line in the appropriate boxes. If all boxes are filled, continue recording by placing a line in the opposite direction to form a cross.

Users are split into age categories. These are children under 18, adults aged 18 to 64 years, and adults 65 and over (you will need to estimate age by sight). Users over 18 are subdivided into male and female. You will need to estimate gender for these individuals by sight.

- Record all legitimate user types (see table 15: Mode categories)
- If you notice that a user makes a return trip during the survey period, then record twice (once for each trip)
- If there are two people on a single vehicle (e.g. a tandem), this should be recorded as two separate entries (with the exception of pushchairs)
- Fill in the larger boxes at the end of each grid with the total
- If there is nothing to record in a box, leave them blank
- Use the Illegitimate users/Notes box to record any illegal users on off-road paths or pavements (e.g. mopeds) and to note any special occurrences (e.g. an organised run)
- At least one person should maintain the count at all times
- Avoid taking comfort breaks during peak periods.

Table 15: Mode categories

Mode	Includes
Bicycles	Standard two-wheel bicycles without electric assistance (anyone pushing a bicycle should be recorded as a pedestrian – see below).
Walking	Including anyone walking a dog, pushing a pushchair, cycle or wheelchair. Walkers using poles as fitness or trekking equipment should be recorded here. Children being carried should be included as 'pedestrian under 18'.
Electric bicycles	Standard two-wheel electric bicycles (excluding e-cargo bikes or those with trailers, which should go under other cycles).
Other cycles	All cycles of non-standard layout including (but not limited to) tricycles, tandems, recumbent cycles, cargo bikes, hand bikes, adapted cycles, bicycles with a trailer, balance bikes, and electric versions of any of these.
Joggers	Anyone jogging or running as they pass the survey point (with allowances for having slowed down to take the survey).

Mode	Includes
Walking with aid	Including those with walking sticks, walking frames or crutches, white canes, service (including guide) dogs, and others. Please do not record these under the 'walking' category.
Wheelchairs	Includes both powered and unpowered wheelchairs and powered mobility scooters.
Other wheeled	Including, but not limited to, scooters, electric scooters, skateboards, roller-skates/ rollerblades and hoverboards. **Do not include individuals using the path illegally.**
Pushchairs	Mark one in the count form for each pushchair or pram. You do not need to count the number of individuals in the pram, or check whether it is empty. A user pushing a pushchair should be recorded as a pedestrian (against the correct age and gender). A child riding on the back of a pushchair should be recorded as a 'Pedestrian under 18'.
Other legitimate	All other non-motorised users of the route. Please write the mode in the Notes box (see below) if possible (e.g. horse rider).
Illegitimate users/notes	Make note of any illegal users on the path, including the quantity (e.g. mopeds, motorbikes, quad bikes), and any unusual events.

Table 16: Weather coding

Code	Weather coding protocol
1	Hot and mostly dry
2	Warm and mostly dry
3	Cold and mostly dry
4	Damp and overcast
5	Warm and mostly wet
6	Cold and mostly wet
7	Heavy rain

Llywodraeth Cymru
Welsh Government