National Centre
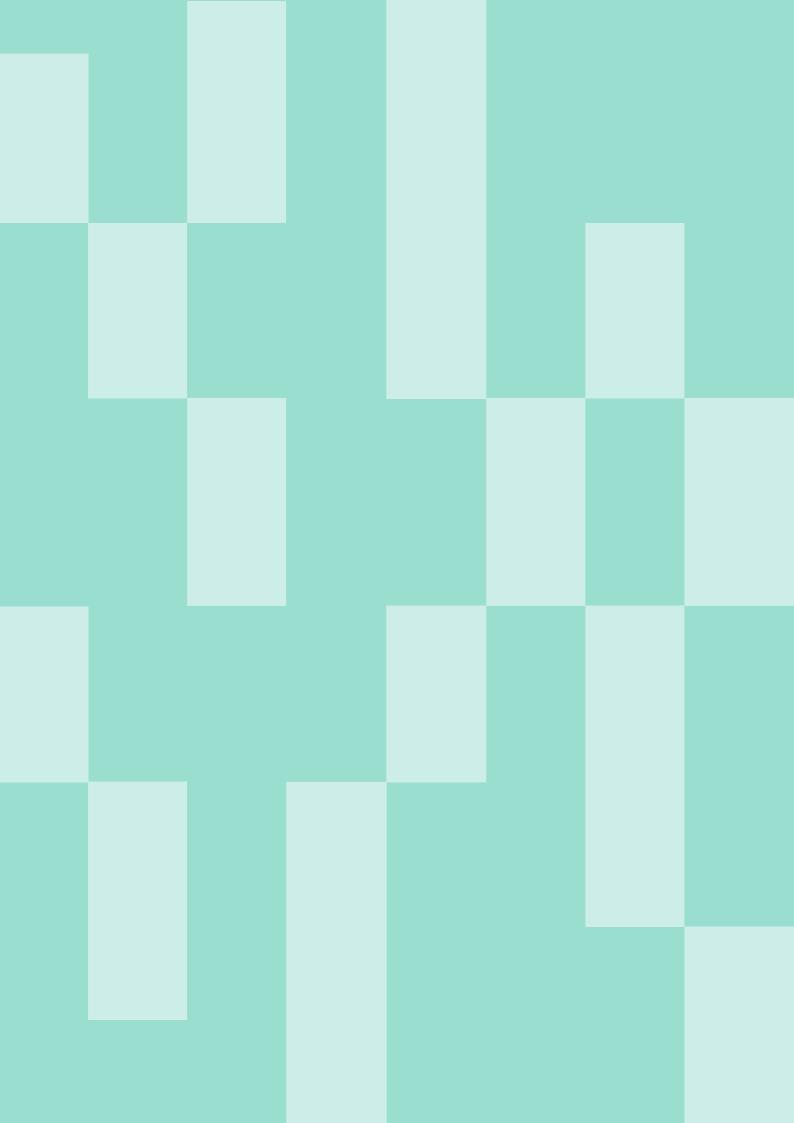for Social Research

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Wales National Travel Survey: Questionnaire Assessment

Authors: Peter Cornick, Eva Aizpurua & Shane Howe
Prepared for: Transport for Wales

AUGUST 2023

We believe that social research has the power to make life better.

By really understanding the complexity of people's lives and what they think about the issues that affect them, we give the public a powerful and influential role in shaping decisions and services that can make a difference to everyone. And as an independent, not for profit organisation we're able to put all our time and energy into delivering social research that works for society.

Contents

Background

The Wales National Travel Survey

Transport for Wales (TfW) has commissioned the National Centre for Social Research to work as its delivery partner to design a suitable methodology for the new Wales National Travel Survey (WNTS). Scheduled for a 2024 launch, the WNTS will collect data on travel attitudes and behaviour among the population in Wales.

The primary goals of the WNTS are threefold:
1) To monitor changes in travel behaviour and evaluate the degree to which specified targets are being achieved.
2) To provide data that will improve the transport evidence base and regional transport models in Wales.
3) To develop a robust, repeatable data collection strategy that provides more agency and control over the data generation process.

To fulfill these objectives, the WNTS will incorporate two components:
1) A survey that will gather data on household composition, socio-demographic characteristics, attitudes towards travel, and some travel behaviours.
2) A travel diary to collect detailed information on travel behaviour over a specific period.

The Current Report

This report is one of several outputs from the third stage of a process aimed at identifying and designing the optimal survey mode(s) for delivering the WNTS. This work is guided by the National Centre for Social Research's REMoDEL approach, a systematic process for designing or transforming social surveys and for gathering robust evidence around the trade-offs linked with different design options (Cornick, 2021).

Key Stages of NatCen's REMoDEL Approach:

Review the research and information needs, including any design parameters

Evaluate the feasibility of various methodological designs considering different quality dimensions

Model a prototype design for further development

Design and develop the new methodological approach and questionnaire

Experiment by testing the design in a quantitative context

Launch the new survey

The Evaluate stage of the WNTS was completed in July of 2023. This stage evaluated competing survey modes and diary collection tools against information and design parameters identified in the Review stage (Cornick, Aizpurua & Howe, 2023). The current report focuses on a desk review of the existing draft questionnaire, outlining any general design issues which could cause difficulties for respondents and any measurement issues encountered through using mixed mode data collection.

Methodology

Aim

In the Evaluate stage TfW selected two potential mixed mode designs for further modelling: 1) a Web-first design with a face-to-face follow-up interview for nonrespondents; and 2) a web-first design followed by the offer of a telephone interview, followed by a face-to-face follow up interview for nonrespondents.

The aim of this assessment is to systematically review the initial draft questionnaire provided by TfW against established frameworks for i) measurement error caused by mixed mode data collection activities (with particular consideration given for the chosen designs); and ii) general best practice questionnaire design. This desk review does not replace cognitive or usability testing and instead aims to identify potential sources of error or bias which can be addressed ahead of further empirical testing.

To assess the questionnaire we first used the Questionnaire Appraisal System-99 (QAS-99). This tool was used to assess and identify improvements for each individual question across eight dimensions (Willis, and Lessler,1999):

1) Reading: is it difficult for interviewers or respondents to read questions uniformly
2) Instructions: any issues caused by explanations, instructions, or introductions
3) Clarity: can respondents misinterpret the meaning or intent of the questions
4) Assumptions: problems caused by assumptions about the respondent
5) Knowledge/Memory: is it possible for respondents to find recall difficult or simply not know
6) Sensitivity/Bias: is the questions notably sensitive or subject to a biased response
7) Response categories: do the response options harmonise with the question and provide adequate responses to be recorded
8) Other: any other options not identified in prior dimension, this includes an assessment of suitability of other members answering on behalf of others

Alongside this general assessment we used NatCen's Mode Effect Framework to identify measurement risks when comparing data across different collection modes (D'Ardenne, et al, 2017).

The Mode Effect Framework isolates measurement risk to three domains:

1) Risk of interviewer effects (i.e. where interviewer presence/ absence can impact on the quality of data collected);
2) Risk of satisficing (i.e. where respondent short-cutting behaviours or the difficulty of the task could impact on the quality of data collected);
3) Risks from presentation effects (i.e. where changes from big-screen to small-screen or aural to visual administration could impact on the quality of data collected).

In addition to these areas, we have included an additional assessment criterion which looks at the character length of questions stems and response options as long questions stems or responses options can impact usability on mobile devices.

While the WNTS is a bilingual project, and the final questionnaire will be available in Welsh and English, the source questionnaire will be developed in English. Once the English questionnaire is finalised a further process of translation and testing will take place to ensure equivalency across languages.

This report summarises the key issues that need to be considered for the Wales National Travel Survey (WNTS) questionnaire. Please note that the items in the draft questionnaire which were identified as being collected through the travel diary have been excluded from this review as they will be discussed in a separate report.

General findings

The questionnaire review has identified a number of issues which should be considered before the source questionnaire is developed further. These issues can be grouped into 'design conventions', which apply to formatting of the questionnaire, and 'question specific issues' which warrant further discussion to unpick the aims and objections of the questions.

Design conventions
Effective questionnaire design plays a crucial role in producing accurate and representative estimates which will permit insightful analyses and inform policy decisions. The decisions made during the design phase significantly impact important dimensions: usability, reliability and accuracy.

There are general design conventions which need to be considered as they have a wide-reaching impact and notable implications across all the questions present. Of particular significance with a mixed-mode survey is deciding whether to implement a universal or optimal mode design. Other areas include the use of household and/or relationship grids; addressing potential sensitive questions during face-to-face interviewing; how to accommodate 'don't know' and refusal options; and how to present questions on screen.

In the following chapter we summarise the options around the following general design conventions addressed:

- Universal mode or Optimal mode design
- Inclusion of household and/or relationship grids
- Inclusion of CASI module in face-to-face element
- Provision and presentation of non-substantive answers (don't know/refusal)
- Ordering of the questionnaire
- Standard Industrial Classifications and Standard Occupational Classifications
- Batteries of scales
- Pagination
- Branching questions
- Use of showcards
- Appropriateness of proxy completions
- Use of open text

Question specific issues

In addition to macro or global decisions, there are item-specific issues which need to be addressed. There are some questions which, upon review, have unclear analytical aims or may prove operationally problematic. For these questions it will be necessary to unpick the underlying research question before a revised question is drafted. For other questions, the review has highlighted gaps or inconsistencies with introductory text, question stems, answer options, or inclusion/exclusion criteria. For these questions, we recommend revisions are implemented in the Design phase. In addition, we review the key data needs as outlined by TfW in the tender and provide a breakdown of where this information is being collected, any concerns with these and whether they could be provided through proxy.

Question specific issues identified:

- Key data needs
- Wellbeing, climate change, and correlation to active travel
- Usage of inclusion and exclusion criteria at introductions

These areas form the basis of discussion for the following sections.

Design conventions

This chapter summarises the overarching questionnaire design conventions that need to be addressed in the second iteration of the questionnaire. Decisions on these conventions will be implemented across the questionnaire to ensure consistency of measurement. For each convention, we outline the options available alongside their strengths and weaknesses.

Universal mode or Optimal mode design

The designs being considered for WNTS comprise up to three modes of data collection activities: Computer Assisted Web interviewing (CAWI), Computer Assisted Telephone Interviewing (CATI), and Computer Assisted Person Interviewing (CAPI). The inclusion of CATI at this stage is explorative. When designing questionnaires for multi- or mixed-mode surveys it is necessary to consider the potential for mode-effects and to implement strategies to minimise or mitigate their risk.

Mode effects occur when the mode of data collection (for instance, web or telephone) causes respondents to answer in different ways. This can bias results. To address this, there are two primary approaches used for questionnaire design in projects with more than one mode of data collection: universal or optimal mode ('Optimode') design. Optimal mode designs involve designing questions specifically for each mode, with the aim of ensuring conceptual equivalence (in effect, this means that the questions may be different in each mode). A universal questionnaire approach consists of consistent wording, question ordering and responses scales across modes. Both approaches have advantages and disadvantages. For instance, while well-designed optimal mode questionnaires will ensure equivalence across modes, they take a long time to develop, require significant testing and can cause some analytical difficulties. Universal mode questionnaires, in contrast, are simpler and quicker to design, and simple to analyse, but by necessity are designed for the most 'basic' mode and do not take advantage of the possibilities available within each mode (for instance, it may not be possible to use a visual stimulus in a telephone survey whereas it is in a web or face-to-face survey).

Web and face-to-face modes have notable differences. Face-to-face surveys are generally interviewer-administered and use primarily aural stimulus whereas web surveys are generally self-administered and are primarily visual. However, both modes can be adapted to minimise differences. For instance, face-to-face interviews can use showcards or self-completion modules to switch to self-administration and visual stimulus. As such, mode-effects across the two modes are often controllable through questionnaire design.

For WNTS, it will be necessary to decide whether to adopt a unimode or optimode approach to question design.

Inclusion of household or relationship grids

In the draft questionnaire supplied by TfW there are no household or relationship grids. Household and relationship grids exist to provide information about all respondents in the household. This establishes detailed information on the household composition and can be used both operationally – to select and gather information on specific or multiple household members – and analytically, to explore how survey findings are influenced by household characteristics, or to explore intra-household dynamics.

Household grids can collect a range of information, but at a minimum collect the age of all household members alongside an identifier (name, nickname, initials etc). There are a number of reasons why a household grid might be included in a questionnaire. For instance, in an individual-level survey this information can be used to select a specific individual from the household to take part in the survey. Further, knowing the number of eligible individuals within a property is helpful for calculating their probability of selection for weighting purposes. Lastly, household and relationship grids can also be used to create a sample frame for future contact endeavours.

The main reason to exclude household or relationship grids are that the project and any analysis is not concerned with household dynamics, has an alternative method of selecting a random or specific individual or does not require this selection process.

We will need to determine whether or not a household grid is necessary in the WNTS. This decision closely relates to separate decisions around whether the survey should be conducted at the individual or the household level.

Inclusion of CASI module in face-to-face

Computer Assisted Self-Interviewing (CASI) is a form of data collection where the respondent completes either all or part of a questionnaire themselves on a computer provided by a trained interviewer. The respondent will read both the question and response options and enter their answer without informing an interviewer their answers. This is deployed in situations where the topic is sensitive, embarrassing or a response is in some way socially desirable. Removing the interviewer from the reading and coding of the question limits the impact an interviewer may have on the response. Other benefits are that CASI administration can provide visual aids or images which can enhance understanding (Heijden et al, 2010). A CASI can, however, cause difficulties if the respondent has a poor reading skill, IT issues or any specific physical conditions which prevent engagement with a laptop. The CASI for this reason should always be refusable.

Inclusion of a CASI for the face-to-face interview would likely improve comparability of estimates achieved with web interviews for items such as sex, gender, and financial capability which can be influenced by the presence of interviewers. Incorporating a CASI element in a telephone interview would be more challenging. One option would be to direct telephone respondents to a web survey covering these questions. However, this is counter to the reasons for its inclusion (improving accessibility for those without internet or IT skills). We recommend that a CASI section is included in the CAPI questionnaire for relevant questions.

Provision and presentation of non-substantive answers

During the course of any survey respondents may encounter questions they either do not know the answer to, or do not want to answer. For these instances, respondents are typically able to answer that they 'don't know' or 'prefer not to answer'. There are only a small number of instances where a refusal option is included in the draft questionnaire, and it is worth considering the merits and disadvantages of including these.

If refusal and don't know options are not included, this will likely increase the levels of substantive answers given. That is, it would be expected that more people will provide a 'valid' answer to the question. However, the absence of 'don't know' and 'prefer not to say' options can also have a negative impact. In some cases it could lead to respondents dropping out of the survey. It can also force respondents to give an artificial response to simply proceed. Respondents can seek alternative ways of answering 'don't know' and there is evidence to suggest respondents will use middle statements (as an example 'neither support nor oppose') as a way of saying 'don't know' (Sturgis et al, 2012). Lastly, there is an ethical element to consider as to whether it is appropriate to exclude a refusal option on questions which may be sensitive or embarrassing to disclose. This becomes increasingly problematic for interviewer administration as respondents may want to refuse an item and it will be unclear how an interviewer should handle this without the facilities to refuse.

There is a distinctive difference between respondents answering 'don't know' or 'prefer not to say'. In some surveys they are treated as simply missing data, while in other surveys they are treated as substantive answers in themselves, they can also provide information on the validity of the question. Refusals inform us the question is intrusive or the response options too personal or identifiable, whereas 'don't know' responses indicate uncertainty as to how to respond, specifically either a state or task uncertainty. This may point to issues with the questionnaire design itself. State uncertainty relates to an uncertainty stemming from the core concept being measured, whereas task uncertainty concerns an inability to map an answer to the responses provided. It is difficult to disentangle causes of uncertainty, but they do enable a close examination of the question for improvement or adjustment if split from refusals.

Decisions on how to display or operationalise the non-substantive answers is typically easier to handle in interviewer-administered interviews as they can be coded in a reactive way without highlighting their availability outside of an initial statement, but this is not so easily administered in remote interviews.

Including non-substantive answers in the web survey can be achieved in two broad ways: reactive or explicit. A reactive approach would only include these on an attempt to skip the question, at which point 'don't know' and 'prefer not to say' options are given. An explicit approach would have these always present. To combat missing data it is possible to use conversion statements for key estimates which have received a non-substantive answer; these would reassure respondents of confidentially and inform them of the importance of the project. However, these should be used sparingly as they will impact respondent burden and lose their novelty and impact if they are used too often (Baghal, and Lynn, 2015). If it is agreed non-substantive answers should be included, the exact display and whether this receives an introduction (either for reactive or explicit) could benefit from user and quantitative testing.

While there will be differences in the presentation across modes, evidence suggests that there is also differential use of 'don't know' and 'prefer not to say' options by survey mode. A recent experiment whilst controlling for respondent and question characteristics found higher rates of refusal (3.3%) among web completion compared to (0.3%) of telephone completions; this was also true for reporting 'don't know' with web generating 2.8% and telephone only 1.4% (Lipps and Mosch, 2022).

It is common for projects to have a universal approach to non-substantive answers. Many will include them for all questions unless they are used for screening purposes or notable routing conditions. It does not need to be an absolute decision; it is possible to only include these for sensitive items but there is a level of subjectivity in assigning sensitivity. As the WNTS will be an optional study for participants it is unlikely to be palatable for respondents to be unable to refuse answers.

Ordering of the questionnaire

In the past most face-to-face surveys have collected demographic information early in the questionnaire. This may be to accommodate routing requirements or selection criteria. Respondent break-off during a face-to-face interview is uncommon, so it may be that less weight is given to the respondent experience. The draft WNTS questionnaire follows this traditional approach but does not presently require this for routing or selection. As WNTS will also operate as a self-administered web interview, it is advised to maximise respondent engagement and minimise disruptions to the flow or conversational nature of the survey. Salience or relevance is often identified as one of the most important aspects to decide whether a selected individual responds to a survey (Fan and Yan, 2010). As drop-out can happen at any stage it will be advantageous to maximise engagement and salience for as much of the questionnaire as possible.

To support engagement, it is advised to include items which are relevant, meet expectations of the survey and are salient to the respondent as the first items encountered, with sensitive, controversial or unengaging questions appearing later. Following this principle, the beginning of the questionnaire would cover questions with the widest interest or relevance, such as those which cover noise in the local area or types of transport used; more invasive questions, such as sex or religion, would appear toward the end of the questionnaire.

Standard industrial classification and Standard occupational coding

Standard Occupational Classification (SOC) and Standard Industrial Classification (SIC) are two classificatory items often used on large surveys which rely on survey responses being applied to a pre-existing framework. SIC is used to understand the nature of the business a respondent is employed by. SOC provides information on the respondent's job, so that it can be classified. It is often not directly analysed but can be used to produce National Statistic Socio-Economic Classification (NS-SEC). NS-SEC is based on the 'Goldthorpe schema' and is used to quantify and assign employment relationship and conditions attached to occupations. This is the only official government social classificatory framework in the UK and is often a strong predictor for many areas of interest, due to the relationship with education, income and cultural pursuits and practices.

To achieve this, traditionally a respondent's job title is collected and then classified to one of the exclusive categories in SOC. The most complete and accurate NS-SEC is produced from their SOC, employment status (employer, self-employed, manager etc) and size of the organisation. This is the full version typically encountered in national statistic projects. A respondent's NS-SEC can be derived through four methods: full, reduced or simplified and self-coded (details below); these have varying degrees of detail and accuracy.

Full:

- o SOC unit group
- o Employment status (employer, employee, self employed)
- o Size of organisation

Reduced:

- o SOC unit group
- o Employment status (employer, employee, self employed)

Simplified:

- o SOC unit group

Self-coded:

- o Occupation (self-classified)
- o Employment status
- o Size of organisation

The full method requires three questions to determine occupation, and a total of five questions for gathering employment status (3 questions) and size of organisation (2 questions). The versions will typically produce three analytic classes: 8, 5 or 3 distinct strata.

It is currently understood that SIC/SOC and NS-SEC are not required for the WNTS. If upon review SIC, SOC or NS-SEC are needed the decision of how to capture this becomes more complicated due to the multiple modes of data collection. NS-SEC and SOC is reliant on varying degrees of free text information. Typically, probing by interviewers is required to generate sufficient information for the responses to be coded accurately. As such, simplified self-completion questions have been devised, but these result in less accurate classification.

Batteries of scales

Batteries of scales (suites of questions all using the same answer scales) can be problematic to implement in mixed-mode surveys. In CAPI these response options tend to be administrated using a single showcard which provides a visual reminder of how people can answer. Online, batteries are typically displayed as grid-based questions. Grids are quite effective at reducing respondent burden and some studies have reported reducing administration time by half. Grids can also make the survey feel less repetitive.

The alternative to using grid formatting is to separate these questions to one item per page, but this will increase the perceived repetitiveness and burden for those completing online (Scaeffer et al, 2020). In CATI it can be cumbersome to read out the scale every time it is asked. This could also become tedious for the participant, leading to fatigue/boredom and therefore lower quality data. Longer scales may also be prone to recency effects: the psychological phenomenon whereby people tend to recall the last item in a list more than those prior to it. While the reason is unknown there is also an observed CATI positivity bias for subjective non-sensitive items (Campanelli et al, 2013).

It is generally assumed that the risk of respondent satisficing, such as straight-lining on grids, will be greater for difficult questions than easy questions. The physical presence of an interviewer can make questions easier to answer (as they are able to explain tasks if required) and increase respondent motivation to engage in the task. Therefore, we would expect more satisficing behaviours online, but these can be partially ameliorated if steps are taken to decrease task difficulty.

In the draft questionnaire there are several questions which would be considered a battery of scales, such as those focusing on welcomeness and satisfaction questions. From past user testing we know respondents receive the grid function quite well; however, they can be more prone to non-differentiation than other presentation techniques and studies have found higher inter-item correlations when using grids (Debell et al, 2021). (It should be noted, though, that some caution should be applied to analysis of non-differentiation as often these scales are measuring the same core or latent concept and it would not be uncommon to harmonise across items.) There are other methods available to detect satisficing such as time spent per question, although this should be relative to each type of question and the individual. It is also possible to flip the scale between questions in an attempt to identify any undesirable behaviour, but this will not be conclusive evidence.

There is potential for a hybrid approach which presents a few items in any given grid which may not promote straight-lining, whilst still benefiting from the less burdensome formatting (Couper, et al, 2012). Ultimately the decision to include grids or standard single item question per page is one of speed, potentially the amount of data (if survey length becomes an issue) and data quality.

Pagination

Another key design element of web data collection is whether to place the survey questions on a separate page or several per page and rely on scrolling. At one extreme this would lead to all questions being displayed on a single web page that a respondent scrolls through, and on the other, each question would appear on a single page which has to be submitted before moving toward the next one (Peytchev et al, 2006). The scrolling or paging discussion is not one which is well suited to a survey this long; it would be impractical to load so many questions on a single page and expect respondent to not feel overwhelmed or to remember where they had answered.

These two competing designs are not mutually exclusive however, and in practice there are instances where it follows conversational and societal expectation for both to be implemented on a single page. As an example, factual items correlated to one another could be presented together and may be advantageous to the respondent providing these are not prone miscalculation or cognitively demanding. A specific illustration would be contact information, where any validation on address, telephone or emails is collected on the same page; another example would be if a household grid is required – it would be easier to capture several items of interest at once (name and age). Whilst there is a wider discussion to be had on the use of grids, these are another instance where there would be multiple connected questions on the same page that require some scrolling if implemented. The key question will be what the most efficient number is to present on a single page without causing difficulties or promoting satisficing, especially for mobile users and this will require testing (Mavletova and Couper, 2014). Due to the prevalence of mobile devices, scrolling comes with additional risks, specifically that the same action used to scroll is also used for selecting a response option. Any usability testing will focus on mobile users.

Branching questions

In the draft questionnaire there are several questions with high numbers of response options. These can prove problematic for respondents, specifically those completing via telephone or through use of a mobile device. In CATI modes, it is harder for participants to retain long lists of options compared to visual modes (CAPI with a showcard or web). In CATI, higher numbers of answer options are problematic in terms of recency effects (tendency to recall last item from a list). This could lead to options lower down the list (i.e., more recently heard by participants) being more likely to be selected than in visual modes. In general, the higher the number of response options, the higher the risk although more factual question about ethnicity or religious denomination are less susceptible as respondents already know the answer they want to provide. The extent to which codes could be viewed as overlapping is also a risk factor.

In general, we recommend keeping lists of response options as short as possible online. A first step could be to cut superfluous or rarely used categorical responses, whilst maintaining a catch-all 'other' category. A second option would be to introduce branching questions as alternative to long lists. For example, ethnicity questions can be clustered under tier one and tier two headings (this approach also aligns with the practice adopted by ONS for the 2021 census). If the number of response options is higher than seven for "Select all that apply" formats response option, a reversal should be considered, to help alleviate the risk of primacy effects. The

reverse ordering works by randomly allocating participants either to see the response items in the original order or the reversed order to combat this.

Use of showcards

Some risks of measurement error are related to how questions and answer categories are presented. In non-visual modes (e.g. CATI or CAPI items without showcards) we would anticipate recency effects whereby participants are more likely to select options that are read out later. For online modes we would anticipate more primacy effects (i.e., where people are more likely to opt for responses that appear at the top of a list). This effect can be exacerbated on mobile devices, when response options on longer lists are not always visible without the use of scrolling. During face-to-face interviewing showcards are often used to help administer the questionnaire as visual aids. These usually contain response options, or scales, that respondents can reference when giving their answer. Showcards are used for several reasons:

- Reducing the cognitive load or burden for long responses to limit recall and more easily process the information presented.
- Promoting standardisation to ensure all respondents view the same response options
- Increasing efficiency (showcards allow the interview to go quicker than if they had to read out all response options)

We recommend showcards are used in the face-to-face interview for the aforementioned reasons, A further advantage is that showcards better mimics the web environment, in that respondents will visually assess response options, rather than relying solely on audio. As scales are labelled, we also recommend these are accompanied by a showcard for parity. This is another aspect which cannot be replicated in telephone interviews. While it is possible to send showcards through the post this will incur additional costs, delays to starting interviews and also places an unreasonable burden on respondents to follow potentially complex routing procedures.

Appropriateness of proxy completion

The decision on whether the WNTS will be a household or individual survey has yet to be decided and will be based largely on power calculations which will be delivered separately. However, the items in this survey have been assessed for their ability to be administered via proxy – that is, answer on behalf of someone else. This assessment took place as it will be very challenging to insist the whole household takes part in the survey and allowing completion via proxy will increase response rates. The draft questionnaire contains many attitudinal questions alongside those which are either sensitive (whether respondent is pregnant or can typically afford modes of transport) or require notable amounts of recall (language used in booking tickets) and these are not suitable to ask someone to answer on behalf of another household member. As such, if a household interview is decided upon, proxy rules will become increasingly important, but due to questionnaire content it is unadvisable for many of these to be asked on behalf of another.

Use of open text

Open text is typically used sparsely for quantitative research as often the analytical needs are to understand commonalities or divergence among groups which is more challenging to accomplish without coded items. This is a particular issue for self-completion surveys; without interviewer assistance the data generated is lower quality – that is, people write less, and are more prone to errors. Literature also shows that telephone interviews tend to generate less information in open text responses (Campanelli et al, 2013). Open text can be analysed qualitatively in its unedited form, but more commonly responses are quantified through coding. This is when responses are incorporated (often called 'back-coding') into existing response options or used to generate new

response options if they are frequent enough. However, this process adds additional costs and processing time to the project.

There are several types of questions which use free text data collection:
- those which supplement existing response options (i.e. B4, C6)
- those which aim to collect location data (i.e. F2a, B1a)
- those which aim to provide insight or rationale into selected responses (i.e. B3, C5)
- a single item which collects reasons for no longer using bus transport (E1a).

The inclusion of questions such as B4 and C6 which use 'other free text entry' to supplement existing response options is commonplace and would help improve the completeness of code frames, but it remains likely web cases will generate less data.

Optional questions which exist to collect reasons for an answer (B3, C5) to the selected responses are relatively high burden for respondents and are not likely to provide data which can be easily analysed. These items would benefit from further discussion to understand the priority and intent for this data. Furthermore, another problematic set of free text questions is F2a and B1a which collect location data: it is unclear how this information will be collected and what level of geography is required. A discussion on the proposed features of these questions is needed, although as noted in the questionnaire review, we have concerns on the usability, recall and functionality of these questions.

Lastly item E1a is an open text question which aims to provide rationale for why a respondent no longer uses bus as a form of transport. We believe a suitable code frame can be created to collect close-ended response from participants, although similar to questions B4 and C6 we would recommend the inclusion of an optional free text component to supplement the answer frames.

Question-specific issues

Key data needs

The WNTS has several key requirements from the questionnaire as outlined in the tender. NatCen has reviewed the initial draft questionnaire provided by TfW to assess whether these requirements are being met. Table 1 below summarises which questions meet the data needs.

Table 1. WNTS key data requirements

Data need	Questions which support this	Suitability for proxy information
Allow progress towards our targets on mode shift, active travel, car use per capita and remote working to be reliably tracked annually at a regional level	Diary data collection	To be addressed after diary review
Provide breakdowns by protected characteristics, Welsh speakers, socio-economic factors and urban/rural classification;	Protected characteristics: S1, S2, S4, S3, S5, S7, S8 Welsh language: A1 person level socio-economic information not captured, but IMD matching is possible Urban / Rural classification	It should be possible to capture Welsh language capability for most, however concerns with household that have weak social ties (HMO's, flat shares etc).

	created from address information	
		Some protected characteristics will be inappropriate to collect on behalf of another (religion, whether pregnant etc) others are less problematic such as age, other studies do proxy disability status. Further discussion on suitability is needed.
M1: Percentage of journeys made by walking, cycling and public transport	Diary data collection	To be addressed after diary review
M4: Average distance travelled per person	Diary data collection	To be addressed after diary review
S17: Average cost per kilometre travelled by public transport	Diary data collection	To be addressed after diary review
S5: Percentage of journeys to a rail station by walking, cycling or bus	Diary data collection	To be addressed after diary review
S11: Percentage of people satisfied with their journey	Captured in B2, C4, D2, D3, E2, F3, G2, H4, H5,H6, I3, Z3, suggest specific transport satisfaction could be generated from diary collection	Not possible to answer on behalf of another member with any certainty.
M5: Percentage of workforce working remotely on a regular basis	Remote working capture in K4	Should be possible to report as a binary item, unlikely to be able to provide exact hours but vague quantifiers (always,

		sometimes etc) should be possible
S12: Percentage of people satisfied with their ability to access public transport independently	Satisfaction with independent use of public transport captured in J5 and J6	Not possible to answer this type of attitudinal information on behalf of another
S15: Percentage of Welsh speakers using Welsh language services in the transport sector	Welsh language used in transport captured in D4, E4, F5, G4, I5, Z5,	It is possible to answer whether other members can speak this but not whether it was used during transport or booking process
S18: Percentage of people who feel they can't afford to travel by public transport	Transport affordability W2, W3, W4	Questions surrounding financial capability or affordability is not appropriate especially for those with looser social ties (HMO's flat shares etc)
S20: Percentage of people who feel safe and welcome when travelling	Welcome when travelling B3, C5, D3, E3, F4, G3, I4, Z4	Not possible to answer this type of attitudinal information on behalf of another
S24: percentage of people regularly bothered by noise from outside the home caused by transport	Noise at home L1, L2, L3	This is possible to capture if assessed at the household level, it is unlikely transport noise pollution will only impact one individual in the home

The measures outlined previously can be separated into diary components and questionnaire items. Key research needs generated by the diary component are items M1, M4, S17, S5, with items S11, M5, S12, S15, S18, S20, S24 being collected through the questionnaire. During the questionnaire review several recommendations were made across the current existing items. Primarily these are to combat mode effects or improve subjective or vague concepts.

There are however two key WNTS requirements which have not been discussed so far that would benefit from a further review with policy colleagues and will need notable revisions as there is likely to be more appropriate ways to meet these data needs than the current iteration; these items are S20 and S11.

The item S11 aims to identify the percentage of people satisfied with their journey. This journey, however, can be up to 12 months ago and will cause significant burden on respondents to recall if they have not used this transport recently. The recall concerns would be improved by limiting the reference period to a more manageable timeframe although we recommend discussing whether this would be better suited as a diary element. The decision on limiting the timeframe from 12 months would impact routed questions such as those using Welsh language during transport; again, this is an item where accuracy would be improved from reducing the time period. While beyond the scope of this report, if item S11 is included in the diary it will be possible to select a random recent form of travel to understand elements of their travel.

Item S20 is problematic from a general questionnaire assessment due to the subjective nature of 'welcomeness' and 'safety' along with certain assumptions surrounding the respondent's interaction (engaging with staff, or consulting information) will prove problematic for some participants. Likewise, from a mode effect perspective these options could promote satisficing due to the numerous domains of interest displayed in a grid format.

Protected characteristics

One of the key information needs for WNTS is to supply information on protected characteristics, which are demographic features of an identity where there is notable evidence which shows discrimination in areas of importance: employment, health and educational outcomes, access to services etc. The inclusion of these items will allow TfW to monitor and evaluate any differences amongst these protected characteristics.

Protected characteristics as defined by the Equality Act 2010:
- age
- disability
- gender reassignment
- marriage or civil partnership (in employment only)
- pregnancy and maternity
- race
- religion or belief
- sex
- sexual orientation

With exception to gender reassignment all protected characteristics are accounted for and represented where possible by ONS harmonised measures. ONS harmonised measures are preferable to newly constructed items as they offer greater comparability with other surveys and have undergone considerable development. While the current questionnaire includes these items, as suggested earlier if these are not used for routing or selection purposes, they would benefit from re-ordering within the questionnaire, so where possible these are collated together. In addition to this, items such as sex and gender would benefit from additional clarification as to why this is being collected and what is meant by sex; these items will also benefit from being collected in a CASI for face-to-face data collection. Sex and Gender also currently lack a harmonised equivalent for telephone administration (or face-to-face data collection but a CASI can circumvent this) and further discussion will be required to understand how best to implement these.

The item not represented in the current questionnaire is gender reassignment. An ONS harmonised version does not exist and developing an instrument to collect this would require significant testing and would benefit from targeted engagement. This might be an item which requires exclusion from initial launch to either wait for ONS guidance or to allow for this development. Furthermore, there is no current collection of socio-economic factors, such as education, income or more extensive classificatory systems such as National Statistic Socio-economic classification (NS-SEC) but matching on locational data such as the Welsh Index of Multiple Deprivation (WIMD) is possible which is how socio-economic classifications will be operationalised.

Wellbeing, thoughts on climate change and correlation to active travel

At the very beginning of the draft questionnaire there are routed questions on active travel, walking and cycling. These aim to understand from the respondent's perspective whether this has an impact on their mental and physical wellbeing, alongside thoughts on climate change and desire to do more walking or cycling. In their current form these questions are too closely related to the hypothesis being tested: 1) active forms of travel improve mental and physical wellbeing; 2) active travel forms may propagate; and 3) those who use active travel are likely to be concerned with the climate. This is problematic in its current format as there is dissonance between the answer options (positive or negative scale) and the questions (contribution climate change) being asked. Additionally grouping these items together is slightly leading in its desired outcome.

We would suggest making this research aim less explicit and split these items into separate distinct questions and use analytical techniques to understand what, if any, relationship is present. For instance, we would disentangle these concepts from one another and recommend using the ONS measures on personal wellbeing (4 items) as these offer more certainty on validity, authority and comparability than current questions. The question on contribution to climate change is a broad domain and would require further discussion with policy colleagues to understand the area of interest. Additionally, climate change is also a potentially controversial term and other phrasings might be better suited such as carbon emission or environmental impact. This item of interest is an area where it would value greatly from further discussion and once adjusted it should undergo cognitive testing.

Use of inclusion and exclusion criteria at introductions

Throughout the survey there are questions which require explanatory text, such as what is considered a car and what trips should be included. An example of this can be found below for the car travel items. This is a significant amount of information to present to a respondent, and for them to take into account when forming a response. We know from previous user testing respondents often skim read the question when it is self-administered. The presentation of clarification and inclusion or exclusionary on a mobile device is also of specific concern as there is less screen space available and this volume of text may not be read. It is unknown how much respondents will retain throughout when answering subsequent questions. Typical guidance is to include all relevant information in the questions stem (Campanelli et al, 2013). An alternative option is to use unfurling help text which expands when clicked upon to provide clarity. This would benefit from testing to ensure respondents exclude and include all relevant information when retrieving and making a judgment on what answer to provide.

Text explaining Inclusion and exclusion items:

Car travel as a means of transport is when you drive or are driven to a particular destination, such as work, the shops, or to visit friends. The questions in this section do not cover driving just for pleasure.

For the purposes of this survey, the term car covers all private motor vehicle, including cars, 4x4 vehicles, light vans, minibuses, campervans, motorcycles and mopeds. It does not include passenger travel by taxi, bus or community transport, or trips made by professional drivers or crew in the course of their work, such as buses, taxis, ambulances, cranes, refuse vehicles, driving instructors and delivery drivers.

Decisions and future discussions

All of the topics which have been discussed in this document will need a resolution before proceeding with further design and formal testing. There are however some priority items among these which will have a notable impact on the project and future decisions:

- Universal mode or Optimal mode design
- Provision of non-substantive answers (don't know/refusal) and presentation of these.
- Standard industrial classifications and Standard occupational classifications
- Inclusion of CASI module in face-to-face
- Use of open text

The remaining items are less of a priority:
- Inclusion of household and/or relationship grids
- Ordering of the questionnaire
- Batteries of scales
- Branching questions
- Use of showcards
- Pagination
- Appropriateness of proxy completions

The next step for the questionnaire development will be in Stage 1b. We recommend that this involves meeting with policy colleagues and other key stakeholders to better understand analytical requirements surrounding some of the measures we have identified as being problematic or worthy of further discussion. After both the general design features and item specific questionnaire content has been agreed a new questionnaire will be provided which will be used as the basis for programming the instrument and user testing, both cognitive and usability.

WNTS draft questionnaire

Wales National Travel Survey

Welcome

Thank you for taking part in the Wales National Travel Survey. Your answers will help us to understand how people experience travel in Wales, and to find out which areas need to improve.

All the personal information that you give us will be anonymised and only used for statistical purposes. We ask these questions so we can produce results for different groups of people. Like all your answers, this information will only ever be used for research purposes and you will never be identifiable from the results. We will treat your information in the strictest confidence under current data protection legislation.

The survey will take around xx minutes to complete. Please answer the questions as fully as you can.

S1. What is your age?

QAS 99

F1. Sensitive content (general): The question asks about a topic that is embarrassing, very private, or that involves illegal behaviour
yes - exact age will be sensitive for some respondents, banded age or refusal with a subsequent banded age would improve this. Also, worth considering what to do if respondent is underage, could screen out and ask for another respondent.

G1. Open-ended question that is inappropriate or difficult
Yes, unclear if it is currently possible to proceed without providing age, no method to refuse this open-ended item.

H2. Difficult to report via proxy
Yes, challenging item to answer on behalf of other, a banded item would be easier

Mode effects

A1. Fear of disclosure and socially desirable reporting
Yes, social conventions with an interviewer presence could lead to higher compliance to provide information - worth considering the ordering though as this doesn't seem to be used for routing purposes so it could be placed elsewhere.

S2. What is your sex?
A question about gender identity will follow later on in the survey

Female
Male

QAS 99

B1. Conflicting or inaccurate instructions, introductions, or explanations.
Yes, a lack of introduction/rationale for collection could cause complications for some individuals, suggest including reasons for capture.

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded, suggest including a definition.
Yes, will be unclear for some whether this is sex at birth, legal sex, or confusion with Gender – also currently the gender question is much later in placement, is this intentional, if so we should discuss the benefits of having these sequential.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.
Yes, assumes respondent accepts a simpler duality, clarification or help text suggested.

F1. Sensitive content (general): The question asks about a topic that is embarrassing, very private, or that involves illegal behaviour
Yes, will be a sensitive item for some, reassurances about privacy would be appropriate. a discussion on the appropriateness of a refusal option also suggested.

H1. Other problems not covered elsewhere
Yes, potential ethical issues, it is worth consider if this should be refusable given its sensitivity and the ordering in the questionnaire.

H2. Difficult to report via proxy
Yes, difficult and inappropriate.

Mode effects

A1. Fear of disclosure and socially desirable reporting
Yes, sensitive information, potentially leading to higher refusals with interviewers if refusals are possible. Consider reordering this location, including it in a CASI for Face-to-face and introducing explanatory text on privacy, reasons for capture and terminology across all modes.

S6. What is your ethnic group?
Choose one option that best describes your ethnic group or background

White
Welsh / English / Scottish / Northern Irish / British
Irish
Gypsy or Irish Traveller
Any other White background – please describe
Mixed / multiple ethnic groups
White and Black Caribbean
White and Black African
White and Asian
Any other Mixed or Multiple background – please describe
Asian / Asian Welsh / Asian British
Indian
Pakistani
Bangladeshi
Chinese
Any other Asian background – please describe
Black / Black Welsh / Black British / Caribbean / African
Caribbean
African background
Any other Black, Black British or Caribbean background – please describe
Other ethnic group
Arab
Any other ethnic group – please describe

QAS 99

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes, sensitive groupings here for marginalized groups could lead to under-reporting (Gyspy/Traveller) discussion on ordering would be beneficial. CASI would be helpful for Face-to-face and a reassurances around confidentiality across all modes. Use of branching questions would permit respondents with reservations to disclose some information but not all, i.e. White, Asian, Mixed, which would then branch to more granular categories.

H1. Other problems not covered elsewhere

Yes - practically this will be challenging to administer via telephone or web, due to number of response options being displayed on a single page consider separating and branching questions into large groups initially would help in administration on small screens and during a telephone interview.

H2. Difficult to report via proxy

Yes, a challenging item to answer on behalf of others, especially those with less familial/relationship ties.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - Gypsy/ Traveller and other marginalised groups which may not disclose with an interviewer present. Consider a CASI for face-to-face, discussion to be had on the ordering of this content in the survey, ability to refuse, worth considering adding branching items which will permit some level of disclosure while still offering some level of anonymity.

B5. Open questions

Yes, we would expect less engagement with free text without interview assistance, this would also be subject to greater typo's and grammatical errors due to the burden placed on the respondent and any limitations on reading or writing skills, coupled with greater difficulties faced by mobile device users.

C3. High number of response options

Yes – a high number of response options, will impact selection in both telephone and web (especially mobile due to space constraints) may lead to user error, unlikely to promote primacy or recency effects as a factual question. However, would suggest branching to tackle some of this usability in these modes.

A1. Can you understand, speak, read or write Welsh?

Please select all that apply

Understand spoken Welsh
Speak Welsh
Read Welsh
Write Welsh
None of the above

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

Yes, assumes proficiency, if of interest would be worth specifying the level of comfortability with Welsh language.

F3. Socially acceptable response is implied by the question.

Yes, current question is unbalanced, and it Is possible it could lead to overreporting, especially in presence of interviewers as for some it will be socially desirable to be familiar with language. See comments on mode effect A1.

G4. Vague response categories are subjective to multiple interpretations

Yes, possible for responses to be subjective based on what level of proficiency the respondent believes they need to 'read' 'write' or 'speak' the language could lead to under or over reporting. To counter this the questions could specify this (but would need to be split across a few items potentially) or accept a level of subjectivity in responses.

H1. Other problems not covered elsewhere

Yes – if respondent selects a Welsh interview, this would be redundant, to an extent at least, consider use of fed forward information based on language of interviews it could look unprofessional or odd to respondent to be asked if they can read Welsh after selecting a Welsh version of the questionnaire and reading/listening to a Welsh question .

H2. Difficult to report via proxy

Yes, challenging item to answer on behalf of others, especially of non-nuclear families or those with loose social ties.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, could be socially desirable, especially in an interviewer setting to report some level of knowledge of the Welsh language. Consider softening the question and making this more socially acceptable i.e. 'We know people living in Wales have

---

different understanding/familiarity of the Welsh language, to what extent, if at all, do you understand or are familiar with this? This could help mitigate any perceived 'correct' answer.

A2. How often do you speak Welsh?
Only if Speak Welsh under A1

Daily
Weekly
Less often
Never

<div style="border:1px solid black; padding:1em;">

QAS 99

F3. Socially acceptable response is implied by the question.

Yes, potential for overreporting, consider changing question to a more balanced option (how often, if at all) and including preamble to acknowledge varying levels of engagement (We know how often Welsh is spoken, differs greatly by each person from not at all, to daily, which of the following best reflects your general usage?) Changes to stem should help with interviewer acquiescence and tendency to agree,

G4. Vague response categories are subjective to multiple interpretations

Yes, uncertain how much is needed to consider speaking this (a single conversation, or request to speak English could count) this could be improved by defining this as more than a single conversation or leave open to subjective interpretation.

H2. Difficult to report via proxy

Yes, challenging item to answer on behalf of others, especially of non-nuclear families or those with loose social ties.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - possible, further testing would be needed but good candidate for a CASI element for Face-to-Face and adding preamble as suggested in A2.

</div>

Walking

Walking as a means of transport is when you walk or wheel to get to a particular destination, such as work, the shops, or to visit friends. The questions in this section do not cover walking just for pleasure or exercise, or walking the dog.

Walking includes all travel on foot and using mobility aids, including running, as well as using mobility scooters, non-motorised and motorised wheelchairs, or roller-skates, skateboards or non-motorised scooters.

When answering, please include journeys where you walk all the way to somewhere, and where you walk as part of a longer journey. For example, walking to a train station.

B1. How often have you walked as a means of transport in the last 12 months?

Most days	*Go to B2*
Several times a week	*Go to B2*
Every week	*Go to B2*
Once or twice a month	*Go to B2*
Once every couple of months	*Go to B2*
Once or twice during the year	*Go to B2*
Not at all	*Go to B4*

QAS 99

F3. Socially acceptable response is implied by the question.

Yes, consider balancing questions (how often, if at all) as could lead to over reporting.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, walking is socially desirable, question is also unbalanced consider comments on F3 for QAS-99

B1. Complex question stem or clarifications

Yes, inclusion and exclusion based on prior questions, further testing required for comprehension of inclusion and exclusion criteria. Help text could be useful.

B1a. Where was your last walking journey from and to?

| From: | *Free text box* | in | Select local authority area from list |
| To: | *Free text box* | in | Select local authority area from list |

<div style="border:1px solid black; padding:10px;">

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

Yes - anchoring is presumably include an entire 12 months but unclear, which makes accuracy quite difficult, and applies to subsequent questions too. Also unclear how this will work for a respondent, is it a list of LA's and what happens if travel is within the LA.

H2. Difficult to report via proxy

Yes - challenging item to answer on behalf of others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, potentially a disclosure issues, depending on granularity of location, user testing required.

</div>

B2. On your last walking journey, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Footway condition					
Sufficient space to move and pass others					
Lighting					
Tactile paving and dropped kerbs at crossing points					

QAS 99

C1. Wording: Question is lengthy, awkward, ungrammatical, or contains complicated syntax

Yes – tactile pathing is not a conversational term, consider alternatives such 'textured ground near crossings' but would benefit from user testing to understand most commonly understood item.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. other passersby, lighting), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

B3. Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By cyclists					
By other road users					
Overall					

Please use the box below if you would like to explain your answer.

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.
yes - assumes others were encountered on this journey will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.
Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from

respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 3 items using repeat scales, should be okay but could still enable straight-lining. Part of a larger discussion.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

Bx. How did your last walking journey make you feel about the following?

	Very positive	Positive	Neutral	Negative	Very negative
Your physical health					
Your mental wellbeing					
Your desire to do more walking					
Your contribution to climate change					

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes- assumes respondent wants to do more walking and they acknowledge climate change. Wider discussion to be had on the intent of this item – see other issues H1.

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

yes - may not have engaged with mental wellbeing or climate change and how this related to walking, before being asked, this is an innate issue with the concepts being measured something which can be rectified with phrasing.

E3. Recall failure: Respondent may not remember the information asked for.

Yes – potential to be impacted by recall, and little options to rectify beyond shortening catchment from 12 months, but this would not resolve the issue entirely.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes, mental health and physical health are private topic and could be sensitive to discuss. This would benefit from an introduction, reassurances or existing in the CASI however, it is worth a wider discussion on the intent of these questions.

F3. Socially acceptable response is implied by the question.

Yes- contribution to climate change is somewhat loaded phrasing, could be better placed as carbon emissions. Worth considering cognitive testing although wider discussion on the intent of these types of questions, as it might be a better experience for the user and data generated to have these items separate.

H1. Other problems not covered elsewhere

Yes - It Is worth reviewing research needs and objectives of these, we assume there will be analysis on different types of travel and mental health, it may be better served to use ONS measures of mental health and analyse these across mode usage, instead of using an explicit measure. Suggest a wider discussion to be held.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes - fear of disclosing physical or mental ill-health, and climate change, suggest this could be included in a CASI but since these question repeat it's worth discussing alternatives.

C2. Battery of scales

Yes – 4 items included, we could look at splitting these items further into two groups to minimise satisficing techniques, but suggest we discuss the intent of these questions further.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, , *no opinion, unsure, undecided,* instead of neutral, unclear what would limit non-substantive responses being selected.

B4. Which of the following would encourage you to walk as a means of transport more often? Please select all that apply.

Slower traffic
Less traffic
More considerate driving
Well-maintained pavements (even, clean, uncluttered, well-lit)
Better provision for health needs (benches, public toilets, ramps)
More safe crossing points
Better maps and signposting, more information on walking routes
More pleasant walking environment (less road noise, less air pollution, more trees)
Other – please describe

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - no option to say none of these, assumes respondent can be encouraged, need to include a 'none of these' option.

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

Yes, respondent may not have engaged with this before, this is not an issue with the question but an innate part of the area of interest so cannot be solved.

H2. Difficult to report via proxy

Yes, very difficult to report on behalf of someone else.

Mode effects

B5. Open questions

Yes – optional free text, likely to receive less engagement in web due to burden emplaced, also likely for data to be of a lower quality (typos or other errors).

C3. High number of response options

Yes – 9 options could be problematic for displaying on a single page and therefore ensuring all items are considered (equally or at all). We could randomise these to reduce systematic issues, or splitting these into separate questions which would be beneficial for telephone interviewing as it is impacted by recency effects (last item listed being item most remembered) which would be mitigated. Separating questions would increase burden and repetitiveness.

D2. Response options high (exceeding 65 characters)

Yes, several items have high character responses, consider trimming some of the examples. This is to ensure mobile devices can see all items on a single page which is already a concern due to high number of response options.

Cycling

Cycling as a means of transport is when you cycle to get to a particular destination, such as work, the shops, or to visit friends. The questions in this section do not cover cycling just for pleasure or exercise.

Cycling includes all travel by cycle. A cycle is any pedal cycle permitted on the public road. Cycles include electric or e-bikes and trikes, where pedalling is assisted by an electric motor, and non-standard cycles such as adapted cycles (cycles or tricycles specially adapted for use by disabled people), cargo cycles and recumbents.

When answering, please include journeys where you cycle all the way to somewhere, and where you cycle as part of a longer journey. For example, cycling to a train station.

C1. Can you ride a cycle?

Yes	*Go to C2*
No	*Go to C1a*

D2. Assumes constant behavior or experience for situations that vary.

Yes - assumes respondent can always ride, or is always unable, this could depend on physical conditions, depending on analytical needs this could be improved by rephrasing this to 'do you know how to ride a cycle' or 'on a typical day can you ride a cycle' worth discussing analytical needs.

H1. Other problems not covered elsewhere

Yes - yes - depending on analytical needs, there is a distinction between being able and being willing, and comfortability i.e. on main roads, at night.

H2. Difficult to report via proxy

Yes - challenging item to answer on behalf of others

Mode effects

B1. Complex question stem or clarifications

Yes – based on prior question which mentions e-bikes, adapted cycles etc, worth including these as help text potentially.

C1a. Would you like to learn to ride a cycle?
Only ask if NO to C1

Yes, please send me details of how I could learn
No – please use the box below if you would like to explain your answer.

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes - assumes respondent would want more information on learning to cycle, whereas the question is only asking whether they would like to learn at some undisclosed period. Suggest a single question to ask whether they want to learn, and a separate one asking if they want to receive information and explaining what this involves (how they would receive information and in what format).

D3. Double-barreled: Contains more than one implicit question.

Yes – one about desire to learn and another whether they want to receive instructional material.

G2. Mismatch between question and response categories

yes - questions asks about willingness to learn but response options also aim to pass on details for training tips, unclear what to do if you want to learn but don't want materials. Suggest splitting these into separate items and the order of these in the questionnaire should be discussed.

H1. Other problems not covered elsewhere

Yes - unclear what this information will be or how the respondent will receive this

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

Yes - challenging item to answer on behalf of others

Mode effects

None assessed, although consent to sending information could be higher in interviewer administered roles due to tendency to acquiesce with interviewers and their ability to act as a reactive ambassador for the project and as a symbol of authenticity.

C2. Do you own a cycle or have regular use of a cycle owned by someone else? Do not include exercise bikes. Please select all that apply

Pedal bicycle
Electric bicycle or e-bike (one that is assisted by an electric motor when you pedal)
I don't own or have regular use of a bicycle
I use a bike hire scheme if I want to cycle as a means of transport

QAS 99

B2. Complicated instructions, introductions, or explanations.

Yes, based on introduction questions. Worth exploring through user testing whether this will be remembered and factored into responses, otherwise will lead to underreporting of tailored bikes i.e. adapted cycles.

H2. Difficult to report via proxy

Yes, potential to be challenging if individual uses a hire scheme but respondent is unaware, otherwise one of the less concerning items to ask by proxy as it should have a physical presence in the home.

Mode effects

B1. Complex question stem or clarifications

Yes, based on previous questions, worth considering whether to include these as help text for those that need a reminder of what should be included.

D2. Response options high (exceeding 65 characters)

Yes, 1 item which aims to define electric cycles, unlikely to be too problematic to display as a limited amount of options to compete for space.

C3. How often have you cycled as a means of transport in the last 12 months?

Most days	*Go to C4*
Several times a week	*Go to C4*
Every week	*Go to C4*
Once or twice a month	*Go to C4*
Once every couple of months	*Go to C4*
Once or twice during the year	*Go to C4*
Not at all	*Go to C6*

QAS 99

B2. Complicated instructions, introductions, or explanations.

Yes, based on introduction questions. Worth exploring through user testing whether this will be remembered and factored into responses, otherwise will lead to underreporting of tailored bikes i.e. adapted cycles.

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

C3. High number of response options

Yes, 7 items but these are a few characters so may not present issues for displaying on mobile devices, testing will be needed.

C3a. Where was your last cycling journey from and to?

From:	*Free text box*	in	Select local authority area from list
To:	*Free text box*	in	Select local authority area from list

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

Yes - anchoring is presumably include an entire 12 months but unclear, which makes accuracy quite difficult, and applies to subsequent questions too. Also unclear how this will work for a respondent, is it a list of LA's and what happens if travel is within the LA - warrants an extended discussion.

H2. Difficult to report via proxy

Yes - challenging item to answer on behalf of others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, potentially a disclosure issues, depending on granularity of location, user testing required.

C4. On your last cycling journey, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information, such as signing					
Route options / continuity					
Road / cycle path condition					
Cycle parking facilities					

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. signage, looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral, no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

C5. How welcome did you feel on your last cycling journey?
Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By other road users					
By people walking and wheeling					
Overall					

Please use the box below if you would like to explain your answer.

QAS-99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.
yes - assumes others were encountered on this journey will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.
Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes - odd inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents

and how this will be incorporated into analysis. Worth further discussion to understand intent.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 3 items using repeat scales, should be okay but could still enable straight-lining. Part of a larger discussion.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion

Cx. How did your last cycling journey make you feel about the following?

	Very positive	Positive	Neutral	Negative	Very negative
Your physical health					
Your mental wellbeing					
Your desire to do more cycling					
Your contribution to climate change					

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes- assumes respondent wants to do more walking and they acknowledge climate change. Wider discussion to be had on the intent of this item – see other issues H1.

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

yes - may not have engaged with mental wellbeing or climate change and how this related to walking, before being asked, this is an innate issue with the concepts being measured something which can be rectified with phrasing.

E3. Recall failure: Respondent may not remember the information asked for.

Yes – potential to be impacted by recall, and little options to rectify beyond shortening catchment from 12 months, but this would not resolve the issue entirely.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes, mental health and physical health are private topic and could be sensitive to discuss. This would benefit from an introduction, reassurances or existing in the CASI however, it is worth a wider discussion on the intent of these questions.

F3. Socially acceptable response is implied by the question.

Yes- contribution to climate change is somewhat loaded phrasing, could be better placed as carbon emissions. Worth considering cognitive testing although wider discussion on the intent of these types of questions.

H1. Other problems not covered elsewhere

Yes - It Is worth reviewing research needs and objectives of these, we assume there will be analysis on different types of travel and mental health, it may be better served to use ONS measures of mental health and analyse these across mode usage, instead of using an explicit measure. Suggest a wider discussion to be held.

H2. Difficult to report via proxy

Yes - close to impossible to accurately answer for others

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes - fear of disclosing physical or mental ill-health, and climate change, suggest this could be included in a CASI but since these question repeat it's worth discussing alternatives.

C2. Battery of scales

Ye – 4 items included, we could look at splitting these items further into two groups to minimise satisficing techniques, but suggest we discuss the intent of these questions further.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *no opinion, unsure, undecided,* instead of neutral, unclear what would limit non-substantive responses being selected.

C6. Which of the following would encourage you to cycle as a means of transport more often? Please select all that apply.

Less or slower traffic
More considerate driving
More direct routes or more routes away from traffic
Secure storage / parking at home / work / stations / on-street
Access to showers / changing facilities at destination
Well-maintained road surfaces for cycling
Better signposting of cycle routes
Training to help me ride a bike, increase my confidence or maintain my bike
Other – please describe

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - no option to say none of these, assumes respondent can be encouraged, need to include a 'none of these' option. Unclear from routing but assumes respondent has a bike, if not an omitted options would be assistance with purchasing/hiring a bike.

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

Yes, respondent may not have engaged with this before, this is not an issue with the question, merely an innate item to the query, so cannot be solved.

H2. Difficult to report via proxy

Yes, very difficult to report on behalf of someone else.

Mode effects

B5. Open questions

Yes – optional free text, likely to receive less engagement in web due to burden emplaced, also likely for data to be of a lower quality (typos or other errors).

C3. High number of response options

Yes – 9 options could be problematic for displaying on a single page and therefore ensuring all items are considered (equally or at all). We could randomise these to reduce systematic issues, or splitting these into separate questions which would be beneficial for telephone interviewing as it is impacted by recency effects (last item listed being item most remembered) which would be mitigated. Separating questions would increase burden and repetitiveness.

D2. Response options high (exceeding 65 characters)

Yes, penultimate option is quite long and also encapsulates a lot of options worth separating these.

Train travel

Train travel includes all passenger rail services into, out of and within Wales, including services operated by Transport for Wales, Avanti West Coast, CrossCountry Trains and
Great Western Railway.

D1. How often have you travelled by train in the last 12 months?

Most days	*Go to D2*
Every week	*Go to D2*
Once or twice a month	*Go to D2*
Once every couple of months	*Go to D2*
Once or twice during the year	*Go to D2*
Not at all	*Go to D5*

QAS 99

B2. Complicated instructions, introductions, or explanations.

Yes, based on introduction questions. Worth exploring through user testing whether this will be remembered and factored into responses specifically how travel outside of Wales will be reported.

H1. Other problems not covered elsewhere

Yes, this scale doesn't match the previous ones, omits several times a week from the list, unaware if this is intentional or not.

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

Mode effects

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

C3. High number of response options

Yes, 6 items but these are a few characters so may not present issues for displaying on mobile devices, testing will be needed.

D1a. Where was your last train journey from and to?

From: Select station from list
To: Select station from list

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

Yes- unclear how this is envisioned working, whether this is a drop-down list or database, and if so what is included in here is it all stations in the UK, or just Wales, requires further discussion.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

None to report, but could become problematic depending on usability of this item.

D2. On your last train journey, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Punctuality					
Reliability					
Ticketing					

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, unclear whether this is personal safety brought on by passengers, or heading to the station, or whether this is safety due to the transport itself, if possible it would be helpful to clarify, otherwise this be subjective for each respondent

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible, depends on how much respondent travels by this mode. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

D3. How welcome did you feel on your last train journey?
Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By station and train staff					
By other passengers					
On the train					
At the station					
Cleanliness					
Comfort					
Overall					

Please use the box below if you would like to explain your answer.

QAS -99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes others were encountered on this journey, or staff engaged etc will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible for recall failure if they don't travel much by train. As indicated in prior questions not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 7 items using repeat scales, is part of a wider discussion but would certainly consider splitting these items, to limit non-differentiation and consider swapping scales for some of these items i.e. level of comfortability, cleanliness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

D4. On your last train journey, what language did you use to do the following?
Please select all that apply.
Only ask if Understand spoken Welsh, Speak Welsh, Write Welsh or Read Welsh under A1

	Welsh	Welsh not available	English	Other language	Didn't do this activity
Plan your journey					
Read information displayed at the station or on the train					
Use a ticket machine					
Speak with station or train staff					
Understand audio announcements					

QAS 99

D3. Double-barreled: Contains more than one implicit question.

Yes, somewhat the inclusion of Welsh not available indicates respondent should answer what language they used and whether Welsh was possible even if they don't speak this. Suggest 'Welsh language is not available' is not present as an option and asked separately for those who select English or other language as quite burdensome.

E3. Recall failure: Respondent may not remember the information asked for.

Possible recall failure for those who are fully proficient in both, this will be exasperated by time, could be improved by limiting response to a smaller period of time.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

C2. Battery of scales

Yes 5 items, could prompt straight-lining possible to combat this by changing scales and separating item but will increase burden and repetitiveness.

D5. Which of the following would encourage you to travel by train more often? Please select all that apply.

Shorter journey times
More frequent services, including more off-peak services
Improved reliability
Cheaper tickets
Better links to stations by bus, walking and cycling
Better information provision
Accessible trains and stations
More available seats
Other – please describe

QAS 99

C1. Wording: Question is lengthy, awkward, ungrammatical, or contains complicated syntax

Yes – information provision is not used colloquially, consider replacing with more everyday language i.e. More information from providers, worth discussing analytical needs.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - no option to say none of these, assumes respondent can be encouraged, need to include a 'none of these' option.

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

Yes, respondent may not have engaged with this before, this is not an issue with the question so cannot be solved.

H2. Difficult to report via proxy

Yes, very difficult to report on behalf of someone else.

Mode effects

B5. Open questions

Yes – optional free text, likely to receive less engagement in web due to burden emplaced, also likely for data to be of a lower quality (typos or other errors).

C3. High number of response options

National Centre for Social Research
Wales National Travel Survey: Questionnaire Assessment

Yes – 9 options could be problematic for displaying on a single page and therefore ensuring all items are considered (equally or at all). We could randomise these to reduce systematic issues, or splitting these into separate questions which would be beneficial for telephone interviewing as it is impacted by recency effects (last item listed being item most remembered) which would be mitigated. Separating questions would increase burden and repetitiveness.

D2. Response options high (exceeding 65 characters)

Yes, several items have high character responses, consider trimming some of the examples. This is to ensure mobile devices can see all items on a single page, which is already a concern due to high number of response options.

Bus travel

Bus travel includes all bus services into, out of and within Wales run by any operator, including TrawsCymru.

Bus services typically operate on fixed routes or schedules and charge a fixed fare. Some services respond to passenger demand, rather than run on a fixed timetable. For example, Transport for Wales' fflecsi services.

The questions in this section do not cover long distance coaches or tours.

E1. Have you travelled by bus in the last 12 months?

Yes – I am a regular bus user	*Go to E1b*
Yes – I travel by bus sometimes	*Go to E1b*
No – I used to travel by bus, but don't any more	*Go to E1a*
No – I have never used the bus	*Go to E5*

QAS 99

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

No mode effect issues to report

E1a. Why have you stopped using the bus?

Free text box   Go to E5

QAS 99

G1. Open-ended question that is inappropriate or difficult

Yes, this is a burdensome approach for the respondent, and would be helpful to construct some obvious coded options to assist with common reasons: costs, health issues, moving home/work, having access to other modes of transport, unreliable services etc.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

B5. Open questions

Yes –free text, likely to receive less engagement in web due to burden emplaced, also likely for data to be of a lower quality (typos or other errors). Suggest we do not rely solely on open questions for data generation.

E1b. Where was your last bus journey from and to?

From: *Free text box*   in   Select local authority area from list
To: *Free text box*   in   Select local authority area from list

---

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

Yes - anchoring is presumably include an entire 12 months but unclear, which makes accuracy quite difficult, and applies to subsequent questions too. Also unclear how this will work for a respondent, is it a list of LA's and what happens if travel is within the LA – warrants an extended discussion.

H2. Difficult to report via proxy

Yes - challenging item to answer on behalf of others.

Mode effects

No mode effects to discuss, but depending on how this is intended to operate this could cause issues across modes based on usability.

E2. On your last bus journey, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Punctuality					
Reliability					
Ticketing					

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, unclear whether this is personal safety brought on by passengers, or heading to the bus, or whether this is safety due to the transport itself, if possible it would be helpful to clarify, otherwise this be subjective for each respondent.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. ticketing at least physically, or looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e *neutral*, *no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

E3. How welcome did you feel on your last bus journey?
Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By the driver and any other staff					
By other passengers					
On the bus					
At the bus stop or station					

National Centre for Social Research
Wales National Travel Survey: Questionnaire Assessment

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
Cleanliness					
Comfort					
Overall					

Please use the box below if you would like to explain your answer.

QAS-99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing. Also cleanliness is unclear whether this refers to the station or the bus itself, worth providing some clarity.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.
yes - assumes others were encountered on this journey will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.
Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes - odd inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 3 items using repeat scales, should be okay but could still enable straight-lining. Part of a larger discussion.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

E4. On your last bus journey, what language did you use to do the following?
Please select all that apply.
Only ask if Understand spoken Welsh, Speak Welsh, Write Welsh or Read Welsh under A1

	Welsh	Welsh not available	English	Other language	Didn't do this activity
Plan your journey					
Read information displayed at the bus station / stop or on the bus					
Use a ticket machine					
Speak with the driver or other staff					
Understand audio announcements					

QAS 99

D3. Double-barreled: Contains more than one implicit question.

Yes, somewhat the inclusion of Welsh not available indicates respondent should answer what language they used and whether Welsh was possible even if they don't speak this. Suggest 'Welsh language is not available' is not present as an option and asked separately for those who select English or other language, quite burdensome.

E3. Recall failure: Respondent may not remember the information asked for.

Possible recall failure for those who are fully proficient in both, this will be exasperated by time, could be improved by limiting response to a smaller period of time.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

C2. Battery of scales

Yes 5 items, could prompt straight-lining possible to combat this by changing scales and separating item but will increase burden and repetitiveness.

E5. Which of the following would encourage you to travel by bus more often?
Please select all that apply.

Shorter journey times
Faster routes
More frequent services, including at quieter times of day
Improved reliability and/or punctuality
Cheaper, simpler tickets
Better information provision
Accessible buses, stops and interchanges
More available, comfortable seats
Other – please describe

QAS 99

C1. Wording: Question is lengthy, awkward, ungrammatical, or contains complicated syntax

Yes – information provision is not used colloquially, consider replacing with more everyday language i.e. More information from providers, worth discussing analytical needs.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - no option to say none of these, assumes respondent can be encouraged, need to include a 'none of these' option.

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

Yes, respondent may not have engaged with this before, this is not an issue with the question so cannot be solved.

H2. Difficult to report via proxy

Yes, very difficult to report on behalf of someone else.

Mode effects

B5. Open questions

Yes – optional free text, likely to receive less engagement in web due to burden emplaced, also likely for data to be of a lower quality (typos or other errors).

C3. High number of response options

Yes – 9 options could be problematic for displaying on a single page and therefore ensuring all items are considered (equally or at all). We could randomise these to reduce systematic issues, or splitting these into separate questions which would be beneficial for telephone interviewing as it is impacted by recency effects (last item listed being item most remembered) which would be mitigated. Separating questions would increase burden and repetitiveness.

Community Transport

Community transport services are local services run by volunteers, not commercial businesses. They provide transport for people who would otherwise be disadvantaged because of age, mobility, impairment or health condition or location and operate a bespoke door to door service.

Services include community bus routes, community car schemes, door-to-door or dial-a-ride services, health transport and wheels to work schemes. Providers are generally charities or community groups.

F1. How often have you travelled by community transport in the last 12 months?

Most days	*Go to F2*
Every week	*Go to F2*
Once or twice a month	*Go to F2*
Once every couple of months	*Go to F2*
Once or twice during the year	*Go to F2*
Not at all	*Go to Fx*

QAS 99

H1. Other problems not covered elsewhere

Yes, this scale doesn't match the previous ones, omits several times a week from the list, unaware if this is intentional or not.

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

<div style="border: 1px solid black; padding: 10px;">

Mode effects

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

C3. High number of response options

Yes, 6 items but these are a few characters so may not present issues for displaying on mobile devices, testing will be needed.

</div>

Fx. Are you aware of your local community transport provider?
Only ask if Not at All under F1

Yes	*Go to G1*
No – please send me details	*Go to G1*
No – I don't want to be contacted by my local provider	*Go to G1*

<div style="border: 1px solid black; padding: 10px;">

QAS 99

H1. Other problems not covered elsewhere

yes – unclear how respondents will receive this information, respondents should be informed how they will receive this information. Will need additional information at a separate question to provide information on how this will be received, unclear what contact is going to be generated.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

No mode effect issues to report

</div>

F2. What type of community transport service have you used? Please select all that apply.

Community bus route	local bus service usually using minibuses that does not have to be pre-booked
Community vehicle scheme	access to self-service, pay as you drive vehicles for members
Dial-a-ride	door to door service that must be pre-booked

Health transport to help people with limited mobility and/or access to public transport get to and from essential medical appointments

Wheels to work loan scheme for those who have no other means of getting to, or keeping, a job or training due to a lack of public transport at times they require and no transport of their own

Other – please describe

QAS 99

H2. Difficult to report via proxy

Yes, very difficult to report on behalf of someone else.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, potentially some of these disclose potentially sensitive information about respondents that they would want to hide. The explanation is likely to prove more detrimental to any disclosure as it specifies the characteristics of the individual using them.

B5. Open questions

Yes – optional free text, likely to receive less engagement in web due to burden emplaced, also likely for data to be of a lower quality (typos or other errors).

D2. Response options high (exceeding 65 characters)

Yes, several, will need to test how these are displayed on mobile devices, potentially helpscreens could be of assistance otherwise this could get aesthetically unruly. Also this may not be needed as those that use the service are likely to be familiar with the name. Greater concerns on the display of this once it has been translated.

F2a. Where was your last journey by community transport from and to?

From: *Free text box* in Select local authority area from list
To: *Free text box* in Select local authority area from list

Type of community transport: Select from list *(as answer set from F2)*

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

Yes - anchoring is presumably include an entire 12 months but unclear, which makes accuracy quite difficult, and applies to subsequent questions too. Also unclear how this will work for a respondent, is it a list of LA's and what happens if travel is within the LA – warrants an extended discussion.

H2. Difficult to report via proxy

Yes - challenging item to answer on behalf of others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, potentially a disclosure issues, depending on granularity of location, user testing required.

F3. On your last journey by community transport, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Punctuality					

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Reliability					
Booking process					

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, unclear whether this is personal safety brought on by passengers, the driver, or whether this is safety due to the transport itself, if possible it would be helpful to clarify, otherwise this be subjective for each respondent

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. looked for information, booking process), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

National Centre for Social Research
Wales National Travel Survey: Questionnaire Assessment

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

F4. How welcome did you feel on your last journey by community transport?

Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By the driver and any other staff					
By other users					
Cleanliness					
Comfort					
Overall					

Please use the box below if you would like to explain your answer.

QAS-99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.
yes - assumes others were encountered on this journey, will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.
Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 3 items using repeat scales, should be okay but could still enable straight-lining. Part of a larger discussion.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion

F5. On your last journey by community transport, what language did you use to do the following? Please select all that apply.
Only ask if Understand spoken Welsh, Speak Welsh, Write Welsh or Read Welsh under A1

	Welsh	Welsh not available	English	Other language	Didn't do this activity
Plan your journey					
Read information displayed in the vehicle					
Speak with the driver or other staff					
Understand audio announcements					

QAS 99

D3. Double-barreled: Contains more than one implicit question.

Yes, somewhat the inclusion of Welsh not available indicates respondent should answer what language they used and whether Welsh was possible even if they don't speak this. Suggest 'Welsh language is not available' is not present as an option and asked separately for those who select English or other language as quite burdensome.

E3. Recall failure: Respondent may not remember the information asked for.

Possible recall failure for those who are fully proficient in both, this will be exasperated by time, could be improved by limiting response to a smaller period of time.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

C2. Battery of scales

Yes 4 items, could prompt straight-lining possible to combat this by changing scales and separating item but will increase burden and repetitiveness.

Taxi and Private Hire Vehicles

Taxis can pick up passengers from taxi ranks and be hailed from the street. Taxis can also be pre-booked. Private hire vehicles can only be pre-booked. For the purposes of this survey, the term *taxi* includes both taxis and private hire vehicles.

G1. How often have you travelled by taxi in the last 12 months?

Most days	*Go to G2*
Every week	*Go to G2*
Once or twice a month	*Go to G2*
Once every couple of months	*Go to G2*
Once or twice during the year	*Go to G2*
Not at all	*Go to H1*

QAS 99

H1. Other problems not covered elsewhere

Yes, this scale doesn't match the previous ones, omits several times a week from the list, unaware if this is intentional or not.

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

Mode effects

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

C3. High number of response options

Yes, 6 items but these are a few characters so may not present issues for displaying on mobile devices, testing will be needed.

G1a. Where was your last taxi journey from and to?

From: *Free text box*   in   Select local authority area from list
To: *Free text box*   in   Select local authority area from list

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

Yes - anchoring is presumably include an entire 12 months but unclear, which makes accuracy quite difficult, and applies to subsequent questions too. Also unclear how this will work for a respondent, is it a list of LA's and what happens if travel is within the LA – warrants an extended discussion.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes, potentially a disclosure issues, depending on granularity of location, user testing required.

G2. On your last taxi journey, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Punctuality					
Reliability					
Cost					

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. punctuality, looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

G3. How welcome did you feel on your last taxi journey?
Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By the driver and any other staff					
By other users					
In the taxi					
Waiting for the taxi					
Cleanliness					
Comfort					
Overall					

Please use the box below if you would like to explain your answer.

QAS-99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing.

Unsure how comfort relates to welcomeness, worth discussing the intent with this area.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.
yes - assumes others were encountered on this journey or that they had to wait for a taxi, will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.
Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes - odd inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 7 items using repeat scales, are likely to promote satisficing specifically straight-lining, this is a large number of items to use the same scale. possible to combat this by changing scales and separating items but will increase burden and repetitiveness. Part of a larger discussion on scales.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

G4. On your last journey by taxi, what language did you use to do the following?
Please select all that apply.
Only ask if Understand spoken Welsh, Speak Welsh, Write Welsh or Read Welsh under A1

	Welsh	Welsh not available	English	Other language	Didn't do this activity
Plan or book your journey					
Read information displayed in the vehicle					
Speak with the driver or other staff					

QAS 99

D3. Double-barreled: Contains more than one implicit question.

Yes, inclusion of '*Welsh not available*' indicates respondent should answer what language they used and whether Welsh was possible even if they don't speak this. Suggest 'Welsh language is not available' is not present as an option and asked separately for those who select English or other language as quite burdensome.

E3. Recall failure: Respondent may not remember the information asked for.

Possible recall failure for those who are fully proficient in both, this will be exasperated by time, could be improved by limiting response to a smaller period of time.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

C2. Battery of scales

Yes 3 items, are unlikely to prompt straight-lining but it is possible, part of a wider discussion.

G5. For your last taxi journey, why did you choose to travel by taxi?

Ease of use
Safety
Door to door service
Only option available

Please use the box below if you would like to explain your answer.

Car travel

Car travel as a means of transport is when you drive or are driven to a particular destination, such as work, the shops, or to visit friends. The questions in this section do not cover driving just for pleasure.

For the purposes of this survey, the term *car* covers all private motor vehicle, including cars, 4x4 vehicles, light vans, minibuses, campervans, motorcycles and mopeds. It does not include passenger travel by taxi, bus or community transport, or trips made by professional drivers or crew in the course of their work, such as buses, taxis, ambulances, cranes, refuse vehicles, driving instructors and delivery drivers.

H1. Do you have access to a car whenever you need it?

Please include any company cars, if available for private use. Do not include company car pool vehicles, where employees can access a vehicle when needed but a vehicle is not available for continuous private use.

	Petrol/diesel	Hybrid	Battery electric	Don't know
Motorcycle, moped				
Car				
Light van or goods vehicle				
Minibus, campervan				
Other – please describe				

QAS 99

B2. Complicated instructions, introductions, or explanations.

yes - lengthy, inclusion/exclusion items on the last item. Unclear how much information will be retained by respondents, especially those relating to inclusion of motorcycles as an item of interest.

D2. Assumes constant behavior or experience for situations that vary.

Y yes- assumes constant availability unsure how a shared vehicle would be answered if it's used primarily by one person for work but available outside these hours, perhaps this could be addressed by general availability.

D3. Double-barreled: Contains more than one implicit question.

Yes- asking for both presence of vehicle but also what type of fuel it uses, this could be better administered as two separate items.

G2. Mismatch between question and response categories

Yes, the prior intro does mention motorcycles, but the questions does not, this may cause some confusion among respondents. also question asks about availability of cars but unclear how to say you don't have these vehicles, presume these are to be left blank, if so this will work quite differently to other grid questions the respondents have encountered.

H2. Difficult to report via proxy

Yes, but less challenging to answer accurately as these will likely have a physical presence at the home.

Mode effects

B1. Complex question stem or clarifications

Yes – based on prior question, uncertain how much respondents will factor this in or remember this in their answer. Worth considering using help text and inclusion for user testing.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes, maximum of 5 items, unlikely to prompt straight-lining as this is more factual but worth testing usability.

H2. How often have you travelled by car in the last 12 months?

Most days	*Go to H3*
Several times a week	*Go to H3*
Every week	*Go to H3*
Once or twice a month	*Go to H3*
Once every couple of months	*Go to H3*
Once or twice during the year	*Go to H3*
Not at all	*Go to I1*

QAS 99

B2. Complicated instructions, introductions, or explanations.

Yes, based on introduction questions. Worth exploring through user testing whether this will be remembered and factored into responses, otherwise will lead to underreporting of certain items.

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

Mode effects

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

C3. High number of response options

Yes, 7 items but these are a few characters so may not present issues for displaying on mobile devices, testing will be needed.

H2a. Where was your last car journey from and to?

From: *Free text box*   in   Select local authority area from list
To: *Free text box*   in   Select local authority area from list

---

QAS 99

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes, assumes respondent remembers and wants to disclose this information, no facility to refuse this or supply a Don't know answer. Worth discussing if the distinction between these non-substantive options is of interest

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

G1. Open-ended question that is inappropriate or difficult

Yes, difficult to answer if unaware of item, also unclear if this can be refused, or what level of detail is requested. Instructions could be provided to support this, further testing is needed though.

H1. Other problems not covered elsewhere

yes - anchoring is presumably include an entire 12 months but unclear, which makes accuracy quite difficult, and applies to subsequent questions too. Also unclear how this will work for a respondent, is it a list of LA's and what happens if travel is within the LA – warrants an extended discussion.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others.

Mode effects

No mode effects to discuss.

H3. On your last car journey, how many other people were you travelling with?

> None – I was the driver and there were no passengers
> One other person
> Two or more other people

QAS 99

B2. Complicated instructions, introductions, or explanations.

Yes, based on introduction questions. Worth exploring through user testing whether this will be remembered and factored into responses, otherwise will lead to underreporting of certain items. In this instance especially motorcycles.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, this is possible, unable to impact this feature without limiting the period reporting from potentially a year to a more manageable period.

H1. Other problems not covered elsewhere

This question seems to only be interested in situations where the respondent is driving (unclear if response option should be interpreted as indicative as all situations), however this is at odds with the introduction statement 'Car travel as a means of transport is when you drive or are driven to a particular destination' if this is only interested in when the respondent drives then it should be routed off people who personally don't drive or have a license.

H2. Difficult to report via proxy

yes - challenging item to answer on behalf of others unless present.

Mode effects

No mode effects to discuss

H4. On your last car journey, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Speed limits along route					
Facilities for taking breaks					

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, unclear whether this is personal safety brought on by other drivers, the driver (if not the respondent), or whether this is safety due to the vehicle itself, if possible it would be helpful to clarify, otherwise this be subjective for each respondent.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. facilities for breaks, or looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H1. Other problems not covered elsewhere

Unclear whether this is only for those who drive themselves or also passengers as prior questions, worth discussing further.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – five items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* instead of neither satisfied or dissatisfied.

H5. On your last car journey, how satisfied or dissatisfied were you with the condition of the road network?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied	Not applicable
Road quality						
Lighting						
Signage						
Litter						
Drainage						
Planting and verges						

QAS 99

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G4. Vague response categories are subjective to multiple interpretations

Yes, uncertain how may respondents would recognise 'planting' as a term they would understand in correlation to road conditions, worth discussing further for different options.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, neutral, no opinion, unsure, undecided, instead of neither satisfied or dissatisfied.

H6. On your last car journey, how satisfied or dissatisfied were you with management of traffic on the road network?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied	Not applicable
Incidents, such as collisions or breakdowns						
Congestion						
Severe weather						
Roadworks						

QAS 99

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

C2. Battery of scales

Yes – four items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, neutral, no opinion, unsure, undecided, instead of neither satisfied or dissatisfied

---

H3. For your last car journey, why did you choose to travel by car?

Ease of use
Cheapest option
Most direct route
No other option available

Please use the box below if you would like to explain your answer.

<div style="border:1px solid black; padding:10px;">

QAS 99

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Unclear if this is multiple choice, if not, this should be clear it is the main reason.

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

</div>

Air travel

Air travel as a means of transport is when you fly to a particular destination, such as a holiday, visiting friends and family or for work. It does not include flying just for pleasure.

When answering the questions in this section, please consider any commercial flights into and out of airports in the UK, as well as your experience at the airports. Please do not include any private flights.

I1. How often have you travelled by air in the last 12 months?

	For business	For pleasure
Every week		
Once or twice a month		
Once every couple of months		
Once or twice during the year		
Not at all		

QAS 99

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

Mode effects

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

---

I2. On your last flight, which UK airport did you fly from or into?

Cardiff	*Go to I3*
Anglesey	*Go to I3*
Bristol	*Go to J1*
Liverpool John Lennon	*Go to J1*
Manchester	*Go to J1*
Birmingham	*Go to J1*
London Heathrow	*Go to J1*
Other – please list	*Go to J1*

QAS 99

G6. Illogical order of response categories

Yes, might be worth considering ordering these alphabetically, or at least those outside of Wales to help navigation.

H1. Other problems not covered elsewhere

Unclear whether this is only for those who report some air travel, need to discuss this further if not.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C3. High number of response options

Yes,8 items but these are a few characters so may not present issues for displaying on mobile devices, and as it is factual question, no notable concerns.

Ix. On your last flight, how did you travel to the airport? Please tick all that apply

Walking
Cycling
Train
Bus
Taxi
Car

QAS 99

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period. More likely to be impactful for previous frequent fliers.

H1. Other problems not covered elsewhere

Unclear whether this is only for those who report some air travel, need to discuss this further if not. Also uncertain if Coaches are omitted for a reason.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

I3. On your last flight, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Punctuality					
Reliability					
Ticketing					

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, unclear whether this is personal safety brought on by other passengers, thoughts on security checks or something else, if possible it would be helpful to clarify, otherwise this be subjective for each respondent

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e.   looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

A1. Fear of disclosure and socially desirable reporting

---

yes - potentially undesirable to disclose safety concerns, could separate this item and provide some additional reassurance or ask about safety in a separate question either across modes or universally and probe if anyone has ever felt intimidated/unsafe threatened etc. potentially in a CASI section for face-to-face interviews.

C2. Battery of scales

Yes – six items using the scale could promote satisficing, specifically likelihood of respondent straight lining these. Could separate these and use different scales, or bunch these into smaller items (1/2 per page) and potentially reverse coding them but this will increase burden and repetitiveness.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, neutral, no opinion, unsure, undecided, instead of neither satisfied or dissatisfied

I4. How welcome did you feel on your last flight?
Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By airport or plane staff					
By other passengers					
On the plane					
At the airport					
Cleanliness					
Comfort					
Overall					

Please use the box below if you would like to explain your answer.

QAS-99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded
yes - feeling welcome is a difficult subject to define with multiple domains, however confident/secure/accepted/ these concepts are also multifaceted, worth cognitive testing.

Unsure how comfort factors into being welcome, worth discussing the intent on this item.

E3. Recall failure: Respondent may not remember the information asked for.
Yes, possible but less likely than some other modes. Not much can be done as it all

depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes - odd inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 7 items using repeat scales, are likely to promote satisficing specifically straight-lining, this is a large number of items to use the same scale. possible to combat this by changing scales and separating item but will increase burden and repetitiveness. Part of a larger discussion on scales.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion

I5. On your last flight, what language did you use to do the following?

Please select all that apply.

Only ask if Understand spoken Welsh, Speak Welsh, Write Welsh or Read Welsh under A1

	Welsh	Welsh not available	English	Other language	Didn't do this activity
Plan or book your journey					
Read information displayed at the airport or on the plane					
Use automated check in facilities or similar					
Speak with airport or plane staff					
Understand audio announcements					

QAS 99

D3. Double-barreled: Contains more than one implicit question.

Yes, inclusion of '*Welsh not available*' indicates respondent should answer what language they used and whether Welsh was possible even if they don't speak this. Suggest 'Welsh language is not available' is not present as an option and asked separately for those who select English or other language as quite burdensome.

E3. Recall failure: Respondent may not remember the information asked for.

Possible recall failure for those who are fully proficient in both, this will be exasperated by time, could be improved by limiting response to a smaller period of time.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

C2. Battery of scales

Yes 5 items, could prompt straight-lining, part of a wider discussion.

Sea travel

Sea travel as a means of transport is when you travel by boat to a particular destination, such as a holiday, visiting friends and family or for work. It does not include sailing just for pleasure.

Z1. How often have you travelled by sea in the last 12 months?

Every week
Once or twice a month
Once every couple of months
Once or twice during the year
Not at all

QAS 99

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else.

Mode effects

A2. Positivity bias on rating scales

Stem is unbalanced, suggest add 'if at all' to limit any systematic overreporting

---

Z2. On your last journey by sea, which UK seaport did you use?
Please select all that apply.

Holyhead	*Go to I3*
Fishguard	*Go to I3*
Milford Haven	*Go to J1*
Plymouth	*Go to J1*
Poole	*Go to J1*
Portsmouth	*Go to J1*
Folkestone	*Go to J1*
Dover	*Go to J1*
Liverpool	*Go to J1*
Other – please list	*Go to J1*

QAS 99

G6. Illogical order of response categories

Yes, might be worth considering ordering these alphabetically, or at least those outside of Wales to help navigation.

H1. Other problems not covered elsewhere

Unclear whether this is only for those who report some sea travel, need to discuss this further if not.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment

C3. High number of response options

Yes, 10 items but these are a few characters so may not present issues for displaying on mobile devices, and as it is factual question, no notable concerns.

Z2. On your last journey by sea, how did you travel to the seaport?
Please tick all that apply

Walking
Cycling
Train
Bus
Taxi
Car

QAS 99

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period. More likely to be impactful for previous users.

H1. Other problems not covered elsewhere

Unclear whether this is only for those who report some sea travel, need to discuss this further if not. Also uncertain if Coaches are omitted for a reason.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Mode effects

No concerns

Z3. On your last journey by sea, how satisfied or dissatisfied were you with the following?

	Very dissatisfied	Fairly dissatisfied	Neither satisfied nor dissatisfied	Fairly satisfied	Very satisfied
Overall journey					
Safety					
Availability of information					
Punctuality					
Reliability					
Ticketing					

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, unclear whether this is personal safety brought on by other passengers, the sea or more generally, if possible it would be helpful to clarify, otherwise this be subjective for each respondent

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes respondent encountered all of these (i.e. looked for information), will need to include a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others.

Z4. How welcome did you feel on your last journey by sea?
Feeling welcome means feeling confident, secure, comfortable and accepted.

	Very welcome	Fairly welcome	Neither welcome nor unwelcome	Fairly unwelcome	Very unwelcome
By port or ferry/boat staff					
By other passengers					
On the boat					
At the port					
Cleanliness					
Comfort					
Overall					

Please use the box below if you would like to explain your answer.

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

yes - assumes others were encountered on this journey or engaged with staff, requires a Not applicable option.

E3. Recall failure: Respondent may not remember the information asked for.

Yes, possible but less likely than some other modes. Not much can be done as it all depends on respondents last journey which could be up to 12 months ago, unless limiting the period.

G1. Open-ended question that is inappropriate or difficult

Yes - odd inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

yes - close to impossible to accurately answer for others

Mode effects

A2. Positivity bias on rating scales

yes - not balanced, suggest inclusion of 'if at all' or 'welcome or unwelcome' to better balance.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C2. Battery of scales

Yes – 7 items using repeat scales, are likely to promote satisficing specifically straight-lining, this is a large number of items to use the same scale. possible to combat this by changing scales and separating items but will increase burden and repetitiveness. Part of a larger discussion on scales.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

Z5. On your last journey by sea, what language did you use to do the following?
Only ask if Understand spoken Welsh, Speak Welsh, Write Welsh or Read Welsh under A1

	Welsh	Welsh not available	English	Other language	Didn't do this activity
Plan or book your journey					
Read information displayed at the port or on the boat					
Use automated check in facilities or similar					
Speak with port or other staff					
Understand audio announcements					

QAS 99

D3. Double-barreled: Contains more than one implicit question.

Yes, somewhat the inclusion of Welsh not available indicates respondent should answer what language they used and whether Welsh was possible even if they don't speak this. Suggest 'Welsh language is not available' is not present as an option and asked separately for those who select English or other language as quite burdensome.

E3. Recall failure: Respondent may not remember the information asked for.

Possible recall failure for those who are fully proficient in both, this will be exasperated by time, could be improved by limiting response to a smaller period of time.

H1. Other problems not covered elsewhere

Unclear whether this is multiple choice, as this does require that due to nature of switching languages during tasks.

H2. Difficult to report via proxy

Yes – challenging to report on behalf of someone else unless also present

Mode effects

C2. Battery of scales

Yes 5 items, could prompt straight-lining possible to combat this by changing scales and separating item but will increase burden and repetitiveness.

Accessibility

J1. Do you have any impairment or health condition lasting or expected to last 12 months or more?

      Yes

      No

<div style="border:1px solid black; padding:10px;">

QAS 99

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes - sensitive for those with conditions, they may require further assurances to anonymity.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Very sensitive item, consider placement in CASI for face-to-face interviewing.

</div>

J2. Do any of these impairments or conditions affect you in any of the following areas?
Only ask if YES to J1

Vision (for example blindness or partial sight)

Hearing (for example deafness or partial hearing)

Mobility (for example walking short distances or climbing stairs)

Dexterity (for example lifting and carrying objects, using a keyboard)

Learning or understanding or concentrating

Memory

Mental ill health

Stamina or breathing or fatigue

Socially or behaviourly (for example associated with autism spectrum disorder (ASD) or attention deficit hyperactivity disorder (ADHD))

Other – please describe

<div style="border:1px solid black; padding:10px;">

QAS 99

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

</div>

Yes - sensitive for those with conditions, they may require further assurances to anonymity.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Very sensitive item, consider placement in CASI for face-to-face interviewing.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C3. High number of response options

Yes, 10 items but these are a few characters so may not present issues for displaying on mobile devices, and as it is factual question, no notable concerns.

D2. Response options high (exceeding 65 characters)

Yes, several items have high character responses but as a harmonized options it is not advisable to trim. User testing will be important especially once it has been translated to check usability.

J3. Do any of your impairments or conditions reduce your ability to carry out day-to-day activities? Please consider whether you are affected while receiving any treatment, taking medication, or using any devices, such as a hearing aid.
Only ask if YES to J1

Yes, a lot
Yes, a little
Not at all

QAS 99

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes - sensitive for those with conditions, they may require further assurances to anonymity.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, work discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Very sensitive item, consider placement in CASI for face-to-face interviewing.

J5. How satisfied or dissatisfied are you with your ability to use rail services in Wales independently?
Please consider whether you need to seek assistance from others to be able to travel by train. For example, you may require a ramp between the platform and the train if there isn't level boarding.

Very satisfied
Fairly satisfied
Neither satisfied nor dissatisfied
Fairly dissatisfied
Very dissatisfied
I don't use rail services

Please use the box below if you would like to explain your answer.

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes - uncertain how someone would answer this if they occasionally need support, or if they don't need support how they should answer, question stem could clarify this is typically or worse scenario.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes - sensitive for those with conditions, they may require further assurances to anonymity.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

G2. Mismatch between question and response categories

Yes - satisfaction might not be the right measurement for this, perhaps its capability or confidence, worth discussing intent.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Very sensitive item, consider placement in CASI for face-to-face interviewing.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

J6. How satisfied or dissatisfied are you with your ability to use bus services in Wales independently? Please consider whether you need to seek assistance from others to be able to travel by bus. For example, you may require a ramp to get onto the bus.

Very satisfied
Fairly satisfied
Neither satisfied nor dissatisfied
Fairly dissatisfied
Very dissatisfied

I don't use bus services.

Please use the box below if you would like to explain your answer.

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes - uncertain how someone would answer this if they occasionally need support, or if they don't need support how they should answer, question stem could clarify this is typically or worse scenario.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes - sensitive for those with conditions, they may require further assurances to anonymity.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

G2. Mismatch between question and response categories

Yes - satisfaction might not be the right measurement for this, perhaps its capability or confidence, worth discussing intent.

H1. Other problems not covered elsewhere

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

Very sensitive item, consider placement in CASI for face-to-face interviewing.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C4. Scales with mid-points

Yes, could change the scales to remove neutral option but this can create an artificial response. Potential to experiment with wording, I,e, *neutral*, *no opinion, unsure, undecided,* Part of a wider discussion.

Employment

K1. In the last 7 days, were you doing any of the following?
Please choose the answer that reflects what you spent most time doing.

In any paid employment or self-employment (or temporarily away from work ill or on holiday)
On maternity or paternity leave
Unemployed and looking for work
Retired (whether receiving a pension or not)
Full-time student, including on holiday or half-term
Unable to work because of long-term sickness or impairment
Looking after home or family
Other – please describe

<div style="border:1px solid">

QAS 99

H2. Difficult to report via proxy

Yes, potentially difficult to disclose if social or familial ties are weak, worth discussing if this will be proxied.

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

</div>

K2. Do you usually

Travel to the same workplace

Travel to a few workplaces regularly

Travel to many different places for work, for example to visit or work for different clients

Work remotely, for example from home or close to home for example from a local coffee shop or library

Only ask if YES to one of first two answer options under K1

<div style="border:1px solid black; padding:10px;">

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes, question what constitutes usual behaviour and whether this is consistent - how to answer if work remotely and also in an office, unclear if this is select all that apply. Might be easier to ask about the last 7 days so it is anchored to a time.

H2. Difficult to report via proxy

Yes, could be difficult but might be easier than some due to physical presence or absence should be known.

Mode effects

No mode effects detected.

</div>

K3. How many hours a week do you usually work?
Only ask if WORK REMOTELY under K2

<div style="border:1px solid black; padding:10px;">

QAS 99

E4. Computation problem: The question requires a difficult mental calculation.

Yes for some people this could be quite challenging, does this include overtime, and is this a typical week or something else, would benefit from clarity on these items, especially for those with flexible, insecure or self-employment.

H2. Difficult to report via proxy

</div>

Yes, could be difficult but might be easier than some due to physical presence or absence should be known.

Mode effects

No mode effects detected.

K4. How many hours a week do you usually work remotely, for example from home or another remote working location?
Only ask if WORK REMOTELY under K2

<div style="border:1px solid black; padding:10px">

QAS 99

E4. Computation problem: The question requires a difficult mental calculation.

Yes for some people this could be quite challenging, does this include overtime, and is this a typical week or something else, would benefit from clarity on these items, especially for those with flexible, insecure or self-employment.

H2. Difficult to report via proxy

Yes, could be difficult but might be easier than some due to physical presence or absence should be known.

Mode effects

No mode effects detected.

</div>

Affordability

W1. Do you hold a concessionary or discounted travel card or pass?
Please do not include cards or passes that you can purchase to get multi-journey or group travel savings.

60 and Over
Disabled person
Disabled person with companion
Young person's railcard or Mytravelpass
Jobcentre Plus travel discount card
Veterans railcard
Other – please describe
I don't have a concessionary travel card or pass

<div style="border:1px solid black; padding:10px;">

QAS 99

C4. Reference periods are missing, not well specified, or in conflict.

Yes, is this currently or would it include those in the process of receiving these.

H2. Difficult to report via proxy

Yes, challenging to answer on behalf of someone else, unless very close social ties.

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

</div>

W2. Do you feel that you can afford to travel by bus in Wales?
Please assume you can use your concessionary or discounted travel card or pass if you have one.
Only ask if NO to first three options under W1

Yes – for all purposes
Yes – for visiting friends and family or for limited social and leisure purposes
Only for work or education
Only for essential health appointments and/or shopping
No – I can't afford to travel by bus at all
Don't know cost of bus travel

Please use the box below if you would like to explain your answer.

<div style="border:1px solid black; padding:10px;">

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes – finances can fluctuate, would suggest this either accounts for a typical week, anchored to last week or is asked generally, worth understanding if there are any further policy or analytical requirements from this question.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

</div>

yes - disclosure of financial struggles, would be helped by acknowledging financial difficulties, i.e. 'we know there are many reasons why some people could struggle with transport costs' or 'we are aware of financial difficulties and situations which limit spending… ' this should help with any embarrassment caused by disclosing financial struggles.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

sensitive item, consider placement in CASI for face-to-face interviewing, and inclusion of a statement to acknowledge reasons for financial difficulties.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

W3. Do you feel that you can afford to travel by train in Wales, if you use your concessionary or discounted travel card or pass?
Only ask if YES to W1

Yes – for all purposes
Yes – for visiting friends and family or for limited social and leisure purposes
Only for work or education
Only for essential health appointments and/or shopping
No – I can't afford to travel by train at all
Don't know cost of train travel

Please use the box below if you would like to explain your answer.

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes – finances can fluctuate, would suggest this either accounts for a typical week, anchored to last week or is asked generally, worth understanding if there are any further policy or analytical requirements from this question.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

yes - disclosure of financial struggles, would be helped by acknowledging financial difficulties, i.e. 'we know there are many reasons why some people could struggle with transport costs' or 'we are aware of financial difficulties and situations which limit spending… ' this should help with any embarrassment caused by disclosing financial struggles.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

Yes, if respondent is asked both, there should be an attempt to change the question stem in some way, i.e. 'now thinking about using your concessionary or discounted card…' otherwise it's possible respondents will think they are answering the same question, for CAWI we can also bold certain items.

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

sensitive item, consider placement in CASI for face-to-face interviewing, and inclusion of a statement to acknowledge reasons for financial difficulties.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

W4. Do you feel that you can afford to travel by train in Wales, <u>without</u> using any concessionary or discounted travel card or pass that you may hold?
Ask all respondents

Yes – for all purposes
Yes – for visiting friends and family or for limited social and leisure purposes
Only for work or education
Only for essential health appointments and/or shopping
No – I can't afford to travel by train at all
Don't know cost of train travel

Please use the box below if you would like to explain your answer.

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes – finances can fluctuate, would suggest this either accounts for a typical week, anchored to last week or is asked generally, worth understanding if there are any further policy or analytical requirements from this question.

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

yes - disclosure of financial struggles, would be helped by acknowledging financial difficulties, i.e. 'we know there are many reasons why some people could struggle with transport costs' or 'we are aware of financial difficulties and situations which limit

spending… ' this should help with any embarrassment caused by disclosing financial struggles.

G1. Open-ended question that is inappropriate or difficult

Yes – this is an unusual inclusion, uncertain what answers are expected (explain the scoring, explain their experience or how they have interpreted the answer) from respondents and how this will be incorporated into analysis. Worth further discussion to understand intent.

H1. Other problems not covered elsewhere

There should be an attempt to change the question stem in some way, i.e. 'now thinking about train travel' otherwise it's possible respondents will think they are answering the same question, for CAWI we can also bold certain items. Also worth discussing other ways to capture this, perhaps asking about affordability across modes, then if a respondent replies yes we can route them to whether this is for all purposes or only some, it might be less burdensome.

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, but part of a wider discussion on the intent of these free text items.

H2. Difficult to report via proxy

Yes, potentially inappropriate to disclose this for someone else, worth discussing if this will be proxied.

Mode effects

A1. Fear of disclosure and socially desirable reporting

sensitive item, consider placement in CASI for face-to-face interviewing, and inclusion of a statement to acknowledge reasons for financial difficulties.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

Noise

L1. In the last 12 months, while at home, have you regularly been bothered by noise from outside your home caused by transport?

Yes	*Go to L2*
No	*Go to Travel in last 24 hours*

QAS 99

D2. Assumes constant behavior or experience for situations that vary.

yes – assumes respondent only has one home, suggest this is anchored to a main home if they have a second one, which could be defined as the one they reside at most which should cover most situations.

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, regularly will be a subjective interpretation and will lead to differential reporting unless defined.

Mode effects

No mode effect concerns

L2. Is the noise usually caused by
Only ask if YES to L1

Road vehicles
Trains
Air transport
Sea transport
Construction works on the road network
Construction works on the rail network
Other – please describe

QAS 99

H1. Other problems not covered elsewhere

Unclear if this is the main source or possible to select multiple options, if it is the main source it would benefit from being define in the question stem.

L3. Is the road traffic noise usually caused by a particular type of vehicle? Please select all that apply

Only ask if ROAD VEHICLES to L2

Heavy goods or construction vehicles

Buses

Vans or home deliveries

Motorcycles

Vehicles playing loud music

Idling vehicles

Other – please describe

No – just general road traffic

QAS 99

No general design comments

Mode effects

A1. Fear of disclosure and socially desirable reporting

Very sensitive item, consider placement in CASI for face-to-face interviewing.

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

C3. High number of response options

Yes, 10 items but these are a few characters so may not present issues for displaying on mobile devices, and as it is factual question, no notable concerns.

D2. Response options high (exceeding 65 characters)

Yes, several items have high character responses but as a harmonized options it is not advisable to trim. User testing will be important especially once it has been translated to check usability.

Equality Monitoring

We ask these questions so we can produce results for different groups of people. Like all your answers, this information will only ever be used for research purposes and you will never be identifiable from the results. The questions in this section are all voluntary.

S4. Which of the following options best describes how you think of yourself?

Heterosexual or Straight
Gay or Lesbian
Bisexual
Other – please describe
Prefer not to say

<div style="border:1px solid">

QAS 99

H2. Difficult to report via proxy

Yes, inappropriate to disclose via proxy and with acceptable accuracy

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

</div>

S3. Is the gender you identify with the same as your sex registered at birth?

Yes
No – please describe your gender identity

QAS 99

B1. Conflicting or inaccurate instructions, introductions, or explanations.
Yes, a lack of introduction/rationale for collection could cause complications for some individuals, suggest including reasons for capture mimicking ONS.

F1. Sensitive content (general): The question asks about a topic that is embarrassing, very private, or that involves illegal behaviour
Yes, will be a sensitive item for some, discussion on the appropriateness of a refusal option also suggested.

H1. Other problems not covered elsewhere
Yes, potential ethical issues if not allowed to refuse, given its sensitivity and worth discussing further the placement.

H2. Difficult to report via proxy
Yes, difficult and inappropriate.

Mode effects

A1. Fear of disclosure and socially desirable reporting
Yes, sensitive information, potentially leading to higher refusals with interviewers if refusals are possible. Consider reordering this location, including it in a CASI for Face-to-face and reasons for capture and terminology across all modes.

B5. Open questions

Yes, includes an optional open-ended text due to sensitivity of this item this is likely to receive more data from self-completion than interviewer administration. Worth considering a CASI element for face-to-face and discussing suitable options for telephone interviewing,

S5. Are you pregnant?

> Yes
> No

QAS 99

F1. Sensitive content (general): The question asks about a topic that is embarrassing, very private, or that involves illegal behaviour
Worth discussing the inclusion of rationale for collection and whether this should be possible to skip.

H2. Difficult to report via proxy
Yes, difficult and inappropriate.

A1. Fear of disclosure and socially desirable reporting
Yes, sensitive information, potentially leading to higher refusals with interviewers if refusals are possible. Consider reordering this location, including it in a CASI for Face-to-face and reasons for capture across all modes.

S7. What is your religion?

No religion
Christian (all denominations)
Buddhist
Hindu
Jewish
Muslim
Sikh
Any other religion – please describe

QAS 99

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes, I know this is an ONS measure but based on analytical needs is this simply self-identification, or include understanding current practices/strength of affiliation.

H2. Difficult to report via proxy

Yes, potentially difficult to disclose if social or familial ties are weak, worth discussing if this will be proxied.

Mode effects

B5. Open questions

Yes, includes an optional open-ended text, this is likely to receive lower quality data and lower frequency in self-administered mode (CAWI) due to aforementioned issues. There isn't much that can improve this and is a factor of self-completion environment.

S8. What is your legal marital or registered civil partnership status?

Never married and never registered in a civil partnership
Married

National Centre for Social Research
Wales National Travel Survey: Questionnaire Assessment

In a registered civil partnership

Separated, but still legally married

Separated, but still legally in a civil partnership

Divorced

Formerly in a civil partnership which is now legally dissolved

Widowed

Surviving partner from a registered civil partnership

QAS 99

H2. Difficult to report via proxy

yes – potentially challenging item to answer on behalf of others if unfamiliar with them.

Mode effects

No mode effect issues to report

Thank You

Thank you for taking part in the Wales National Travel Survey.

If you are happy for us to contact you with further information about the Wales National Travel Survey, please enter your email address below.

T1. Email address

QAS 99

B2. Complicated instructions, introductions, or explanations.

Uncertain what respondents are agreeing to, worth elaborating this, if they will be recontacted for future surveys or simply finding out more about the results.

H1. Other problems not covered elsewhere

Yes, worth validating email address (enter information twice) and collecting other information Telephone etc and checking address information to permit multiple contact streams.

Due to inclusion of telephone, language such as below won't make sense, suggest this operates differently for Telephone, i.e. *do you have an email address you can share so we can recontact you?*

H2. Difficult to report via proxy

Yes, consent should not be proxied.

Mode effects

No mode effects to report, but consent is often higher in interviewer administration as they can act as ambassadors.

If you have any comments or suggestions about how we can improve travel in Wales, please use the box below to explain.

T2. Further comments

Appendix

QAS 99

A1. Difficulty determining what parts of the question should be read

Yes/No

A2. Difficulty determining what parts of the question should be read

Yes/No

A3. Question is not fully scripted and therefore difficult to read

Yes/No

B1. Conflicting or inaccurate instructions, introductions, or explanations.

Yes/No

B2. Complicated instructions, introductions, or explanations.

Yes/No

C1. Wording: Question is lengthy, awkward, ungrammatical, or contains complicated syntax

Yes/No

C2. Technical term(s) are undefined, unclear, or complex

Yes/No

C3. Vague: There are multiple ways to interpret the question or to decide what is to be included or excluded

Yes/No

C4. Reference periods are missing, not well specified, or in conflict.

Yes/No

D1. Inappropriate assumptions are made about the respondent or about his/her living situation.

Yes/No

D2. Assumes constant behavior or experience for situations that vary.

Yes/No

D3. Double-barreled: Contains more than one implicit question.

Yes/No

E1. Knowledge may not exist: Respondent is unlikely to know the answer to a factual question

Yes/No

E2. Attitude may not exist: Respondent is unlikely to have formed the attitude being asked about.

Yes/No

E3. Recall failure: Respondent may not remember the information asked for.

Yes/No

E4. Computation problem: The question requires a difficult mental calculation.

Yes/No

F1. Sensitive content (general): The question asks about a topic that is embarrassing, very private, or that involves illegal behaviour

Yes/No

F2. Sensitive wording (specific): Given that the general topic is sensitive, the wording should be improved to minimize sensitivity.

Yes/No

F3. Socially acceptable response is implied by the question.

Yes/No

G1. Open-ended question that is inappropriate or difficult

Yes/No

G2. Mismatch between question and response categories

Yes/No

G3. Technical term are undefined unclear or complex

Yes/No

G4. Vague response categories are subjective to multiple interpretations

Yes/No

G5. Overlapping response categories

Yes/No

G6. Illogical order of response categories

Yes/No

H1. Other problems not covered elsewhere

Yes/No

H2. Difficult to report via proxy

Yes/No

Mode effects

A1. Fear of disclosure and socially desirable reporting

Yes/No

A2. Positivity bias on rating scales

Yes/No

B1. Complex question stem or clarifications

Yes/No

B2. Extra information

Yes/No

B3. Computation

Yes/No

B4. Document consultation

Yes/No

B5. Open questions

Yes/No

C1. Ranking tasks

Yes/No

C2. Battery of scales

Yes/No

C3. High number of response options

Yes/No

C4. Scales with mid-points

Yes/No

C5. Hidden codes and interviewer-coded items

Yes/No

C6. Non-standard question format or visual aid

Yes/No

D1. Stem length high (exceeding 250 characters)

Yes/No

D2. Response options high (exceeding 65 characters)

Yes/No

References

Al Baghal, T. and Lynn, P. (2015) Using motivational statements in web-instrument design to reduce item-missing rates in a mixed-mode context*, Public Opinion Quarterly, 79(2): 568-579.*
https://doi.org/10.1093/poq/nfv023

Campanelli, P. Nicolaas, G. Jäckle, A. Lynn, P. Hope, S. Blake, V. Gray, M. (2011) *A Classification of Question Characteristics Relevant to Measurement Error and Consequently Important for Mixed Mode Questionnaire Design* Presented 11 October 2011 at the Royal Statistical Society, London, UK

Cornick, P. (2021). *The NatCen Remodel approach. A systematic approach to transforming social surveys*. Briefing Paper. Centre for Social Survey transformation.

Cornick, P., Aizpurua, E., & Howe, S. (2023). *Wales National Travel Survey: Review report*. Report prepared by NatCen Social Research for Transport of Wales.

Couper, M.P., Tourangeau, R., Conrad, F.G. and Zhang, C., 2012. The Design of Grids in Web Surveys. *Social Science Computer Review*, *31*(3), pp.322-345.

D'Ardenne, J., Collins, D., Gray, M., Jessop, C., Pilley, S. (2017) Assessing the risk of mode effects: review of proposed survey questions for waves 7-10 of Understanding Society, *Understanding Society Working Paper 2017-04,* Colchester: University of Essex. Available at:
https://www.understandingsociety.ac.uk/research/publications/524254

Debell, M., Wilson, C., Jackman, S. and Figueroa, L., 2021. Optimal response formats for online surveys: Branch, grid, or single item?. *Journal of Survey Statistics and Methodology*, *9*(1), pp.1-24.

Fan, W. and Yan, Z., 2010. Factors affecting response rates of the web survey: A systematic review. *Computers in human behavior*, *26*(2), pp.132-139.

Lipps, O. and Monsch, G.A., 2022. Effects of question characteristics on item nonresponse in telephone and web survey modes. *Field Methods*, *34*(4), pp.318-333.

Mavletova, A. and Couper, M.P., 2014. Mobile web survey design: Scrolling versus paging, sms versus e-mail invitations. *Journal of Survey Statistics and Methodology*, *2*(4), pp.498-518.

Peytchev, A., Couper, M.P., McCabe, S.E. and Crawford, S.D., 2006. Web survey design: Paging versus scrolling. *International Journal of Public Opinion Quarterly*, *70*(4), pp.596-607.

Schaeffer, N.C. and Dykema, J., 2020. Advances in the science of asking questions. *Annual Review of Sociology*, *46*, pp.37-60.

Sturgis, P., Roberts, C., and Smith, P. (2012). 'Middle alternatives revisited: how the neither/nor response acts as a way of saying 'I don't know''. *Sociological Methods & Research*. 43(1). 15-38.

Van der Heijden, P.G., Van Gils, G., Bouts, J. and Hox, J.J., 2000. A comparison of randomized response, computer-assisted self-interview, and face-to-face direct questioning: Eliciting sensitive information in the context of welfare and unemployment benefit. *Sociological Methods & Research*, *28*(4), pp.505-537.

Willis, G. and Lessler, J. (1999) 'Question appraisal system QAS-99', Rockville, MD: Research Triangle Institute