National Centre for Social Research

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Wales National Travel Survey (WNTS) 2025-26: Technical report

Authors: Shane Howe, Nick Waugh, Zac Marco Perera, Anna Keyes & Mark Todd
Prepared for: Transport for Wales

AUGUST 2026

The power of understanding

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.

National Centre for Social Research
3rd Floor Block 3
Tiller and Lock
250 City Road
London, EC1V 2AB

020 7250 1866
www.natcen.ac.uk

A Company Limited by Guarantee Registered in England Number.4392418
A Charity registered in England and Wales (1091768) and Scotland (SC038454)

This project was carried out in compliance with ISO20252

This report presents the findings from independent research conducted by the National Centre of Social Research on behalf of Transport for Wales and Welsh Government. Unless stated to the contrary, the findings, suggestions, and recommendations presented in the report are grounded in the data collected for the research during a specific period of time, and do not represent the personal or professional views of the author(s) or the official view of the National Centre for Social Research. Neither the author(s) nor the National Centre for Social Research accept responsibility or any liability for how the findings might be interpreted or used by any party other than Transport for Wales and Welsh Government. We reserve the right to issue a public correction for any misuse or misrepresentation of the research that is brought to our attention. Prior written consent must be sought from the copyright holder for the reproduction or distribution of the report and any of its findings in part or in full and include this disclaimer.

Contents

1.	**Introduction and background**	**5**
1.1	Background	5
1.2	Development work	6
1.3	Uses of the WNTS data	6
2.	**Sample selection**	**8**
2.1	Sample size and structure	8
2.2	Selection of addresses	8
2.3	Clustering and allocation of selected addresses	9
2.4	Selection of dwelling units and/or households	10
2.5	Selection of individuals	10
2.6	Ineligible (deadwood) addresses	11
3.	**Fieldwork procedures**	**13**
3.1	Fieldwork structure	13
3.2	Contacting respondents	13
3.3	Interviewer training and briefings	14
3.4	Interviewer supporting documents	15
3.5	NatCen Survey Enquiry Team and TfW Enquiry Line	16
4.	**Survey instrument and response**	**18**
4.1	The survey instrument	18
4.2	The questionnaire	18
4.3	The travel diary	19
4.4	The CAWI interview	21
4.5	The CAPI and CAPI-Tel interview	22
4.6	Welsh language requirements	23
4.7	Secure Anonymised Data Linkage	24
4.8	Outcome coding	24
4.9	Conditional incentive	27
4.10	Response rates	27
4.11	Quality control	28
5.	**Data processing**	**29**
5.1	Data sources	29
5.2	Data reconciliation	29
5.3	Data cleaning and edits	30
5.4	Coding	31
5.5	Derived variables	32
5.6	Data outputs	33
6.	**Weighting**	**34**
6.1	Summary of the weighting approach	34
6.2	Interview weights	34
6.3	Diary weights	36

7. Bibliography **38**

Appendices **39**

1. Introduction and background

1.1 Background

In 2023, Transport for Wales (TfW) commissioned the National Centre for Social Research (NatCen) to work as its delivery partner to design a suitable methodology for the new Wales National Travel Survey (WNTS).

The WNTS 2025-26 was a web-first survey designed to measure travel attitudes and behaviours among residents of Wales. Commencing on 10th March 2025 the survey was live for 58 weeks to cover fieldwork for the full year. This included covering a March batch which was moved to 2026 to accommodate an early launch. The survey closed on 28th April 2026. Data was collected using a mixed-mode approach that combines Computer-Assisted Web Interviewing (CAWI), Computer-Assisted Personal Interviewing (CAPI) conducted by face-to-face by trained interviewers, and Computer-Assisted Personal Interviewing administered through Telephone (CAPI-Tel). This approach helped ensure broad population coverage and accessibility, maximising respondent participation.

The target population for the survey comprised adults aged 16 and over living in private residential households in Wales. Data collection was conducted at an individual level, continuously throughout the survey year to capture seasonal variation in travel behaviour.
There were three primary goals of the WNTS:

1. To **monitor changes** in travel behaviour and assess progress against specified transport policy targets and measures.
2. To **provide high-quality data** to strengthen the transport evidence base and support the ongoing development of regional transport models in Wales.
3. To **establish a robust and repeatable data collection strategy** that increases agency and control over the data generation process.

To meet these objectives, the WNTS comprised two core components:

1. **Survey Questionnaire**: Respondents answered questions covering their travel attitudes, preferences and experiences. Topics included their frequency of use of various modes of transport, satisfaction with modes of transport and what would encourage them to start using modes of transport or to use them more often.

2. **Travel Diary:** Respondents completed a two-day travel diary, recalling their daily travel activities for the two days prior to completing the survey. The diary captured detailed information on individual trips undertaken, including origin and destination locations, transport mode(s) used, and journey purpose. The travel diary used an Ordnance Survey (OS) mapping Application Programming Interface (API) to support accurate reporting.

1.2 Development work

The WNTS 2025-26 survey followed several developmental phases as guided by NatCen's REMoDEL framework to establish a suitable methodology for this new survey. Following the completion of a review of research and information needs, evaluation of methodological designs, further modelling and design of questionnaire and data collection methods the survey progressed to the experimentation phase.

The first pilot was conducted between 3rd May and 2nd June 2024. The objectives were to understand the volume and data quality generated by a two-day recall travel diary, evaluate competing methods of respondent selection and the type and placement of the travel diary within the survey. The pilot demonstrated that within-household random selection could only be implemented successfully in CAPI. The same approach resulted in lower compliance and increased respondent burden in CAWI. Consequently, the final design adopted random selection in CAPI, while allowing up to two eligible household members to participate in CAWI. The pilot also confirmed the effectiveness of the selected diary design and its placement within the questionnaire.

A second pilot was completed between 9th September and 27th October 2024. This phase focused on testing the end-to-end survey process, including the respondent journey through the sequential offering of completion modes, internal systems for transferring sample cases between data collection modes, and the associated data processing requirements. The findings highlighted how enhancements and adjustments could be made to the data processing framework (i.e. the data protocol) prior to weighting and final data delivery, helping to ensure the robustness and quality of the survey outputs.

Full details of the research, development process, considerations and rationale for the final survey design have been published[1], alongside the testing processes and findings[2].

1.3 Uses of the WNTS data

The WNTS is one of Welsh Government and TfW's primary sources of data concerning travel attitudes and behaviour within Wales. In 2021, Welsh Government published a new Wales Transport Strategy, Llwybr Newydd[3], setting out the aims and ambitions to shape the transport

[1] "Survey development for the Wales National Travel Survey," Transport for Wales, accessed August 25, 2026, https://tfw.wales/projects/wales-national-travel-survey/research-and-development/survey-development.
[2] "Wales National Travel Survey Pilot Testing," Transport for Wales, accessed August 25, 2026, https://tfw.wales/projects/wales-national-travel-survey/research-and-development/pilot-testing.
[3] "Llwybr Newydd: the Wales transport strategy 2021", Welsh Government, accessed August 25, 2026, https://www.gov.wales/llwybr-newydd-wales-transport-strategy-2021.

system over the next 20 years. Llwybr Newydd also committed to developing a new national travel survey. The WNTS is an integral part of the monitoring framework for this strategy[4].

Data generated through the WNTS will be used by Welsh Government and TfW to establish baseline data for targets and measures which will enable them to monitor changes in travel attitudes and behaviours over time. It is also anticipated that other public bodies, charities, think tanks, educational institutions, and the wider population will benefit from and engage with the data once it is published.

This report describes the key technical features of the WNTS 2025-26. Each chapter of the report covers a specific aspect of the survey:

- **Chapter 2: Sample selection**
  - Describes the sample design and selection procedures.
- **Chapter 3: Fieldwork procedures**
  - Outlines the data collection approach, including survey modes, response contact strategies and fieldwork management.
- **Chapter 4: Survey instrument and response**
  - Details the questionnaire and travel diary design and response rates.
- **Chapter 5: Data processing**
  - Outlines procedures used to validate, clean, edit and prepare data for weighting and analytics.
- **Chapter 6: Weighting**
  - Details the weighting methodology used to adjust the raw data for sampling procedures, selection probabilities and differential non-response.

Together, these chapters provide a comprehensive overview of the design, implementation and data adjustment processes which produced the WNTS 2025-26 data.

[4] "Wales Transport Strategy: Monitoring Measures", Transport for Wales, accessed August 25, 2026, https://tfw.wales/projects/monitoring-and-evaluation/wales-transport-strategy/monitoring-measures.

2. Sample selection

2.1 Sample size and structure

The WNTS 2025-26 was designed to achieve a representative sample of adults Wales. Households were selected using an unclustered, stratified random sampling approach. Within eligible households, up to two adults could participate via CAWI, one randomly selected adult could participate via CAPI, or one self-selected or randomly selected adult could participate via CAPI-Tel.

The Postcode Address File (PAF) with Multiple Residency Expansion (managed by Royal Mail) served as the sampling frame. This address file is designed to ensure that multiple dwellings sharing a front door are listed as separate addresses.

17,900 addresses in Wales were drawn from the sampling frame, with only 14,900 issued for the 2025-26 fieldwork. The remaining 3,000 were held in reserve to be deployed in a situation where response was lower than anticipated.

2.2 Selection of addresses

Separate core and reserve samples were drawn to manage uncertainty in response rates while controlling fieldwork costs. Under this approach, only the core sample was issued upfront, with the reserve sample held back to be released only if overall and target sub-group response rates were lower than expected.

The sample was stratified primarily by the four Welsh regions, reflecting the Corporate Joint Committee geography, to facilitate between-region comparisons. The region with the smallest proportion of total adult population, Mid Wales, was oversampled with the aim of achieving an annual effective sample size of 400 in that region. The effective sub-sample size of 400 provides sufficient precision for core analytical requirements, whilst remaining cost effective. After the 17,900 addresses had been sampled, 14,900 were randomly selected as the main sample, retaining the stratified sample design in both the main and reserve samples. The sample distribution by region is shown in Table 1.

Table 1. Issued sample proportions by region.

Region	Main sample addresses	Reserve sample addresses	Proportion of total sample
North Wales	3,175	639	21.3%
Mid Wales	1,475	298	9.9%
South West Wales	3,225	649	21.6%
South East Wales	7,025	1,414	47.1%
Total	14,900	3,000	100.0%

Within each region stratum, further stratification was employed by sorting the PAF by Local Authority crossed by Census 2021 urban-rural categorisation, Census 2021 area-level proportion of households with access to at least one car or van, and postcode prior to sample selection. These stratification variables were chosen as they are known to be associated with travel behaviour and are consistent with the sample stratifiers used for England's National Travel Survey[5].

The reserve sample did not end up being released for the WNTS 2025-26. This was because data from the first two quarters of fieldwork indicated that response rates were on course to achieve the target number of interviews both overall and at a regional level. Trip numbers recorded through the travel diary were consistent with expectations, and the design effects of mid-year weights were within acceptable limits.

2.3 Clustering and allocation of selected addresses

The household-level sample for WNTS was drawn without clustering, before the selected addresses were clustered algorithmically into geographically proximate assignments. The assignments were produced to contain a mean number of 25 addresses, ranging from 9 to 29 addresses. These assignments were designed to facilitate efficient CAPI follow up visits to addresses that did not complete the survey during the initial CAWI phase. While respondents could request a telephone interview through CAPI-Tel during this period, such interviews were not conducted until CAPI fieldwork started.

Smaller assignments were only required in rural locations with low population density, meaning that only 1% of the sample was clustered into assignments of 15 or fewer addresses. The main sample consisted of 609 assignments and the reserve sample of 123 assignments.

Main sample assignments were randomly allocated to quarters and then months of the year. The number allocated per month was proportional to the number of days in the month. For example, 47 main sample assignments were allocated to February and 53 were allocated to December. This was to spread the sample as evenly as possible across the calendar year, to best measure the seasonality of travel behaviour. Within each month, assignments were randomly assigned to four equally sized batches.

Variation in the number of addresses per assignment was considered throughout the allocation process. The division of assignments into the main and reserve samples used random sampling with probabilities proportionate to the number of addresses in the assignment. Subsequent random allocation of assignments to months and batches was checked to confirm an even distribution by number of addresses and number of assignments. Random allocation to quarters, months, and batches after sorting the assignments by the sample stratification

[5] "National Travel Survey 2024: Technical report", Department for Transport, accessed August 25, 2026, https://www.gov.uk/government/statistics/national-travel-survey-2024-technical-report.

variables ensured that each quarter of WNTS responses retained the same stratification, including oversampling by region.

2.4 Selection of dwelling units and/or households

It is possible that a randomly selected address may contain multiple dwelling units or multiple households of people. To uphold random selection, it was necessary to ensure that each of these elements were also selected randomly for the WNTS.

For the purposes of random selection, conventional definitions of dwelling units and households were followed. A dwelling unit was defined as a living space that has its own front door. A household was defined as a space where, within a dwelling unit, one person or a group of people (1) use the accommodation as their only or main residence, (2) share cooking facilities, and (3) share a living room, sitting area or dining area.

It was not possible to enforce random selection of these elements during CAWI fieldwork. Information about whether individual addresses have multiple dwelling units or households is not readily available (i.e. for sample creation) and, if it were, ensuring the invitation letter reached the correct dwelling unit or household would be a logistical challenge. Therefore, only CAPI fieldworkers could enforce random selection of dwelling units and households when they visited addresses. In most circumstances (99.995%[6]), the sampled address contained only one dwelling unit and one household.

However, when multiple dwelling units or households were encountered, strict procedures were followed to ensure that they were randomly selected. If interviewers discovered that there were multiple dwelling units within a sampled address, they would record each dwelling unit in their case management system, which would randomly select one for them. Similarly, if interviewers discovered that there were multiple households within a selected dwelling unit, they would repeat this procedure: entering an identifier for each household into their case management system and having it randomly select one for them.

Households residing at sampled addresses with multiple dwelling units and/or households, have a lower chance of being selected than other households. While there were relatively few addresses of this type, they were still statistically accounted for. Weighting accounted for the underrepresentation of households at addresses with multiple dwelling units or households (see Chapter 6. Weighting).

2.5 Selection of individuals

[6] Of all eligible addresses, which were visited by an interviewer. Only 15 of the sampled addresses contained more than one dwelling unit or more than one household.

Within sampled households, not all individuals were eligible to participate. The procedure determining which individual(s) were eligible to take part varied between the CAWI, CAPI and CAPI-Tel modes.

When completing the WNTS via CAWI, any two adults living in the sampled address were eligible to participate. Individuals were not randomly selected, and any two adults within the household could take part. The decision not to use a random selection for CAWI was made after the first WNTS pilot study. This found that the random selection method used did not produce a larger or more representative sample compared to the “any-two adults” approach, which permits any two eligible respondents to take part.

If completing the WNTS via CAPI, individuals were selected randomly and only one randomly sampled adult living in the household was invited to participate. To randomly select an individual to take part, the interviewer entered an identifier for each eligible household member into their case management system, which randomly selected an individual for them. Interviewers were strictly informed that only that randomly selected individual could then take part in the WNTS via CAPI. If the sampled adult was not present at the property at the time the random selection was carried out, the interviewer was instructed to try to arrange for the sampled adult to participate, returning to the property at an agreed upon time or recalling at different hours and days.

CAPI-Tel was offered as an opt-in mode and could be completed by one adult respondent only. During the initial three-week CAWI-only period of fieldwork, household members could use the number provided in reminder letters to schedule a telephone interview, with any adult eligible to participate. During the face-to-face part of fieldwork, we do not assume selection has been adhered to but it is possible the adult that had been randomly selected by the interviewer is the one to participate via CAPI-Tel, this will be dependent on interviewer interaction and at what point the respondent has requested a telephone interview.

These rules of selection mean that individuals living in larger households were less likely to be selected to participate. This was adjusted for when weighting the responses (see section 6).

2.6 Ineligible (deadwood) addresses

Sometimes sampled addresses were unsuitable for the survey sample and deemed ineligible. The following types of address were classified as ineligible:

- Houses not yet built or under construction.
- Demolished or derelict buildings or buildings where the address has “disappeared” when 2 addresses were combined into one.
- Housing units known not to contain any resident household on the date of the first contact attempt (i.e. is vacant).

- An address occupied solely by a business, school, government office or other organisation with no resident persons.
- Residential accommodation not used as the main residence of any of the residents.
- An address that is blacklisted - blacklisted addresses have been previously flagged by interviewers as being unsafe to visit.

3. Fieldwork procedures

3.1 Fieldwork structure

To account for seasonal variation in travel behaviour, the fieldwork for WNTS was split evenly across the year. This was achieved by dividing the sample into 48 batches and allocating four batches to different weeks within each month; approximately one batch went live each week. Once a batch went live it remained so for eight weeks.

During the first three weeks of fieldwork, respondents could complete the survey via CAWI or book a CAPI-Tel interview. After three weeks, the CAPI mode was launched. The CAPI mode operated concurrently with the CAWI mode for five weeks; during this time, respondents could also complete the survey via CAPI-Tel.

3.2 Contacting respondents

The WNTS used two sequential modes of contact to reach residents at sampled addresses, consisting of an initial postal approach followed by an interviewer visit for non-responding households. All respondent-facing materials were produced bilingually in both English and Welsh and were provided simultaneously.

The postal approach saw two or three letters sent to all sampled address selected for the WNTS. Contact began with an invitation letter, issued at the start of the fieldwork period and was followed by a reminder letter approximately one week later. Any respondents who had not completed the survey online within the first two weeks were sent the second, and final, reminder letter. These letters explained the purpose of the study, how the address had been selected and how to take part, and provided a URL link, QR code and two unique access codes for online participation.

Each letter included a frequently asked questions (FAQ) document addressing common questions about participation and data confidentiality. The two reminder letters also informed recipients of the opportunity to take part via an alternative mode. Both reminder letters informed respondents that they could book a telephone interview and gave them a telephone number they could contact to do so. The second reminder letter also informed recipients that an interviewer would visit their address in due course to allow them to take part through a face-to-face interview. The three letters and FAQ document can be found in appendices A to D.

Approximately one week after the second reminder letter was dispatched, CAPI fieldwork commenced; this allowed a week for households to opt out of an interviewer visit. Interviewers were allocated all addresses within an assignment that had not already taken part or opted out. They were instructed to visit each address as soon as possible, to encourage someone living

there to take part, and to make at least six attempts to contact the respondent by visiting the address before leaving the non-contact letter (detailed in section 3.3.).

After allocation, interviewers were informed of anybody who had requested a telephone interview, face-to-face interview or appointment. They received a text message which confirmed the details of the case and the nature of the request. They also received a similar notification, during CAPI fieldwork, when somebody at an assigned address completed the survey online or decided to opt-out. The text message they received confirmed the case details, provided instructions for closing the case in the case management software, and asked them not to visit the address.

3.3 Interviewer training and briefings

NatCen interviewers received training which focused on the nature of CAPI for face-to-face and telephone interviewing and workshops on doorstep recruitment technique. The training provided tools for interviewers to competently approach residential addresses and encourage individuals within households to take part in social surveys. It also provided them with background knowledge to NatCen and appropriate points of contact if they faced challenges in the field. For example, if they required additional fieldwork materials or they could not locate an address. After this, interviewers were supervised during their initial launch on a project and ongoing monitoring took place to ensure adherence to data quality standards.

Before commencing fieldwork, face-to-face interviewers were required to attend a WNTS briefing. The briefings were designed to provide interviewers with key information needed to successfully collect data for the WNTS, confidently discuss the importance of WNTS with respondents and act as ambassadors for the project, TfW and Welsh Government.

Briefings provided information on:

- The background to the survey, and its aims and objectives
- How TfW and the Welsh Government will use the data
- The fieldwork sequence
- Persuading people to take part
- Random selection procedures
- Conducting the survey
- Using the embedded OS Map
- Connecting to the internet and troubleshooting issues
- Administrative procedures (e.g. issuing respondent incentives)

At the start of the survey year, full-day briefings were delivered in person to groups of approximately 10 to 20 interviewers. Representatives from TfW and the Welsh Government attended these sessions to highlight the importance of the WNTS. Two in-person briefings were held in Cardiff and one in Chester; these were the locations accessible to the most interviewers.

Throughout the year, as briefing requirements became ad-hoc, briefings were delivered online to smaller groups of interviewers who were recruited to join the project during the fieldwork year. Online briefings lasted half a day and were typically delivered to fewer than five interviewers. These were shorter as the interactive elements of the briefing, designed to be delivered in-person, were removed.

3.4 Interviewer supporting documents

Interviewers received a collection of documents to assist them in the field. These included materials designed to assist with data collection, encourage respondents to complete the survey online, and provide guidance and reminders throughout fieldwork.

The full list of documents provided to interviewers is found below and examples are found in appendices E to M respectively. All documents were A4 unless otherwise stated.

- **Interviewer instructions**: A written document containing the information delivered during the briefing.

- **Copies of the second reminder letter**: A version of the second reminder letter without any sample specific information. Interviewers used these letters to help explain why they were at the doorstep and could leave one with someone to remind them of their visit.

- **Access code card**: An A5 card used by interviewers to record a third access code for respondents who wished to take part online but did not have their original access codes from earlier communications. The access code card was double sided with English on one side and Welsh on the other.

- **Non-contact letter**: A letter encouraging people at the address to take part online after an interviewer had made multiple visits to the property and failed to contact them. The letter encouraged them to take part online and interviewers had a space to write down their details, when they visited and a third access code. The non-contact letter was doubled sided with English on one side and Welsh on the other.

- **“I speak” showcard**: A multilingual document explaining the WNTS and why the interviewer was visiting. This was to be used when a member of the public did not speak English. The description of the survey was written in Arabic, Bengali, Cantonese, Polish, Romanian and Welsh – the main languages used in Wales according to the 2021 Census beyond English.

- **Showcards**: A set of cards to be shown to respondents when the interviewer was asking questions which had long, repetitive, convoluted or personal response options. The cards displayed the possible response options in large print across the whole page. The showcards were produced in English and Welsh.

- **Travel diary guidance**: A guidance document reminding interviewers of key definitions and descriptions to be used when collecting travel diary data. The guidance was produced in English and Welsh.

- **Paper backup diary**: A data collection document for use when interviewers were struggling to access or use the OS Map API. The paper diary was designed to capture the same trip information as the online diary and required interviewers to input the information captured into the respective online diary, once they were somewhere with a stable internet connection. This paper backup diary was produced in English and Welsh.

- **SAIL information sheet and data linking flowchart**: An information sheet containing additional information on the Secure Anonymised Data Linkage (SAIL) element of the survey (see 4.7). It explained the purpose of collecting additional personal data, other data held that their data could be linked with, how the data would be used and the organisations involved. The information sheets were produced in English and Welsh.

3.5 NatCen Survey Enquiry Team and TfW Enquiry Line

Those invited to take part in the WNTS were directed to contact the NatCen Survey Enquiry Team (SET) if they had any questions or complaints. They could contact the NatCen SET using a freephone telephone number or email address; these were present on all respondent-facing materials. Once contact was made, the individual could select which language they wished to communicate in (English or Welsh). Those wishing to communicate in Welsh were directed to the TfW enquiry line. Arrangements were in place for the NatCen SET and the TfW enquiry line to securely pass respondent details to each other.

To prepare the NatCen SET and TfW enquiry line for handling WNTS queries, both teams were briefed on key information about the survey and the process for exchanging information. This allowed the TfW enquiry line to deal with some issues at source, without referring them to the NatCen SET, and gave both teams the tools to transfer requests between one another, should an enquiry require the other team.

The NatCen SET were required to handle some enquires as the TfW enquiry line did not have access to sample and survey information and could not contact interviewers. These queries included interview requests, queries about survey access and queries about incentives. To facilitate this, the NatCen SET were given access to the sample and incentive information. In addition, they were provided with supporting materials: a project information sheet covering the same material as the briefing and copies of the invitation and reminder letters, FAQ sheet, and interviewer materials for reference.

Typical forms of respondent contact related to support with accessing and completing the survey online, arranging or rescheduling an interviewer visit, confirming the legitimacy of the

survey or the organisations involved, and locating and redeeming the incentive they received for taking part.

4. Survey instrument and response

4.1 The survey instrument

The WNTS was developed in Blaise 5, a survey software platform developed and managed by Statistics Netherlands. It was comprised of two components – a questionnaire and two-day travel diary – which measured respondents' attitudes towards different transport modes and other transport-related topics and their travel behaviour. Both the theoretical (i.e. question wording) and practical (i.e. fieldwork procedure) elements of the survey were developed through initial design research, cognitive and usability testing, and two pilots [7][8]. The survey took respondents approximately 30 to 40 minutes to complete.

4.2 The questionnaire

The WNTS questionnaire comprised blocks of questions that each covered a specific topic. Table 2 describes each block and their order in the WNTS.

Table 2. Sequential question blocks in the WNTS.

Question block	Description
Age	Age questions, screening out any respondents under 16.
Welsh language	A question asking whether respondents speak, read, write, or understand Welsh
Nuisance noise	Questions asking respondents about noise they might experience from outside their home.
Travel frequency	Questions asking respondents how frequently they use different modes of transport.
Walking and wheeling	Questions which follow up on the travel frequency block, asking about walking and wheeling.
Cycling	Questions which follow up on the travel frequency block, asking about cycling.
Community transport	Questions which follow up on the travel frequency block, asking about community transport.
Bus	Questions which follow up on the travel frequency block, asking about bus travel.
Trains	Questions which follow up on the travel frequency block, asking about train travel.

[8] Transport for Wales, *Survey Development for the Wales National Travel Survey*, accessed August 25, 2026, https://tfw.wales/projects/wales-national-travel-survey/research-and-development/survey-development.

Taxi	Questions which follow up on the travel frequency block, asking about taxi use.
Car	Questions which follow up on the travel frequency block, asking about car use.
Plane	Questions which follow up on the travel frequency block, asking about air travel.
Ferry or boat	Questions which follow up on the travel frequency block, asking about travel by sea.
Postcode check	A question asking respondents to confirm their postcode, to confirm the home address is correct in the diary and that no fraudulent actors are completing the survey.
Travel diary	A series of questions asking respondents to record their travel over the past 2 days. See section 4.3 for further information.
Employment	Questions about employment status.
Impairment or health conditions and accessibility	Questions about any health conditions, illnesses or impairment, and whether they reduced the respondent's ability to carry our day-to-day activities.
Travel card and affordability	Questions about the affordability of travel by bus and train.
Equality measures	Demographic questions, including questions on sex, gender, relationship status, ethnicity, religion, sexuality and household size.
Survey assessment items	Questions about the experience completing the survey.
Incentives	Questions for administering the incentive to the respondent, should they want one.
Consent and contact details	Questions asking whether the respondent would be happy to contribute to similar research in the future, taking their details if they wished.
SAIL	Questions collecting information to allow the anonymised linkage of survey data to the SAIL databank (see 4.7).

4.3 The travel diary

The WNTS was designed to collect detailed information about respondents' recent journeys within Wales, such as transport mode, distance travelled and journey purpose. To do this, respondents were asked where, when, how and why they travelled during the two days preceding the day that the survey was completed. Only journeys which started and/or finished in Wales were recorded and journeys made for exercise, pleasure/leisure, or during the course of work were excluded. For each journey, origin and destination location data were collected.

To collect location data, the OS Maps API was integrated into the survey software; respondents were asked to identify locations using an interactive map embedded within the survey

questionnaire. The mapping tool allowed respondents to select locations directly, reducing reliance on written descriptions and improving the precision of location data captured for subsequent analysis.

The map interface was designed to support the recording of all journeys undertaken during the two days prior to survey completion. Capturing origin and destination locations enabled the derivation of journey characteristics, including travel distance, and supported the analysis of travel patterns across Wales.

The mapping tool provided a user experience similar to that of widely used web-based mapping applications, reducing the learning required to identify and record journey locations accurately. This reflected the functionality commonly found in contemporary mapping software, allowing respondents to zoom, pan, search and select.

OS Maps functionality was implemented within a modified version of the Blaise web client application, where the standard Blaise map control was extended to incorporate an OS map control. Mapping was rendered using OS services on a Leaflet raster tile layer. Respondents were expected to select locations directly on the map by clicking to drop a pin or using the text search function. Only where a location could not be identified were respondents prompted to provide a description via a free text field.

Location search functionality was supported through integration with both the OS Places and OS Names APIs. The OS Places API supported searches based on addresses and postcodes, while the OS Names API enabled searches using place names, landmarks, roads, and other geographic features. Together, these services improved the ease and accuracy of recording journey locations. A modified version of the Leaflet Control Geocoder was implemented to support this integration. Unlike the default configuration, which supported a single API, the adapted control first queried the OS Places API and, where no match was found, automatically queried the OS Names API. This approach improved coverage and usability when identifying locations.

Where respondents were unable to identify a location on the map, they were asked to provide a free-text description instead. These responses were reviewed during data processing and, where possible, converted into a postcode.

Additional layers were included to support specific journey types. A searchable database of train stations was incorporated for respondents reporting rail travel. For journeys by bus, bus stop information was presented using an ArcGIS service. This was configured to provide coordinates, stop level information, directional data and associated icons. This service was integrated through an Esri Leaflet Feature Layer, allowing bus stops and interchanges to be visualised directly on the map interface.

To ensure compatibility between multiple data sources, the Proj4 JavaScript library was used to transform coordinates across differing spatial reference systems used by OS services, the bus stop API and the Blaise environment. Further configuration of the map control was achieved through custom properties defined within the Blaise Resource Database Editor, allowing refinement of API behaviour and overall usability.

Data captured through the APIs included latitude and longitude coordinates, and postcode information. These data were used both within the survey, where relevant, to support the respondent, and in subsequent processing. As the study focused on journeys that began and/or ended in Wales, multiple data sources were combined to determine whether each reported journey occurred wholly or partially within Wales and was therefore within scope of the analysis.

Interviewers primarily conducted surveys in respondents' homes, where internet connectivity varied considerably. A secure and stable connection could not always be guaranteed through tethering to an interviewer's work mobile device. Alternative procedures were available where the mapping tool could not be accessed.

To mitigate this, a paper diary option was developed and provided to fieldworkers for use where a stable connection could not be established. This replicated the information collected through the map-based interface; however, it did not include the visual aids, or validation checks available within the API. The paper diary allowed data collection to continue in situations where connectivity was insufficient or where the OS API was unavailable due to a service interruption. Once a secure and stable internet connection was available, interviewers transferred the information captured on the paper diary into the online mapping tool for the respective survey response enabling origin and destination data to be captured in the same format as interviews where the mapping functionality was used directly. The paper diary was then securely destroyed. This approach helped ensure consistency and comparability of location data across all survey modes.

Not all interviews were conducted in person, and a loss of visual functionality was encountered when interviews were conducted via CAPI-Tel or when interviewers reverted to completing the map remotely. The method of location entry did not change; interviewers still input locations using the map API. However, instead of directly using the map to enter locations, respondents were required to describe the locations they wished to enter over the phone. Interviewers were briefed to be patient with respondents when carrying out this task and to prompt respondents to provide key information for finding locations (e.g. postcodes, geographic reference points).

4.4 The CAWI interview

At first contact, the recipient of the invitation letter was encouraged to complete the WNTS online. The letter provided respondents with two methods of accessing the survey:

- A web address, which they could type into their browser alongside the access codes provided;
- A unique QR code comprising both URL and access code, which they could scan.

Once they had arrived at the survey link, respondents were asked to enter one of the two access codes provided to them on their invite letter. These were 9 digits long and contained a mix of letters and numbers. If a second adult in the household wanted to take part, they were instructed to use the second access code.

Follow-up letters contained the same links and access codes and informed respondents about other ways they could take part in the survey. The first reminder letter included instructions on how to schedule a telephone interview, and the second reminder letter informed the household that an interviewer was going to visit soon to offer a face-to-face appointment.

After entering their access code, respondents could begin the survey, which was designed for use on both small (e.g., mobile) and large (e.g., PC) screens. To maintain privacy and security, respondents were automatically logged out after 20 minutes of inactivity and required to re-enter their access code to continue. Any previously entered responses were saved, allowing respondents to resume the survey from where they had left off.

Upon completing the survey, respondents were presented with a final confirmation screen thanking them for their participation and confirming that the survey had been successfully submitted. They were then advised that they could close their browser window.

4.5 The CAPI and CAPI-Tel interview

CAPI and CAPI-Tel interviews were typically conducted via an appointment, once the interviewer had successfully contacted somebody at the assigned address and arranged a time and place to conduct an interview. In some instances, a respondent may have received a letter and got in touch to arrange a CAPI or CAPI-Tel interview before an interviewer had tried to make contact at their address. In others, respondents may have agreed to a ‘walk-in’ appointment, where the interview was conducted at the same time as first contact.

CAPI and CAPI-Tel interviews were typically conducted during one appointment, although interviewers were trained to suggest breaking interviews into multiple appointments if it suited the respondent. The survey was completed on interviewer laptops, who had an offline version of the survey downloaded to their case management software. The travel diary element, however, was hosted online and required interviewers to connect to the internet and open a web link during the interview. Interviewers started the survey by accessing the specific case within their case management system, completing observations of the address and random selection, and clicking a button to open the survey. Then they would read out the questions and response options as they appeared and enter the answer provided by the respondent.

The content of the CAWI, CAPI and CAPI-Tel questionnaires were highly comparable. However, the following differences existed between them:

- The CAPI survey included a self-completion component for the following elements of the survey: the travel diary, employment, impairment, affordability, and equality measure blocks. This was not possible in CAPI-Tel and interviewers were instructed to be more accepting of refusals to these items.
- The CAPI survey contained additional questions encouraging respondents to self-complete a Computer-Assisted Self-Interviewing section.
- The CAPI and CAPI-Tel surveys contained a linking question asking the interviewer or respondent to click a link to access the diary.
- The CAPI and CAPI-Tel surveys included some questions at the end of the survey, asking respondents if they consented for the quality assurance team to contact them in the future.
- The CAPI and CAPI-Tel surveys did not include “don’t know” and “prefer not to say” options. Instead, interviewers were instructed to select these response options when respondents spontaneously indicated that they didn’t know or preferred not to answer.

CAPI interviews featured showcards for questions with long response lists, allowing respondents to read the options themselves and provide responses anonymously.

4.6 Welsh language requirements

To comply with the legal duty to treat English and Welsh equally, the WNTS was designed as a fully bilingual survey. All respondent-facing materials and data collection instruments were available in both Welsh and English. The Welsh language content was reviewed and approved by the Welsh Government and TfW prior to implementation.

The materials which were provided in both languages included the:

- Survey questionnaire
- API map-based questions
- Back up paper travel diary
- Invitation and reminder letters
- Frequently asked questions document
- Missed contact correspondence
- Taking part online materials
- SAIL data linkage support materials
- Incentive communications
- Helpline support services

Respondents were permitted to take part in Welsh across all three modes of administration: web, face-to-face and telephone.

When completing the survey online, respondents were able to select their preferred language. Each survey page included a toggle function that allowed users to switch seamlessly between Welsh and English. a functionality that extended to the OS API and associated map-based tools, including the enhanced train station search and bus stop layers. The language option was introduced on the first page of the survey – the login page - where the survey was described bilingually.

This comprehensive bilingual approach ensured consistency across all stages of the survey and supported inclusive participation.

4.7 Secure Anonymised Data Linkage

The WNTS included items to facilitate the anonymous linkage of individual survey responses to the SAIL databank held at Swansea University.

At the end of the survey, respondents were told that their survey data may be linked to SAIL unless they opted out of the data linkage. Where respondents did not opt out of data linkage, they were asked to provide some additional personal data items (full name, sex, date of birth and postcode) which were required to facilitate anonymised data linkage.

4.8 Outcome coding

Once a sampled address was no longer eligible to take part in the survey (i.e. their time window for taking part was closed), a code representing a specific outcome was applied. A full list of the possible fieldwork outcomes can be found below, in table 3.

Table 3. Outcome codes used on the WNTS.

Code	Type	Outcome
110	Productive	Fully completed interview.
210	Productive	Partially completed interview; the respondent reached the equality measures block but did not reach the incentive block. An acceptable amount of data has been captured.
219	Partially productive	Partially completed interview; the respondent did not reach the equality measures block.
310	Non-contact	Eligibility established but no contact made with anyone at the address after 6 or more calls.
321	Non-contact	Contact made, but not at selected dwelling unit (used only for addresses with multiple dwelling units).
322	Non-contact	Contact made at (selected) household but not with anyone from the address.

328	Non-contact	Multiple dwelling units only: contact made at (selected) dwelling unit, but not with anyone from selected household.
410	Non-contact	Office refusal.
421	Non-contact	Contact made at sampled address, but information refused about number of dwelling units at address.
422	Refusal	Cannot identify target respondent(s) – relevant information refused.
428	Refusal	Contact made at selecting dwelling unit, but information refused about number of households.
431	Refusal	Refusal before interview.
432	Refusal	Proxy refusal.
440	Refusal	Refusal during interview.
450	Refusal	Broken appointment – no recontact.
511	Other unproductive	Temporarily ill during survey period – notified to office.
512	Other unproductive	Temporarily ill during survey period – notified to interviewer.
521	Other unproductive	Away or in hospital during survey period – notified to office.
522	Other unproductive	Away or in hospital during survey period – notified to interviewer.
531	Other unproductive	Physically or mentally unable/incapable – notified to office.
532	Other unproductive	Physically or mentally unable/incapable – notified to interviewer.
541	Other unproductive	Language difficulties – notified to office.
542	Other unproductive	Language difficulties – notified to interviewer.
593	Other unproductive	Respondent completed online during CAPI fieldwork phase.
594	Other unproductive	Respondent wants to complete online during CAPI fieldwork phase.
599	Other unproductive	Other unproductive.
612	Unknown eligibility – no contact	Issued not attempted.
620	Unknown eligibility – no contact	Inaccessible.
630	Unknown eligibility – no contact	Unable to locate address.
640	Unknown eligibility – no contact	Unknown whether address is residential: information refused.
641	Unknown eligibility – no contact	Unknown whether address is residential: No contact after 6+ calls.
650	Unknown eligibility – no contact	Residential address but unknown if eligible person(s) present – information refused.

651	Unknown eligibility – no contact	Residential address but unknown if eligible person(s) present – non-contact after 6+ calls.
690	Unknown eligibility – no contact	Other unknown eligibility (no contact made).
710	Ineligible or deadwood	Not yet built/under construction.
720	Ineligible or deadwood	Demolished/derelict.
730	Ineligible or deadwood	Vacant/empty housing unit.
740	Ineligible or deadwood	Non-residential address (e.g. business, school, office, factory etc).
750	Ineligible or deadwood	Address occupied, no resident household (e.g. occupied holiday/weekend home).
760	Ineligible or deadwood	Communal establishment/institution – no private dwellings.
790	Ineligible or deadwood	Other ineligible.
810	Unknown eligibility – contact made	Information refused about whether address is residential.
820	Unknown eligibility – contact made	Contact made but not with someone who can confirm the presence of a resident household.
830	Unknown eligibility – contact made	Information refused about whether resident(s) are eligible.
850	Unknown eligibility – contact made	Unable to confirm eligibility of resident(s) due to a language barrier.
890	Unknown eligibility – contact made	Other unknown eligibility.

If a respondent had taken part during the CAWI-only period of fieldwork, it was only possible for their case to receive a productive or partially productive outcome code. A case was considered fully productive if the respondent had reached the first incentive question, partially productive if the respondent had reached the ethnicity question (in the equality measures block) and an early partially productive if they had reached the Welsh language block.

Only these three outcomes were possible during the CAWI-only period of fieldwork because no other information about the address was available, as a fieldworker had not yet visited the address. A household could have up to two of these outcomes, as two respondents were permitted to take part via CAWI. Once CAPI fieldwork commenced, any addresses without a productive outcome code were visited by an interviewer, who could provide more information about the address.

During the CAPI phase of fieldwork, interviewers were required to assign outcome codes to all addresses that had not completed the survey online during the CAWI-only phase. Fully and partially productive codes were generated automatically by the CAPI program, and the remaining outcome codes were assigned manually by the interviewer or – when appropriate – by the office team at NatCen. Addresses that were not issued to an interviewer or which were

issued but not coded out (and therefore deemed to be unworked) were defaulted to the outcome code of 612 at the end of fieldwork for the batch.

4.9 Conditional incentive

The WNTS offered a £10 Love2Shop shopping voucher to individuals that completed a fully productive interview.

Respondents that completed the survey via CAWI or CAPI-Tel received the conditional incentive via email or, if they preferred, through the post. Information about the preferred delivery method and the respondent's relevant contact information were collected towards the end of the interview. Depending on the incentive type that was issued, a "thank you email" or "thank you letter" was sent out, examples of which are provided in appendix N and appendix O respectively.

Respondents that completed the survey via CAPI were issued with a £10 physical Love2Shop gift card by the interviewer. They were told that the gift card would be activated within the next 5 working days. The gift card was activated after the CAPI data had been transmitted back to the NatCen office.

4.10 Response rates

Overall, 35% of issued addresses produced a productive outcome (i.e. one or more eligible individuals within the sampled household completed the survey). This method of estimation underestimates survey response rate slightly, however, because ineligible cases are included in the base size (i.e. are included as addresses which could have provided a response). Across all issued addresses, 8.5% were ineligible. Table 4 presents the frequencies of each address-level outcome.

Table 4. Response outcomes for the issued sample (*n* = 14,900).

Outcome code type	Percentage of issued addresses*
Productive	35.4%
Partially productive	2.5%
Non-contact	10.9%
Refusal	17.8%
Other unproductive	15.1%
Unknown eligibility	7.9%
Ineligible or deadwood	8.5%
Unknown eligibility - contact made	2.1%
Total	100.0%

*Rounded to 1 decimal place

The individual-level fully productive response rate was 21%; on the assumption that two eligible individuals lived in each household. This is an underestimate of individual-level response

because ineligible cases are once again included in the base size and because not every sampled address will have contained two people eligible to take part.

Almost three-quarters (74%) of productive interviews were completed via CAWI, demonstrating the effectiveness of the web mode as the primary method of data collection. A further 24% of productive interviews were achieved through face-to-face CAPI interviewing, while 2% were completed via CAPI-Tel. However, these mode outcomes reflect the concurrent nature of the fieldwork design. Interviewers played an important role in supporting participation across modes, encouraging and assisting respondents to complete the survey online where appropriate.

4.11 Quality control

Productive cases submitted by interviewers were checked to ensure that interviewers were working to the standards they were trained to and in accordance with the specific project requirements they were briefed on. Specifically, checks involved contacting respondents who had provided consent to recontact regarding the interview they had conducted. Respondents were asked to confirm that they had taken part in the WNTS and that the interviewer had behaved in accordance with their training and the briefing instructions.

In total, 637 productive CAPI cases were checked. This was done via telephone (445), post (105) and – when no response was received – face-to-face (87). Checks were typically carried out within 4 weeks of the interview date.

In addition to respondent validation checks, CAPI interviews were routinely reviewed for unusual response patterns or other features that warranted further examination. Where such cases were identified, they were discussed with the interviewer to confirm the circumstances of the interview and to ensure that the data accurately reflected the respondent's answers. This process formed part of the survey's wider approach to maintaining data quality and consistency.

5. Data processing

5.1 Data sources

The WNTS was designed as a mixed mode survey. To facilitate this in the Blaise 5 environment, the two modes (CAWI and CAPI) were set up as separate projects, using different databases. Each mode acted as a source of data.

In practice, this resulted in three distinct sources of data. The CAWI mode produced a single data set, containing the questionnaire and travel diary data jointly and the CAPI mode produced two data sets, splitting out the data that was collected offline (i.e. the questionnaire data) and the data that was collected online (i.e. the travel diary data).

Although by design the CAPI-Tel was a distinct mode, it was not programmatically different to the CAPI mode. The method of data collection was different, but the data and programming infrastructure were not. Therefore, CAPI-Tel data came through the same two sources as the CAPI data (i.e. the questionnaire data and the travel diary data). Any reference to CAPI data in this chapter refers to data which comes from the CAPI database, including both the CAPI and CAPI-Tel modes of data collection.

5.2 Data reconciliation

The existence of three data sources introduced the need for reconciliation. The design of the survey specified that households could contribute either one or two productive CAWI cases or one productive CAPI case. However, given the separate data sources, it was possible that a household could break these design rules. If a household completed the survey online, close to the time they completed via CAPI they could produce at least one productive CAWI case and a productive CAPI case. If a household was given a third access code, they could produce three productive CAWI cases (one more than permitted). Both scenarios were inconsistent with the design of the survey.

To address these inconsistencies, a set of reconciliation rules were created and applied. These rules were guided by the principle that the final dataset should reflect the survey design and ensure all households have equal representation. For example, where a household produced three productive CAWI cases, only the earliest two were retained, as the third should not have occurred.

Broadly speaking, the rules for data reconciliation followed the principle that data should be harmonised according to what should have happened. In more specific terms, and to account for all eventualities, the following rules were applied:

1. Any fully productive cases were kept ahead of partially productive cases.

2. Where at least one CAWI case and one CAPI case existed, or three CAWI cases were present:
    a. One CAWI case and one CAPI case;
        i. The earliest completed case was retained
    b. Two CAWI cases and one CAPI case;
        i. The CAPI case was retained if it was the earliest completed case.
        ii. Otherwise, the two CAWI cases were retained.
    c. Three CAWI cases;
        i. Demographic data were reviewed to identify and remove duplicates
        ii. The two earliest completed cases were retained

5.3 Data cleaning and edits

After reconciliation and merging, standard data quality checks were conducted to identify and remove any anomalous or otherwise low-quality responses. This primarily included checking for respondents who had completed the survey unexpectedly quickly (referred to as speeders) and for respondents who had completed the survey multiple times.

Speeders were identified by estimating the median elapsed time per variable and using these estimates to calculate the expected completion time for each respondent. The differences between the total and estimated times were measured and used to create a range within which most of these differences fell. Limits on this range were set (increasing the range) to identify unusually low times (i.e. times outside of the adjusted range). Any cases identified as speeders this way were removed; sixteen were removed across the survey year.

As the survey allowed up to two adults to take part in the same household, it was possible for the same person to complete the survey twice, using both access codes from their invitation letter. Responses within the same household were compared on their answers to demographic questions (age, sex, ethnicity), their contact information (name, the email and phone numbers they provided), and their household information (number of adults, number of children, number of vehicles). Any cases with matching information across these categories were reviewed and the first completed case was retained (whilst the other was discarded). A total of fifteen were removed for being identified as duplicates.

Household comparisons were also carried out for responses to the questions that asked about the number of adults and children in the household. If two people within the same household had taken part, their answers to these two questions were compared. If the two respondents disagreed on the number of adults and children within the household, then the oldest respondent's answers to these questions were taken as the true values. Failing this (i.e. if the oldest respondent was impossible to determine), the responses provided by the first person to complete the survey in the household were taken as true values. The true values were used to create a harmonised version of these responses across the whole household. These harmonised variables were used during the weighting process.

5.4 Coding

The next step in data processing involved standardising the codes behind universal response options (i.e. refusal options) and applying codes to free text-entry responses. These activities took multiple forms, described below.

5.4.1 Non-substantive response options

Non-substantive response options, typically of limited analytical interest, were standardised across the dataset to ensure consistency. The following codes were applied uniformly to these response categories:

- Not applicable: -1
- Don’t know: -8
- Prefer not to say: -9

5.4.2 Back-coding

A total of 51 questions in the survey gave respondents the opportunity to select the response option “Other (please describe)” and write in a response. Where respondents used this option but provided a response that matched an existing category, their answers were reassigned to the appropriate predefined category. This process of coding responses back into the existing set of response options is known as back coding.

Cases where a substantial number of respondents provided similar but previously unlisted responses via the free-text option were reviewed in collaboration with TfW. Where appropriate, new response categories were created to accommodate these recurring answers, and relevant responses were coded accordingly. A list of all new response categories can be found in appendix P.

This process of back coding was done using Ascribe Coder, a NatCen approved third-party supplier, which assists with coding and analysing open-text survey responses.

5.4.3 Automatic coding

When completing the diary, respondents could forego the use of the interactive map and instead use a free-text entry to describe the location of a journey. Where possible, these free-text responses were coded back into postcodes, so that they could be used for journey analysis. These responses were processed using a two-stage automated approach to derive postcode information. Both stages used Azure OpenAI, Microsoft's enterprise-grade, private deployment of large language models (LLMs). Azure OpenAI processes data within a secure, private environment, ensuring full confidentiality of participant responses.

This activity began by filtering out non-location content entered by respondents. This step ensured that only relevant geographic information was passed forward for processing, while

excluding vague responses such as generic place types (e.g., "pharmacy") that could not be meaningfully geocoded.

Once the text entries had been filtered to include only relevant geographic information, Named Entity Recognition (NER) techniques were applied to extract potential address information from the text responses. Each free-text location entry provided by a respondent was compared against that respondent's recorded home location using an LLM. The model assessed whether the two entries referred to the same physical place, accounting for common variations such as abbreviations and colloquial place names in both English and Welsh (for example, a respondent writing "home" or "cartref" clearly intends their home address). The model only replaced entries when confidence was high to avoid introducing errors.

In the second stage, a local LLM was employed to infer the outward postcode (the first segment of a UK postcode, such as CF10) from the extracted address information. The location text was passed to the same Azure OpenAI model, configured specifically to act as a geocoding assistant for Wales. Drawing on its context, the model inferred the first segment of a UK postcode, e.g. as CF10 for each entry.

The model applied the following logic:

- Extract and standardise postcodes where already provided; otherwise estimate the outward postcode when sufficient Welsh location detail is available.
- Responses should remain unprocessed if they are outside Wales or are too vague.

The resulting data retained all original survey responses alongside postcode assignments inferred from training data correlations. This automated approach proved effective in processing inconsistent verbatim location data and was designed to be replicable for future survey cycles.

Adjustments had been made to the procedure during the processing of the six-month data. The respondent’s home location was added to the data delivered to the LLM, to assist in identifying whether a respondent had returned home, and additional instructions were given to the LLM, asking it to identify whether the respondent had used “home” (or “cartref”) in the free-text response.

5.5 Derived variables

Finally, additional variables were derived for the data set. This involved using information the respondent provided, information obtained from para data, and/or information from outside sources (e.g. geographical information). Table 5 provides a full list of variables derived for the final data set.

Table 5. Derived variables for WNTS 2025-26.

Variable	Description

serial_eul	A scrambled version of serial number, for maintaining anonymity during data delivery.
serialh_sl	A scrambled version of household serial number, for maintaining anonymity during data delivery.
freelancer_scrambled	A scrambled version of interviewer number, for maintaining anonymity during data delivery.
agedv	A grouped version of the age variable, matched to the banded age categories used in the questionnaire if a respondent does not provide their exact age.
disabilitystatus	A variable to match the harmonised standard for defining disability, set by The Government Statistical Service (GSS).
emp_status	A variable to match the harmonised standard for employment status in the UK, set by The Government Statistical Service (GSS).
hhad_harm	A harmonised version of the number of adults in the household; used for the weighting process.
hhch_harm	A harmonised version of the number of children in the household used for the weighting process.
newperno	A variable to identify whether the respondent was the first or second member of the household to respond (when applicable).
completion_mode	A variable to identify whether the respondent took part via CAWI, CAPI or CAPI-Tel.
start_location	A variable to identify the start location of the diary journey.
purpose_updated	A variable to match how TfW planned to report journey purpose; used for the weighting process.
tripnumber_dv	A variable to identify where a diary journey came sequentially in the diary day.
in_wales	A variable to identify whether the journey started and/or finished in Wales.

5.6 Data outputs

Following completion of data processing, datasets were prepared for delivery in two stages: preparation for weighting and preparation of final datasets.

Firstly, the list of coded travel locations, and the derived variable *in_wales* were provided to Transport for Wales for their agreement on 15th May 2026. Conditional agreement was provided on 19th May 2026, subject to a minor adjustment to a single case. Then, data sets were compiled for the NatCen statistics team, so that weights could be produced for the data.

Following weighting, final deliverable datasets were produced at both the person and journey level. These included all cleaned, processed, and derived variables, alongside the final survey weights. These were delivered to TfW on 15th July 2026.

6. Weighting

6.1 Summary of the weighting approach

Using a methodology consistent with the weighting of the first six months of responses, two sets of weights were prepared for the WNTS 2025-26 survey responses:

- A set of interview weights for the questionnaire data.
- A set of diary weights for the diary data.

6.2 Interview weights

The five stages of weighting the interview responses are described below.

6.2.1 Address selection weights (W1)

The first stage of weighting adjusted for the differential address selection probabilities by region resulting from oversampling Mid Wales. The weights (W1) were calculated as the inverse of the probability of selection, i.e. the total number of addresses in each Welsh region divided by the number of addresses selected.

6.2.2 Weighting to adjust for differences in the probability of an address being issued to an interviewer (W2)

Due to the web-first nature of fieldwork and the potential for differences in response patterns by mode of data collection, the non-response weighting stage was split by mode. The initial stage of address non-response weighting used logistic regression to model differences between addresses issued to an interviewer and addresses that provided at least one web response within 3 weeks of the invitation letter (i.e. addresses not visited by an interviewer). The model was weighted by the address selection weights and included the following predictor variables: month the address was issued, Wales region, Census 2021 urban-rural status in 6 categories (RUC21), Census 2021 Output Area Classifications (OAC21), population density quintiles for postcode sectors, and population density at Local Authority level.

The model-predicted probability (P1) for each address was used to calculate separate weights for each mode: W2a=1/(1-P1) for addresses not visited by an interviewer, and W2b=1/P1 for addresses visited by an interviewer. Two composite weights were then produced: W3a=W1*W2a and W3b=W1*W2b. When weighted by the respective weight (W3a and W3b) each mode sub-sample (addresses not visited and addresses visited by an interviewer respectively) is representative of the whole issued sample.

6.2.3 Weighting to adjust for differences in the probability of an address responding after being issued to an interviewer (W4)

The latter stage of non-response weighting involved modelling differences between responding and non-responding addresses, for all addresses that were issued to an interviewer. The

outcome was whether the address provided at least one response, either by web after being issued to an interviewer or by face-to-face interview.

Addresses that were not issued to an interviewer because they provided a web response within 3 weeks of issue were dropped from this model's base, along with addresses known to be ineligible (deadwood).

In order to control consistently for the same sources of bias in both survey modes, the same six variables were included in the final model as in the previous stage model. The model-predicted probability (P2) for each responding address issued to an interviewer was estimated and the weight was calculated as W4=1/P2. This weight was trimmed at the 99.5th percentile to improve efficiency and reduce the design effect. A composite weight (W5) was then calculated for all addresses that provided a survey response after being issued to an interviewer as the product of W3b and W4.

After these two stages of modelling, the full address non-response weights (W6) were created as follows:

- W3a: for responding addresses not visited by an interviewer.
- W5: for responding addresses visited by an interviewer.

6.2.4 Household weights (W7)

The address-level weights (W6) were matched onto individual responses, and a household weight (W7) was calculated to adjust for bias due to systematic differences in the number of completed interviews from households of different sizes. W7 is the number of eligible adults in the household divided by the number of survey responses from the household. For example, a household of 2 eligible adults providing 1 response would receive a household weight of 2. To prevent high outlying weights, the number of eligible adults was capped at 4. The household weights were multiplied by the combined selection and non-response weights (W6) to produce the pre-calibration weights (W8).

6.2.5 Calibration weights (W9)

For the final stage of the interview weighting, W8 was adjusted to match the latest available population estimates for age-sex categories and Wales region while controlling for quarter of issue (25% of total weights per quarter). Population estimates for Wales residents aged 16+ were taken from the Office for National Statistics (ONS) 2024 mid-year population estimates.

The final interview weights were checked, and three obvious high-weight outliers were identified and trimmed. Alternative versions of the final weights were compared to assess the impact on residual bias, design effect and effective sample size. The trimmed weights provided a marginal reduction in residual bias and design effect so were chosen as the final weights.

The effect of weighting on the precision of survey estimates is indicated by the effective sample size (NEFF). The effective sample size measures the size of an (unweighted) simple random sample that would achieve the same level of precision (that is, the range of the standard error associated with each estimate) as the weighted survey design. If the effective sample size is close to the achieved sample size, this indicates that the weighting strategy is efficient and has not substantially reduced precision. For the final interview weights, the effective sample size (NEFF) was 4,095, with a design effect (DEFF) of 1.49 and efficiency of 67%.

Table 6. NEFF by Wales Region of Interview Weights[9]

	Achieved sample size	**Effective sample size (NEFF)**
Southeast Wales	2,827	1,916
Southwest Wales	1,272	860
Mid Wales	669	480
North Wales	1,349	936

6.3 Diary weights

The diary weights were produced for all trips reported within Wales and any diary days in which no trips within Wales were reported. Respondents who received interview weights but did not complete both days of the travel diary did not receive diary weights.

Diary weighting consisted of two stages, which are described below.

6.3.1 Day of the week adjustment (W10)

Respondents were asked to report their travel for the two days prior to the day on which they completed an interview. As the day of data collection is at the respondent discretion, diary days in the responding sample are unevenly distributed across days of the week. Travel behaviour is known to vary between days of the week, so the diary weights needed to adjust for this.

The interview weights were used as the starting point for the diary weights. These are rescaled so that for the first diary day, each day of the week received 1/7 (14.3%) of the total weight. This produced an interim diary weight (W10).

6.3.2 Day 2 trip drop-off adjustment (W11)

Within diary data, a pattern of fewer trips being reported on the second diary day can be observed. This is likely to be associated with greater difficulty in recalling exact behaviour two days prior, compared with the day before data collection. To control for this drop-off in the number of trips reported, data from the second diary day was upweighted.

[9] Calculating effective sample size by region ignores differences in average weights between regions. The overall calculation includes these differences as an additional source of weight variation. Because effective sample size decreases as weight variability increases, the overall effective sample size is usually smaller than the sum of the region-level effective sample sizes.

To calculate the adjustment factor for diary day 2, trip rates for days 1 and 2 were calculated for each day of the week, weighted by W10. The adjustment factor for each day of the week consisted of the average weighted trip rate for diary day 1 divided by the average weighted trip rate for diary day 2. These adjustment factors comprise W11.

The final diary weights (W12) were created as follows:

- For diary day 1 data, W10.
- For diary day 2 data, W10 * W11.

The distribution of the final diary weights was checked and did not contain outliers. The highest diary weights were associated with respondents who received relatively high interview weights and whose data related to diary day 2, reflecting the application of the day 2 trip drop-off adjustment. No trimming was applied as it would primarily affect cases receiving the day 2 adjustment and would therefore risk undermining the correction for differences in trip reporting between diary days.

The impact of the diary weighting stages on weighting efficiency was modest. The final interview weights had an efficiency of 67%. The day-of-week adjustment decreased the efficiency to 66%, while the addition of the day 2 trip drop-off adjustment resulted in a final diary weight efficiency of 64%.

7. Bibliography

Department for Transport. “National Travel Survey 2024: Technical report”. Accessed August 25, 2026. https://www.gov.uk/government/statistics/national-travel-survey-2024-technical-report.

Transport for Wales. “Survey development for the Wales National Travel Survey.” Accessed August 25, 2026. https://tfw.wales/projects/wales-national-travel-survey/research-and-development/survey-development.

Transport for Wales. “Wales National Travel Survey Pilot Testing.” Accessed August 25, 2026. https://tfw.wales/projects/wales-national-travel-survey/research-and-development/pilot-testing.

Transport for Wales. “Wales Transport Strategy: Monitoring Measures”. Accessed August 25, 2026. https://tfw.wales/projects/monitoring-and-evaluation/wales-transport-strategy/monitoring-measures.

Welsh Government. “Llwybr Newydd: the Wales transport strategy 2021”. Accessed August 25, 2026. https://www.gov.wales/llwybr-newydd-wales-transport-strategy-2021.

Appendices

Appendix A: Invitation letter

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

If you need any help, a large print or Braille letter, contact us free on 0800 652 9296 or WNTS@natcen.ac.uk

Your reference:
P19655 <HHSerial>/<CKL>

Dear Resident,

Your household has been chosen to take part in the **Wales National Travel Survey**.

This is your chance to tell us how you experience and use all forms of transport across Wales, whether you travel by car, cycle, bus, train or any other way. The results will help us to make transport in Wales better for everyone, so it's important that you participate.

To say thank you for taking part, we will send you a **£<VouchType> voucher**.

Taking part is voluntary. You will be asked questions about yourself, how you choose to travel, and your recent journeys.

How to take part

Or Scan code below:

1. Go to the survey on your mobile device or computer: **mysurvey.natcen.ac.uk/WNTS**
2. Enter your access code: Person 1 <Acc1a> <Acc1b> <Acc1c>
   Person 2 <Acc2a> <Acc2b> <Acc2c>
3. Complete the survey and receive a **£<VouchType> voucher** as a thank you

<QRcode>

How long will it take?
The survey will take about 40 minutes. You will then receive a **£<VouchType> voucher**.

Who should take part?
Up to two people aged 16 years or over in your household can take part online. Each person completing the study will receive a voucher.

When should I complete it by?
Please complete the survey online as soon as possible, as the survey will only be available for a limited time.

The survey is easy to complete. Answers are kept confidential and are only used for research purposes.

The National Centre for Social Research (NatCen) is carrying out the survey on behalf of Transport for Wales.

Thank you for your support,

Geoff Ogden
Chief Transport Planning and Development Officer
Transport for Wales

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS

P19655_WNTS_ADV

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Os oes angen cymorth arnoch chi, neu lythyr mewn Braille neu brint mawr, cysylltwch â ni am ddim ar 0800 652 9296 neu ATCC@natcen.ac.uk

Eich cyfeirnod:
P19655 <HHSerial>/<CKL>

Annwyl Breswylydd,

Mae eich cartref chi wedi cael ei ddewis i gymryd rhan yn **Arolwg Teithio Cenedlaethol Cymru**.

Dyma eich cyfle i ddweud wrthym sut brofiad a gewch chi gyda gwasanaethau trafnidiaeth ledled Cymru a sut yr ydych yn eu defnyddio, p'un a ydych yn teithio mewn car, ar feic, bws neu drên, neu mewn unrhyw ffordd arall. Bydd y canlyniadau'n ein helpu ni i wneud trafnidiaeth yng Nghymru'n well i bawb, felly mae'n bwysig eich bod yn cymryd rhan. I ddweud diolch i chi am gymryd rhan, byddwn yn anfon **taleb £**<VouchType> atoch.

Chi sy'n dewis a ydych eisiau cymryd rhan ai peidio. Byddwn yn gofyn cwestiynau i chi amdanoch chi'ch hun, sut rydych yn dewis teithio, a'r teithiau rydych wedi eu gwneud yn ddiweddar.

Sut i gymryd rhan

Neu sganiwch y cod isod:

1. Ewch i'r arolwg ar eich dyfais symudol neu gyfrifiadur: **mysurvey.natcen.ac.uk/WNTS**
2. Rhowch eich cod mynediad: Person 1 <Acc1a> <Acc1b> <Acc1c>
   Person 2 <Acc2a> <Acc2b> <Acc2c>
3. Cwblhewch yr arolwg a byddwch yn derbyn **taleb £**<VouchType> i ddiolch i chi

<QRcode>

Faint o amser fydd hyn yn ei gymryd?
Bydd yr arolwg yn cymryd tua 40 munud. Yna byddwch yn derbyn **taleb £**<VouchType>.

Pwy ddylai gymryd rhan?
Gall hyd at ddau o bobl 16 oed neu'n hŷn yn eich cartref gymryd rhan. Bydd pob unigolyn sy'n cwblhau'r astudiaeth yn derbyn taleb.

Erbyn pryd ddylwn i gwblhau'r arolwg?
Cwblhewch yr arolwg ar-lein cyn gynted ag y gallwch, oherwydd dim ond am amser penodol y bydd ar gael.

Mae'r arolwg yn hawdd ei gwblhau. Rydym yn cadw'r atebion yn gyfrinachol a dim ond at ddibenion ymchwil y cânt eu defnyddio.

Mae'r Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen) yn gwneud yr arolwg ar ran Trafnidiaeth Cymru.

Diolch yn fawr am eich cefnogaeth,

Geoff Ogden
Prif Swyddog Cynllunio Trafnidiaeth a Datblygu
Trafnidiaeth Cymru

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_WNTS_ADV

Appendix B: First reminder letter

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

If you need any help, a large print or Braille letter, contact us free on 0800 652 9296 or WNTS@natcen.ac.uk

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Your reference:
P19655 <HHSerial>/<CKL>

Dear Resident,

We wrote to you recently to invite you to take part in the **Wales National Travel Survey**. If you have already completed this survey, please accept our thanks and ignore this letter.

We want to understand your experiences of all forms of transport in Wales, so we can improve journeys for people like you. We are keen to hear from people who travel by car, cycle, bus, train and any other mode. This is an opportunity for you to have your voice heard.

Taking part is important, even if you don't travel often. You can complete the survey online on any device, and you can return to any point if needed. Taking part is voluntary. You will be asked a range of questions about yourself, how you choose to travel, and your recent journeys.

How to take part

Or Scan code below:

1. Go to the survey on your mobile device or computer: **mysurvey.natcen.ac.uk/WNTS**
2. Enter your access code: Person 1 <Acc1a> <Acc1b> <Acc1c>
   Person 2 <Acc2a> <Acc2b> <Acc2c>
3. Complete the survey and receive a £<VouchType> **voucher** as a thank you

<QRcode>

How long will it take?
The survey will take about 40 minutes. You will then receive a £<VouchType> **voucher**.

Who should take part?
Up to two people aged 16 years or over in your household can take part online. Each person completing the study will receive a voucher.

When should I complete it by?
Please complete the survey online as soon as possible, as the survey will only be available for a limited time.

If you do not wish to take part online, you can request a telephone interview by calling **0800 652 9296**. Answers are kept confidential and are only used for research purposes.

The National Centre for Social Research (NatCen) is carrying out the survey on behalf of Transport for Wales.

Thank you for your support,

Geoff Ogden
Chief Transport Planning and Development Officer
Transport for Wales

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS

P19655_WNTS_R1

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Os oes angen cymorth arnoch chi, neu lythyr mewn Braille neu brint mawr, cysylltwch â ni am ddim ar 0800 652 9296 neu ATCC@natcen.ac.uk

Eich cyfeirnod:
P19655 <HHSerial>/<CKL>

Annwyl Breswylydd,

Rydym wedi ysgrifennu atoch yn ddiweddar i'ch gwahodd i gymryd rhan yn **Arolwg Teithio Cenedlaethol Cymru**. Os ydych wedi cwblhau'r arolwg hwn yn barod, hoffem ddiolch i chi ac anwybyddwch y llythyr hwn.

Rydym eisiau deall eich profiadau o bob math o drafnidiaeth yng Nghymru, er mwyn i ni allu gwella teithiau i bobl fel chi. Rydym yn awyddus i glywed gan bobl sy'n teithio mewn car, ar feic, bws neu drên ac unrhyw ddull arall. Mae hwn yn gyfle i chi gael clust i'ch llais. Mae'n bwysig cymryd rhan, hyd yn oed os nad ydych yn teithio'n aml. Gallwch gwblhau'r arolwg ar-lein ar unrhyw ddyfais, a gallwch fynd yn ôl at unrhyw bwynt os oes angen.

Chi sy'n dewis a ydych eisiau cymryd rhan ai peidio. Byddwn yn gofyn amrywiaeth o gwestiynau i chi amdanoch chi'ch hun, sut rydych yn dewis teithio, a'r teithiau rydych wedi eu gwneud yn ddiweddar.

Sut i gymryd rhan

Neu sganiwch y cod isod:

1. Ewch i'r arolwg ar eich dyfais symudol neu gyfrifiadur: **mysurvey.natcen.ac.uk/WNTS**
2. Rhowch eich cod mynediad: Person 1 <Acc1a> <Acc1b> <Acc1c>
   Person 2 <Acc2a> <Acc2b> <Acc2c>
3. Cwblhewch yr arolwg a byddwch yn derbyn **taleb £**<VouchType> i ddiolch i chi

<QRcode>

Faint o amser fydd hyn yn ei gymryd?
Bydd yr arolwg yn cymryd tua 40 munud. Yna byddwch yn derbyn **taleb £**<VouchType>.

Pwy ddylai gymryd rhan?
Gall hyd at ddau o bobl 16 oed neu'n hŷn yn eich cartref gymryd rhan. Bydd pob unigolyn sy'n cwblhau'r astudiaeth yn derbyn taleb.

Erbyn pryd ddylwn i gwblhau'r arolwg?
Cwblhewch yr arolwg ar-lein cyn gynted ag y gallwch, oherwydd dim ond am amser penodol y bydd ar gael.

Os nad ydych eisiau cymryd rhan ar-lein, gallwch ofyn am gyfweliad dros y ffôn drwy ffonio **0800 652 9296**. Rydym yn cadw'r atebion yn gyfrinachol a dim ond at ddibenion ymchwil y cânt eu defnyddio.

Mae'r Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen) yn gweinyddu'r astudiaeth ar ran Trafnidiaeth Cymru.

Diolch yn fawr am eich cefnogaeth,

Geoff Ogden
Prif Swyddog Cynllunio Trafnidiaeth a Datblygu
Trafnidiaeth Cymru

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_WNTS_R1

Appendix C: Second reminder letter

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

If you need any help, a large print or Braille letter, contact us free on 0800 652 9296 or WNTS@natcen.ac.uk

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Your reference:
P19655 <HHSerial>/<CKL>

Dear Resident,

Recently, we invited you to take part in the **Wales National Travel Survey**. We know that some people are not able or would prefer not to take part online, so an interviewer from our survey partner the National Centre for Social Research (NatCen) will visit your home to offer you the chance to participate in a face-to-face interview instead. The interviewer will show you their NatCen Identification badge on arrival.

Remember that you can still complete the survey online on any device or you can request a telephone interview or opt-out of any further contact by calling **0800 652 9296**. If you have already completed the survey, please accept our thanks and ignore this letter.

How to take part

Or Scan code below:

1 Go to the survey on your mobile device or computer: **mysurvey.natcen.ac.uk/WNTS**

2 Enter your access code: Person 1 <Acc1a> <Acc1b> <Acc1c>
Person 2 <Acc2a> <Acc2b> <Acc2c>

<QRcode>

3 Complete the survey and receive a £<VouchType> **voucher** as a thank you

Who should take part and how long will it take?
Up to two people aged 16 years or over in your household can take part. The survey will take about 40 minutes and each person completing the study will receive a £<VouchType> **voucher**.

When should I complete it by?
Please complete the survey online as soon as possible, as the survey will only be available for a limited time. Answers are kept confidential and are only used for research purposes.

Thank you for your support,

Geoff Ogden
Chief Transport Planning and Development Officer
Transport for Wales

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS

P19655_WNTS_R2

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Os oes angen cymorth arnoch chi, neu lythyr mewn Braille neu brint mawr, cysylltwch â ni am ddim ar 0800 652 9296 neu ATCC@natcen.ac.uk

Eich cyfeirnod:
P19655 <HHSerial>/<CKL>

Annwyl Breswylydd,

Rydym wedi eich gwahodd yn ddiweddar i gymryd rhan yn **Arolwg Teithio Cenedlaethol Cymru**. Gwyddom nad yw rhai pobl yn gallu cymryd rhan ar-lein, neu y byddai'n well ganddynt beidio. Felly bydd holwr o'n partner yn yr arolwg, sef y Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen), yn ymweld â'ch cartref i gynnig cyfle i chi i gael cyfweliad wyneb yn wyneb yn lle gwneud yr arolwg ar-lein. Bydd yr holwr yn dangos eu bathodyn adnabod NatCen i chi wrth gyrraedd.

Cofiwch y gallwch gwblhau'r arolwg ar-lein o hyd, ar unrhyw ddyfais. Gallwch ofyn am gyfweliad ffôn neu optio allan o unrhyw gysylltiad pellach drwy ffonio **0800 652 9296**. Os ydych wedi cwblhau'r arolwg hwn yn barod, diolch yn fawr i chi ac anwybyddwch y llythyr hwn.

Sut i gymryd rhan

Neu sganiwch y cod isod:

1. Ewch i'r arolwg ar eich dyfais symudol neu gyfrifiadur: **mysurvey.natcen.ac.uk/WNTS**
2. Rhowch eich cod mynediad: Person 1 <Acc1a> <Acc1b> <Acc1c>
   Person 2 <Acc2a> <Acc2b> <Acc2c>
3. Cwblhewch yr arolwg a byddwch yn derbyn **taleb £**<VouchType> i ddiolch i chi

<QRcode>

Pwy ddylai gymryd rhan a faint o amser fydd hyn yn ei gymryd?
Gall hyd at ddau o bobl 16 oed neu'n hŷn yn eich cartref gymryd rhan. Bydd yr arolwg yn cymryd tua 40 munud a bydd pob unigolyn sy'n cwblhau'r astudiaeth yn derbyn **taleb £**<VouchType>.

Erbyn pryd ddylwn i gwblhau'r arolwg?
Cwblhewch yr arolwg ar-lein cyn gynted ag y gallwch, oherwydd dim ond am amser penodol y bydd ar gael. Mae'r atebion yn cael eu cadw'n gyfrinachol a dim ond at ddibenion ymchwil y cânt eu defnyddio.

Diolch yn fawr am eich cefnogaeth,

Geoff Ogden
Prif Swyddog Cynllunio Trafnidiaeth a Datblygu
Trafnidiaeth Cymru

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_WNTS_R2

Appendix D: FAQ



Frequently asked questions

What is the Wales National Travel Survey?
The Wales National Travel Survey (WNTS) involves around 15,000 people a year across Wales. The study is carried out for Transport for Wales by the National Centre for Social Research (NatCen). The results will help us understand how people experience transport across Wales.

Who are the National Centre for Social Research (NatCen)?
NatCen is Britain's largest independent social research agency. For over 50 years, they have worked with charities, government and academic institutions. They are independent of all government departments and political parties.

Why is the study important?
The WNTS is your chance to tell us about your experiences, opinions and use of all forms of transport in Wales. We value your contribution as we want to hear from people of different genders, ages and all walks of life, living in all parts of Wales.

Why should I take part?
Participation is voluntary, but your answers will help us to understand and take action on things that are important to you. The survey will take about 40 minutes and you will receive a £10 Love2Shop voucher as a thank you.

How did you get my contact details?
Your address was randomly selected from the Royal Mail's publicly-available list of all addresses in Wales.

Can I take part in Welsh?
Yes. You can participate in this survey in Welsh or English.

Are my answers kept confidential?
Yes. The information you give us will be kept confidential and only used for research purposes. More details about the survey and how we store and process your information can be found on our website.
https://tfw.wales/projects/wales-national-travel-survey

What if I have any other questions?
You can contact NatCen at: **WNTS@natcen.ac.uk** or **0800 652 9296**
Or contact Transport for Wales directly at: **travelsurvey@tfw.wales** or **03333 211 202**

To request this information in large print or Braille, or if there is any way we can make it easier way for you to take part, just call us on 0800 652 9296

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS

P19655_FAQ

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

Cwestiynau cyffredin

Beth yw Arolwg Teithio Cenedlaethol Cymru?
Mae Arolwg Teithio Cenedlaethol Cymru (WNTS) yn cynnwys tua 15,000 o bobl bob blwyddyn ledled Cymru. Y Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen) sy'n gweinyddu'r astudiaeth ar ran Trafnidiaeth Cymru. Bydd y canlyniadau'n ein helpu ni i ddeall sut brofiad y mae pobl yn ei gael o drafnidiaeth ledled Cymru.

Pwy yw'r Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen)?
NatCen yw asiantaeth ymchwil cymdeithasol annibynnol fwyaf Prydain. Am fwy na 50 mlynedd, maen nhw wedi gweithio gydag elusennau, y llywodraeth a sefydliadau academaidd. Maen nhw'n annibynnol ar holl adrannau'r llywodraeth a phob plaid wleidyddol.

Pam mae'r astudiaeth yn bwysig?
Yr Arolwg Teithio Cenedlaethol yw eich cyfle i ddweud wrthym am eich profiadau, eich barn a'ch defnydd o wasanaethau trafnidiaeth yng Nghymru. Rydym yn gwerthfawrogi eich cyfraniad am fod angen i ni glywed gan bobl o wahanol ryweddau, oedrannau a chefndiroedd, sy'n byw ymhob rhan o Gymru.

Pam ddylwn i gymryd rhan?
Chi sy'n dewis a ydych eisiau cymryd rhan ai peidio, ond bydd eich atebion yn ein helpu ni i ddeall a gweithredu ar bethau sy'n bwysig i chi. Bydd yr arolwg yn cymryd tua 40 munud a byddwch yn derbyn taleb £10 Love2Shop i ddiolch i chi.

Sut gawsoch chi fy manylion cyswllt?
Cafodd eich cyfeiriad ei ddewis ar hap o'r rhestr o'r holl gyfeiriadau yng Nghymru sydd ar gael i'r cyhoedd gan y Post Brenhinol.

A fydda i'n gallu cymryd rhan drwy gyfrwng y Gymraeg?
Byddwch. Gallwch wneud yr arolwg hwn yn Gymraeg neu yn Saesneg.

A fydd fy atebion yn cael eu cadw'n gyfrinachol?
Byddant. Bydd y wybodaeth a rowch i ni'n cael ei chadw'n gyfrinachol ac yn cael ei defnyddio dim ond at ddibenion ymchwil. Gallwch weld rhagor o fanylion am y ffordd yr ydym yn storio a phrosesu eich gwybodaeth ar ein gwefan. **https://trc.cymru/prosiectau/arolwg-teithio-cenedlaethol-cymru**

Beth os oes gen i gwestiynau eraill?
Gallwch gysylltu â NatCen yn: **WNTS@natcen.ac.uk** neu **0800 652 9296**
Neu cysylltwch â Trafnidiaeth Cymru'n uniongyrchol ar: **arolwgteithio@trc.cymru** neu **03333 211 202**

I ofyn am y wybodaeth hon mewn print mawr neu Braille, neu os oes ffordd y gallwn ei wneud yn haws i chi gymryd rhan, ffoniwch ni ar 0800 652 9296

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_FAQ

Appendix E: Opening pages of the interviewer instructions



Wales National Travel Survey

Interviewer instructions

Contents

1 INTRODUCTION TO THE WALES NATIONAL TRAVEL SURVEY 3

1.1 The history and purpose of WNTS 3
1.1.1 Why do TfW need to collect data from people directly? 4
1.1.2 Uses of WNTS data 4

1.2 Where can you find data and information from the survey? 4

2 FIELDWORK OVERVIEW 5

2.1.1 Connecting to the office before conducting fieldwork 5

2.2 Stages of fieldwork 5
Stage 1: Web fieldwork 5
Stage 2: Face-to-face fieldwork 6

3 CONTACTING RESPONDENTS 8

3.1 The sample 8

3.2 Making contact 8
3.2.1 Addresses with multiple dwelling units 9
3.2.2 Multiple households 10
3.2.3 Person selection 11
3.2.4 Dwelling units and households 12
3.2.5 Establishing eligibility 12
Ineligible (deadwood) addresses 12
Unknown eligibility 13
Establishing residence at the address 13
3.2.6 Managing reluctant respondents on the doorstep 13
People who are more likely to want to opt out of the WNTS 14
3.2.7 How to arrange a phone interview 14
3.2.8 How to deal with respondents who would like to speak in Welsh 14

3.3 Dealing with language difficulties 14
3.3.1 Using someone in the household as a translator 14
3.3.2 Last resort language cards 15

3.4 Doorstep administration 16
3.4.1 The electronic Address Record Form (eARF) 16
Spare access codes 16
Visits record 16
Recording Telephone Calls 16
Outcome codes 16
No contact with anyone at address after 6+ calls 18

4 THE FACE-TO-FACE INTERVIEW 22

Appendix F: Copy of the second reminder letter

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

If you need any help, a large print or Braille letter, contact us free on 0800 652 9296 or WNTS@natcen.ac.uk

Your reference:
P19655

Dear Resident,

Recently, we invited you to take part in the **Wales National Travel Survey**. We know that some people are not able or would prefer not to take part online, so an interviewer from our survey partner the National Centre for Social Research (NatCen) will visit your home to offer you the chance to participate in a face-to-face interview instead. The interviewer will show you their NatCen Identification badge on arrival.

Remember that you can still complete the survey online on any device or you can request a telephone interview or opt-out of any further contact by calling **0800 652 9296**. If you have already completed the survey, please accept our thanks and ignore this letter.

How to take part

Or Scan code below:

1. Go to the survey on your mobile device or computer: **mysurvey.natcen.ac.uk/WNTS**
2. Enter your access code: Person 1
   Person 2
3. Complete the survey and receive a **£ voucher** as a thank you

Who should take part and how long will it take?
Up to two people aged 16 years or over in your household can take part. The survey will take about 40 minutes and each person completing the study will receive a **£ voucher**.

When should I complete it by?
Please complete the survey online as soon as possible, as the survey will only be available for a limited time. Answers are kept confidential and are only used for research purposes.

Thank you for your support,

Geoff Ogden
Chief Transport Planning and Development Officer
Transport for Wales

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS

P19655_WNTS_R2_no_mm

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

Os oes angen cymorth arnoch chi, neu lythyr mewn Braille neu brint mawr, cysylltwch â ni am ddim ar 0800 652 9296 neu ATCC@natcen.ac.uk

Eich cyfeirnod:
P19655

Annwyl Breswylydd,

Rydym wedi eich gwahodd yn ddiweddar i gymryd rhan yn **Arolwg Teithio Cenedlaethol Cymru**. Gwyddom nad yw rhai pobl yn gallu cymryd rhan ar-lein, neu y byddai'n well ganddynt beidio. Felly bydd holwr o'n partner yn yr arolwg, sef y Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen), yn ymweld â'ch cartref i gynnig cyfle i chi i gael cyfweliad wyneb yn wyneb yn lle gwneud yr arolwg ar-lein. Bydd yr holwr yn dangos eu bathodyn adnabod NatCen i chi wrth gyrraedd.

Cofiwch y gallwch gwblhau'r arolwg ar-lein o hyd, ar unrhyw ddyfais. Gallwch ofyn am gyfweliad ffôn neu optio allan o unrhyw gysylltiad pellach drwy ffonio **0800 652 9296**. Os ydych wedi cwblhau'r arolwg hwn yn barod, diolch yn fawr i chi ac anwybyddwch y llythyr hwn.

Sut i gymryd rhan

Neu sganiwch y cod isod:

1. Ewch i'r arolwg ar eich dyfais symudol neu gyfrifiadur: **mysurvey.natcen.ac.uk/WNTS**
2. Rhowch eich cod mynediad: Person 1
   Person 2
3. Cwblhewch yr arolwg a byddwch yn derbyn **taleb £** i ddiolch i chi

Pwy ddylai gymryd rhan a faint o amser fydd hyn yn ei gymryd?
Gall hyd at ddau o bobl 16 oed neu'n hŷn yn eich cartref gymryd rhan. Bydd yr arolwg yn cymryd tua 40 munud a bydd pob unigolyn sy'n cwblhau'r astudiaeth yn derbyn **taleb £**.

Erbyn pryd ddylwn i gwblhau'r arolwg?
Cwblhewch yr arolwg ar-lein cyn gynted ag y gallwch, oherwydd dim ond am amser penodol y bydd ar gael. Mae'r atebion yn cael eu cadw'n gyfrinachol a dim ond at ddibenion ymchwil y cânt eu defnyddio.

Diolch yn fawr am eich cefnogaeth,

Geoff Ogden
Prif Swyddog Cynllunio Trafnidiaeth a Datblygu
Trafnidiaeth Cymru

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_WNTS_R2_no_mm

Appendix G: Access code card

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

URL:

mysurvey.natcen.ac.uk/WNTS

Cod mynediad/Access code:



T. 0800 652 9296
E. WNTS@natcen.ac.uk
W. natcen.ac.uk/WNTS

Appendix H: Non-contact letter

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

Sorry I missed you!

My name is: _____

I called on ____ /____ /____ at ____ : ____

Weblink: **mysurvey.natcen.ac.uk/WNTS**

Access code: _____

Dear household,

I'm an interviewer with the National Centre for Social Research working on the **Wales National Travel Survey**. Recently we sent a letter to your address inviting you to take part in this important study. I called at your address to provide further details about the survey and to schedule a convenient time for an interview, but it looks like we missed each other.

Your household was randomly selected to take part in this study which will help Transport for Wales and Welsh Government understand how people experience and use all forms of transport in Wales.

If it's more convenient for you, you can still complete the survey online using the above weblink and access code. Alternatively, you can contact our office on **FREEPHONE 0800 652 9296** to let them know the best time to for me to call again or to schedule a telephone interview. If you prefer, you can also opt out of any further contact by calling this number.

If we do not hear from you, I'll call again soon. I'll be carrying my identity card with my photograph so you will know who I am.

Thank you for your time.

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS P19655_WNTS_NC

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

Rwy'n flin collais i chi!

Fy enw i yw: _____

Galwais heibio ar ____ /____ /____ am ____ : ____

Hyperddolen: **mysurvey.natcen.ac.uk/ATCC**

Côd mynediad: _____

Annwyl ddeiliad y tŷ,

Rwy'n holwr gyda'r Ganolfan Genedlaethol Ymchwil Gymdeithasol (NatCen) wrthi'n gweithio ar **Arolwg Teithio Cenedlaethol Cymru**. Yn ddiweddar, anfonom lythyr atoch yn eich gwahodd i gymryd rhan yn yr astudiaeth bwysig hon. Galwais heibio'ch cartref chi i ddarparu manylion pellach ynghylch yr arolwg a threfnu amser cyfleus i gynnal cyfweliad, ond mae'n debyg ein bod wedi colli'n gilydd.

Cafodd eich cartref chi ei ddewis ar hap i gymryd rhan yn yr astudiaeth a fydd yn helpu Trafnidiaeth Cymru a Llywodraeth Cymru i ddeall sut brofiad sydd gan bobl o ddefnyddio'r holl ddulliau teithio yng Nghymru a sut maent yn eu defnyddio.

Os yw'n fwy cyfleus ichi, gallwch gwblhau'r arolwg ar-lein gan ddefnyddio'r hyperddolen a chôd mynediad uchod. Fel arall, gallwch gysylltu â'n swyddfa ar **RADFFÔN 0800 652 9296** er mwyn rhoi gwybod am yr amser gorau imi alw heibio eto neu i drefnu cyfweliad dros y ffôn. Os yw'n well gennych, gallwch hefyd optio allan o unrhyw gysylltiad pellach drwy ffonio'r rhif hwn.

Os nad ydym yn clywed gennych, byddaf yn galw heibio eto'n fuan. Bydd gen i gerdyn adnabod gyda llun ohonof arno fel y byddwch yn f'adnabod.

Diolch am eich amser.

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_WNTS_NC

Appendix I: “I speak” showcard



I speak Arabic	-	أتحدث العربية
I speak Bengali	-	Avwg evsjv fvlvq K_v ewj
I speak Cantonese	-	本人說粵語。
I speak Polish	-	Mówię po polsku
I speak Romanian	-	Vorbesc română
I speak Welsh	-	Dwi'n siarad Cymraeg

National Centre for Social Research

Your address has been selected to take part in the Wales National Travel Survey and this is why I am visiting. This important study is being carried out by The National Centre for Social Research, on behalf of Transport for Wales and the Welsh Government. It is about how people travel and the results are used to improve transport in Wales. We are interested in hearing your views, even if you do not travel by bus or train.

If you would like to help us, you can complete the survey online by visiting the website and entering the code I give you. If you would prefer to be interviewed in person, please give the interviewer a phone number of someone in your household who speaks English to translate on your behalf. The interviewer will be in contact to explain more about the study. Thank you.

Arabic

جرى اختيار عنوانك للمشاركة في الاستبيان الوطني للتنقل في ويلز، وهذا هو السبب وراء زيارتي. يُجري هذه الدراسة المهمة المركز الوطني للبحوث الاجتماعية، بتكليفٍ من هيئة النقل في ويلز وحكومة ويلز، وتركز على كيفية تنقل الأفراد، وستُستخدم النتائج لتحسين خدمات النقل في ويلز. نحن مهتمون بسماع آرائك حتى وإن كنت لا تستخدم الحافلات أو القطارات.

إذا كنت ترغب في مساعدتنا، فيمكنك إكمال الاستبيان عبر الإنترنت من خلال زيارة الموقع الإلكتروني وإدخال الرمز الذي سأعطيك إياه، أما إذا كنت تفضل إجراء مقابلة شخصية، فيرجى إعطاء المحاور رقم هاتف شخص من أسرتك يتحدث الإنجليزية ليتولى مهمة الترجمة. وسيتواصل معك المحاور لتوضيح مزيد من التفاصيل حول الدراسة. شكرًا لك.

Bengali

আপনার ঠিকানা ওয়েল্স ন্যাশনাল ট্র্যাভেল সার্ভেতে অংশ নেওয়ার জন্য বেছে নেওয়া হয়েছে এবং আমি সেইজন্য এসেছি। ট্রান্সপোর্ট ফর ওয়েল্স এবং ওয়েল্‌শ সরকারের পক্ষ থেকে ন্যাশনাল সেন্টার ফর সোশাল রিসার্চ এই গুরুত্বপূর্ণ অধ্যয়ন পরিচালনা করছে। লোকেরা যেভাবে যাতায়াত করে তা এর বিষয় এবং এর ফলাফল দিয়ে ওয়েল্সের পরিবহনে উন্নতি করা হয়। আপনি যদি বাস বা ট্রেনে যাতায়াত নাও করেন তাহলেও আমরা আপনার মতামত জানায় আগ্রহী।

যদি আপনি আমাদের সাহায্য করতে চান, ওয়েবসাইটে গিয়ে আমার দেওয়া কোড ব্যবহার করে আপনি অনলাইনে এই সমীক্ষা সম্পূর্ণ করতে পারেন। যদি ব্যক্তিগতভাবে ইন্টারভিউ দিতে চান, আপনার পক্ষ থেকে অনুবাদ করে দেওয়ার জন্য আপনার পরিবারে যে ইংরেজি বলতে পারেন তার ফোন নম্বর ইন্টারভিউয়ারকে দিয়ে দেবেন। অধ্যয়নের বিষয়ে আরও বুঝিয়ে দেওয়ার জন্য ইন্টারভিউয়ার যোগাযোগ করবেন। ধন্যবাদ।

Cantonese

您的地址被選中參加威爾士國家交通調查，這就是我今天拜訪的原因。這項重要的研究由國家社會研究中心代表威爾士交通局和威爾士政府進行，旨在了解人們的出行方式，並利用調查結果改善威爾士的交通設施。我們非常希望聽取您的意見，即使您平時不乘坐巴士或火車，也歡迎分享看法。

如果您願意協助我們，您可以透過登入網站並輸入我所提供的代碼，在網上完成調查。如果您較希望接受面對面的訪談，請向調查員提供一位會說英語的家庭成員的聯絡電話，以便協助翻譯。調查員會與您聯繫，進一步說明這項研究的細節。感謝您！

Polish

Powodem mojej wizyty jest wybór Twojego adresu do udziału w Krajowym Badaniu Transportowym Walii (Wales National Travel Survey). Jest to ważne badanie przeprowadzane przez Krajowe Centrum Badań Społecznych (National Centre for Social Research) na zlecenie organizacji Transport for Wales i rządu walijskiego. Dotyczy ono sposobów podróżowania, a jego wyniki są wykorzystywane do poprawy transportu na terenie Walii. Zależy nam na poznaniu Twoich opinii, nawet jeśli nie podróżujesz autobusem ani pociągiem.

Jeśli chcesz nam pomóc, możesz wypełnić ankietę online, odwiedzając stronę internetową i wpisując kod, który Ci podam. Jeśli wolisz osobistą rozmowę, prosimy o podanie ankieterowi numeru telefonu osoby z Twojego gospodarstwa domowego, która mówi po angielsku i będzie mogła dla Ciebie tłumaczyć. Ankieter skontaktuje się z Tobą, aby wyjaśnić szczegóły badania. Dziękuję.

Romanian

Adresa dumneavoastră a fost selectată pentru a lua parte la Sondajul național privind călătoriile în Țara Galilor și acesta este motivul pentru care vă contactez. Acest sondaj important este realizat de către Centrul Național pentru Cercetare Socială, în numele Transport pentru Țara Galilor și al guvernului galez. Sondajul se referă la modul în care călătoresc oamenii, iar rezultatele sunt utilizate pentru îmbunătățirea transportului în Țara Galilor. Suntem interesați să aflăm opiniile dumneavoastră, chiar dacă nu călătoriți cu autobuzul sau cu trenul.

Dacă doriți să ne ajutați, puteți completa sondajul online accesând site-ul web și introducând codul pe care vi-l dau. Dacă preferați să fiți intervievat în persoană, vă rugăm să dați intervievatorului numărul de telefon al unei persoane din gospodăria dumneavoastră care vorbește limba engleză pentru a traduce în numele dumneavoastră. Intervievatorul vă va contacta pentru a vă explica mai multe despre sondaj. Vă mulțumim.

Appendix J: Example of showcards

WNTS V1 (English)

WlkEnc/WlkEncNon

Showcard C4

1. Better maintained routes
2. Less obstruction on the path, such as parked vehicles
3. Less or slower traffic
4. More considerate drivers and path users
5. More places to stop and rest
6. More pleasant walking routes
7. More safe crossing points
8. Routes that connect to where I want to go
9. I am unable to walk or wheel as a means of transport more often now
10. Other (please describe)
11. None of these

WlkEnc/WlkEncNon

Showcard C4

1. Llwybrau sy'n cael eu cynnal a'u cadw'n well
2. Llai o rwystrau ar y llwybr, fel cerbydau wedi parcio
3. Llai o draffig neu draffig arafach
4. Gyrwyr a defnyddwyr llwybrau sy'n fwy ystyriol
5. Mwy o leoedd i stopio a gorffwys
6. Llwybrau cerdded brafiach
7. Mannau croesi mwy diogel
8. Llwybrau sy'n cysylltu â'r mannau lle'r wyf eisiau mynd
9. Nid wyf yn gallu cerdded nac olwyno'n amlach fel math o drafnidiaeth
10. Arall (manylwch)
11. Dim un o'r rhain

Appendix K: Travel diary guidance

WNTS Diary Guidance - ENG

Offline diary guidance

Please remember to only use the offline diary when you cannot secure an internet connection. When using the offline diary to collect journey information please **begin by reading out the following content in italics**, which you can refer to at any time:

In this section, we will ask about your travel in the last two days. By travel we mean the journeys you made for your own purposes, such as going shopping, going to work or returning home.

If your work involves transporting or delivering goods or people, such as working as a bus driver or a delivery driver, please do not include those work-related journeys.

We are only interested in the journeys that started and/or finished in Wales.

First travel day

Your travel day began at 5.00am yesterday, and finished at 5.00am today, covering 24 hours.

Second travel day

Your travel day began at 5.00am the day before yesterday, and finished at 5.00am yesterday, covering 24 hours.

Please remember to **collect both days** of travel information.

WNTS Canllawiau ar Ddyddiadur Arolwg - WEL

Canllawiau ar y dyddiadur all-lein

Cofiwch mai dim ond pan na allwch chi gysylltu â'r rhyngrwyd y dylech chi ddefnyddio'r dyddiadur all-lein. Wrth ddefnyddio'r dyddiadur all-lein i gasglu gwybodaeth am siwrneiau, **dechreuwch drwy ddarllen y cynnwys canlynol mewn llythrennau italig** (gallwch gyfeirio at hwn ar unrhyw adeg):

Yn yr adran hon, byddwn yn gofyn am eich manylion teithio ar gyfer y ddau ddiwrnod diwethaf. Ystyr 'teithio' yw'r siwrneiau rydych chi wedi'u gwneud at eich dibenion eich hun – fel mynd i siopa, mynd i'r gwaith neu ddod yn ôl adref.

Os yw eich gwaith yn cynnwys cludo neu ddanfon nwyddau neu bobl – er enghraifft, os ydych chi'n gyrru bws neu'n danfon nwyddau – peidiwch â chynnwys y teithiau sy'n gysylltiedig â'r gwaith.

Dim ond yn y teithiau sydd wedi dechrau a/neu orffen yng Nghymru y mae gennym ni ddiddordeb.

Diwrnod teithio cyntaf

Dechreuodd eich diwrnod teithio am 5.00am ddoe, a gorffennodd am 5.00am heddiw, gan gwmpasu 24 awr.

Ail ddiwrnod teithio

Dechreuodd eich diwrnod teithio am 5.00am echdoe, a gorffennodd am 5.00am ddoe, gan gwmpasu 24 awr.

Cofiwch **gasglu'r manylion teithio ar gyfer y ddau ddiwrnod**.

Appendix L: Paper backup diary

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

GENERAL INFORMATION BLOCK

Which day are you recording a journey for? Yesterday ☐ Day before yesterday ☐	Journey: #	Serial number:

Start location: HOME ☐ OR SOMEWHERE ELSE:

End location: HOME ☐ OR SOMEWHERE ELSE:

Start time: AM ☐ PM ☐ :	What was the purpose of this journey? If more than one purpose is given, please note the main purpose. (Showcard L1):

HOW DID YOU TRAVEL ON THIS JOURNEY? (SHOWCARD L2)

Please select the main mode of transport

BUS ☐ → **GO TO BUS START**

CYCLE ☐ → **GO TO CYCLE**

CAR ☐ → **GO TO CAR**

TRAIN ☐ → **GO TO TRAIN START**

WALKING OR WHEELING ☐ → **GO TO OTHER TRAVEL**

TAXI ☐ → **GO TO OTHER TRAVEL**

OTHER ☐ → **GO TO OTHER TRAVEL**
DESCRIBE:

→ **TURN PAGE**

BUS START

Where did you **get on** the bus?	Where did you **get off** the bus?	
		→ **GO TO TICKETS**

TRAIN START

At which station did you **get on** the train?	At which station did you **get off** the train?	
		→ **GO TO TICKETS**

TICKETS

Was a concessionary or discounted card used for the journey?	**Yes** ☐ **No** ☐	
Was a season ticket, multi-trip ticket or unlimited travel ticket used for the journey?	**Yes** ☐ **No** ☐	
Excluding these cards and tickets, did this specific journey cost anything?	**Yes** ☐ **No** ☐	
How much did you pay for your ticket for this specific journey?	**£**	→ **GO TO TRAIN/BUS END**

TRAIN/BUS END (SHOWCARD L5/L6) Please select all that apply

How did you **get to** the train station/bus stop?	How did you **get from** the train station/bus stop to your destination?	CYCLE → **GO TO CYCLE** CAR → **GO TO CAR** OTHER MODE → **GO TO END**

CYCLE

On this journey, what type of cycle did you use? (Showcard L4):	→ **GO TO OTHER TRAVEL**

CAR

Number of other adults (16 and over):	Children (under 16):	
On this journey, were you the driver or passenger? Driver ☐ Passenger ☐	Type of fuel (Showcard L3):	→ **GO TO OTHER TRAVEL**

OTHER TRAVEL Please select all that apply

What **other** mode(s) of transport did you use for this journey?

END

Did you make any other journeys? **Yes** ☐ **No** ☐
YES → START NEW JOURNEY **NO → DIARY DAY COMPLETE**

P19655_WNTS

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

BLOC GWYBODAETH GYFFREDINOL

Ar gyfer pa ddiwrnod ydych chi'n cofnodi siwrnai? Ddoe ☐ Echdoe ☐	Taith: Rhif	Rhif cyfresol:

LLEOLIAD CYCHWYN: ☐ CARTREF NEU RYWLE ARALL:

LLEOLIAD GORFFEN: ☐ CARTREF NEU RYWLE ARALL:

Amser cychwyn: ☐ AM ☐ PM :	Beth oedd pwrpas y siwrnai hon? Os oes mwy nag un pwrpas, nodwch y prif un. (Showcard L1):

SUT GWNAETHOCH CHI DEITHIO AR Y SIWRNAI HON? (SHOWCARD L2)

Dewiswch y prif ddull teithio

BWS ☐ → **EWCH I'R ADRAN BWS – CYCHWYN**

BEIC ☐ → **EWCH I'R ADRAN BEIC**

CAR ☐ → **EWCH I'R ADRAN CAR**

TRÊN ☐ → **EWCH I'R ADRAN TRÊN – CYCHWYN**

CERDDED NEU OLWYNIO ☐ → **EWCH I'R ADRAN DULL TEITHIO ARALL**

TACSI ☐ → **EWCH I'R ADRAN DULL TEITHIO ARALL**

ARALL ☐ → **EWCH I'R ADRAN DULL TEITHIO ARALL**
RHOWCH DDISGRIFIAD:

→ **TROWCH Y DUDALEN**

BWS – CYCHWYN

Ble wnaethoch chi **ddod ar** y bws?	Ble wnaethoch chi **ddod oddi ar** y bws?	
		→ **EWCH I'R ADRAN TOCYNNAU**

TRÊN – CYCHWYN

Ym mha orsaf wnaethoch chi **ddod ar** y trên?	Ym mha orsaf wnaethoch chi **ddod oddi ar** y trên?	
		→ **EWCH I'R ADRAN TOCYNNAU**

TOCYNNAU

A ddefnyddiwyd cerdyn disgownt neu gonsesiwn ar gyfer y siwrnai?	**Do** ☐ **Naddo** ☐	
A ddefnyddiwyd tocyn tymor, tocyn aml-daith neu docyn teithio faint fynnwch ar gyfer y siwrnai?	**Do** ☐ **Naddo** ☐	
Heblaw am y cardiau a'r tocynnau hyn, a oedd y daith benodol hon yn costio unrhyw beth?	**Oedd** ☐ **Nac oedd** ☐	→ **EWCH I'R ADRAN TRÊN/ BWS – GORFFEN**
Faint wnaethoch chi ei dalu am eich tocyn ar gyfer y siwrnai benodol hon?	**£**	

TRÊN/BWS – GORFFEN (SHOWCARD L5/L6) Dewiswch bob un sy'n berthnasol

Sut wnaethoch chi **gyrraedd** yr orsaf drenau/safle bws?	Sut wnaethoch chi **fynd o'r** orsaf drenau/safle bws i'ch cyrchfan?	BEIC → **EWCH I'R ADRAN BEIC** CAR → **EWCH I'R ADRAN CAR** DULL TEITHIO ARALL → **EWCH I'R DIWEDD**

BEIC

Ar y siwrnai hon, pa fath o feic wnaethoch chi ei ddefnyddio? (Showcard L4):	→ **EWCH I'R ADRAN DULL TEITHIO ARALL**

CAR

Nifer yr oedolion eraill (16 oed a hŷn):	Plant (dan 16 oed):	
Ar y siwrnai hon, ai gyrrwr neu deithiwr oeddech chi? Gyrrwr ☐ Teithiwr ☐	Math o danwydd (Showcard L3):	→ **EWCH I'R ADRAN DULL TEITHIO ARALL**

DULL TEITHIO ARALL Dewiswch bob un sy'n berthnasol

Pa ddull(iau) teithio **eraill** wnaethoch chi eu defnyddio ar gyfer y siwrnai hon?

DIWEDD

Wnaethoch chi unrhyw siwrneiau eraill? **Do** ☐ **Naddo** ☐

DO → DECHRAU SIWRNAI NEWYDD
NADDO → WEDI CWBLHAU'R DIWRNOD YN Y DYDDIADUR

P19655_WNTS

Appendix M: SAIL information sheet and data linking flowchart

tfw.wales

WALES NATIONAL TRAVEL SURVEY

Making your survey answers even more valuable

What do we want to do?

Transport for Wales would like to be able to link your anonymised survey answers to other anonymised information held about you in the SAIL Databank at Swansea University. For example: your GP, hospital and education records.

The SAIL Databank - SAIL stands for Secure Anonymised Information Linkage and you can read more about the SAIL databank on their website: https://saildatabank.com.

The SAIL Databank is funded by Welsh Government.

Why do we want to link your survey answers?

Linking your Wales National Travel Survey answers will give approved researchers, within Transport for Wales (TfW), the Welsh Government, the NHS and other accredited public organisations, a wealth of extra information, so that they can have a clearer picture of issues in Wales and how to tackle them.

What will happen to my information?

Transport for Wales, a trusted third-party Digital Health and Care Wales, and a secure research environment the SAIL Databank; will work together to link your survey answers with other anonymised information held about you on the SAIL Databank.

Digital Health and Care Wales is an organisation with secure facilities for linking data. The SAIL Databank is a Wales-wide research resource focused on improving health, well-being and services. The SAIL databank is an ISO 27001 certified and UK Statistics Authority accredited environment, and contains a range of anonymised, person-based datasets, that subject to safeguards and approvals, can be anonymously linked together to address important research questions. The SAIL Databank does not receive or handle identifiable data. Your name, DOB and postcode will remain separate from your survey responses at all times and will not be included in the linked data.

Who will be able to use the linked data?

The data will be made available through the SAIL Databank to approved researchers from TfW, Welsh Government, universities or other accredited organisations for projects that have been approved by TfW, Welsh Government and the SAIL Information Governance Review Panel(IGRP). Only non-commercial research projects will be approved.

Before researchers are allowed to access data using a secure research environment, they must complete a training course to make sure they understand how to handle linked anonymised data safely, lawfully and responsibly.

Where can I get more information about this?

For more information please visit www.tfw.wales/projects/wales-national-travel-survey

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

trc.cymru

AROLWG TEITHIO CENEDLAETHOL CYMRU

Gwneud atebion eich arolwg hyd yn oed yn fwy gwerthfawr

Beth ydym ni eisiau ei wneud?

Hoffai Trafnidiaeth Cymru allu cysylltu eich atebion arolwg dienw â gwybodaeth ddienw arall a gedwir amdanoch ym Manc Data SAIL ym Mhrifysgol Abertawe. Er enghraifft: eich meddyg teulu, cofnodion ysbyty ac addysg.
Banc Data SAIL - Ystyr SAIL yw Cyswllt Diogel Gwybodaeth Ddienw a gallwch ddarllen mwy am fanc data SAIL ar eu gwefan: https://saildatabank.com/cy.
Ariennir Banc Data SAIL gan Lywodraeth Cymru.

Pam rydyn ni eisiau cysylltu atebion eich arolwg?

Bydd cysylltu atebion eich Arolwg Teithio Cenedlaethol Cymru yn rhoi cyfoeth o wybodaeth ychwanegol i ymchwilwyr cymeradwy, o fewn Trafnidiaeth Cymru, Llywodraeth Cymru, y GIG a sefydliadau cyhoeddus achrededig eraill, fel y gallant gael darlun cliriach o faterion yng Nghymru a sut i fynd i'r afael â hwy.

Beth fydd yn digwydd i'm gwybodaeth?

Bydd Trafnidiaeth Cymru, trydydd parti dibynadwy lechyd a Gofal Digidol Cymru, ac amgylchedd ymchwil diogel Banc Data SAIL; yn cydweithio i gysylltu eich atebion arolwg â gwybodaeth ddienw arall a gedwir amdanoch ar Fanc Data SAIL.
Mae lechyd a Gofal Digidol Cymru yn sefydliad sydd â chyfleusterau diogel ar gyfer cysylltu data. Mae Banc Data SAIL yn adnodd ymchwil Cymru gyfan sy'n canolbwyntio ar wella iechyd, llesiant a gwasanaethau. Mae cronfa ddata SAIL yn amgylchedd sydd wedi'i ardystio gan ISO 27001 ac wedi'i achredu gan Awdurdod Ystadegau'r DU, ac mae'n cynnwys ystod o setiau data dienw, sy'n seiliedig ar unigolion, y gellir eu cysylltu'n ddienw yn amodol ar fesurau diogelu a chymeradwyaeth i fynd i'r afael â chwestiynau ymchwil pwysig. Nid yw Banc Data SAIL yn derbyn nac yn trin data adnabyddadwy. Bydd eich enw, dyddiad geni a chod post yn aros ar wahân i'ch ymatebion arolwg bob amser ac ni fyddant yn cael eu cynnwys yn y data cysylltiedig.

Pwy fydd yn gallu defnyddio'r data cysylltiedig?

Bydd y data ar gael drwy Fanc Data SAIL i ymchwilwyr cymeradwy o TrC, Llywodraeth Cymru, prifysgolion neu sefydliadau achrededig eraill ar gyfer prosiectau sydd wedi'u cymeradwyo gan Trafnidiaeth Cymru, Llywodraeth Cymru a Phanel Adolygu Llywodraethu Gwybodaeth SAIL (IGRP). Dim ond prosiectau ymchwil anfasnachol fydd yn cael eu cymeradwyo.

Cyn y caniateir i ymchwilwyr gael mynediad at ddata gan ddefnyddio amgylchedd ymchwil diogel, rhaid iddynt gwblhau cwrs hyfforddi i wneud yn siŵr eu bod yn deall sut i drin data dienw cysylltiedig yn ddiogel, yn gyfreithlon ac yn gyfrifol.

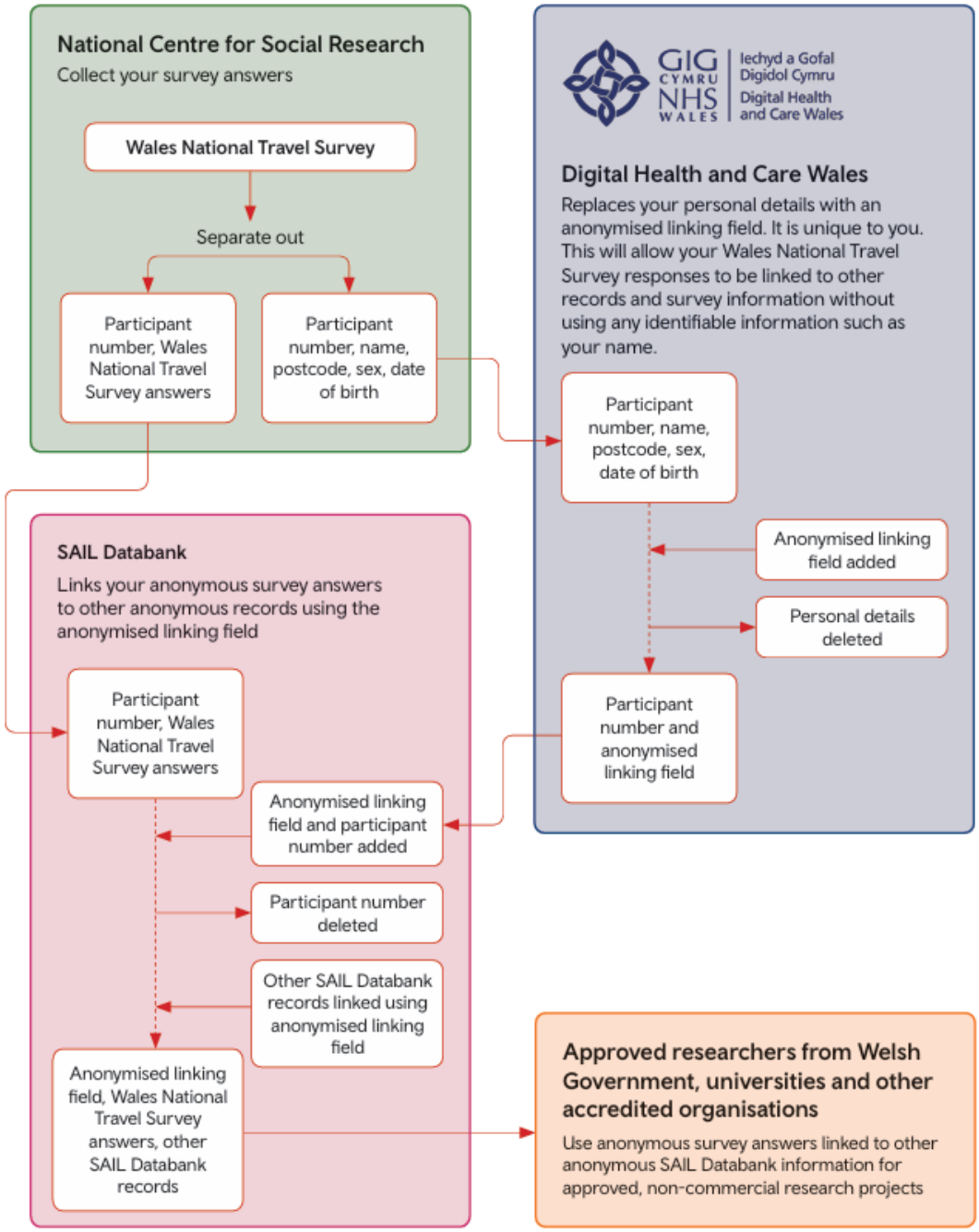
Ble gallaf gael rhagor o wybodaeth am hyn?

I gael rhagor o wybodaeth ewch i trc.cymru/prosiectau/arolwg-teithio-cenedlaethol-cymru

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

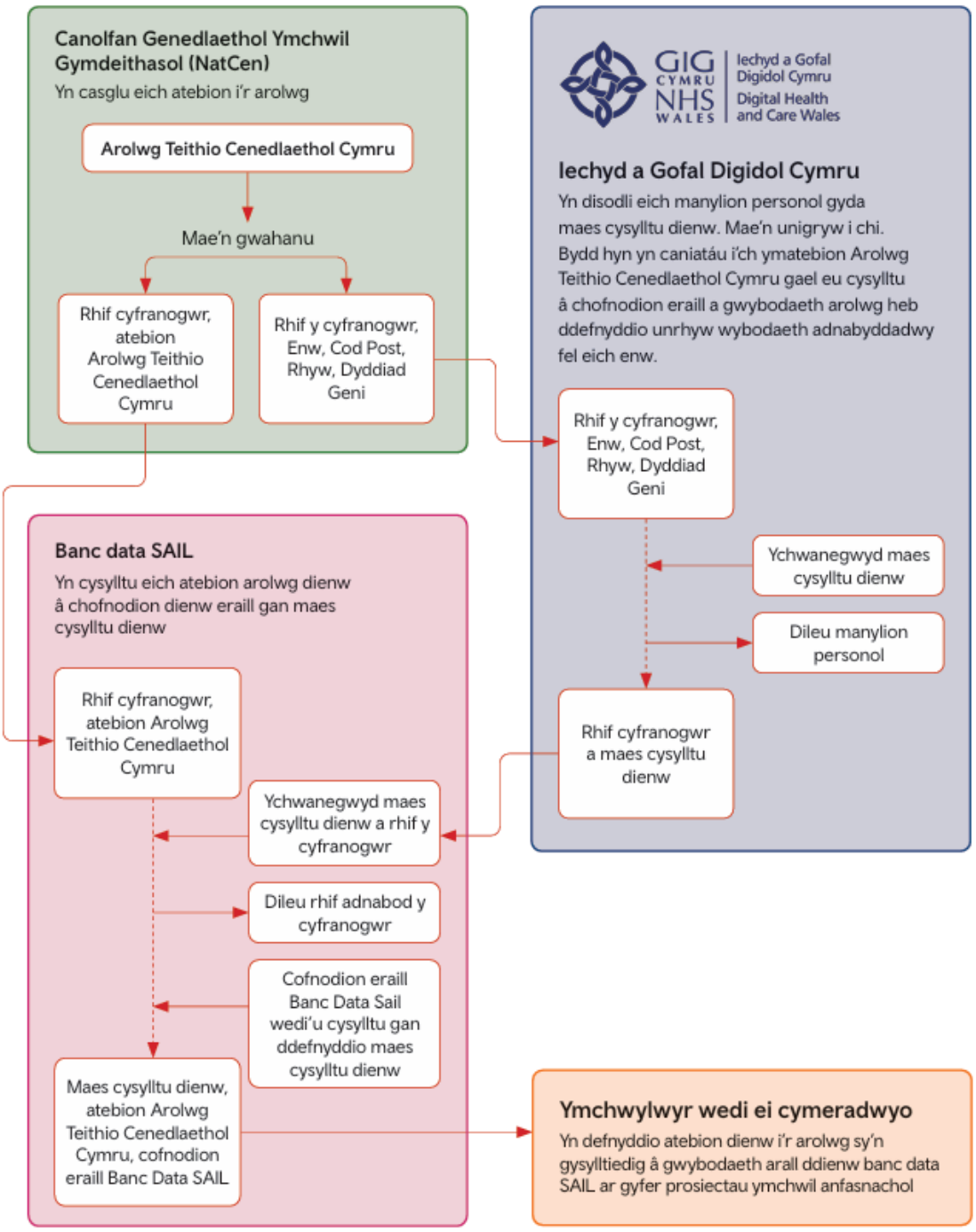
TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

How do we securely link your survey answers to other information?



TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Sut ydyn ni'n cysylltu eich atebion i'r arolwg yn ddiogel â gwybodaeth arall?



Appendix N: Thank you email

View in browser

National Centre for Social Research

Diolch am wneud gwahaniaeth
Thank you for making a difference

Eich Cyfeirnod / Your Reference: P19655 99990000011

Annwyl Gyfranogwr yn yr Astudiaeth,

Diolch yn fawr am gymryd rhan yn Arolwg Teithio Cenedlaethol Cymru yn ddiweddar. Drwy gymryd rhan rydych wedi'n helpu ni i ddeall yn well sut mae pobl fel chi yn defnyddio ac yn profi gwasanaethau trafnidiaeth yng Nghymru.

Diolch

I dangos ein gwerthfawrogiad, mae manylion eich taleb £10 isod.

Cod taleb:

Dyddiad dod i ben: 12/03/2028

Ewch i www.love2shoprewards.co.uk a rhowch* eich cod gwobr

* Rydym yn argymell eich bod yn nodi'r cod drwy gopïo a gludo. Os byddwch yn teipio'r cod, cofiwch ei fod yn sensitif i lythrennau bach a phriflythrennau, ac os yw eich cod yn cynnwys unrhyw nodau "0" yna sero yw'r rhain (nid priflythyren "O").

Dear Study Participant,

Thank you for taking part in our recent Wales National Travel Survey. By taking part you have helped us better understand how people like you use and experience transport services in Wales.

Thank you

As a token of our appreciation, please find details of your £10 voucher below.

Voucher code:

Expiry date: 12/03/2028

Please visit www.love2shoprewards.co.uk and enter* your reward code.

* We recommend that you enter the code by copying and pasting it. If you enter the code manually please be aware that it is case sensitive, and if your code contains any "0" then they are zeros (not capital "O"s).

Yna bydd opsiwn i **ddewis naill ai gerdyn ffisegol neu e-Rodd** ar y sgrin nesaf (Nodwch: os byddwch yn dewis cerdyn ffisegol, cofiwch ei actifadu ar wefan Love2Shop unwaith y byddwch yn ei dderbyn yn y post). Gallwch wario eich taleb mewn amrywiol siopau ar y stryd fawr ac ar-lein, yn dibynnu pa opsiwn rhodd a ddewiswch – cliciwch ar "FAQs" ar www.love2shoprewards.co.uk i gael rhagor o fanylion.

Os bydd gennych unrhyw broblemau gyda'r cynnyrch rydych wedi ei ddewis o'r wefan, yna cysylltwch â Love2Shop yn uniongyrchol: e-bostiwch help@love2shop.co.uk neu ffoniwch **0344 375 0739** .

Darganfod rhagor

I gael rhagor o wybodaeth, ewch i WNTS.natcen.ac.uk, e-bostiwch WNTS@natcen.co.uk, neu ffoniwch y Rhadffôn **0800 652 9296** .

Diolch yn fawr am eich cefnogaeth

There will then be an option to **choose either a physical or e-Gift card** on the next screen (Note: if you opt for a physical card, please remember to activate it on the Love2Shop website once received in the post). You can spend your voucher at various online and high street stores, depending on which gift option you choose – click "FAQs" on www.love2shoprewards.co.uk for further details.

If you have any issues with the product you have chosen from the website, then please contact Love2Shop directly: email help@love2shop.co.uk or call **0344 375 0739** .

Find out more

For more information, please visit WNTS.natcen.ac.uk, email WNTS@natcen.co.uk, or call Freephone **0800 652 9296** .

Thank you for your support



Geoff Ogden
Prif Swyddog Cynllunio Trafnidiaeth a Datblygu | Chief Transport Planning and Development Officer
Trafnidiaeth Cymru | Transport for Wales

Appendix O: Thank you letter

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Your reference:
P19655 <HHSerial>/<CKL>

Thank you for making a difference

Dear Study Participant,

Thank you for taking part in our recent Wales National Travel Survey. By taking part you have helped us better understand how people use and experience transport services in Wales.

Thank you

As a token of our appreciation, please find details of your **£<VouchType> voucher** below.

Your voucher reward code: **<CustomField_1>**

The expiry date is: **<CustomField_3>**

Please visit **www.love2shoprewards.co.uk** and enter* your reward code.

* When entering the code please be aware that it is case sensitive, and if your code contains any "0" characters then they are zeros (not capital "O" letters).

There will then be an option to choose either a physical or e-Gift card on the next screen (Note: if you opt for a physical card, please remember to activate it on the Love2Shop website once received in the post). You can spend your voucher at various online and high street stores, depending on which gift option you choose – click "FAQs" on **www.love2shoprewards.co.uk** for further details.

If you have any issues with the product you have chosen from the website, then please contact Love2Shop directly: email **help@love2shop.co.uk** or call **0344 375 0739**.

Thank you for your support,



Geoff Ogden
Chief Transport Planning and Development Officer
Transport for Wales

WNTS@natcen.ac.uk 0800 652 9296 natcen.ac.uk/WNTS

P19655_TY

TRAFNIDIAETH CYMRU
TRANSPORT FOR WALES

Mae Trafnidiaeth Cymru yn eiddo i Lywodraeth Cymru
Transport for Wales is owned by the Welsh Government

National Centre for Social Research

<add1>
<add2>
<add3>
<add4>
<add5>
<Postcode>

Eich cyfeirnod:
P19655 <HHSerial>/<CKL>

Diolch am wneud gwahaniaeth

Annwyl Gyfranogwr yn yr Astudiaeth,

Diolch yn fawr am gymryd rhan yn ein Harolwg Teithio Cenedlaethol Cymru yn ddiweddar. Trwy gymryd rhan rydych wedi ein helpu ni i ddeall yn well sut brofiad mae pobl yn ei gael o wasanaethau trafnidiaeth yng Nghymru a sut maent yn eu defnyddio nhw.

Diolch

I ddangos ein gwerthfawrogiad, mae manylion eich **taleb £**<**VouchType**> isod.

Cod gwobr eich taleb yw: <**CustomField_1**>

Y dyddiad dod i ben yw: <**CustomField_3**>

Ewch i **www.love2shoprewards.co.uk** a rhowch* eich cod gwobr.

*Wrth roi'r cod cofiwch ei fod yn sensitif i lythrennau bach a phriflythrennau, ac os yw eich cod yn cynnwys unrhyw nodau "O" yna sero yw'r rhain (nid y briflythyren "O").

Yna bydd opsiwn i ddewis naill ai gerdyn ffisegol neu e-Rodd ar y sgrin nesaf (Nodwch: os byddwch yn dewis cerdyn ffisegol, cofiwch ei actifadu ar wefan Love2Shop unwaith y byddwch yn ei dderbyn yn y post). Gallwch wario eich taleb mewn siopau amrywiol ar y stryd fawr ac ar-lein, yn dibynnu ar ba opsiwn rhodd a ddewiswch – cliciwch ar "FAQs" ar **www.love2shoprewards.co.uk** i gael rhagor o fanylion.

Os bydd gennych unrhyw broblemau gyda'r cynnyrch rydych wedi ei ddewis o'r wefan, yna cysylltwch â Love2Shop yn uniongyrchol: e-bostiwch **help@love2shop.co.uk** neu ffoniwch **0344 375 0739**.

Diolch yn fawr am eich cefnogaeth,

Geoff Ogden
Prif Swyddog Cynllunio Trafnidiaeth a Datblygu
Trafnidiaeth Cymru

ATCC@natcen.ac.uk 0800 652 9296 natcen.ac.uk/ATCC

P19655_TY

Appendix P: New response categories

Question	New code	Label
busavdrsnoth	501	Health reasons
busavdrsnoth	504	No sufficient bus routes/service
busencnonoth	501	Cleaner/newer/better buses
busencnonoth	502	Improved integration with other transport modes
busencnonoth	503	Controlled anti-social behaviour
busencoth	501	Cleaner/newer/better buses
busencoth	502	Improved integration with other transport modes
busencoth	503	Controlled anti-social behaviour
carfueloth	501	Liquefied Petroleum Gas (LPG)
cycencnonoth	501	Better fitness
cycencoth	501	Better fitness
taxencnonoth	506	Easier to book
taxencoth	506	Easier to book
trnencnonoth	503	Cleaner/Better maintained
trnencnonoth	504	More conductors/Improved safety
trnencnonoth	508	Better information on trains and at the station
trnencoth	503	Cleaner/Better maintained
trnencoth	504	More conductors/Improved safety
trnencoth	508	Better information on trains and at the station
wlkencnonoth	501	Improved safety of route
wlkencoth	501	Improved safety of route