

## **APPENDIX A – DETAILED SURVEY METHODOLOGY**

### **Northern Ireland Passenger Survey**

1. The Northern Ireland Passenger Survey (NIPS) (para 7a(i)1 above) is conducted by NISRA at NI's main air and sea ports and measures the number of GB and overseas visitors who stayed at least one night in NI and exited via a NI air or sea port. The methodology implemented from January 2010 when NISRA took over responsibility for the survey is outlined below.
2. NIPS data is collected via face-to-face interviews with passengers exiting through NI sea ports and airports. A multi-stage sampling design is employed. This involves sampling a port on a given day and within a given period of the day (referred to as a 'shift'); and within the shift, certain passengers passing an interview line are systematically chosen for interview at fixed intervals from a random start.

### *Sample Design and Response*

3. There are two sample intervals applied at each shift to all passengers crossing the interviewing line. Each of the passengers contacted through application of the sample interval is screened to assess whether they are overnight visitors to NI and/or RoI or if a frequent visitor to NI (at least once each week). If the passenger is an overnight visitor, they will be asked about their visit to NI and/or RoI. If the passenger is not an overnight visitor or is a frequent visitor, no further questions will be asked but the contact will be recorded as non-eligible.
4. Passengers sampled using the first fixed interval (every 5<sup>th</sup> passenger in 2010) are asked a number of questions relating to their visit e.g. Country of residence, number of overnights spent in NI, number of overnights spent in ROI, reason for visit to NI, total expenditure in NI.
5. Passengers sampled using the second fixed interval (every 10<sup>th</sup> passenger in 2010) are asked the same questions as those using the first fixed interval plus additional questions regarding their trip to NI and/or RoI.

6. Passengers who are selected for interview and who complete the whole of the interview are classified as ‘completes’ and those who complete the majority of the questionnaire as ‘partial’. Some respondents who give very limited information, but enough for them to be included in the weighting calculations are classified as ‘minimum’. Where passengers can’t be contacted or are contacted and refuse to give any information are classified as ‘non-contacts’

**Table 1: 2010 NIPS Sample**

<b>NI Passenger Survey</b>	<b>2010</b>
Sample size	68,700
Non-eligible	45,100
Non-contacts	7,300
Visitors (complete, partial and minimum responses)	16,300

#### *Weighting*

7. A three stage weighting process is applied. The data from all respondents is weighted to compensate for a) survey design and b) non-response. The data is then weighted / calibrated to the passenger traffic known to have exited NI through that port during the reference period. The total passenger numbers are obtained from the Civil Aviation Authority (CAA) and the ferry companies. The weighting is carried out on data collected from complete, partial, minimum and non-eligible respondents. Non-contacts are omitted from the weighting calculation as no information is available for these passengers.

#### *Confidence Intervals*

8. Confidence intervals are calculated for visitor numbers and expenditure to provide users with an indication of the variability of the estimates produced. The confidence intervals relating to a selection of NIPS 2010 estimates at 95% confidence interval are shown in table 2.

Table 2: Sampling error associated with NIPS estimates 2010

<b>Country of Residence</b>	<b>95% Confidence Interval</b>
Great Britain	+/- 6%
Other European	+/- 8%
North America	+/- 10%
Other overseas	+/- 9%

### **Survey of Overseas Travellers (Failte Ireland)**

9. The Survey of Overseas Travellers (SOT) is conducted by Fáilte Ireland at the main air and sea ports in the Republic of Ireland (ROI). Fáilte Ireland (FI) sample for 2011 was c. 6,000 and FI provide NISRA with data from this survey on the number of GB and overseas visitors who stayed at least one night in NI and exited via a ROI air or sea port (in return for reciprocal data from NISRA). These are often referred to as VIAS ('via ROI') GB and overseas visitors, of which there were just over 500 respondents in 2011. The SOT survey is currently weighted by month, by route and by country of residence from the "Country of Residence" survey administered by CSO (see below) to gross back to population levels.

### **Country of Residence Survey (CRS) - CSO**

10. A sample of sailings and flights is selected and a systematic sample of passengers on each is surveyed by CSO using Person Assisted Paper Interview. The selection of sailings and flights is done in such a way as to ensure proper representation of day and night sailings/flights and weekday and weekend sailings/flights. On the selected sailings/flights, a 1 in 5 systematic sample of passengers is selected and their country of residence is recorded. Sample results are grossed up to total passenger numbers provided by the airports and ferry companies. The total sample size for 2010 was 322,700 passengers, of which about half were Irish residents travelling overseas. The principal variables collected were country of residence of passengers, route, mode of transport and results are published monthly by CSO (rolling three months).

<http://www.cso.ie/en/media/csoie/surveysandmethodologies/surveys/tourism/documents/crsqualityrpt.pdf>

## **Passenger Card Inquiry (PCI) - CSO**

11. The PCI is conducted by the CSO and supplements the CRS by obtaining data on expenditure, purpose of journey, length of stay and type of accommodation used for passengers entering or leaving the Republic of Ireland via air and sea ports. A sample of flights and sailings is selected for surveying. This selection is intended to give an even representation of routes, day and night and weekday and weekend flights/sailings. PCI cards are distributed and then collected by enumerators once completed by the passenger. Sample results are grossed up to total passenger numbers travelling for each route type, as provided by the airports and ferry companies and to the results of the CRS

[http://www.cso.ie/en/media/csoie/surveysandmethodologies/surveys/tourism/documents/pdf/passenger\\_card\\_inquiry\\_quality\\_report.pdf](http://www.cso.ie/en/media/csoie/surveysandmethodologies/surveys/tourism/documents/pdf/passenger_card_inquiry_quality_report.pdf) .

12. A change to the PCI was made at NISRA's request to better capture the number of transit passengers departing via the ROI, who spent time in Northern Ireland. This change was rolled out to all ROI airports and ports. However the PCI does not include a measure of such visitors expenditure in Northern Ireland, which is a limiting factor. CSO is continuing to monitor the robustness of the approach and NISRA has been advised that the methodology employed on the PCI may be subject to review. In the interim it is proposed to keep using the Fáilte Ireland SOT based estimates.

13. The SOT estimates are not official statistics within the meaning of the Code of Practice. They are based on a small sample size and it is not possible to provide confidence intervals, given the nature of the sample design. However NISRA will publish these externally provided estimates with appropriate caveats in its annual tourism statistics publication (currently scheduled for 6 June 2013, subject to their availability from CSO) in order to provide a more complete picture of tourism estimates.

14. In the past the CSO conducted a PCI survey of passengers on rail and scheduled bus services to and from Northern Ireland but this was discontinued in 2003. The Country of Residence Survey distribution found

in 2003 is applied each year to rail and bus passenger numbers. However a recent methodological review of tourism statistics in the ROI expressed concerns about the accuracy of this approach.

The Central Statistics Office (CSO) in ROI conducts a postal survey of private households (Household Travel Survey (HTS)) to measure international and domestic travel patterns (including overnight visits to NI and associated details such as expenditure, purpose of trip, type of accommodation used, etc). of ROI residents. The HTS is a random stratified sample. Each month, approximately 4,600 households (or approximately 0.3%) of all private households are randomly selected from the Electoral Register, where the selection is stratified by District Electoral Division. The HTS is a postal survey with a response rate of c. 40%. Information is provided from this survey on ROI residents' overnight trips to NI. The supply of this information to NISRA has been delayed with 2011 results published in October 2012 and results for 2012 are currently anticipated from CSO by early June 2013. Information for NI is based on a small sample of around 200 respondents annually who report an overnight visit to NI. CSO have advised that it is not possible to provide confidence intervals around estimates of ROI visitor numbers to NI from this survey at this time. NISRA is seeking user views as to whether to publish these externally provided estimates in its annual tourism statistics publication (currently scheduled for 6 June 2013, subject to availability from CSO) or quarterly thereafter in order to provide a complete picture of visitor numbers. Quarterly estimates are likely to be based on relatively small numbers, with potentially volatile results across quarters (and no confidence intervals).

### **Continuous Household Survey (CHS) - NISRA**

15. The NI Domestic Tourism Survey is delivered as a module within the Continuous Household Survey (CHS). The CHS is conducted by NISRA and is used to provide information on a wide range of social and economic issues relevant to NI, including the number of overnight and leisure and tourism day trips<sup>1</sup> taken by NI residents in NI. The questionnaire consists of both a household interview and an individual interview with each person

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<sup>1</sup> A leisure day trip is an outing or trip, not for business purposes, made on the same day from home with no time or distance restriction. A tourism day trip is a leisure day trip taken outside the respondent's usual environment where they are away from home for more than three hours.

aged 16 and over. The tourism module is asked of all persons in the household and includes questions on household size, number of overnight and day trips, the length of trip, main travel destination, the purpose of travel, the type of accommodation used and associated expenditure.

#### *Sample Design and Response*

16. The CHS is based on a systematic random sample of 4,500 addresses drawn each year from the Land and Property Services Agency's (LPSA) list of domestic addresses. The LPSA addresses are sorted by district council and ward, so the sample is effectively stratified geographically. Data is collected by personal interview using CAPI, and the interviews are spread equally over the 12 months from April to March.
17. The sample of addresses used for CHS is obtained from the Land and Property Services Agency Valuation List. In 2009/10 a simple random sample of almost one per cent of domestic properties on the list was selected. The information covered by the survey is collected by personal interview throughout the year, allocated on a monthly basis. Interviews were sought of all the adult members (those aged 16 and over) of 4,500 addresses in 2009/10.

***Table 3 CHS response from all households (2009/10).***

<b>Sample</b>	<b>2009/10</b>
Addresses Issued	4,500
Ineligible	508
Effective Sample	3,992
<b>Response</b>	<b>Percentage</b>
Fully Co-operating including Proxy & Partial	69
Refusals	24
Non-contact	6
Base (100%)	3,992

19. Of the addresses issued 11 per cent were excluded from the sample as ineligible through absence of any household at the address or because the address no longer existed. The effective sample was 3,992 addresses. The minimum information accepted from a household was a fully completed household schedule including basic demographic information on all

individuals in the household. A subset of information was accepted by proxy for individuals with whom it was not possible for the interviewer to make contact within the allocation period. Outright refusals were obtained from 24% of addresses in the effective sample (Table 3). A further 6% of the effective sample addresses could not be contacted during the allocation period.

#### *Confidence intervals*

20. It should be noted that the interviews resulted in data for c. 400 overnight trips in NI. Such estimates quoted in CHS tables are based on data collected from a sample of the population and are therefore subject to sampling error. To illustrate this point the confidence limits relating to a trips within NI at 95% confidence interval are shown in table 4.

Table 4: Sampling error associated with CHS estimates 2011/12

<b>Overnight trips taken by NI residents within NI (2011)</b>	<b>95% Confidence Interval</b>
Trips within NI	+/- 14%

#### **Occupancy Surveys (Supply Side)**

21. The monthly Hotel and Bed & Breakfasts (B & Bs, Guesthouse (GH) and Guest Accommodation (GA) Surveys are conducted NISRA. All hotels and a random sample of B&Bs/GHs and GA are sent a monthly form to complete detailing the number of rooms and beds available and occupied each month. The form also collects information on the origin of arrivals and guests.
22. The random sample of B&Bs/GHs and GA is selected by a disproportionate stratified sample, in other words, the sample is selected according to Local Authority and size of establishment. The sample is drawn from the Stock as provided by the NITB. The annual Self-catering occupancy survey is issued to all self-catering establishments at the end of the year.

#### *Weighting*

23. Hotel occupancy data is weighted by the number of bed-spaces, number of rooms and district council. The data is weighted to the full stock and assuming

non-response bias. Currently the B&B, Guesthouse and Guest Accommodation data is weighted taking no account of sampling rate, but the number of bed-spaces, number of rooms and district council. Due to different response rates to different parts of the survey, there are different weights for arrivals, guests and weekend/weekday splits. Responses from the self-catering occupancy survey is weighted to the full population by local authority and number of units assuming non-response bias.

### *Confidence Intervals*

24. As the hotel occupancy and self catering surveys are censuses, there is no requirement for confidence intervals. Work is planned to develop confidence intervals for other occupancy surveys, but this is ultimately subject to other development priorities and will be informed by user views.