National Rail Passenger Survey

Technical Guide

Autumn 2015

(Wave 33)

bdrc continental

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providing intelligence

Contents

Page No.

1. Background 1
2. Sample design 2
   - 2.1 Overview 2
   - 2.2 Detailed sampling plan 3
   - 2.3 Assigning days of week, times of day, and fieldwork dates to selected stations 4
     - 2.3.1 Days of week and times of day 4
     - 2.3.2 Shift dates 10
     - 2.3.3 Sense checks 10
     - 2.3.4 Changes to shift plans during fieldwork period 11
     - 2.3.5 Sampling for surveys distributed on-train 12
   - 2.4 Sample size 14
   - 2.5 Other sub-samples covered in NRPS reporting 15
   - 2.6 Weighting 16
   - 2.7 Questionnaire distribution 17
   - 2.8 Data verification 18
   - 2.9 Response rates 20
3. Derivation of key factors affecting customer satisfaction 21
   - 3.1 Aspects of rail journeys covered by NRPS 21
   - 3.2 Multivariate analysis to derive which journey aspects are most important 24
4. Glossary of terms 25
5. Deliverables 27
6. KPIs 28
7. Appendices 29
   - 7.1 Appendix A: 29
   - Results of multivariate analysis – drivers of overall journey satisfaction 29
   - 7.2 Appendix B 32
   - Questionnaire (Autumn 2015) 32
   - 7.3 Appendix C 44
   - Definition of PTE areas 44
   - 7.4 Appendix D 52
   - Weighting regime: main survey – Wave 33 52
   - 7.5 Appendix E 53
   - Journey Purpose Definition 53
   - 7.6 Appendix F 54
   - Building block genre definitions 54
   - 7.7 Appendix G: 56
   - Methodology for calculating passenger volumes by TOC and station 56

1. Background

Transport Focus (known as Passenger Focus until April 2015, and previously OPRAF and the Strategic Rail Authority) set up the National Rail Passenger Survey in 1999. The aim of the NRPS was to provide customer views on rail company performance on a consistent basis, so that comparisons could be made between the various companies. Over time, data from the NRPS has been built into the franchising contracts with train companies, making the results an important commercial dimension of running a Train Operating Company (TOC). Given this, the sample design, fieldwork standards and accuracy of assigning journeys to specific TOCs are of the greatest importance. In addition, large enough sample sizes are required for each TOC to ensure that performance changes can be seen in the marketplace.

The first NRPS was run in Autumn 1999 and it has been run twice a year since then. The first seven waves were undertaken by The Oxford Research Agency, until the contract was offered at competitive tender in Autumn 2002. In December 2002, Continental Research (now merged to become BDRC Continental) was appointed to run the survey, and has done so since including through two further competitive tender processes.

The questionnaire is fairly consistent from one wave to another, with some questions included in just Spring or Autumn waves to limit length. Questionnaire comprehension and completeness is tested periodically via qualitative research, the last such check being in late 2011. This check produced a number of helpful suggestions regarding layout and style and identified a number of small modifications that could be made to the measurement of station and train performance that are covered in NRPS. This document outlines the methodology used in the Autumn 2015 survey, the twenty-sixth undertaken by BDRC Continental and wave 33 in the overall series. The aim of this document is to provide information on all key aspects of methodology, including all area definitions used to generate analyses.

2. Sample design

2.1 Overview

The NRPS uses a two stage cluster sample design for each Train Operating Company (TOC). The first stage sampling unit is a train station, and questionnaires are distributed to passengers departing from that station on a particular day during a specified time period.

Stations are selected for each TOC using a PPS (probability proportionate to size) basis, using the estimated number of passengers departing from that station annually as the size measure. As such, larger stations may be selected several times and smaller stations will be selected fewer times. Days of the week and times of day are then assigned to each selected station, based upon agreed profiles for different types of station and upon day of week and journey purpose (commuter, business leisure) profile information provided by the TOCs for journeys taking place on their networks. Sampling points are then assigned to weeks at random during the survey period.

A completely new sampling plan is generated every two years, utilising data on passenger volumes provided by ORR and on journey profiles as supplied by the TOCs. This process was undertaken in advance of the Autumn 2014 wave, using:

- ORR data on station entries and interchanges
- LENNON data on the number of journeys allocated to each TOC
- RailPlanner data on the number of services run by each TOC from each station.

These datasets are amalgamated to generate estimates of the number of passengers each TOC carries from each station it calls at, and this is used as the basis for the sample design. A description of how these three sources of information are used to generate estimates for passenger volumes by TOC at each station, is given in Appendix G.

2.2 Detailed sampling plan

The key principles of the sample design are as follows:

- The railway network is divided into building blocks for each of the current Train Operating Companies. The original rationale for this approach was to enable existing, planned and also previous franchises to be measured by combining data from relevant building blocks. Increasingly, it also allows TOCs to align NRPS results to business units monitored for other, mainly operational and financial metrics. This allows TOCs to compare, for example, actual punctuality measured by PPM with perceived punctuality measured by passengers, for each of these individual business units
- There are now 78 building blocks which are the principal sampling units for the survey, reflecting the key routes on each of the franchise networks, and for non-franchised TOCs, in Autumn 2015.
- Up to and including Autumn 2015, some of the building blocks are station based and some are route based (this is intended to change in the future). For the station based blocks, the number of passenger journeys for each station originally calculated for the TOC is assigned to that station in its building block. For route based building blocks, some stations appear in more than one building block. In these situations, passenger volumes are split between building blocks
- Stations are then selected with probability proportional to this derived passenger volume figure for each building block. This means that the larger stations will be selected several times and very small stations will have a lower probability of selection. When the sampling plan is updated, the small stations selected may therefore vary significantly from the previous plan, whereas the sample of larger stations will tend to be quite consistent
- The sampling plan is completely updated every two years, with small modifications made to the existing plan in intervening periods. The Autumn 2014 wave of NRPS was the first in the current cycle, and another new plan will be used from Autumn 2016.

2.3 Assigning days of week, times of day, and fieldwork dates to selected stations

2.3.1 Days of week and times of day

In the early waves of BDRC's management of the NRPS, days and times were assigned to all shifts as follows:

1. A day of week was assigned at random to each shift, in proportion to day of week profiles as provided by the TOCs

2. Times of day were assigned based on the following profiles, which are set separately for city centre and other stations, and for weekdays versus weekends (all shifts are three hours in length):

Time of day profile of passenger journeys
(derived from Wave 9 NRPS data)

city centres	%	%	%
Time band	Weekday	Weekend	Total
06:00 – 10:00	8.02	0.33	8.35
10:01 – 13:00	19.48	15.88	35.36
13:01 – 16:00	22.01	5.91	27.91
16:01 – 19:00	25.32	0.37	25.69
19:01 – 22:00	2.52	0.16	2.68
Total	77.35	22.65	100.00

other stations			
Time band	Weekday	Weekend	Total
06:00 – 10:00	48.73	0.51	49.24
10:01 – 13:00	27.93	10.78	38.70
13:01 – 16:00	5.98	0.79	6.77
16:01 – 19:00	4.99	0.04	5.03
19:01 – 22:00	0.26	0.00	0.26
Total	87.88	12.12	100.00

An on-going principle of the NRPS is that systems and processes have continually but gradually evolved over time, in order to improve its representativeness as well as its operational efficiency, without disrupting continuity of survey results.

One example of this followed the Roberts-Miller Review of NRPS undertaken in 2005/6, which recommended that the time of day profiles were amended to equalise the number of outward and return journeys. Ever since NRPS started in 1999, a pattern of over representation of outward trips had been observed and initially the profile was around two thirds of reported journeys being outward journeys.

In Wave 9 (Autumn 2003), a number of shifts starting at 7 pm were introduced, as previously all shifts had been completed by that time. As shown in the table below, this made an impact into rebalancing outward and return journeys, reducing the former by around 4% and boosting return journeys.

	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16
Outward	67	66	68	64	63	63	62	64	64	64	64
Return	28	28	29	33	34	34	34	32	33	33	33
One way trip only	4	5	2	3	3	3	3	3	3	3	3
Don't know	1	1	1	1	1	1	1	1	0	0	1

The consultant's recommendation was to move more shifts from morning to evening peak to improve this rebalancing.

This change was incorporated into the allocation of shifts to time of day for Wave 17 (Autumn 2007), with approximately 100 shifts moved from the original morning peak time generated by the above procedure to an evening peak time. The result has rebalanced outward and return journeys more, as shown by the table below, with outward journeys in Waves 17 onwards now representing 52-56% rather than the 62-64% in earlier waves. In Wave 27 (Autumn 2012) a further re-alignment took place to move the outward/return ratio nearer to 50:50). This was partially successful, but was fine-tuned a little further in from wave 28 onwards, as shown in the table below.

	w18	w19	w20	w21	w22	w23	w24	w25	w26	w27	w28	w29	w30	w31	w32	w33
Outward	53	54	54	54	54	53	56	55	54	45	46	49	48	51	49	50
Return	44	42	41	42	42	43	41	41	42	51	49	47	47	45	46	45
One way trip only	3	3	4	3	3	3	3	3	3	3	4	3	3	4	4	4
Don't know/NA	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Again in the spirit of gradual improvement, the initial process for assigning days of week and times of day above has evolved and now takes two stages:

Stage 1. Referencing previous shift plans

Although the sample plan is created from scratch every two years, a large number of the same stations will be sampled in every 2-year (4-wave) cycle; this is certainly the case for larger stations. Therefore, a useful first stage of assigning days and times for each shift is to look at the days and times used in the previous wave (which used the previous sampling plan), and as far as possible, to replicate the shift details which were used then. This has two advantages: Firstly, a degree of stability is maintained from wave to wave, despite generating a completely new sample plan every two years. Secondly, it allows us to predict the likely outcome of many of the shifts, because we know how their direct comparison shifts performed in the past (i.e. we will have a very good idea of the likely number of completed surveys that can be generated from each shift, how many will be for weekdays versus weekend days, and how many will be for each TOC where multiple TOCs call at a station); this allows us to check the suitability of the sample plan, before it is implemented. Following the initial focus on the proportion of outward versus return journeys described above, we have also looked at how many questionnaires would likely be returned for outward and return journeys, as part of this process).

The diagram below shows a simplified example of this process:

- All the shifts for wave x (the previous wave) are listed, sorted by station, and within stations are then listed in randomised order
- New shifts for wave y are then listed, sorted by station, and each shift takes the time and day details of equivalent shifts in wave x: so the first shift in the list for a certain station, takes the details of the first-listed shift for that station, from the previous wave
- In the illustration below, 7 shifts took place at Liverpool Street in wave x, and this station has been selected 8 times (i.e. for 8 shifts) in the next wave, wave y. Thus the first 7 shifts in wave y take on the details of the shifts which took place in wave x, and the 8th shift will need completely new times and day details

Shifts conducted in wave x			Shifts to be conducted in wave y	
Station	Start time	Day	Station	Time/day
London Liverpool Street 1	06:00	Tue	London Liverpool Street 1	Use time and day details as in wave x
London Liverpool Street 2	17:00	Mon	London Liverpool Street 2	Use time and day details as in wave x
London Liverpool Street 3	15:00	Fri	London Liverpool Street 3	Use time and day details as in wave x
London Liverpool Street 4	08:00	Sat	London Liverpool Street 4	Use time and day details as in wave x
London Liverpool Street 5	16:00	Wed	London Liverpool Street 5	Use time and day details as in wave x
London Liverpool Street 6	12:00	Sun	London Liverpool Street 6	Use time and day details as in wave x
London Liverpool Street 7	07:00	Thu	London Liverpool Street 7	Use time and day details as in wave x
			London Liverpool Street 8	Requires new time and day details

The next illustration below shows the opposite effect, where a station has been selected fewer times than it was in the previous wave. Because the shifts from wave x have initially been randomised, there is no human bias in the selection of which shifts' details will be replicated.

Shifts conducted in wave x			Shifts to be conducted in wave y	
Station	Start time	Day	Station	Time/day
Nottingham 1	08:00	Wed	Nottingham 1	Use time and day details as in wave x
Nottingham 2	14:00	Sat	Nottingham 2	Use time and day details as in wave x
Nottingham 3	16:00	Thu	Nottingham 3	Use time and day details as in wave x
Nottingham 4	17:00	Fri	Nottingham 4	Use time and day details as in wave x
Nottingham 5	13:00	Wed		
Nottingham 6	09:00	Mon		

Stage 2: Assigning days/times to "new" shifts

At the end of the process described above, we will be left with a set of shifts with no time or day assignment. Some of these will be at larger stations at which we have selected more shifts than in the previous wave, and some will be at (usually smaller) stations which were not covered in the previous wave.

This list of 'new' shifts is listed in a randomised order, and days of the week are assigned to this randomised list, according to the average weekday/weekend profiles for all journeys, as supplied by TOCs. For the sample plans used for Autumn 2015, these were:

Train Operating Company	Weekday %	Weekend %
Abellio Greater Anglia	86	14
Arriva Trains Wales	82	18
c2c	86	14
Chiltern Railways	82	18
CrossCountry	78	22
East Midlands Trains	82	18
First Great Western	77	23
First Hull Trains	70	30
First TransPennine Express	82	18
Gatwick Express	79	22
Govia Thameslink Railway	86	14
Grand Central	71	29
Great Northern	89	11
Heathrow Connect	71	29
Heathrow Express	79	21
London Midland	85	15
London Overground	82	18
Merseyrail	80	20
Northern Rail	76	24
ScotRail	80	20
South West Trains	85	15
Southeastern	90	10
Southern	90	10
TfL Rail	88	12
Thameslink	83	17
Virgin Trains	81	19
Virgin Trains East Coast	76	24
Average	**81**	**19**

(The profiles in this table are also used as part of the final weighting of NRPS results. More information about the weighting is given in section 2.7.)

So when the new sample plan was generated in Autumn 2015, of the 'new' shifts, 81% were assigned at random to a weekday, and 19% were assigned at random to a weekend.

Within the weekdays, a fifth of these are assigned (again randomly) to each of Monday, Tuesday, Wednesday, Thursday and Friday. Within the weekend days, approximately half will be Saturdays and half will be Sundays.

Following this, time-bands are assigned, using the approximate proportions as shown in the table on page 4 as a start point. Note that there is also some judgement involved here, where we also take into account:

- the overall number of shifts (for the whole sample plan) in the mornings and afternoons/evenings, in order that we can also consider the implication that this is likely to have on the overall proportion of surveys completed for outward versus return journeys
- information from TOCs about the proportion of journeys made on their networks for commuting, business and leisure reasons (this will also inform the overall shift-patterns across different times of day)
- the level of weighting which was required in previous waves, for journey purpose and day of week (for example if commuters needed to be down-weighted for a TOC, it may be appropriate to reduce the number of peak-time shifts at key stations serving that TOC, in subsequent waves).

2.3.2 Shift dates

Once times and days have been assigned to each of the planned shifts, the full list of all shifts in the sample plan is sorted in a random order, and a week number is assigned. There are usually 10 weeks in a typical wave's fieldwork period, and so a week number between 1 and 10 is given. Weeks 1-3 are over-represented here by approximately +20%, in order that the fieldwork is slightly heavier at the outset; this enables early monitoring of progress and means that, if any additional 'top up' shifts are needed later to address likely sample size shortfalls, these can be arranged with minimised risk of causing a bottle-neck of fieldwork (and thus clustering in the sample) later on.

Sample plans are shared with station managers in advance of fieldwork, and station managers are given the opportunity to alert us to:

- any clashes with other research which may be happening on site at stations
- any significant local events such as major sports events which may impact the safety of fieldworkers
- any outright station closures or outright lack of train services.

Some shift dates may then be changed as a result of these reasons, before fieldwork begins. However, note that fieldwork dates are not changed purely because there is anticipated disruption to rail services (if rail services are still in operation); this is because the NRPS rightly captures the experience of passengers including when they are disrupted.

2.3.3 Sense checks

Finally (before sharing the sample plans with station managers), a number of checks are performed on the sample plan to ensure the sample as a whole is balanced and looks sensible. These include:

- spread of shifts by week, by station – for stations which have several shifts, these are checked to ensure there is a reasonable spread by week, so that larger stations do not see a clustering of fieldwork all in a short space of time
- spread of shifts by time, by station – again, for larger stations, checks are made to ensure there is at least a reasonable spread by time
- spread of shifts by day of week, by time – the similar process again.

Where there is an obvious cluster of shifts around the same few weeks, around similar times, or all on the same day of the week, some manual changes may be made at this point. This is kept to a minimum, however, as it is desirable to keep the sample as natural and un-engineered as possible.

2.3.4 Changes to shift plans during fieldwork period

There are two reasons which mean the sample plan could be altered once fieldwork begins:

- Problems with individual shifts meaning they need to be re-arranged for another time
- Additional 'top up' shifts which may be needed to address likely shortfalls in sample sizes.

During the Autumn 2015 wave, 15% of shifts from the original sampling plan (including shifts for the main NRPS and any booster samples) needed to be changed slightly due to problems. The majority of these were caused by fieldworker issues such as illness, but also included problems at the stations themselves caused by adverse weather or other disruption to rail services, and a small number of administrative errors. When this happens, wherever possible shifts are rescheduled to the same day, at the same time, and during a week which is as close to the original as possible.

Throughout the fieldwork period, progress is monitored, and where response is a little lower than anticipated, 'top up' fieldwork shifts may be added to ensure that sample size targets for each TOC and building block are achieved. Top up shifts will be arranged at stations (or on trains for those TOCs and routes which are sampled on board trains) which serve the building blocks requiring extra help, and may be targeted towards the TOC in question, meaning the fieldworker is instructed to prioritise customers of that TOC, if more than one TOC calls at the station. Because the practical purpose of top up shifts is to address potential shortfalls, the stations selected are usually the busiest stations for the TOC or building block in question; however the total mix of stations already in the sample, and the number of shifts scheduled at each, will be taken into account here, to ensure that the busiest stations are not significantly over-sampled. Similarly, the time and day of a top up shift will be chosen to align with the busier periods at the station, but again the overall time of day and day of week pattern which is already in the sample plan for that station and that TOC will be taken into consideration, with a view to keeping an overall balance and minimising the weighting required at analysis stage as far as possible.

2.3.5 Sampling for surveys distributed on-train

While the majority of NRPS questionnaires are distributed to passengers at stations before they board their trains, for some TOCs it is more appropriate to distribute the questionnaires on board the trains themselves.

All survey shifts for the non-franchised TOCs (Grand Central, Heathrow Connect, Heathrow Express and First Hull Trains) are conducted on trains, as this is the only practical way of ensuring a sufficiently large sample of customers (of all passenger footfall at stations where these TOCs call, the proportion made up by these TOCs' customers is generally small). For the Heathrow TOCs, interviewing on trains between Heathrow and London Paddington also removes the possibility of giving a questionnaire to a passenger making an inter-terminal transit only.

Among the franchised TOCs, questionnaires for the following building blocks and complete TOCs are now distributed on board trains. These are where passenger numbers at individual stations are low, and where on station fieldwork had been shown to yield low numbers of questionnaires distributed and hence returned. For some TOCs (notably Northern Rail and Arriva Trains Wales, on-train distribution also enables a wider range of different small stations to be included in the sample; this means on-train distribution also generates a more representative and inclusive picture of passenger experience.

- Arriva Trains Wales – all five building blocks
- London Overground – all five building blocks
- Northern Rail – all four building blocks
- Scotrail – rural building block
- South West Trains – Island Line building block.

(Note that a small proportion of the questionnaires for these 'on-train' TOCs will come from shifts which took place at stations. For example, fieldworkers will be distributing questionnaires at stations like Manchester Piccadilly in order to reach passengers using First TransPennine Express, Virgin Trains, East Midlands Trains and CrossCountry; they are likely to also hand questionnaires out to some Northern Rail passengers while doing this. Providing they relate to verified journeys these questionnaires will still be accepted and will contribute to the final results.)

The procedure for determining fieldwork shifts to be conducted on train is:

- As described in section 2.1, the overall sampling process begins with identifying annual passenger volumes for each station, and therefore for each TOC and each building block. This information is used to determine the proportion of on-train fieldwork shifts which will be required on each part of a TOC's route
- Where an individual building block also divides into a number of different routes or branch lines, the published timetables are consulted to establish the number of services which are run by the TOC on each route or line. This informs how the shifts should be divided between the individual routes and lines (lines with more journeys should have a

proportionately higher number of shifts). Individual station volumes are also taken into account here, to help determine how busy each route or branch line is, and again this will be used to inform the proportion of all shifts which should be allocated to each part of the network.

- Journeys are then manually defined for each shift in each section of the TOC's network, where fieldworkers can travel backwards and forwards along a route or section of route, for approximately three hours (although because the shifts are based around the timetables, some shifts may be a little longer or a little shorter). As far as possible these journeys will be defined such that as much of the whole network is covered as practically possible.
- Days and approximate times are assigned using the same principles as for at-station shifts, although again the exact times will naturally be determined by the TOC's timetable.

For TOCs which have only one building block or a very simple network (e.g. the non-franchised TOCs), or where on-train shifts are only relevant to one or two building blocks (e.g. Island Line), the procedure is a little different. In these cases, a list of all service departures through the week can be generated, and then individual departures are selected using a systematic approach, to form the start time of the fieldwork shifts.

For NRPS as a whole, results are also weighted to help correct for natural differences in response rate at different times of day and days of week, and in different locations (this is described later in section 2.7). For all TOCs and building blocks where fieldwork is conducted on board trains, sampling plans may be amended slightly in subsequent waves (as with the at-station sampling), to improve on weighting efficiency over time.

2.4 Sample size

Each TOC has a target sample size. Initially, this was set at 500 for each TOC. However, the sample size for all London and South East TOCs was raised to 1,000, to allow separate analysis of peak and off-peak journeys. The complex route structure for Greater Anglia, Southeastern, Southern and South West Trains led to the sample sizes for each of these franchises being increased to 1,500. All long distance services (East Coast, First Great Western, East Midland Trains, Virgin West Coast, CrossCountry and TransPennine Express) were increased to 1,000 sample size in 2001.

The ScotRail sample size was increased to 1,000 due to its complexity, whilst Island Line was reduced to 250 and then 100 due to its simplicity. The sample sizes for Heathrow Express, Heathrow Connect, First Hull Trains and Grand Central are 500 each, reflecting a fairly simple operating structure for these open-access TOCs. Sample sizes for Arriva Trains Wales, First TransPennine Express and Northern Rail were set at 750, 1,000 and 1,000 respectively, reflecting the relative complexity of the routes making up these franchises.

Sample sizes for First Great Western, Greater Anglia, First Capital Connect and South West Trains were set at the sum of the sample sizes of their constituent parts (2,750, 2,000, 1,500 and 1,750 respectively) to enable TOC reports for each part of the new franchise to be produced and compared with earlier waves. For example, this was done for original FGW, FGWL, Wessex, Thameslink and WAGN. The sample size for Southern was increased to 2,000 when it absorbed Gatwick Express.

In the Autumn 2011 wave, sample sizes for Arriva Trains Wales and London Overground were increased from 750 to 1,000, to compensate for the increased clustering present with the distribution of questionnaires for these TOCs changing from at-station to on-train (see section 2.4).

Target sample sizes in the Autumn 2015 wave were therefore as shown in section 6 of this report. (These may be amended in 2016 following industry consultation, to bring some of the TOCs with larger and smaller sample sizes better into relative proportion with other TOCs in line with actual passenger volumes.)

2.5 Other sub-samples covered in NRPS reporting

As well as providing data for existing TOCs, the NRPS also provides data for a number of “virtual” TOCs. For the Autumn 2015 Wave, these ”virtual” TOCs were the three constituent parts of First Great Western – Long distance, Thames Valley and West.

Data is also produced for the six PTE areas in England (West Midlands, West Yorkshire, South Yorkshire, TfGM, Merseytravel and Tyne and Wear), for the SEWTA area in Wales and for the Strathclyde area in Scotland. Each PTE area except Tyne & Wear has a notional target sample of 500 interviews about journeys starting and ending within the PTE area, although no boosts are undertaken to meet these notional targets. The Tyne & Wear area is much smaller than the others, and so any journey starting in the Tyne & Wear area counts towards the PTE analysis and the notional target sample size is 250. The TfGM area was redefined in Wave 25 to match that currently being used by TfGM. The definition of which stations fall in each PTE area is at Appendix E. For the first time in Wave 26, PTE data was weighted using the day of week and journey purpose profile produced from aggregating waves 16-25 (following analysis which had shown these weighted profiles to be fairly invariant between waves). This procedure has been continued since.

Since wave 29 an additional report, covering the London region, has also been produced. Although not a PTE, this follows similar principles in terms of journeys which are included.

2.6 Weighting

Although the sample is designed to generate the right number of responses from each type of station, differential response rates mean this does not exactly happen in practice. Furthermore, although the sample shifts are allocated to days and times to generate the "right" profile of passengers, weighting is employed to ensure sound estimates that do relate to the TOC as a whole. Finally, the gradual increase in building blocks, often with differential sampling rates, means that weighting is required to correct deliberate sampling imbalances.

An extreme case of this is for South West Trains, where 1,500 interviews are conducted on the mainline part of the franchise, with 100 of these on the Island Line. This 15:1 ratio for sampling is then weighted to reflect a 200:1 ratio when weighting to the respective numbers of journeys, meaning that Island Line questionnaires are substantially down-weighted in the results for the overall TOC. Similar considerations apply for other TOCs where building blocks have been used with the consequence that weighted and un-weighted sample sizes by building block (and subsequently by station) show increasing divergence.

The questionnaires analysed for each TOC building block are weighted by station size stratum. The data for each TOC is then weighted by:

- weekday/weekend
- journey purpose (Commuter/Business/Leisure),

and grossed up to the estimated number of passenger journeys for that TOC building block. This means that the weighted data for a number of TOCs or building blocks can be simply aggregated (e.g. to generate data for a virtual TOC or a TOC type).

All the data used in this weighting was updated in Summer 2014 in advance of the completely new sample plan generation for the Autumn 2014 wave. Data from the ORR and other sources was used to estimate journeys starting from each station for each TOC, and was sent out by Transport Focus to each TOC for verification, along with the existing weights for journey purpose and day of week. TOCs updated these figures in some cases. Some further updates to the data and therefore the weights were made during the summer of 2015, in advance of the Autumn 2015 survey, due to changes made to some franchises. These were: the move of the East Anglia "Metro" route which is now operated by MTR Crossrail and currently named TfL Rail; the move of the East Anglia "West Anglia Inner" route which is now operated as part of London Overground; the forming of the GTR franchise with its four separate companies, Gatwick Express, Great Northern, Southern and Thameslink; and a streamlining of the South West Trains building blocks from eight into four. Data and weights were also reviewed, but not changed, for franchises which changed hands: the East Coast and Scotrail franchises. Appendix D gives the resultant data used in the weighting regime for the main survey in Autumn 2015.

2.7 Questionnaire distribution

The key features of the way questionnaires are distributed are:

- Questionnaires are handed out evenly across a 3-hour interviewing shift, to ensure as wide a spread of passenger types and journeys as possible (as described earlier, shifts which take place on board trains may be a little longer or shorter than three hours, depending on the service timetable)
- Passengers are given a self-completion questionnaire and a reply paid envelope
- The passenger's name and phone number are taken where permission is granted, for back checking purposes
- For the Spring 2003 wave onwards, the time of giving out the questionnaire was noted as well as the customer's gender and observable age
- Passengers are also asked the purpose of their journey, using the same codes as in the questionnaire itself
- On some shifts, only passengers for a selected TOC are given questionnaires. Apart from on these shifts, questionnaires are given to any passengers about to board a train
- Questionnaires are station specific, with the station name and the TOCs calling at the station pre-printed on the questionnaire (except for the questionnaires distributed on train, where the passenger is asked to tick the station where they boarded the train from a pre-printed list)
- From the Spring 2003 wave onwards, all questionnaires have an 11 digit serial number pre-printed. The first four digits are a station code, the next four a shift code and the final three a sequence number
- This serial number is also printed on the bottom of the front page as a barcode, which is scanned when questionnaires arrive back in the office. This allows us to quickly identify the returns from each shift on a dynamic basis and enables us to quickly identify shifts with low or no returns
- From the Spring 2004 wave onwards, the station name is personalised throughout the questionnaire and all questionnaires are scanned rather than having data punched manually.

All distribution of questionnaires occurs between 06:00 and 22:00, during a three hour shift. The number of questionnaires distributed depends upon the station, day of week and time of day and ranges from 75 at a busy city centre station on a weekday to 15 at a small rural station.

Prior to Wave 17, all interviewing shifts had been at one of the times 06:00-09:00, 07:00-10:00, 10:00-13:00, 13:00-16:00, 16:00-19:00 and 19:00-22:00. In Wave 17, again taking on board one of the recommendations in the NRPS Review, all three hour time periods from 06:00-09:00 to 19:00-22:00 were used. This gives a better spread of journeys across the day and ensures more later evening journeys from 19:00 onwards (as these can now be picked up in shifts commencing 17:00, 18:00 and 19:00 rather than just those commencing at 19:00 as in previous waves).
Some shift times at smaller stations are amended to coincide with train departures e.g. if there are only two or three trains per day.

2.8 Data verification

Many checks are undertaken on NRPS data, before a questionnaire is allowed to pass through for analysis. Most of these revolve around checking that the journey claimed by the respondent is feasible.

The questionnaire asks the respondent to record where they disembarked from the train they boarded when given the questionnaire (Q1b). The respondent is also asked to list any subsequent stations where they changed trains and their final destination (Q2b/c). There is a need to check that the first leg journey as recorded is feasible and also that the destination of this leg is served by the TOC the respondent claimed to use.

We also code the origin and destination of the train the respondent uses, in addition to where they boarded and left that train. This is appended to the questionnaire data when the journey details are validated on Rail Planner.

When questionnaires are received back from respondents, these initial checks are carried out using the electronic railway timetable, from Rail Planner. The checks that are made are:

- Does a train leave the origin station at the time stated by the respondent?
- If so, is it a service of the TOC defined by the respondent?
- If so, does it call at the station written in at Q1b?
- If so, is this station different from the origin station?
- If so, accept the data. If not, set aside for further investigation
- Does the train terminate at a Central London station and if so, is this before 10:00 on a weekday? This question is used to define morning peak journeys in the London and South East sector.

The data entry system does not accept any journey that violates any of these tests. Such questionnaires set aside are investigated by the research executive team. (If a stated time is just a minute or two different from a journey which is valid in all other respects (correct TOC, destination called at by train, no other TOC runs a service near this time), then the journey time may be altered and the questionnaire accepted.)

Once the questionnaire has been scanned, a set of reports highlighting potential errors and unusual incidences is produced, which act as final checks that journeys are valid. These reports include identifying any questionnaires where:

- The origin and destination station are not valid for the TOC used
- The origin and destination station are the same
- The origin and destination of the train service itself are not valid for the TOC used
- The origin and destination of the journey are not valid for at least one TOC building block
- The origin and destination of the train are not valid for at least one building block.

From the Autumn 2004 Wave onwards, a question has been added to the questionnaire, to identify if any part of the first leg of the passenger journey was undertaken by replacement bus service, rather than by train. All such journeys are eliminated from the database, so that all journeys monitored by NRPS now include train-only journeys, with no part by replacement bus service. However, the bus replacement journey data is stored and can be analysed outside of the main NRPS database.

Where building blocks are station based, the journey can be assigned to a TOC building block by reference to the TOC and the station where the passenger boarded. Where building blocks are route based, the assignment uses rules based upon the station of boarding and alighting and the origin and destination of the train. If all of these stations can only come from one building block, the assignment is made electronically; if the journey could have been assigned to more than one building block, an exception report is prepared as a prelude to manual assignment of the journey to a building block. The assignment of such journeys to building blocks is then made in conjunction with Transport Focus.

2.9 Response rates

In the main Autumn 2015 survey (Wave 33):

- 102,395 questionnaires were distributed to fieldworkers for the main NRPS survey (covering both franchised and non-franchised TOCs)
- 93,955 questionnaires were handed out to passengers (a hand out rate of 91.8%)
- 28,886 questionnaires were returned (a return rate of 30.7%)
- 28,072 valid questionnaires were used in the NRPS dataset (including both franchised and non-franchised TOCs) – a response rate of 29.9%
- An additional 14,825 questionnaires were printed for sample boosts for Network Rail, TfGM and Merseytravel
- Of these, 13,970 were distributed to passengers (94.2%)
- Of these, 3,854 were returned (27.6%).

Of the 1,004 questionnaires returned but not used in Wave 33 (including both main NRPS and the various boosts):

- 375 were received after the cut-off date
- 83 had date / time / journey problems which could not be resolved (meaning we could not assign a TOC to the journey)
- 308 were blank/incomplete surveys
- 9 were filled in about London Underground services
- 88 were affected by interviewer errors
- 141 were for other reasons.

Adding the 1,004 questionnaires that were returned but not used increases the overall response rate of the Autumn 2015 survey (including main and boost surveys) to 30.3%.

3. Derivation of key factors affecting customer satisfaction

3.1 Aspects of rail journeys covered by NRPS

Before the first wave of NRPS was undertaken in Autumn 1999, TORA undertook some preliminary research. The aim of this research was to identify all the issues that passengers felt important to them as part of their rail journeys, so that all such issues could be monitored in NRPS.

This initial research comprised:

- a qualitative element (eight focus groups and seven depth interviews among disabled customers), to generate the list of dimensions passengers viewed as important to them
- a quantitative element (conjoint analysis) to rank these dimensions and identify the most important of them

From this initial research, a list of 25 key factors was derived, and these have been used in all waves of NRPS. Two additional measures, relating to personal security at the station and on the train, were added in Autumn 2002, bringing the total number of factors to 27.

One element of the new contract awarded to Continental Research in December 2002 was a requirement to validate the list of dimensions used since Autumn 1999, and see if it was still relevant. There were two aspects to this:

- Are all the factors currently measured important to rail passengers in evaluating their journeys
- Are there any factors missing from the current list.

Two approaches were used to answer this:

- Multivariate analysis was undertaken on all data from Waves 1 to 7, to see how much of the variation in overall journey satisfaction was explained by the 25 factors collected in each of those waves. The notion here was that if most of the variation in overall journey satisfaction was explained by these factors, there were unlikely to be any key missing factors.
- In the event, only around 65% of the total variation in overall journey satisfaction was accounted for, suggesting that other factors might be present
- Further qualitative research was therefore undertaken in May 2003, to try and identify any missing dimensions. Eight focus groups were undertaken, covering leisure, commuter and business travellers and covering urban, suburban and rural locations. The key conclusion was that for frequent passengers, there were no measures on the following:
    - Presence of staff on the station
    - Presence of staff on the train
    - Cleanliness of the outside of the train
    - Cleanliness of the inside of the train

These factors have been incorporated into the questionnaire – the cleanliness questions from Autumn 2003 and the availability of staff from Spring 2004 (these availability questions were originally only asked of regular travellers on a route but this was changed to all respondents in the Spring 2004 survey).

Overall satisfaction with the station was added as a new measure in Autumn 2010, to provide a direct overall measure of station performance.

Three new factors were added in Autumn 2012:

- Overall satisfaction with the train
- The availability of shelter facilities at the station
- The availability of seating at the station

The first of these was added to try and understand which of the individual train factors is driving satisfaction with the train element of the journey (just as the overall station satisfaction score has been used to identify which of the station factors drives that).

In Spring 2013, 'The choice of shops/eating/drinking facilities available' at the station was also added.

Overall satisfaction with today's journey is also measured. The full list of the 38 factors used in Autumn 2015 is as shown overleaf.

Full List of 38 factors measured in NRPS:

17 STATION FACTORS:

Ticket buying facilities

***Provision of information about train times / platforms**

The upkeep/ repair of the station buildings/ platforms

Cleanliness of the station

The facilities and services at the station

The attitudes and helpfulness of the staff

Connections with other forms of public transport

Facilities for car parking

Facilities for bicycle parking

***The overall station environment**

Your personal security whilst using that station

How request to station staff was handled

Availability of staff at the station

Overall satisfaction with the station (not used in the multivariate analysis)

The availability of shelter facilities at the station

The availability of seating at the station

The choice of shops/eating/drinking facilities available

21 TRAIN FACTORS:

***The frequency of the trains on that route**

***Punctuality / reliability (i.e. the train arriving / departing on time)**

***The length of time the journey was scheduled to take (speed)**

***Connections with other train services**

***The value for money for the price of your ticket**

***Up keep and repair of the train**

***The provision of information during the journey**

The helpfulness and attitude of staff on train

The space for luggage

The toilet facilities

***Sufficient room for all the passengers to sit / stand**

***The comfort of the seating area**

Space for bicycles

***The ease of being able to get on and off the train**

***Your personal security whilst on board the train**

Availability of staff on the train

Cleanliness of the train (not used in the multivariate analysis or in main report)

***Cleanliness of the inside of the train**

Cleanliness of the outside of the train

***How well train company dealt with delays**

Overall satisfaction with the train (not used in the multivariate analysis)

All the dimensions are rated by respondents on five point verbal scales, either a satisfaction scale or a good/poor scale. There is a final option for did not use/no opinion.

In addition to these measures, the questionnaire monitors many other aspects of passenger journeys, and is shown at Appendix B. At stations and on board trains in Wales, a Welsh version is offered to respondents.

3.2 Multivariate analysis to derive which journey aspects are most important

Multivariate analysis is now undertaken every wave – nationally, by TOC type and by individual TOC and building block – to determine the relative importance of each factor in influencing overall trip satisfaction.

For the analysis to derive the factors which are important to overall journey satisfaction, all of the factors in the list on the previous page are included, except for “overall satisfaction with the station”, “overall satisfaction with the train” and “cleanliness of the train” (the latter is excluded because it is superseded by the two separate measures for cleanliness of the inside and outside of trains).

Those marked with an asterisk in the list above are the significant factors identified from the national multivariate analysis in Wave 32/33 combined. Those emboldened were identified as key from the initial conjoint analysis in 1999. As can be seen, there is considerable consistency in the key drivers of satisfaction, with punctuality being the most important driver of satisfaction.

The full results from this multivariate analysis are shown at Appendix A.

4. Glossary of terms

Certain terms are used throughout the NRPS and these are defined here, for convenience.

Central London stations are any of the following:

Blackfriars	Kings Cross	Paddington
Cannon Street	Liverpool Street	St Pancras
Charing Cross	London Bridge	Victoria
City Thameslink	Marylebone	Waterloo
Euston	Moorgate	Waterloo East
Fenchurch Street		

Journey purpose provides a categorisation of passenger journeys. Journeys are defined as Commuter, Business or Leisure, using the codes at Appendix E.

Peak journeys for journeys in London and the South East are defined as weekday journeys for which the train terminates (or passes through for Govia Thameslink Railway) at a Central London station before 10:00 or departs from a Central London Station between 16:00 and 19:00

Shift is a period during which a fieldworker distributes questionnaires to rail passengers

TOC is a Train Operating Company

TOC type classifies each TOC into one of three types, currently as follows:

London & South East	Long Distance	Regional
Abellio Greater Anglia	CrossCountry	Arriva Trains Wales
c2c	Virgin Trains East Coast	Merseyrail
Chiltern Railways	East Midlands Trains	Northern Rail
Gatwick Express	First TransPennine Express	ScotRail
Great Northern	Virgin Trains	
Great Western Railway		
London Midland		
London Overground		
Southern		
Southeastern		
South West Trains		
Thameslink		
TfL Rail		

TOC building block is a subset of a TOC for which an independent sample is drawn and for which weighting is applied. Using building blocks allows TOCs to align NRPS data with operational data for sub divisions of their network and also allows new franchise geographies to be assessed before a new franchise commences. Most building blocks are route based although a few TOCs use stations to define their building blocks.

Building blocks are being increasingly used to benchmark performance against the (weighted) average for a building block genre e.g. comparing Stansted Express to the average of the airport services genre. There are seven building block genres to which all building blocks have been assigned:

- Short commute
- Long commute
- High speed
- Long distance
- Inter urban
- Rural
- Airport services

Appendix F provides the definition of the genre allocated to each building block.

5. Deliverables

A wide range of reports is produced from the NRPS data each wave. The key reports are defined below:

Report	Produced for
At a glance report	Short summary reports showing headline results
Full report *(formerly known as Summary Report)*	A report providing trend data for each TOC by wave which is used to generate the Transport Focus Main NRPS report
Multivariate analysis	Key drivers nationally, for each TOC type and each TOC and for each building block
Rankings report	Results since wave 10, showing satisfaction score for each TOC by factor, significant changes since one year earlier, national rank and rank in TOC type
Stakeholder report *(formerly known as Consultees Report)*	A report of summary results produced for all TOCs and a range of Stakeholders
Network Rail stations report	Percentage of passengers satisfied by each main factor for last 10 waves for all Network Rail managed stations covered by NRPS during that time period
TOC Reports	Produced for each TOC, virtual TOC and PTE area
Field Report	A document detailing the field operation
Technical Report	This report, outlining the key elements of NRPS
User Guidance Report	A document providing information on sample sizes and statistical reliability

All reports are supplied electronically to Transport Focus at the end of each wave. The TOC Reports and Stakeholder Report are distributed electronically to a distribution list mandated by Transport Focus. SPSS files are also available.

In addition, access to the raw data itself and to the verbatim comments written in by respondents in response to open-ended questions are available online. Please see the Transport Focus website or at http://www.NRPSreportal.org.uk/ for further details of this online system. SPSS files are also available. Another online system called 'Data Explorer' gives access to 10 waves of data by TOC and building block for all the main NRPS factors. Access is available via: http://data.transportfocus.org.uk/train/nps/question/service-overall/

6. KPIs

The new contract from Autumn 2007 onwards suggested monitoring Key Performance Indicators. We have included here performance against the target sample sizes for each train company for the Autumn 2015 wave (showing the number of used questionnaires for each TOC).

Train Operating Company	Target	Sample size achieved
Arriva Trains Wales	1,000	1,109
Abellio Greater Anglia	1,600	1,588
c2c	1,000	1,087
Chiltern Railways	1,000	1,074
Crosscountry	1,000	1,031
East Midlands Trains	1,000	1,063
First Hull Trains*	500	576
First TransPennine Express	1,000	1,016
Gatwick Express	500	505
Grand Central*	500	620
Great Northern	500	563
Great Western Railway	2,750	2,880
Heathrow Connect*	500	566
Heathrow Express*	500	548
London Midland	1,000	1,125
London Overground	1,200	1,322
Merseyrail	500	483
Northern Rail	1,000	1,086
Scotrail	1,000	1,064
South West Trains	1,750	1,951
Southeastern	1,500	1,580
Southern	1,500	1,538
TfL Rail	200	316
Thameslink	1,000	1,081
Virgin Trains	1,000	1,233
Virgin Trains East Coast	1,000	1,067
Total	**26,000**	**28,072**

TOCs marked * are non-franchised operators included in NRPS, but not part of many of the published results.

7. Appendices

7.1 Appendix A:

Results of multivariate analysis – drivers of overall journey satisfaction

The % of variance shows how much of the variation in overall passenger satisfaction is explained by that factor. Data is analysed for the two waves in a year combined, to provide a larger sample size for this analysis at TOC level.

The analysis uses the % satisfied (i.e. very plus fairly satisfied) – overall and with each factor – as the input data. Although this has less variance than the full 1-5 scale, it is the % satisfaction that is the key metric and which forms the basis of TOC targets. It therefore makes more sense to base the key driver analysis on this measure rather than the full 1-5 scale.

Just over a third (36%) of the variation in overall passenger satisfaction is explained by the rating on punctuality/reliability, making this by far the most important driver of overall satisfaction. 56% of the variation in overall dissatisfaction is explained by dissatisfaction with how the train company handled any delays, making this by far the most important driver of trip dissatisfaction.

Train factors remain far more important drivers of passenger satisfaction than station factors.

Where a figure is shown as 0%, this means the factor is a significant driver of overall satisfaction but the percentage variance is below 0.5% (but still above zero).

Where no figure is shown, this means the factor is not a significant driver of overall trip satisfaction.

Drivers of overall journey satisfaction – w32/33 combined

Station factors	
Ticket buying facilities	0%
Provision of information about train times/platforms	3%
The upkeep/repair of the station buildings/platforms	0%
Cleanliness of the station	
The facilities and services at the station	
The attitudes and helpfulness of the staff	
Connections with other forms of public transport e.g. bus, tube, tram, taxi etc.	
Facilities for car parking	0%
The availability of staff at the station	
The overall station environment	3%
Your personal security whilst using that station	0%
The provision of shelter facilities	
Availability of seating	
The choice of shops/eating/drinking facilities available	0%
Overall satisfaction with how request was handled	0%
Train factors	
The frequency of the trains on that route	5%
Punctuality/reliability (i.e. the train arriving/departing on time)	36%
The length of time the journey was scheduled to take (speed)	8%
Connections with other train services	0%
The value for money for the price of your ticket	2%
Up keep and repair of the train	1%
The provision of information during the journey	2%
The helpfulness and attitude of staff on train	
The space for luggage	
The toilet facilities	0%
Sufficient room for all the passengers to sit/stand	3%
The comfort of the seating area	4%
The ease of being able to get on and off the train	8%
Your personal security whilst on board the train	1%
The availability of the staff on the train	
The cleanliness of the inside of the train	21%
The cleanliness of the outside of the train	
How well train company dealt with delays	1%

Drivers of overall journey dissatisfaction – w32/33 combined

Station factors	
Ticket buying facilities	0%
Provision of information about train times/platforms	2%
The upkeep/repair of the station buildings/platforms	
Cleanliness of the station	
The facilities and services at the station	
The attitudes and helpfulness of the staff	
Connections with other forms of public transport.	
Facilities for car parking	
The availability of staff at the station	
The overall station environment	3%
Your personal security whilst using that station	0%
The provision of shelter facilities	
Availability of seating	0%
The choice of shops/eating/drinking facilities available	
How request to station staff was handled	0%
Train factors	
The frequency of the trains on that route	2%
Punctuality/reliability (i.e. the train arriving/departing on time)	12%
The length of time the journey was scheduled to take (speed)	7%
Connections with other train services	1%
The value for money for the price of your ticket	0%
Up keep and repair of the train	0%
The provision of information during the journey	1%
The helpfulness and attitude of staff on train	0%
The space for luggage	
The toilet facilities	
Sufficient room for all the passengers to sit/stand	5%
The comfort of the seating area	2%
The ease of being able to get on and off the train	4%
Your personal security whilst on board the train	1%
The availability of the staff on the train	
The cleanliness of the inside of the train	2%
The cleanliness of the outside of the train	0%
How train company dealt with delays	56%

7.2 Appendix B

Questionnaire (Autumn 2015)

1575	0026	001

transportfocus

D D M M Y Y: 1 5

National Rail Passenger Survey Autumn 2015

Thank you for agreeing to take part in our survey. Transport Focus is the official, independent consumer watchdog that represents rail, bus, and tram passengers. To help us represent the views of passengers in your area we would appreciate a little of your time to complete this survey. It asks about the rail journey you made when given this questionnaire.

The rail industry and governments pay close attention to the survey's results. These results provide Transport Focus with the evidence to seek improvements on behalf of passengers.

- **Please comment on National Rail services only. Do not comment on Underground services.**
- **To answer the questions please tick the box next to the answer(s) that apply or write in your answer in the space provided. Unless the question allows you to tick several answers please just tick one box per question.**
- **When you have completed your questionnaire please return it to us in the envelope provided.**
- **If you would prefer to complete this questionnaire online (including a larger print version) it can be found at: www.npssurvey.co.uk**

SECTION 1: TRAIN DETAILS

Q1a Please fill in the scheduled departure time of the train you caught after being given this questionnaire.

Use the 24 hr clock e.g. 17: 25 ☐☐ : ☐☐

Q1b You were given this questionnaire before boarding a train at **London Victoria**. At which station did you get off this train? Please write in the name of the station:

Q1c Did this journey involve you travelling on a rail replacement bus or coach service today?

Yes..... ☐
No..... ☐

Q2a Did you continue your journey by train after getting off at this station?
(Please remember not to include underground travel)

Yes..... ☐ **Go to Q2b**
No..... ☐ **Go to Q3**

Q2b Please write in the name of your final destination station:

Q2c Please write in the names of any other stations at which you changed trains before reaching your final destination:

Route: I M

1

TCL 1 2 3

bdrc continental

ALL ANSWER

Q3 Which train company was operating the train which you boarded at **London Victoria**.

Southeastern..... ☐
Gatwick Express..... ☐
Southern..... ☐

Other: Please write in

Don't know..... ☐

SECTION 2: YOUR JOURNEY TODAY

Q4 What was the main purpose of the trip you were making when given this questionnaire?

Daily commuting to/from work ..... ☐
Less regular commuting to/from work ..... ☐
Daily commuting for education (to/from college/school/university) ..... ☐
Less regular commuting for education (to/from college/school/university) ..... ☐
On company business (or own if self employed) ..... ☐
On personal business (job interview, dentist etc.) ..... ☐
Visiting friends or relatives ..... ☐
Shopping trip ..... ☐
Travel to/from holiday ..... ☐
A day out ..... ☐
Sport ..... ☐
Other leisure trip ..... ☐

Q5 And were you on your outward or return journey when you were given a questionnaire?

Outward ..... ☐
Return ..... ☐
One way trip only ..... ☐

Q6 Were you: ***(tick all that apply)***

Travelling alone ..... ☐
Travelling with children aged 0-4 ..... ☐
Travelling with children aged 5-10 ..... ☐
Travelling with children aged 11-15 ..... ☐
Travelling with other adults 16+..... ☐

Q7 Were you: ***(tick all that apply)***

Travelling with heavy/bulky luggage/other large items..... ☐
Travelling with a pushchair..... ☐
Travelling with a folding bicycle..... ☐
Travelling with a non-folding bicycle..... ☐
Travelling with a dog..... ☐
Travelling with a helper..... ☐
Travelling with a mobility scooter..... ☐
Travelling with a wheelchair..... ☐
None apply..... ☐

Q8a Are you affected by any physical or mental health conditions or illnesses lasting or expected to last 12 months or more? ***(tick all that apply)***

No: None..... ☐ **Go to Q10**
Yes: Vision (e.g. blindness or partial sight)..... ☐ **Go to Q8b**
Yes: Hearing (e.g. deafness or partial hearing)..... ☐ **Go to Q8b**
Yes: Mobility (e.g. only able to walk short distances or difficulty climbing stairs)..... ☐ **Go to Q8b**
Yes: Dexterity (e.g. difficulty lifting and carrying objects or using a keyboard)..... ☐ **Go to Q8b**
Yes: Learning or understanding or concentrating..... ☐ **Go to Q8b**
Yes: Memory..... ☐ **Go to Q8b**
Yes: Mental health..... ☐ **Go to Q8b**
Yes: Stamina or breathing or fatigue..... ☐ **Go to Q8b**
Yes: Socially or behaviourally (for example associated with autism, attention deficit disorder or Asperger's syndrome)..... ☐ **Go to Q8b**

Other: Please write in **Go to Q8b**

Q8b Does your condition or illness have an adverse effect on your ability to make journeys by rail?

Yes, a lot..... ☐ Yes, a little..... ☐ Not at all..... ☐

Q8c How satisfied are you that **London Victoria** station met your needs as a passenger with a long term illness or disability?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

Q8d How satisfied are you that the trains themselves met your needs as a passenger with a long term illness or disability?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

Q8e Did you book assistance with your train company to get on/off the train?

Yes..... ☐ **Go to Q9** No..... ☐ **Go to Q10**

Q9 If so, how satisfied were you with the way these arrangements:

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/no opinion
Were dealt with when booking.....	☐	☐	☐	☐	☐	☐
Were carried out on the day.....	☐	☐	☐	☐	☐	☐

ALL ANSWER

Q10 How did you buy your ticket for your journey today?

In advance - booked over phone..... ☐ **Go to Q11**
In advance at station..... ☐ **Go to Q11**
In advance via travel agent..... ☐ **Go to Q11**
In advance - via the internet/a website..... ☐ **Go to Q11**
In advance - via an app..... ☐ **Go to Q11**
On the day of travel at a station ticket office..... ☐ **Go to Q12**
On the day of travel - ticket collected at station..... ☐ **Go to Q12**
On the day of travel - bought from a ticket machine..... ☐ **Go to Q12**
On the day of travel on the train..... ☐ **Go to Q12**
On the day of travel - via the internet/a website..... ☐ **Go to Q12**
On the day of travel - via an app..... ☐ **Go to Q12**
Used a season ticket..... ☐ **Go to Q12**
Ticket was organised for me..... ☐ **Go to Q12**
I use Pay as you Go on Oyster or other smartcard or payment card - non-season..... ☐ **Go to Q12**

Other: Please write in **Go to Q12**

Q11 When did you buy your ticket for your journey today?

Today..... ☐ In last fortnight..... ☐ In last two months..... ☐
In last week..... ☐ In last month..... ☐

ALL ANSWER

Q12 Was the ticket for your journey:

A paper ticket – purchased from ticket office or station/ticket machine..... ☐
A paper ticket – collected from ticket office or station/ticket machine..... ☐
A paper ticket – printed at home, work, or somewhere else..... ☐
An Oyster card (London only)..... ☐
Another smartcard (not Oyster)..... ☐
A ticket on mobile phone (known as m-ticket or e-ticket)..... ☐
A contactless payment card – using bank debit/credit card..... ☐

Other: Please write in

Q13 How would you rate the following:

	Very good	Fairly good	Neither good nor poor	Fairly poor	Very poor	Did not use/no opinion
The information provided about tickets available	☐	☐	☐	☐	☐	☐
The range of tickets available	☐	☐	☐	☐	☐	☐
Ease of ticket purchase	☐	☐	☐	☐	☐	☐

Q14a What type of ticket did you use for your journey from **London Victoria**?
(note: type of ticket is often shown at the top left of your ticket)

- Anytime Single/Return ☐
- Anytime Day Single/Return ☐
- Off-Peak/Super Off-Peak Single/Return ☐
- Off-Peak Day/Super Off-Peak Day Single/Return ☐
- Advance ☐
- Day Travelcard ☐
- Oyster Pay As You Go ☐
- Weekly or monthly Season Ticket (including Travelcard/Travelcard on Oyster) ☐
- Annual Season Ticket (including Travelcard/Travelcard on Oyster) ☐
- Special promotion ticket e.g. Rover ticket ☐
- Rail Staff Pass/Privilege Ticket/Police Concession ☐
- Free travel pass (e.g. Freedom pass) ☐

Other: Please write in

Q14b Is your ticket for your journey today?

First Class ☐ Standard Class ☐

Q15 Was your fare reduced because you have any of the following? If so, which one?

- Did not use a railcard ☐
- 16-25 Railcard ☐
- Senior Railcard ☐
- Family & Friends Railcard ☐
- Disabled Persons Railcard ☐
- Network Railcard ☐
- Forces Railcard ☐
- Two Together Railcard ☐
- GroupSave discount ☐

Other: Please write in

NOW WE'D LIKE YOUR OPINION OF LONDON VICTORIA STATION WHERE YOU WERE WHEN GIVEN THIS QUESTIONNAIRE.

Q16 How would you rate **London Victoria** station for:

	Very good	Fairly good	Neither good nor poor	Fairly poor	Very poor	Did not use/no opinion
Ticket buying facilities (if you bought at that station)	☐	☐	☐	☐	☐	☐
Provision of information about train times/platforms	☐	☐	☐	☐	☐	☐
The upkeep/repair of the station buildings/platforms	☐	☐	☐	☐	☐	☐
Cleanliness of the station	☐	☐	☐	☐	☐	☐
The facilities and services at the station (e.g. toilets, shops, cafes etc.)	☐	☐	☐	☐	☐	☐
The availability of staff at the station	☐	☐	☐	☐	☐	☐
The attitudes and helpfulness of the staff	☐	☐	☐	☐	☐	☐
Connections with other forms of public transport (e.g. bus, tube, tram, taxi etc.)	☐	☐	☐	☐	☐	☐
Facilities for car parking	☐	☐	☐	☐	☐	☐
Facilities for bicycle parking	☐	☐	☐	☐	☐	☐
Your personal security whilst using that station	☐	☐	☐	☐	☐	☐
The overall station environment	☐	☐	☐	☐	☐	☐
The provision of shelter facilities	☐	☐	☐	☐	☐	☐
Availability of seating	☐	☐	☐	☐	☐	☐
The choice of shops/eating/drinking facilities available	☐	☐	☐	☐	☐	☐

Q17 And how familiar are you with **London Victoria** station?

Very familiar	Fairly familiar	Not very familiar	Not at all familiar	Don't know
☐	☐	☐	☐	☐

Q18 While at **London Victoria** station, did you ask staff for help or information?
(tick all that apply)

Yes - asked for help..... ☐ **Go to Q19**
Yes - asked for information..... ☐ **Go to Q19**
Couldn't find anyone to ask..... ☐ **Go to Q20a**
No - didn't need help/information..... ☐ **Go to Q20a**

Q19 Overall, how satisfied were you with the way your request was handled?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

ALL ANSWER
Q20a If you used an automatic ticket gate at **London Victoria** station today, how easy did you find it to use?

Very easy	Fairly easy	Neither easy nor difficult	Fairly difficult	Very difficult	Don't know/ not relevant
☐	☐	☐	☐	☐	☐

ONLY ANSWER Q20B IF YOU SAID FAIRLY OR VERY DIFFICULT REGARDING USING THE TICKET GATES IN Q20A
Q20b If you found the gates difficult to use, why was that?

Q21 Overall how satisfied are you with **London Victoria** station?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

NOW THINK JUST ABOUT THE TRAIN YOU WERE ABOUT TO CATCH WHEN HANDED THIS AT LONDON VICTORIA

ALL ANSWER
Q22 Based on your experience **on that journey**, how satisfied were you with:

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know no opinion
The frequency of the trains on that route.....	☐	☐	☐	☐	☐	☐
Punctuality/reliability of the train (i.e. the train arriving/departing on time).....	☐	☐	☐	☐	☐	☐
The length of time the journey was scheduled to take.....	☐	☐	☐	☐	☐	☐
Connections with other train services.....	☐	☐	☐	☐	☐	☐
The value for money of the price of your ticket..	☐	☐	☐	☐	☐	☐

Q23a How would you rate the **train** you boarded for that journey in terms of:

	Very good	Fairly good	Neither good nor poor	Fairly poor	Very poor	Did not use/no opinion
Cleanliness	☐	☐	☐	☐	☐	☐
Up keep and repair (condition of seats, walls, tables etc.)	☐	☐	☐	☐	☐	☐
The provision of information during the journey	☐	☐	☐	☐	☐	☐
The availability of staff on the train	☐	☐	☐	☐	☐	☐
The helpfulness and attitude of staff on train	☐	☐	☐	☐	☐	☐
The space for luggage	☐	☐	☐	☐	☐	☐
Sufficient room for all the passengers to sit/stand	☐	☐	☐	☐	☐	☐
The comfort of the seating area	☐	☐	☐	☐	☐	☐
Space for bicycles	☐	☐	☐	☐	☐	☐
The ease of being able to get on and off the train	☐	☐	☐	☐	☐	☐
Your personal security whilst on board the train	☐	☐	☐	☐	☐	☐
The toilet facilities	☐	☐	☐	☐	☐	☐

ONLY ANSWER Q23B IF YOU SAID FAIRLY OR VERY POOR REGARDING THE TRAIN TOILET FACILITIES IN Q23A

Q23b Please describe the nature of the problem and whether the problem was with a specific toilet (e.g. a disabled persons toilet or all the toilets).

Q24 Specifically thinking about the cleanliness of the train you boarded for that journey, how would you rate it for:

	Very good	Fairly good	Neither good nor poor	Fairly poor	Very poor	Don't know/no opinion
The cleanliness of the inside of the train	☐	☐	☐	☐	☐	☐
The cleanliness of the outside of the train	☐	☐	☐	☐	☐	☐

Q25 Overall, how satisfied are you with the train you boarded for your journey?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

Q26 Did you experience any delay either on this train or because the train you had planned to catch there cancelled? Again, please think **only of the train you first boarded at London Victoria station directly after receiving the questionnaire.**

No delay ☐ **Go to Q31**
Yes - minor delay ☐ **Go to Q27**
Yes - serious delay ☐ **Go to Q27**

Q27 What sort of delay did you experience? ***(tick all that apply)***

Train was late departing at the beginning of my journey ☐
Train was late arriving at my destination ☐
Train I had planned to catch was cancelled ☐
Could not get on train as it was overcrowded ☐
Took longer than expected to buy train ticket ☐
Train I took to this station was late and I missed my connection ☐
Crowding at station meant it took a long time to reach my platform and I missed my train ☐
Lack of/poor information caused a delay to my journey ☐

Other: Please write in

Q28 How long was your delay? Hours: ☐☐ Minutes: ☐☐

Q29 How well do you think the train company dealt with this delay?

Very well	Fairly well	Neither well nor poorly	Fairly poorly	Very poorly	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

Q30 How well do you rate the train company for each of the following, in relation to the delay that occurred?

	Very well	Fairly well	Neither well nor poorly	Fairly poorly	Very poorly	Don't know/no opinion
The amount of information provided about the delay	☐	☐	☐	☐	☐	☐
The accuracy of information given about the delay	☐	☐	☐	☐	☐	☐
The usefulness of the information	☐	☐	☐	☐	☐	☐
The speed with which information was provided	☐	☐	☐	☐	☐	☐
The time taken to resolve the problem	☐	☐	☐	☐	☐	☐
The availability of alternative transport if the train service could not continue	☐	☐	☐	☐	☐	☐

WE WOULD NOW LIKE YOU TO GIVE US YOUR OVERALL OPINION OF YOUR JOURNEY TODAY

ALL ANSWER

Q31 Taking into account just **London Victoria** station where you boarded the train and the actual train travelled on after being given this questionnaire, how satisfied were you with your journey today?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

Q32 Now thinking about mobile voice and data coverage whilst at **London Victoria** station and/or travelling on the train. How satisfied were you with the reliability of following:

	Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Did not use/ don't know
Mobile phone reception for making calls at the station	☐	☐	☐	☐	☐	☐
Mobile data coverage for accessing the internet/emails at the station	☐	☐	☐	☐	☐	☐
Mobile phone reception for making calls on the train	☐	☐	☐	☐	☐	☐
Mobile data coverage for accessing the internet/emails on the train	☐	☐	☐	☐	☐	☐

Q33 If you made calls/sent texts during your train journey today, which mobile company did you use?

- 3 ☐
- EE ☐
- O2 ☐
- Orange ☐
- T-Mobile ☐
- Talkmobile ☐
- Tesco Mobile ☐
- Virgin Mobile ☐
- Vodafone ☐

Other: Please write in

Did not make calls/send texts during the journey today ☐

Q34 If you used mobile data services during your train journey today, which mobile company did you use?

- 3 ☐
- EE ☐
- O2 ☐
- Orange ☐
- T-Mobile ☐
- Talkmobile ☐
- Tesco Mobile ☐
- Virgin Mobile ☐
- Vodafone ☐

Other: Please write in

- Wi-fi provided by train company ☐
- Did not use mobile data services during the journey today ☐

Q35 Would you consider changing to a different mobile operator if they provided better coverage on your train journeys than your current provider?

Definitely consider	Probably consider	Probably would not consider	Definitely would not consider	Don't know/no opinion
☐	☐	☐	☐	☐

Q36 How long were you on the train that you got on at **London Victoria** station?

Hours: ☐☐ Minutes: ☐☐

Q37 How often do you make the train journey that you were on today when handed this questionnaire?

- 3 or more times a week ☐ **Go to Q38**
- Once or twice a week ☐ **Go to Q38**
- 1 or 2 times a month ☐ **Go to Q38**
- Once every 2-3 months ☐ **Go to Q42**
- Once every 6 months ☐ **Go to Q42**
- Less often ☐ **Go to Q42**
- Never/first time today ☐ **Go to Q42**

SECTION 3: FOR FREQUENT USERS OF THIS ROUTE
ANSWER Q38-Q41 ONLY IF YOU MAKE TODAY'S TRAIN JOURNEY AT LEAST 1 OR 2 TIMES A MONTH

Q38 How long have you been using this route on a regular basis?

- Under 1 year ☐
- 1-4 years ☐
- 5-9 years ☐
- 10 years or more ☐

Q39 How would you describe a typical trip over the past month?

- I always get a seat ☐
- I usually get a seat ☐
- There are seats available but I prefer to stand ☐
- I usually stand and it is crowded ☐
- I usually stand and it is very crowded ☐
- It varies ☐

Q40 How satisfied are you with the times when the ticket office is open on this route?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐

Q41 How often is your ticket checked?

Too often..... ☐
About right..... ☐
Not often enough..... ☐

SECTION 4: SECURITY ON THE RAILWAY
PLEASE THINK ABOUT ALL THE OCCASIONS IN THE LAST SIX MONTHS (INCLUDING TODAY), WHEN YOU HAVE TRAVELLED BY TRAIN

ALL ANSWER

Q42 During the last six months, have you had cause to worry about your personal security whilst making a train journey?

Yes..... ☐ **Go to Q43**
No..... ☐ **Go to Q44**

Q43 If you have had cause to worry, what was the reason for your concern? ***(tick all that apply)***

AT THE STATION

Lack of station staff ..... ☐
Lack of police officers..... ☐
Lack of other passengers ..... ☐
Poor on-station lighting ..... ☐
Lack of information ..... ☐
Anti-social behaviour by other people at the station..... ☐
Saw actual vandalism or violence on the station ..... ☐
Fear of terrorism..... ☐

Other: Please write in

ON THE TRAIN

Lack of on-train staff ..... ☐
Lack of police officers..... ☐
Lack of other passengers ..... ☐
Poor train lighting ..... ☐
Lack of information ..... ☐
Anti-social behaviour by other people on the train..... ☐
Saw actual vandalism or violence on the train..... ☐
Fear of terrorism..... ☐

Other: Please write in

SECTION 5: GENERAL INFORMATION

ALL ANSWER

Q44 Which of these potential improvements do you think would be likely to assist you when **planning** future rail journeys? ***(tick all that apply)***

Better telephone enquiry/booking service..... ☐
Better Internet enquiry/booking service..... ☐
Better information facilities at stations..... ☐
Better ticket buying facilities at station ticket offices..... ☐
Better ticket buying facilities at station ticket machines..... ☐
Better route maps of the rail network..... ☐
Make timetables easier to read..... ☐
Better promotion of when advanced tickets will be available..... ☐
None of these..... ☐

Other: Please write in

Q45 Thinking back over the last six months, have you made a compensation claim following a delayed journey or complained to any of the train companies about their service? ***(tick all that apply)***

No	☐ **Go to Q48**
Yes - claimed for compensation on a weekly season ticket	☐ **Go to Q46**
Yes - claimed for compensation on a monthly or longer season ticket	☐ **Go to Q46**
Yes - claimed for compensation on a single/return ticket	☐ **Go to Q46**
Yes - complained (e.g. by letter/phone/email) but did not claim for compensation	☐ **Go to Q46**
Yes - complained (e.g. by letter/phone/email) and claimed for compensation	☐ **Go to Q46**

IF YES, PLEASE ANSWER Q46 AND Q47 FOR THE MOST RECENT OCCASION

Q46 How satisfied were you with the way your complaint/claim was handled?

Very satisfied	Fairly satisfied	Neither satisfied nor dissatisfied	Fairly dissatisfied	Very dissatisfied	Don't know/ no opinion
☐	☐	☐	☐	☐	☐
Go to Q48	**Go to Q48**	**Go to Q48**	**Go to Q47**	**Go to Q47**	**Go to Q48**

Q47 Why were you dissatisfied? ***(tick all that apply)***

Insufficient compensation	☐
Inappropriate form of compensation	☐
Time taken to respond	☐
Poor explanation given	☐
Have not yet received a response	☐

Other: Please write in

ALL ANSWER

Q48 Did other passengers' behaviour give you cause to worry or make you feel uncomfortable during your journey?

Yes	☐ **Go to Q49**
No	☐ **Go to Q50**

Q49 Which of the following were the reason(s) for this? ***(tick all that apply)***

Passengers drinking/under the influence of alcohol	☐
Passengers taking/under the influence of drugs	☐
Abusive or threatening behaviour	☐
Rowdy behaviour	☐
Feet on seats	☐
Music being played loudly	☐
Smoking	☐
Graffiti or vandalism	☐
Other	☐

ALL ANSWER

Q50 Please use the space below for any further comments you would like to make about your trip today or the rail service generally.

10

SECTION 6: ABOUT YOU
IN ORDER TO ENSURE THAT THE RESPONSES OF ALL GROUPS OF PASSENGERS ARE INCLUDED, PLEASE GIVE US THE FOLLOWING DETAILS ABOUT YOURSELF

Q51 Your age:

16 - 18	☐	55 - 59	☐
19 - 25	☐	60 - 64	☐
26 - 34	☐	65 - 69	☐
35 - 44	☐	70 - 80	☐
45 - 54	☐	81+	☐

Q52 Are you:

- Male ☐
- Female ☐

Q53 Are you:

- Working full time ☐
- Working part time ☐
- Not working ☐
- Retired ☐
- Full time student ☐

Q54 Which of the following best describes the occupation of the Chief Wage Earner in your household?

- Professional/Senior Managerial ☐
- Middle Managerial ☐
- Junior Managerial/Clerical/Supervisory ☐
- Skilled Manual (With professional qualifications/served an apprenticeship) ☐
- Unskilled Manual (No qualifications/not served an apprenticeship) ☐
- Full time student ☐
- Retired ☐
- Unemployed/Between jobs ☐
- Housewife/Househusband ☐

Other: Please write in

Q55 Do you regularly use the internet? ***(tick all that apply)***

- Yes, at home ☐
- Yes, at work ☐
- No ☐

Q56 To which of these ethnic groups do you consider you belong?

White
- British ☐
- Any other White background ☐

Mixed
- White and Black Caribbean ☐
- White and Black African ☐
- White and Asian ☐
- Any other Mixed background ☐

Asian or Asian British
- Indian ☐
- Pakistani ☐
- Bangladeshi ☐
- Chinese ☐
- Any other Asian background ☐

Black, Arab or Black/Arab British
- Arab ☐
- Caribbean ☐
- African ☐
- Any other Black/African/Caribbean background ☐

Other: Please write in

This survey is being undertaken for Transport Focus by BDRC-Continental, an independent market research agency which adheres to the Market Research Society's code of conduct. You were handed this questionnaire by an interviewer working for Perspective Research Services, a part of BDRC Continental.

The information that you have provided on this questionnaire is subject to the Data Protection Act 1998 and will not be used to identify you personally. The data will only be used for research purposes. Any organisations receiving the data will also be subject to the same restrictions and obligations under the Data Protection Act 1998.

If you have any queries about this survey or how your data will be used please contact Rebecca Joyner at BDRC Continental on 020 7490 9148.

If you would like to check that this survey is genuine, you can contact the Market Research Society on 0500 396999 or www.mrs.org.uk who will verify BDRC-Continental's status as a legitimate market research organisation.

To find out more about the National Rail Passenger Survey or Transport Focus's work visit our website or follow us on Twitter.

Web: www.transportfocus.org.uk
Twitter: @transportfocus

If you would be happy to participate in future research projects about the rail industry please complete the contact details below (this will only be available to Transport Focus):

Name:

Email address:

Thank you for completing this questionnaire.

Please return it in the envelope provided or use the following Freepost address:

National Rail Passenger Survey
Perspective Research Services Ltd
FREEPOST (RTLU-YLTS-TGYY)
12-20 Baron Street
London N1 9LL

7.3 Appendix C

Definition of PTE areas

Stations in area: TfGM

ALTRINCHAM	GODLEY	MOSES GATE
ARDWICK	GORTON	MOSSLEY (GREATER MANCHESTER)
ASHBURYS	GREENFIELD	MOSTON
ASHTON-UNDER-LYNE	GUIDE BRIDGE	NAVIGATION ROAD
ATHERTON	HAG FOLD	NEWTON FOR HYDE
BELLE VUE	HALE	ORRELL
BLACKROD	HALL I' TH' WOOD	PATRICROFT
BOLTON	HATTERSLEY	PEMBERTON
BRAMHALL	HAZEL GROVE	REDDISH NORTH
BREDBURY	HEALD GREEN	REDDISH SOUTH
BRINNINGTON	HEATON CHAPEL	ROCHDALE
BROADBOTTOM	HINDLEY	ROMILEY
BROMLEY CROSS	HORWICH PARKWAY	ROSE HILL MARPLE
BRYN	HUMPHREY PARK	RYDER BROW
BURNAGE	HYDE CENTRAL	SALFORD CENTRAL
CASTLETON	HYDE NORTH	SALFORD CRESCENT
CHASSEN ROAD	INCE (MANCHESTER)	SMITHY BRIDGE
CHEADLE HULME	IRLAM	STALYBRIDGE
CLIFTON	KEARSLEY	STOCKPORT
DAISY HILL	LEVENSHULME	STRINES
DAVENPORT	LITTLEBOROUGH	SWINTON (LANCASHIRE)
DEANSGATE	LOSTOCK	TRAFFORD PARK
DENTON	MANCHESTER AIRPORT	URMSTON
EAST DIDSBURY	MANCHESTER OXFORD ROAD	WALKDEN
ECCLES	MANCHESTER PICCADILLY	WESTHOUGHTON
FAIRFIELD	MANCHESTER VICTORIA	WIGAN NORTH WESTERN
FARNWORTH	MARPLE	WIGAN WALLGATE
FLIXTON	MAULDETH ROAD	WOODLEY
FLOWERY FIELD	MIDDLEWOOD	WOODSMOOR
GATHURST	MILLS HILL	
GATLEY	MOORSIDE	

Stations in area: Merseytravel

AIGBURTH	GREEN LANE	OLD ROAN
AINSDALE	HALEWOOD	ORRELL PARK
AINTREE	HALL ROAD	PORT SUNLIGHT
BANK HALL	HESWALL	PRESCOT
BEBINGTON	HIGHTOWN	RAINFORD
BIDSTON	HILLSIDE	RAINHILL
BIRKDALE	HOOTON	RICE LANE
BIRKENHEAD CENTRAL	HOUGH GREEN	ROBY
BIRKENHEAD HAMILTON SQUARE	HOYLAKE	ROCK FERRY
BIRKENHEAD NORTH	HUNTS CROSS	SANDHILLS
BIRKENHEAD PARK	HUYTON	SEAFORTH AND LITHERLAND
BLUNDELLSANDS AND CROSBY	KIRKBY	SOUTHPORT
BOOTLE NEW STRAND	KIRKDALE	SPITAL
BOOTLE ORIEL ROAD	LEA GREEN	ST HELENS CENTRAL
BROAD GREEN	LEASOWE	ST HELENS JUNCTION
BROMBOROUGH	LIVERPOOL CENTRAL	ST MICHAELS
BROMBOROUGH RAKE	LIVERPOOL JAMES STREET	THATTO HEATH
BRUNSWICK	LIVERPOOL LIME STREET	UPTON
CONWAY PARK	LIVERPOOL SOUTH PARKWAY	WALLASEY GROVE ROAD
CRESSINGTON	MAGHULL	WALLASEY VILLAGE
EARLESTOWN	MANOR ROAD	WALTON (MERSEYSIDE)
EASTHAM RAKE	MEOLS	WATERLOO (MERSEYSIDE)
ECCLESTON PARK	MEOLS COP	WAVERTREE TECHNOLOGY PARK
EDGE HILL	MOORFIELDS	WEST ALLERTON
FAZAKERLEY	MORETON (MERSEYSIDE)	WEST KIRBY
FORMBY	MOSSLEY HILL	WHISTON
FRESHFIELD	NEW BRIGHTON	
GARSWOOD	NEWTON-LE-WILLOWS	

Stations in area: Nexus PTE

BROCKLEY		
EAST BOLDON		
HEWORTH		
NEWCASTLE		
SEABURN		
SUNDERLAND		

Stations in area: SEWTA

ABER	FERNHILL	PONTYPRIDD
ABERCYNON	GARTH (MID GLAMORGAN)	PORTH
ABERDARE	GILFACH FARGOED	PYLE
ABERGAVENNY	GRANGETOWN (GLAMORGAN)	QUAKERS YARD
BARGOED	HEATH HIGH LEVEL	RADYR
BARRY	HEATH LOW LEVEL	RHIWBINA
BARRY DOCKS	HENGOED	RHOOSE (CARDIFF INTERNATIONAL AIRPORT)
BARRY ISLAND	LISVANE AND THORNHILL	RHYMNEY
BIRCHGROVE	LLANBRADACH	RISCA AND PONTYMISTER
BRIDGEND	LLANDAF	ROGERSTONE
BRITHDIR	LLANHARRAN	SARN
CADOXTON	LLANHILLETH	SEVERN TUNNEL JUNCTION
CAERPHILLY	LLANISHEN	TAFFS WELL
CALDICOT	LLANTWIT MAJOR	TIR-PHIL
CARDIFF BAY	LLWYNYPIA	TON PENTRE
CARDIFF CENTRAL	MAESTEG	TONDU
CARDIFF QUEEN STREET	MAESTEG EWENNY ROAD	TONYPANDY
CATHAYS	MERTHYR TYDFIL	TREFFOREST
CHEPSTOW	MERTHYR VALE	TREFFOREST ESTATE
COGAN	MOUNTAIN ASH	TREHAFOD
CORYTON	NEWBRIDGE	TREHERBERT
CROSSKEYS	NEWPORT (SOUTH WALES)	TREORCHY
CWMBACH	NINIAN PARK	TROED-Y-RHIW
CWMBRAN	PENARTH	TY GLAS
DANESCOURT	PENCOED	WAUN-GRON PARK
DINAS POWYS	PENGAM	WHITCHURCH
DINAS RHONDDA	PENRHIWCEIBER	WILDMILL
DINGLE ROAD	PENTRE-BACH	YNYSWEN
EASTBROOK	PONTLOTTYN	YSTRAD MYNACH
EBBW VALE PARKWAY	PONTYCLUN	YSTRAD RHONDDA
FAIRWATER	PONTYPOOL AND NEW INN	

Stations in area: Strathclyde PTE

AIRBLES	CLYDEBANK	HAMILTON WEST	NITSHILL
AIRDRIE	COATBRIDGE CENTRAL	HARTWOOD	PAISLEY CANAL
ALEXANDRA PARADE	COATBRIDGE SUNNYSIDE	HAWKHEAD	PAISLEY GILMOUR St
ALEXANDRIA	COATDYKE	HELENSBURGH CENTRAL	PAISLEY ST JAMES
ANDERSTON	CORKERHILL	HIGH STREET GLASGOW	PARTICK
ANNIESLAND	CRAIGENDORAN	HILLFOOT	PATTERTON
ARDROSSAN HARBOUR	CROFTFOOT	HILLINGTON EAST	POLLOKSHAWS EAST
ARDROSSAN SOUTH BEACH	CROOKSTON	HILLINGTON WEST	POLLOKSHAWS WEST
ARDROSSAN TOWN	CROSSHILL	HOLYTOWN	POLLOKSHIELDS EAST
ARGYLE STREET	CROSSMYLOOF	HOW WOOD	POLLOKSHIELDS WEST
ASHFIELD	CROY	HYNDLAND	PORT GLASGOW
AUCHINLECK	CUMBERNAULD	IBM	POSSILPARK & PARKHOUSE
AYR	DALMARNOCK	INVERKIP	PRESTWICK AIRPORT
BAILLIESTON	DALMUIR	IRVINE	PRESTWICK TOWN
BALLOCH	DALREOCH	JOHNSTONE	PRIESTHILL AND DARNLEY
BARASSIE	DALRY	JORDANHILL	QUEENS PARK (GLASGOW)
BARGEDDIE	DRUMCHAPEL	KENNISHEAD	RENTON
BARRHEAD	DRUMFROCHAR	KILMARNOCK	RUTHERGLEN
BARRHILL	DRUMGELLOCH	KILMAURS	SALTCOATS
BEARSDEN	DRUMRY	KILPATRICK	SCOTSTOUNHILL
BELLGROVE	DUKE STREET	KILWINNING	SHAWLANDS
BELLSHILL	DUMBARTON CENTRAL	KINGS PARK	SHETTLESTON
BISHOPBRIGGS	DUMBARTON EAST	KIRKHILL	SHIELDMUIR
BISHOPTON	DUMBRECK	KIRKWOOD	SHOTTS
BLAIRHILL	DUNLOP	LANARK	SINGER
BLANTYRE	EAST KILBRIDE	LANGBANK	SPRINGBURN
BOGSTON	EASTERHOUSE	LANGSIDE	STEPPS
BOWLING	EXHIBITION CENTRE GLASGOW	LARGS	STEVENSTON
BRANCHTON	FAIRLIE	LENZIE	STEWARTON
BRIDGETON	FORT MATILDA	LOCHWINNOCH	SUMMERSTON
BURNSIDE	GARROWHILL	MARYHILL	THORNLIEBANK
BUSBY	GARSCADDEN	MAXWELL PARK	THORNTONHALL
CAMBUSLANG	GIFFNOCK	MAYBOLE	TROON
CARDONALD	GILSHOCHILL	MILLIKEN PARK	UDDINGSTON
CARDROSS	GIRVAN	MILNGAVIE	WEMYSS BAY
CARFIN	GLASGOW CENTRAL	MOSSPARK	WEST KILBRIDE

CARLUKE	GLASGOW QUEEN STREET	MOTHERWELL	WESTERTON
CARMYLE	GLENGARNOCK	MOUNT FLORIDA	WHIFFLET
CARNTYNE	GOUROCK	MOUNT VERNON	WHINHILL
CARTSDYKE	GREENFAULDS	MUIREND	WHITECRAIGS
CATHCART	GREENOCK CENTRAL	NEILSTON	WILLIAMWOOD
CHARING CROSS (GLASGOW)	GREENOCK WEST	NEW CUMNOCK	WISHAW
CLARKSTON	HAIRMYRES	NEWTON (LANARKSHIRE)	WOODHALL
CLELAND	HAMILTON CENTRAL	NEWTON-ON-AYR	YOKER

Stations in area: South Yorkshire PTE

ADWICK			
ALTHORPE			
BARNSLEY			
BENTLEY (YORKSHIRE)			
BOLTON-ON-DEARNE			
CHAPELTOWN			
CONISBROUGH			
CROWLE			
DARNALL			
DARTON			
DODWORTH			
DONCASTER			
DORE			
ELSECAR			
HATFIELD AND STAINFORTH			
KIRK SANDALL			
KIVETON BRIDGE			
KIVETON PARK			
MEADOWHALL			
MEXBOROUGH			
PENISTONE			
ROTHERHAM CENTRAL			
SCUNTHORPE			
SHEFFIELD			
SILKSTONE COMMON			
SWINTON (YORKSHIRE)			
THORNE NORTH			
THORNE SOUTH			
THURNSCOE			
WOMBWELL			
WOODHOUSE			

Stations in area: West Yorkshire PTE

BAILDON	MIRFIELD		
BATLEY	MOORTHORPE		
BEN RHYDDING	MORLEY		
BERRY BROW	MYTHOLMROYD		
BINGLEY	NEW PUDSEY		
BRADFORD FORSTER SQUARE	NORMANTON		
BRADFORD INTERCHANGE	OUTWOOD		
BRAMLEY (YORKSHIRE)	PONTEFRACT BAGHILL		
BROCKHOLES	PONTEFRACT MONKHILL		
BURLEY PARK	PONTEFRACT TANSHELF		
BURLEY-IN-WHARFEDALE	RAVENSTHORPE		
CASTLEFORD	SALTAIRE		
COTTINGLEY	SANDAL AND AGBRIGG		
CROSS GATES	SHEPLEY		
CROSSFLATTS	SHIPLEY		
DEIGHTON	SLAITHWAITE		
DENBY DALE	SOUTH ELMSALL		
DEWSBURY	SOWERBY BRIDGE		
EAST GARFORTH	STEETON AND SILSDEN		
FEATHERSTONE	STOCKSMOOR		
FITZWILLIAM	STREETHOUSE		
FRIZINGHALL	TODMORDEN		
GARFORTH	WAKEFIELD KIRKGATE		
GUISELEY	WAKEFIELD WESTGATE		
HALIFAX	WALSDEN		
HEADINGLEY	WOODLESFORD		
HEBDEN BRIDGE			
HONLEY			
HORSFORTH			
HUDDERSFIELD			
ILKLEY			
KEIGHLEY			
KNOTTINGLEY			
LEEDS			
LOCKWOOD			
MARSDEN			
MENSTON			
MICKLEFIELD			

Stations in area: West Midlands PTE

ACOCKS GREEN	JEWELLERY QUARTER	WALSALL	
ADDERLEY PARK	KINGS NORTON	WHITLOCKS END	
ASTON	LANDYWOOD	WIDNEY MANOR	
BERKSWELL	LANGLEY GREEN	WITTON	
BESCOT STADIUM	LEA HALL	WOLVERHAMPTON	
BIRMINGHAM INTERNATIONAL	LONGBRIDGE	WYLDE GREEN	
BIRMINGHAM MOOR STREET	LYE	WYTHALL	
BIRMINGHAM NEW STREET	MARSTON GREEN	YARDLEY WOOD	
BIRMINGHAM SNOW HILL	NORTHFIELD		
BLAKE STREET	OLD HILL		
BLOXWICH	OLTON		
BLOXWICH NORTH	PERRY BARR		
BORDESLEY	ROWLEY REGIS		
BOURNVILLE	SANDWELL AND DUDLEY		
BUTLERS LANE	SELLY OAK		
CANLEY	SHIRLEY		
CANNOCK	SMALL HEATH		
CHESTER ROAD	SMETHWICK GALTON BRIDGE		
COSELEY	SMETHWICK ROLFE STREET		
COVENTRY	SOLIHULL		
CRADLEY HEATH	SPRING ROAD		
DORRIDGE	STECHFORD		
DUDDESTON	STOURBRIDGE JUNCTION		
DUDLEY PORT	STOURBRIDGE TOWN		
EARLSWOOD (WEST MIDLANDS)	SUTTON COLDFIELD		
ERDINGTON	TAME BRIDGE PARKWAY		
FIVE WAYS	THE HAWTHORNS		
FOUR OAKS	TILE HILL		
GRAVELLY HILL	TIPTON		
HALL GREEN	TYSELEY		
HAMPTON-IN-ARDEN	UNIVERSITY (BIRMINGHAM)		
HAMSTEAD (BIRMINGHAM)			
HEDNESFORD			

7.4 Appendix D

Weighting regime: main survey – Wave 33

TOC	total journeys	COMMUTE	BUSINESS	LEISURE	WEEKDAY	WEEKEND
Abellio Greater Anglia	76,840,989	48	18	34	86	14
Arriva Trains Wales	29,900,809	32	10	58	82	18
c2c	37,356,300	67	6	27	86	14
Chiltern Railways	22,839,474	38	25	37	82	18
Crosscountry	45,510,499	15	28	57	78	22
East Midlands Trains	24,089,566	23	28	49	82	18
First Hull Trains	772,533	10	45	45	70	30
First TransPennine Express	28,000,000	26	13	61	82	18
Gatwick Express	7,871,977	15	44	40	79	22
Govia Thameslink Railway	299,035,259	45	26	29	86	14
Grand Central	1,178,001	5	28	67	71	29
Great Northern	49,652,819	47	28	25	89	11
Great Western Railway	99,672,075	30	20	50	77	23
Heathrow Connect	2,451,755	50	11	39	71	29
Heathrow Express	5,840,816	2	68	30	79	21
London Midland	64,021,215	40	13	46	85	15
London Overground	158,422,392	56	3	41	82	18
Merseyrail	43,271,150	37	8	55	80	20
Northern Rail	93,834,223	38	9	53	76	24
Scotrail	86,339,000	39	13	47	80	20
South West Trains	222,620,007	53	15	32	85	15
Southeastern	168,377,622	61	12	27	90	10
Southern	173,440,720	51	15	34	90	10
TfL Rail	36,590,035	70	10	20	88	12
Thameslink	68,069,743	43	25	32	83	17
Virgin Trains	31,911,288	11	23	66	81	19
Virgin Trains East Coast	19,904,278	10	33	57	76	24

7.5 Appendix E

Journey Purpose Definition

Detailed description	Journey Purpose
Daily commuting to/from work/college/school	Commuter
Less regular commuting to/from work/college/school	
On company business (or own if self employed).....	Business
On personal business (job interview, dentist etc).....	Leisure
Visiting friends or relatives.....	
Shopping trip.....	
Travel to/from holiday	
A day out.....	
Sport	
Other leisure	

7.6 Appendix F

Building block genre definitions

HIGH SPEED	SHORT COMMUTE
VIRGIN TRAINS EAST COAST – LONDON – YORKS	ABELLIO GREATER ANGLIA – METRO
GREAT WESTERN RAILWAY – LONG DISTANCE	LONDON OVERGROUND – WEST ANGLIA
SOUTHEASTERN – HIGH SPEED	ATW – CARDFF & VALLEYS
VIRGIN - LONDON – LIVERPOOL	ATW – SOUTH WALES & BORDERS
VIRGIN - LONDON – MANCHESTER	C2C – SOUTHEND LINE
VIRGIN - LONDON - NORTH WALES	C2C – TILBURY LINE
VIRGIN - LONDON – SCOTLAND	EMT – LOCAL
VIRGIN - LONDON – WOLVERHAMPTON	GTR - THAMESLINK LOOP
LONG DISTANCE	LONDON OVERGROUND – GOSPEL OAK – BARKING
CROSSCOUNTRY- BIRMINGHAM - NE AND SCOTLAND	LONDON OVERGROUND – RICHMOND/CLAPHAM JUNCTION – STRATFORD
CROSSCOUNTRY - BIRMINGHAM - SOUTH COAST	LONDON OVERGROUND – WATFORD – EUSTON
CROSSCOUNTRY - BIRMINGHAM - SOUTH WEST	LONDON OVERGROUND – DALSTON – CROYDON
CROSSCOUNTRY - BIRMINGHAM – STANSTED	LONDON MIDLAND - WEST MIDLANDS
FIRST HULL TRAINS	MERSEYRAIL – NORTHERN
FTPE – NORTH	MERSEYRAIL – WIRRAL
EMT – LIVERPOOL – NORWICH	NORTHERN - MANCHESTER & LIVERPOOL
VIRGIN TRAINS EAST COAST – LONDON – SCOTLAND/NE	NORTHERN – TYNE TEES & WEAR
GRAND CENTRAL – LONDON-BRADFORD	SCOTRAIL – STRATHCLYDE
GRAND CENTRAL – LONDON-SUNDERLAND	SOUTHERN METRO
VIRGIN TRAINS – LONDON-SCOTLAND (VIA BHAM)	SOUTHEASTERN – METRO
	SWT – METRO

INTERURBAN	**LONG COMMUTE**
ABELLIO GREATER ANGLIA – INTERCITY	ABELLIO GREATER ANGLIA – WEST ANGLIA OUTERS
ATW - INTERURBAN	ABELLIO GREATER ANGLIA - MAINLINE
CHILTERN – NORTH	CHILTERN – SOUTH
CROSSCOUNTRY - BIRMINGHAM – MANCHESTER	VIRGIN TRAINS EAST COAST – LONDON-EAST COAST/EAST MIDLANDS
CROSSCOUNTRY - NOTTINGHAM – CARDIFF	EMT – LONDON
VIRGIN TRAINS EAST COAST – NON LONDON JOURNEYS	GREAT NORTHERN
FTPE - NORTH WEST	THAMESLINK NORTH
FTPE – SOUTH	THAMESLINK SOUTH
LONDON MIDLAND - WEST COAST	GREAT WESTERN RAILWAY – LONDON THAMES VALLEY
NORTHERN - SOUTH & EAST YORKSHIRE	LONDON MIDLAND - LONDON COMMUTER
SCOTRAIL – INTERURBAN	SCOTRAIL – URBAN
SWT – LONGER DISTANCE	SOUTHERN - SUSSEX COAST
RURAL	SOUTHEASTERN - MAINLINE
ABELLIO GREATER ANGLIA – RURAL	SWT – OUTER SUBURBAN & LOCAL
ATW – MID WALES & BORDERS	**AIRPORT**
ATW – NORTH WALES & BORDERS	ABELLIO GREATER ANGLIA – STANSTED EXPRESS
GREAT WESTERN RAILWAY – WEST	GATWICK EXPRESS
NORTHERN - LANCASHIRE & CUMBRIA	HEATHROW EXPRESS
NORTHERN - WEST & NORTH YORKSHIRE	HEATHROW CONNECT
SCOTRAIL – RURAL	
SWT - ISLAND LINE	

7.7 Appendix G:

Methodology for calculating passenger volumes by TOC and station

The following is a description of how ORR data is used to calculate passenger volumes for each TOC at each station in the national rail network.

Step 1

Passenger journey data for each station is taken from the ORR database. This database uses ticket sales data from LENNON supplemented with journey data from a number of other sources that LENNON does not include, principally:

- Journey data from TfL for London Underground stations that offer national rail services
- PTE journeys from sales that are made from sources other than national rail stations.

The data used is number of entries plus number of interchanges. For example, the total annual passenger journeys estimated from London Victoria in 2010 was 39,626,050 (35,127,971 entries and 4,498,079 interchanges).

Step 2

This data is then aggregated for all stations across the rail network and compared to the total obtained by aggregating data for all TOCs as supplied by DfT. In 2010, the station aggregation total was 1,227,778,667, whereas the DfT TOC total was 1,240,218,685. An adjustment factor is calculated for each station so that the station totals add to the TOC totals – this initial adjustment factor is 1.010132134 and the adjusted total for London Victoria is 40,027,546.

Step 3

Data from the electronic timetable is used to count how many services each TOC runs from a station in the four weeks in February each year. This is then profiled, so that we estimate what percentage of the services run from a station are by each TOC. At London Victoria, the % breakdown of services run from the station in 2010 was as follows:

Southeastern	28.07%
Gatwick Express	11.88%
Southern	60.05%

Step 4

These profiles are then applied to the total passenger count for the station derived in step 1. Implicitly, the assumption is that the proportion of journeys by TOC from the station is the same as the proportion of number of services by TOC from the station. For London Victoria, this results in estimated passenger volumes as follows:

Southeastern	11,235,150
Gatwick Express	4,756,615
Southern	24,035,782

Step 5

The total estimated passenger journeys for each TOC is computed by adding up the estimate for each station at which the TOC calls. For Southeastern, this gives a total of 162,471,848 compared to the TOC total of 154,073,470. This produces a TOC scaling factor for Southeastern of 0.94830872. A similar process for Gatwick Express and Southern produces factors of 0.72579627 and 1.08620260 respectively.

Step 6

These factors are then applied, TOC by TOC, to the estimated passenger journeys for each station at which the TOC calls. This gives an updated estimated passenger journeys for the TOC for each station. So at London Victoria, the updated figures are as follows:

Southeastern	10,654,391 (11,235,150 times 0.94830872)
Gatwick Express	3,452,333 (4,756,615 times 0.72579627)
Southern	25,942,024 (24,035,782 times 1.08620260)

A revised estimate for London Victoria is then calculated by adding up these totals - 40,048,747 compared to the original station total of 40,027,546. A station scaling factor for London Victoria is now produced - 0.9994706.

Steps 5 and 6 are then repeated until the process converges in that station factors remain as they were from the previous iteration (TOC totals are preserved in the final run as these are regarded as sacrosanct).

At the end of this process we have a set of estimated passenger journeys for each TOC at each station that adds to the TOC totals and adds as closely as possible to the station totals.