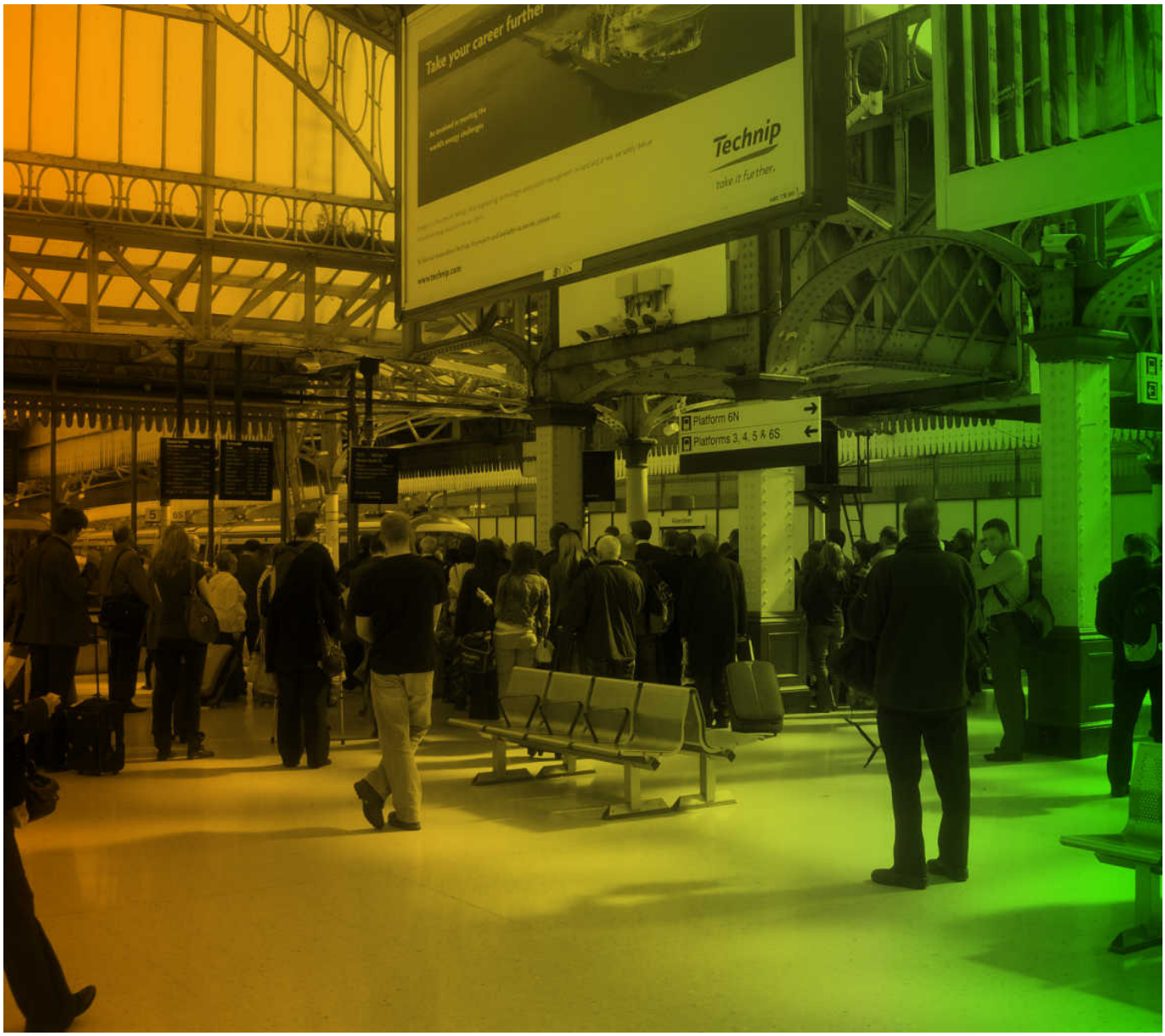
Nestrans Rail Overcrowding Survey



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Nestrans Rail Overcrowding Survey

Rev No	Comments	Checked by	Approved by	Date
3	Draft for Client Comment following October survey		PMF	16/11/11
2	Revised following client comments and platform data	AM	PMF	05/08/11
1	Draft for Client Comment	AM	PMF	25/07/11

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Job No 60221475 / M001 Reference 11 Date Created November 2011

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Introduction

1 Introduction

1.1 Introduction

In their Regional Transport Strategy (RTS), Nestrans state that:

Rail journey times between the north east and central Scotland are long relative to the distances involved, and there are also issues of train capacity, fare levels and peak-hour overcrowding.

In June 2011, Nestrans commissioned AECOM to gather data to assess the extent of overcrowding on peak period rail services in North East Scotland between Stonehaven and Inverurie, and on rail station platforms.

This report presents the methodology, results and key findings of surveys undertaken on 21 and 24 June and 27 and 28 October 2011 on behalf of Nestrans by AECOM, in partnership with sub-consultants Streetwise Services Limited.

1.2 Background

Improved rail links and connections are a key element of Nestrans' external and internal connection strategies in their RTS.

A range of rail survey work has been undertaken by Nestrans in recent years, including:

- Surveys in relation to the introduction of timetable improvements at Dyce and Inverurie rail stations; and
- Surveys in relation to potential demand for the Dyce Shuttle Bus service which connects Dyce rail station and Aberdeen Airport.

This commission provides further confirmation of characteristics and issues associated with peak hour rail travel in North East Scotland, and provides quantification of the level of peak-hour loading, both on-board train services, and at station platforms.

The surveys have assessed for each service included in the survey:

- Train type, and seated capacity of the train
- Numbers of passengers on the service, whether seated, standing, or using vestibule “flip-up” seats
- An overall percentage service occupancy for each leg of the journey, calculated from the total occupancy of the train divided by the total seated capacity of the train.

1.3 Industry Definition of Overcrowding

Within the rail industry, rail overcrowding is defined as Passengers in Excess of Capacity (PIXC). For journeys greater than 20 minutes it is measured with respect to the number of standard class seats on the train.

For journeys of 20 minutes or less, an additional allowance for standing room is also made, which varies with the type of rolling stock. For modern sliding door stock, it is typically approximately 35 per cent of the number of seats.

It is noted that within the study, journeys times are typically greater than 20minutes for trips between Aberdeen and Inverurie (23-27min), and Aberdeen and Stonehaven (16-25min). They are less than 20 minutes for trips to between Aberdeen and Dyce (08-11min), and Aberdeen and Portlethen (16-25min).

1.4 Structure of Report

The remainder of this report is structured as follows:

- Chapter 2 – Methodology;
- Chapter 3 – June Survey Results;
- Chapter 4 – October Survey Results;
- Chapter 5 – Station Platform Assessments; and
- Chapter 6 – Key Findings.

Appendix A provides results of passenger counts undertaken on station platforms, as part of the Station Platform Assessments in the June survey.

Appendix B presents photographs taken as part of the June and October Station Platform Assessments.

Methodology

2 Methodology

2.1 Introduction

This chapter details the methodology employed for the survey. It considers methodologies for the two principal elements of the survey as follows:

- Rail Overcrowding Assessment; and
- Station Platform Assessment.

2.2 Scope of Survey

Discussions with Nestrans confirmed the requirement to assess the level of overcrowding on the following routes/journeys:

Table 2.1 – AM Peak Services

	Northbound				
Stonehaven-Portlethen-Aberdeen	0723 - 0744	0734 - 0755	0748 0759 0813	0822 0831 0844	
Aberdeen-Dyce- Inverurie	0750 0803 0817		0823 0836 0848	0850 0859 -	
	Southbound				
Inverurie-Dyce-Aberdeen	0714 0726 0737	0749 0803 0814	0822 0835 0846	- 0908 0919	0915 0927 0938
Aberdeen-Portlethen-Stonehaven					

Table 2.2 – PM Peak Services

	Northbound					
Stonehaven-Portlethen-Aberdeen						
Aberdeen-Dyce- Inverurie	1643 1652 -	1718 1729 1741	1756 1805 1819	1820 1829 1841		
	Southbound					
Inverurie-Dyce-Aberdeen	1618 1631 1641	1638 1654 1705	- 1705 1714		1716 1730 1741	1752 1806 1817
Aberdeen-Portlethen-Stonehaven	1637 - 1653		1716 1727 1737	1736 - 1752	1816 - 1833	1830 1840 1849

2.3 Rail Overcrowding Assessment Methodology

For all services listed in Tables 2.1 and 2.2 above, survey teams conducted on-board passenger counts to record the following information:

- An estimate of the passengers carried for each section of the above journeys (e.g. Stonehaven-Portlethen and Portlethen-Aberdeen);
- The number of passengers as a percentage of the seating capacity (i.e. the assessment of overcrowding); and
- The type of seating / standing (seated, standing, vestibules), plus the seating capacity of the train.

This information facilitated calculation of the estimate of passengers/overcrowding for all individual sections of the targeted journeys.

A total of seven surveyors were required to resource the on-board surveys, allowing for providing two surveyors on the busiest routes and those routes made up of multiple train sets.

2.4 Station Platform Assessment Methodology

Nestrans also requested that the survey should consider station/platform overcrowding and issues relating to safety where numbers wishing to access trains at peak times are a concern relative to the time available for boarding trains. It was also requested that the survey should also consider safety issues relating to the passenger disembarkation/embarkation process, and the time and space available for this.

Additional dedicated resource was provided for this element of the survey, positioned at Stonehaven (AM only), Dyce, and Aberdeen Guild Street to monitor peak period departures.

This element was only undertaken on the Friday in the June survey.

During the October survey, and based on the outcomes of the earlier survey in June, attention was focussed only on PM departures Aberdeen station.

2.5 Survey Conduct

Authorisation to conduct the on-board train surveys, and for surveyors to pass between platforms at Aberdeen rail station was obtained through discussions with ScotRail.

2.6 Summary

This section has set out the data collection methods identified to facilitate the assessment of rail overcrowding in North East Scotland.

Chapter 3 sets out the results of the June survey, and Chapter 4 sets out the October results.

June Survey Results

3 June Survey Results

3.1 Introduction

This chapter presents the key results from the on-board and station platform surveys undertaken in June 2011. For each of these tasks, analysis is categorised according to direction, day and time of day.

3.2 Meeting the Survey Requirements

3.2.1 Introduction

No significant problems were encountered during the on-board counts. However, operational issues affected the way counts were calculated for two services. These are summarised in the tables below.

Table 3.1 – Friday 24 June 1718 Aberdeen – Inverurie

Count Issue	Assessment
An extra train-set was added onto this service meaning the surveyor could not get access through the whole train. This was not previously highlighted by ScotRail that this was going to be the case.	On train surveyor had the rear 4 carriages covered. The on platform surveyor at Dyce counted the rear 2 carriages. This was done by carriage (including where they were positioned - seated or otherwise) plus an on/off count of each carriage so the number travelling on to Inverurie could be determined.

This issue was factored into the resourcing of the second survey on Monday 27th June.

Table 3.2 – Monday 27 June 1716 Inverurie – Aberdeen

Count Issue	Assessment
The surveyor was not able to get to Inverurie in time for the 17.16 departure. The train that had been planned to use to get to Inverurie to position the surveyor was terminated in Aberdeen.	Passenger numbers were estimated based on platform counts undertaken at both Aberdeen and Dyce stations, as well as supplementary on-off passenger counts.

3.3 Rail Overcrowding Assessment

The sections below present the key results of the on-board train surveys undertaken on Friday 24th June and Monday 27th June 2011. Results are presented by direction, day and time of day, and within each of these sections, the results are further sub-divided into route section to highlight total occupancy, and percentage of the total train occupancy.

3.4 Northbound Services (Friday 24th June)

3.4.1 AM Peak

Table 3.3 – Stonehaven – Aberdeen – Dyce – Inverurie (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:23	**Stonehaven**	**Aberdeen**	87	0	2	4	93	68%
07:50	**Aberdeen**	**Dyce**	113	9	4	4	130	96%
08:03	**Dyce**	**Inverurie**	9	0	0	0	9	7%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.4 – Stonehaven – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:34	**Stonehaven**	**Aberdeen**	83	0	0	6	89	36%
Train Class:	Super Voyager							
Number of Carriages:	5							
Number of Seats:	250							

Table 3.5 – Stonehaven – Portlethen – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:48	**Stonehaven**	**Portlethen**	113	0	10	6	129	61%
07:59	**Portlethen**	**Aberdeen**	112	0	7	8	127	60%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.6 – Aberdeen – Dyce – Inverurie (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:23	**Aberdeen**	**Dyce**	88	0	6	6	100	74%
08:36	**Dyce**	**Inverurie**	35	0	0	0	35	26%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.7 – Stonehaven – Portlethen – Aberdeen – Dyce (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Stonehaven**	**Portlethen**	132	5	4	3	144	68%
08:31	**Portlethen**	**Aberdeen**	146	6	7	4	163	77%
08:50	**Aberdeen**	**Dyce**	39	0	0	0	39	18%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

3.4.2 PM Peak

Table 3.8 – Aberdeen – Dyce (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:43	**Aberdeen**	**Dyce**	31	0	1	0	32	24%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.9 – Aberdeen – Dyce – Inverurie (1) (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:18	**Aberdeen**	**Dyce**	190	9	10	4	213	61%
17:29	**Dyce**	**Inverurie**	203	41	10	0	254	73%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

Table 3.10 – Stonehaven – Aberdeen – Dyce – Inverurie (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:33	**Stonehaven**	**Aberdeen**	142	0	4	0	146	69%
17:56	**Aberdeen**	**Dyce**	87	0	4	0	91	43%
18:05	**Dyce**	**Inverurie**	64	0	2	1	67	32%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.11 – Aberdeen – Dyce – Inverurie (2) (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:20	**Aberdeen**	**Dyce**	149	6	9	4	168	62%
18:29	**Dyce**	**Inverurie**	146	1	8	2	157	58%
Train Class:	158							
Number of Carriages:	4 (2 x 2)							
Number of Seats:	272							

3.5 Northbound Services (Monday 27th June)

3.5.1 AM Peak

Table 3.12 – Stonehaven – Aberdeen – Dyce – Inverurie (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:23	**Stonehaven**	**Aberdeen**	99	1	4	0	104	76%
07:50	**Aberdeen**	**Dyce**	115	5	5	12	137	101%
08:03	**Dyce**	**Inverurie**	9	0	0	0	9	7%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.13 – Stonehaven – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:34	**Stonehaven**	**Aberdeen**	103	0	0	5	108	43%
Train Class:	Super Voyager							
Number of Carriages:	5							
Number of Seats:	250							

Table 3.14 – Stonehaven – Portlethen – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:48	**Stonehaven**	**Portlethen**	129	0	8	5	142	67%
07:59	**Portlethen**	**Aberdeen**	130	0	8	9	147	69%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.15 – Aberdeen – Dyce – Inverurie (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:23	**Aberdeen**	**Dyce**	111	3	5	7	126	93%
08:36	**Dyce**	**Inverurie**	45	0	1	0	46	34%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.16 – Stonehaven – Portlethen – Aberdeen – Dyce (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Stonehaven**	**Portlethen**	155	2	6	6	169	80%
08:31	**Portlethen**	**Aberdeen**	158	3	6	9	176	83%
08:50	**Aberdeen**	**Dyce**	41	0	2	0	43	20%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

3.5.2 PM Peak

Table 3.17 – Aberdeen – Dyce (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:43	**Aberdeen**	**Dyce**	44	0	0	0	44	32%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.18 – Aberdeen – Dyce – Inverurie (1) (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:18	**Aberdeen**	**Dyce**	251	17	19	13	300	86%
17:29	**Dyce**	**Inverurie**	271	29	22	3	325	93%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

Table 3.19 – Stonehaven – Aberdeen – Dyce – Inverurie (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:33	**Stonehaven**	**Aberdeen**	121	0	6	1	128	60%
17:56	**Aberdeen**	**Dyce**	137	0	5	10	152	72%
18:05	**Dyce**	**Inverurie**	94	0	3	0	97	46%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.20 – Aberdeen – Dyce – Inverurie (2) (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:20	**Aberdeen**	**Dyce**	141	1	5	8	155	57%
18:29	**Dyce**	**Inverurie**	151	0	6	2	159	58%
Train Class:	158							
Number of Carriages:	4 (2 x 2)							
Number of Seats:	272							

3.6 Southbound Services (Friday 24th June)

3.6.1 AM Peak

Table 3.21 – Inverurie – Dyce – Aberdeen – Portlethen – Stonehaven (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:14	**Inverurie**	**Dyce**	65	0	3	1	69	33%
07:26	**Dyce**	**Aberdeen**	82	1	6	6	95	45%
07:40	**Aberdeen**	**Stonehaven**	68	0	0	0	68	32%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.22 – Inverurie – Dyce – Aberdeen (1) (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:49	**Inverurie**	**Dyce**	166	5	11	14	196	56%
08:03	**Dyce**	**Aberdeen**	173	3	10	18	204	59%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

Table 3.23 – Inverurie – Dyce – Aberdeen (2) (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Inverurie**	**Dyce**	63	0	0	0	63	46%
08:35	**Dyce**	**Aberdeen**	89	0	3	1	93	68%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.24 – Dyce – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:08	**Dyce**	**Aberdeen**	71	1	7	3	82	39%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.25 – Inverurie – Dyce – Aberdeen (3) (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:15	**Inverurie**	**Dyce**	123	12	4	22	161	118%
09:27	**Dyce**	**Aberdeen**	125	15	3	17	160	118%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

3.6.2 PM Peak

Table 3.26 – Inverurie – Dyce – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:18	**Inverurie**	**Dyce**	76	0	0	0	76	56%
16:31	**Dyce**	**Aberdeen**	105	16	5	12	138	101%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.27 – Aberdeen – Stonehaven (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:37	**Aberdeen**	**Stonehaven**	129	0	6	7	142	33%
Train Class:	170							
Number of Carriages:	6 (2 x 3)							
Number of Seats:	424							

Table 3.28 – Inverurie – Dyce – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:38	**Inverurie**	**Dyce**	28	3	0	0	31	15%
16:54	**Dyce**	**Aberdeen**	92	0	5	3	100	47%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.29 – Dyce – Aberdeen – Portlethen – Stonehaven (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:05	**Dyce**	**Aberdeen**	42	0	0	0	42	31%
17:14	**Aberdeen**	**Portlethen**	66	0	3	2	71	52%
17:27	**Portlethen**	**Stonehaven**	58	0	2	2	62	46%
Train Class:		158						
Number of Carriages:		2						
Number of Seats:		136						

Table 3.30 – Inverurie – Dyce – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:16	**Inverurie**	**Dyce**	109	4	9	5	127	93%
17:30	**Dyce**	**Aberdeen**	118	28	10	36	192	141%
Train Class:		158						
Number of Carriages:		2						
Number of Seats:		136						

Table 3.31 – Aberdeen – Stonehaven (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:36	**Aberdeen**	**Stonehaven**	136	2	8	6	152	72%
Train Class:		170						
Number of Carriages:		3						
Number of Seats:		212						

Table 3.32 – Inverurie – Dyce – Aberdeen (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:52	**Inverurie**	**Dyce**	24	0	0	0	24	18%
18:06	**Dyce**	**Aberdeen**	51	0	2	4	57	42%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.33 – Aberdeen – Stonehaven (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:16	**Aberdeen**	**Stonehaven**	234	0	0	0	234	43%
Train Class:	Class 43 HST (East Coast)							
Number of Carriages:	9							
Number of Seats:	546 (113 1st, 433 2nd)							

Table 3.34 – Aberdeen – Portlethen – Stonehaven (Friday 24th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:30	**Aberdeen**	**Portlethen**	79	0	2	1	82	39%
18:40	**Portlethen**	**Stonehaven**	76	0	2	0	78	37%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

3.7 Southbound Services (Monday 27th June)

3.7.1 AM Peak

Table 3.35 – Inverurie – Dyce – Aberdeen (1) (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:14	**Inverurie**	**Dyce**	90	0	4	0	94	44%
07:26	**Dyce**	**Aberdeen**	109	0	7	2	118	56%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.36 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:49	**Inverurie**	**Dyce**	253	11	16	8	288	83%
08:03	**Dyce**	**Aberdeen**	279	13	17	8	317	91%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

Table 3.37 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Inverurie**	**Dyce**	55	0	1	2	58	43%
08:35	**Dyce**	**Aberdeen**	73	0	5	1	79	58%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.38 – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:08	**Dyce**	**Aberdeen**	19	0	1	0	20	9%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.39 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:15	**Inverurie**	**Dyce**	107	3	10	5	125	92%
09:27	**Dyce**	**Aberdeen**	96	0	5	8	109	80%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

3.7.2 PM Peak

Table 3.40 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:18	**Inverurie**	**Dyce**	54	0	0	0	54	40%
16:31	**Dyce**	**Aberdeen**	87	2	6	5	100	74%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.41 – Aberdeen – Stonehaven (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:37	**Aberdeen**	**Stonehaven**	128	0	8	1	137	32%
Train Class:	170							
Number of Carriages:	6 (2 x 3)							
Number of Seats:	424							

Table 3.42 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:38	**Inverurie**	**Dyce**	9	0	0	0	9	4%
16:54	**Dyce**	**Aberdeen**	72	0	6	3	81	38%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.43 – Dyce – Aberdeen – Portlethen – Stonehaven (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:05	**Dyce**	**Aberdeen**	48	0	0	2	50	37%
17:14	**Aberdeen**	**Portlethen**	96	3	5	6	110	81%
17:27	**Portlethen**	**Stonehaven**	85	3	3	3	94	69%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.44 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:16	**Inverurie**	**Dyce**	115	2	6	10	133*	98%
17:30	**Dyce**	**Aberdeen**	124	25	8	15	172*	126%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

*** Passenger numbers were estimated based on platform counts undertaken at both Aberdeen and Dyce stations.**

Table 3.45 – Aberdeen – Stonehaven (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:36	**Aberdeen**	**Stonehaven**	119	0	8	1	128	60%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 3.46 – Inverurie – Dyce – Aberdeen (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:52	**Inverurie**	**Dyce**	4	0	0	0	4	3%
18:06	**Dyce**	**Aberdeen**	55	0	4	4	63	46%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 3.47 – Aberdeen – Stonehaven (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:16	**Aberdeen**	**Stonehaven**	179	0	0	0	179	33%
Train Class:	Class 43 HST (East Coast)							
Number of Carriages:	9							
Number of Seats:	546 (113 1st, 433 2nd)							

Table 3.48 – Aberdeen – Portlethen – Stonehaven (Monday 27th June)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:30	**Aberdeen**	**Portlethen**	77	2	0	0	79	37%
18:40	**Portlethen**	**Stonehaven**	75	0	0	0	75	35%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

3.8 Rail Overcrowding Assessment – Friday/Monday Summary Comparison

The tables below compare the results of the Friday surveys with the result on the corresponding Monday service.

Table 3.49 – Northbound AM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Friday)	% Occupancy (Monday)	Notes
07:23	**Stonehaven**	**Aberdeen**	158	68%	76%	From Perth. Terminates Inverurie
07:50	**Aberdeen**	**Dyce**	158	96%	101%	
08:03	**Dyce**	**Inverurie**	158	7%	7%	
07:34	**Stonehaven**	**Aberdeen**	Super Voyager	36%	43%	From Dundee
07:48	**Stonehaven**	**Portlethen**	170	61%	67%	From Edin
07:59	**Portlethen**	**Aberdeen**	170	60%	69%	
08:23	**Aberdeen**	**Dyce**	158	74%	93%	To Inverness
08:36	**Dyce**	**Inverurie**	158	26%	34%	
08:22	**Stonehaven**	**Portlethen**	170	68%	80%	From Glas. Terminates Dyce
08:31	**Portlethen**	**Aberdeen**	170	77%	83%	
08:50	**Aberdeen**	**Dyce**	170	18%	20%	

Table 3.50 – Northbound PM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Friday)	% Occupancy (Monday)	Notes
16:43	**Aberdeen**	**Dyce**	158	24%	32%	Terminates Dyce
17:18	**Aberdeen**	**Dyce**	170+158	61%	86%	To Inverness
17:29	**Dyce**	**Inverurie**	170+158	73%	93%	
17:33	**Stonehaven**	**Aberdeen**	170	69%	60%	From Edin. Terminates Inverurie
17:56	**Aberdeen**	**Dyce**	170	43%	72%	
18:05	**Dyce**	**Inverurie**	170	32%	46%	
18:20	**Aberdeen**	**Dyce**	158 x 2	62%	57%	To Inverness
18:29	**Dyce**	**Inverurie**	158 x 2	58%	58%	

Table 3.51 –Southbound AM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Friday)	% Occupancy (Monday)	Notes
07:14	**Inverurie**	**Dyce**	170	33%	44%	Continues to Glasgow
07:26	**Dyce**	**Aberdeen**	170	45%	56%	
07:40	**Aberdeen**	**Stonehaven**	170	32%	Not surveyed	
07:49	**Inverurie**	**Dyce**	170 + 158	56%	83%	From Inverness
08:03	**Dyce**	**Aberdeen**	170 + 158	59%	91%	
08:22	**Inverurie**	**Dyce**	158	46%	43%	Local Service
08:35	**Dyce**	**Aberdeen**	158	68%	58%	
09:08	**Dyce**	**Aberdeen**	170	39%	9%	Continues to Glasgow
09:15	**Inverurie**	**Dyce**	158	118%	92%	From Inverness
09:27	**Dyce**	**Aberdeen**	158	118%	80%	

Table 3.52 – Southbound PM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Friday)	% Occupancy (Monday)	Notes
16:18	**Inverurie**	**Dyce**	158	56%	40%	From Inverness
16:31	**Dyce**	**Aberdeen**	158	101%	74%	
16:37	**Aberdeen**	**Stonehaven**	170 x 2	33%	32%	To Glasgow
16:38	**Inverurie**	**Dyce**	170	15%	4%	To Edinburgh
16:54	**Dyce**	**Aberdeen**	170	47%	38%	
17:05	**Dyce**	**Aberdeen**	158	31%	37%	Terminates Stonehaven
17:14	**Aberdeen**	**Portlethen**	158	52%	81%	
17:27	**Portlethen**	**Stonehaven**	158	46%	69%	
17:16	**Inverurie**	**Dyce**	158	93%	98%	From Inverness
17:30	**Dyce**	**Aberdeen**	158	141%	126%	
17:36	**Aberdeen**	**Stonehaven**	170	72%	60%	To Glasgow
17:52	**Inverurie**	**Dyce**	158	18%	3%	Local Service
18:06	**Dyce**	**Aberdeen**	158	42%	46%	
18:16	**Aberdeen**	**Stonehaven**	Class 43 HST	37%	28%	To Leeds via Edinburgh
18:30	**Aberdeen**	**Portlethen**	170	39%	37%	To Glasgow
18:40	**Portlethen**	**Stonehaven**	170	37%	35%	

3.9 Passenger Comments

Over the course of the survey programme, the survey team also received qualitative feedback from users of the train service.

Table 3.53 below summarises the main comments that were received.

Table 3.53 – Recorded Passenger Comments

Service	Passenger Comment
07:23 Aberdeen to Inverurie (Friday 24th June)	Passenger stated that a fairly large proportion of BP workers get every second Friday off (of which the 24th was an off day) which he suggested results in a marked decrease in train users on the Aberdeen- Dyce section of the journey.
17:05 Dyce to Stonehaven (Friday 24th June)	Passenger stated that this train is usually busier and he rarely manages to get a seat.
17:05 Aberdeen to Stonehaven (Mon 27th June)	Passenger suggested that train has been quieter than usual recently. Another passenger suggested Wednesday was the busiest day of the week.

3.10 Summary

This chapter has presented the results of the on-board and station platform surveys undertaken on Friday 24th June 2011 and Monday 27th June 2011.

Chapter 4 sets out the results of the October surveys.

October Survey Results

4 October Survey Results

4.1 Introduction

This chapter presents the key results from the on-board and station platform surveys undertaken in October 2011. For each of these tasks, analysis is categorised according to direction, day and time of day.

4.2 Meeting the Survey Requirements

4.2.1 Introduction

All train services targeted as per the study brief were successfully surveyed.

No significant problems were encountered during this element of the survey, although an unforeseen issue affected the way counts were calculated for one service. This is summarised in the table below.

Table 4.1 – Thursday 27 October 0908 Dyce to Aberdeen

Count Issue	Assessment
Missed connection in order to survey the 0908 Dyce – Aberdeen train.	Passengers were counted at Aberdeen station as the train arrived. The count was accurate as only a small number of passengers were on board the service.

The survey team also reported that on Thursday, some trains were overcrowded meaning staff had difficulty walking through. However, counts were recorded for each service as far as possible, and completed using observations from the platform. The dataset highlights those trains where this was reported to be an issue.

4.3 Rail Overcrowding Assessment

The sections below present the key results of the on-board train surveys undertaken on Thursday 27th October and Friday 28th October 2011. Results are presented by direction, day and time of day, and within each of these sections, the results are further sub-divided into route section to highlight total occupancy, and percentage of the total train occupancy.

4.4 Northbound Services (Thursday 27th October)

4.4.1 AM Peak

Table 4.2 – Stonehaven – Aberdeen – Dyce – Inverurie (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:23	**Stonehaven**	**Aberdeen**	75	0	2	0	77	57%
07:50	**Aberdeen**	**Dyce**	120	6	4	23	153	113%
08:03	**Dyce**	**Inverurie**	8	0	0	0	8	6%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.3 – Stonehaven – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:34	**Stonehaven**	**Aberdeen**	134	0	0	7	141	56%
Train Class:	Super Voyager							
Number of Carriages:	5							
Number of Seats:	250							

Table 4.4 – Stonehaven – Portlethen – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:48	**Stonehaven**	**Portlethen**	184	19	2	42	247	117%
07:59	**Portlethen**	**Aberdeen**	184	21	1	42	248	117%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.5 – Aberdeen – Dyce – Inverurie (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:23	**Aberdeen**	**Dyce**	106	2	6	10	124	91%
08:36	**Dyce**	**Inverurie**	30	0	0	0	30	22%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.6 – Stonehaven – Portlethen – Aberdeen – Dyce (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Stonehaven**	**Portlethen**	161	4	10	18	193	91%
08:31	**Portlethen**	**Aberdeen**	162	4	12	18	196	92%
08:50	**Aberdeen**	**Dyce**	79	0	3	0	82	39%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

4.4.2 PM Peak

Table 4.7 – Aberdeen – Dyce (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:43	**Aberdeen**	**Dyce**	51	0	0	2	53	39%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.8 – Aberdeen – Dyce – Inverurie (1) (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:18	**Aberdeen**	**Dyce**	277	30	12	90	409	118%
17:29	**Dyce**	**Inverurie**	304	90	10	68	472	136%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

The ability to undertake counts on board this train was made more difficult by the level of on-board overcrowding.

Table 4.9 – Stonehaven – Aberdeen – Dyce – Inverurie (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:33	**Stonehaven**	**Aberdeen**	95	0	13	3	111	52%
17:56	**Aberdeen**	**Dyce**	104	0	8	3	115	54%
18:05	**Dyce**	**Inverurie**	81	0	3	2	86	41%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.10 – Aberdeen – Dyce – Inverurie (2) (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:20	**Aberdeen**	**Dyce**	156	4	15	3	178	65%
18:29	**Dyce**	**Inverurie**	152	0	12	1	165	61%
Train Class:	158							
Number of Carriages:	4 (2 x 2)							
Number of Seats:	272							

4.5 Northbound Services (Friday 28th October)

4.5.1 AM Peak

Table 4.11 – Stonehaven – Aberdeen – Dyce – Inverurie (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:23	**Stonehaven**	**Aberdeen**	75	0	3	0	78	57%
07:50	**Aberdeen**	**Dyce**	112	4	5	4	125	92%
08:03	**Dyce**	**Inverurie**	10	0	0	0	10	7%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.12 – Stonehaven – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:34	**Stonehaven**	**Aberdeen**	110	0	0	7	117	47%
Train Class:	Super Voyager							
Number of Carriages:	5							
Number of Seats:	250							

Table 4.13 – Stonehaven – Portlethen – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:48	**Stonehaven**	**Portlethen**	189	23	5	31	248	117%
07:59	**Portlethen**	**Aberdeen**	189	25	6	31	251	118%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.14 – Aberdeen – Dyce – Inverurie (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:23	**Aberdeen**	**Dyce**	104	1	4	14	123	90%
08:36	**Dyce**	**Inverurie**	46	0	0	0	46	34%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.15 – Stonehaven – Portlethen – Aberdeen – Dyce (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Stonehaven**	**Portlethen**	146	1	9	15	171	81%
08:31	**Portlethen**	**Aberdeen**	152	1	9	19	181	85%
08:50	**Aberdeen**	**Dyce**	Train Terminated in Aberdeen (service running late)					
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

4.5.2 PM Peak

Table 4.16 – Aberdeen – Dyce (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:43	**Aberdeen**	**Dyce**	37	0	1	1	39	29%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.17 – Aberdeen – Dyce – Inverurie (1) (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:18	**Aberdeen**	**Dyce**	285	35	14	22	356	102%
17:29	**Dyce**	**Inverurie**	282	47	11	40	380	109%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

Table 4.18 – Stonehaven – Aberdeen – Dyce – Inverurie (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:33	**Stonehaven**	**Aberdeen**	133	0	17	8	158	75%
17:56	**Aberdeen**	**Dyce**	84	0	5	0	89	42%
18:05	**Dyce**	**Inverurie**	61	0	5	0	66	31%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.19 – Aberdeen – Dyce – Inverurie (2) (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:20	**Aberdeen**	**Dyce**	168	0	9	4	181	67%
18:29	**Dyce**	**Inverurie**	169	0	10	6	185	68%
Train Class:	158							
Number of Carriages:	4 (2 x 2)							
Number of Seats:	272							

4.6 Southbound Services (Thursday 27th October)

4.6.1 AM Peak

Table 4.20 – Inverurie – Dyce – Aberdeen – Portlethen – Stonehaven (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:14	**Inverurie**	**Dyce**	115	0	7	1	123	58%
07:26	**Dyce**	**Aberdeen**	134	9	14	6	163	77%
07:40	**Aberdeen**	**Stonehaven**	96	2	11	0	109	51%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.21 – Inverurie – Dyce – Aberdeen (1) (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:49	**Inverurie**	**Dyce**	293	44	12	25	374	107%
08:03	**Dyce**	**Aberdeen**	282	50	11	48	391	112%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

The ability to undertake counts on board this train was made more difficult by the level of on-board overcrowding.

Table 4.22 – Inverurie – Dyce – Aberdeen (2) (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Inverurie**	**Dyce**	65	0	2	0	67	49%
08:35	**Dyce**	**Aberdeen**	83	0	3	1	87	64%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.23 – Dyce – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:08	**Dyce**	**Aberdeen**	16	0	0	0	16	8%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Missed connection in order to survey the 0908 Dyce – Aberdeen train. Passengers were counted at Aberdeen station as the train arrived.

Table 4.24 – Inverurie – Dyce – Aberdeen (3) (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:15	**Inverurie**	**Dyce**	109	6	7	17	139	102%
09:27	**Dyce**	**Aberdeen**	96	3	5	20	124	91%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

4.6.2 PM Peak

Table 4.25 – Inverurie – Dyce – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:18	**Inverurie**	**Dyce**	47	0	0	1	48	35%
16:31	**Dyce**	**Aberdeen**	96	7	6	10	119	88%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.26 – Aberdeen – Stonehaven (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:37	**Aberdeen**	**Stonehaven**	167	0	22	38	227	107%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.27 – Inverurie – Dyce – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:38	**Inverurie**	**Dyce**	20	0	0	0	20	9%
16:54	**Dyce**	**Aberdeen**	85	0	4	0	89	42%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.28 – Dyce – Aberdeen – Portlethen – Stonehaven (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:05	**Dyce**	**Aberdeen**	57	0	0	2	59	43%
17:14	**Aberdeen**	**Portlethen**	115	2	3	4	124	91%
17:27	**Portlethen**	**Stonehaven**	102	1	2	4	109	80%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.29 – Inverurie – Dyce – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:16	**Inverurie**	**Dyce**	58	0	3	0	61	45%
17:30	**Dyce**	**Aberdeen**	121	23	4	25	173	127%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.30 – Aberdeen – Stonehaven (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:36	**Aberdeen**	**Stonehaven**	185	39	3	25	252	119%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

The ability to undertake counts on board this train was made more difficult by the level of on-board overcrowding.

Table 4.31 – Inverurie – Dyce – Aberdeen (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:52	**Inverurie**	**Dyce**	16	0	0	1	17	13%
18:06	**Dyce**	**Aberdeen**	42	0	1	2	45	33%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.32 – Aberdeen – Stonehaven (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:16	**Aberdeen**	**Stonehaven**	249	0	0	0	249	46%
Train Class:	Class 43 HST (East Coast)							
Number of Carriages:	9							
Number of Seats:	546 (113 1st, 433 2nd)							

Table 4.33 – Aberdeen – Portlethen – Stonehaven (Thursday 27th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:30	**Aberdeen**	**Portlethen**	90	0	0	1	91	67%
18:40	**Portlethen**	**Stonehaven**	88	0	0	0	88	65%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

4.7 Southbound Services (Friday 28th October)

4.7.1 AM Peak

Table 4.34 – Inverurie – Dyce – Aberdeen (1) (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:14	**Inverurie**	**Dyce**	92	0	5	0	97	46%
07:26	**Dyce**	**Aberdeen**	104	3	14	2	123	58%
07:37	**Aberdeen**	**Stonehaven**	90	0	8	0	98	46%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.35 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
07:49	**Inverurie**	**Dyce**	287	27	17	13	344	99%
08:03	**Dyce**	**Aberdeen**	267	29	20	29	345	99%
Train Class:	170 / 158							
Number of Carriages:	5 (3 / 2)							
Number of Seats:	348 (212 / 136)							

Table 4.36 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
08:22	**Inverurie**	**Dyce**	85	0	0	1	86	63%
08:35	**Dyce**	**Aberdeen**	98	0	5	4	107	79%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.37 – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:08	**Dyce**	**Aberdeen**	27	0	0	0	27	20%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.38 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
09:15	**Inverurie**	**Dyce**	115	7	7	20	149	110%
09:27	**Dyce**	**Aberdeen**	105	7	7	24	143	105%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

4.7.2 PM Peak

Table 4.39 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:18	**Inverurie**	**Dyce**	99	3	4	4	110	81%
16:31	**Dyce**	**Aberdeen**	134	24	6	28	192	141%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.40 – Aberdeen – Stonehaven (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:37	**Aberdeen**	**Stonehaven**	186	22	32	26	266	125%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.41 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
16:38	**Inverurie**	**Dyce**	8	0	0	0	8	4%
16:54	**Dyce**	**Aberdeen**	57	0	6	4	67	32%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.42 – Dyce – Aberdeen – Portlethen – Stonehaven (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:05	**Dyce**	**Aberdeen**	40	0	3	0	43	32%
17:14	**Aberdeen**	**Portlethen**	79	0	1	3	83	61%
17:27	**Portlethen**	**Stonehaven**	80	0	2	3	85	63%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.43 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:16	**Inverurie**	**Dyce**	105	1	5	0	111	82%
17:30	**Dyce**	**Aberdeen**	134	34	3	18	189	139%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.44 – Aberdeen – Stonehaven (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:36	**Aberdeen**	**Stonehaven**	205	36	12	43	296	140%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

Table 4.45 – Inverurie – Dyce – Aberdeen (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
17:52	**Inverurie**	**Dyce**	28	0	0	0	28	21%
18:06	**Dyce**	**Aberdeen**	69	0	2	2	73	54%
Train Class:	158							
Number of Carriages:	2							
Number of Seats:	136							

Table 4.46 – Aberdeen – Stonehaven (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:16	**Aberdeen**	**Stonehaven**	284	0	0	12	296	54%
Train Class:	Class 43 HST (East Coast)							
Number of Carriages:	9							
Number of Seats:	546 (113 1st, 433 2nd)							

Capabilities on project:
Transportation

Table 4.47 – Aberdeen – Portlethen – Stonehaven (Friday 28th October)

			Total					
Scheduled Departure Time	From (station name)	To (station name)	Seated	Standing	Sitting on 'flap-up' vestibule seats	Standing in Vestibule	Total occupancy	% Occupancy
18:30	**Aberdeen**	**Portlethen**	110	0	2	0	112	82%
18:40	**Portlethen**	**Stonehaven**	107	0	1	0	108	79%
Train Class:	170							
Number of Carriages:	3							
Number of Seats:	212							

4.8 Rail Overcrowding Assessment – Thursday/Friday Summary Comparison

The tables below compare the results of the Thursday surveys with the result on the corresponding Friday service.

Table 4.48 – Northbound AM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Thursday)	% Occupancy (Friday)	Notes
07:23	**Stonehaven**	**Aberdeen**	158	57%	57%	From Perth. Terminates Inverurie
07:50	**Aberdeen**	**Dyce**	158	113%	92%	
08:03	**Dyce**	**Inverurie**	158	6%	7%	
07:34	**Stonehaven**	**Aberdeen**	Super Voyager	56%	47%	From Dundee
07:48	**Stonehaven**	**Portlethen**	170	117%	117%	From Edin
07:59	**Portlethen**	**Aberdeen**	170	117%	118%	
08:23	**Aberdeen**	**Dyce**	158	91%	90%	To Inverness
08:36	**Dyce**	**Inverurie**	158	22%	34%	
08:22	**Stonehaven**	**Portlethen**	170	91%	81%	From Glas. Terminates Dyce
08:31	**Portlethen**	**Aberdeen**	170	92%	85%	
08:50	**Aberdeen**	**Dyce**	170	39%	-	

Table 4.49 – Northbound PM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Thursday)	% Occupancy (Friday)	Notes
16:43	**Aberdeen**	**Dyce**	158	39%	29%	Terminates Dyce
17:18	**Aberdeen**	**Dyce**	170 + 158	118%	102%	To Inverness
17:29	**Dyce**	**Inverurie**	170 + 158	136%	109%	
17:33	**Stonehaven**	**Aberdeen**	170	52%	75%	From Edin. Terminates Inverurie
17:56	**Aberdeen**	**Dyce**	170	54%	42%	
18:05	**Dyce**	**Inverurie**	170	41%	31%	
18:20	**Aberdeen**	**Dyce**	158 x 2	65%	67%	To Inverness
18:29	**Dyce**	**Inverurie**	158 x 2	61%	68%	

Table 4.50 – Southbound AM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Thursday)	% Occupancy (Friday)	Notes
07:14	**Inverurie**	**Dyce**	170	58%	46%	Continues to Glasgow
07:26	**Dyce**	**Aberdeen**	170	77%	58%	
07:40	**Aberdeen**	**Stonehaven**	170	51%	46%	
07:49	**Inverurie**	**Dyce**	170 + 158	107%	99%	From Inverness
08:03	**Dyce**	**Aberdeen**	170 + 158	112%	99%	
08:22	**Inverurie**	**Dyce**	158	49%	63%	Local Service
08:35	**Dyce**	**Aberdeen**	158	64%	79%	
09:08	**Dyce**	**Aberdeen**	170	8%	20%	Continues to Glasgow
09:15	**Inverurie**	**Dyce**	158	102%	110%	From Inverness
09:27	**Dyce**	**Aberdeen**	158	91%	105%	

Table 4.51 – Southbound PM Peak Summary

Scheduled Departure Time	From (station name)	To (station name)	Train Set	% Occupancy (Thursday)	% Occupancy (Friday)	Notes
16:18	**Inverurie**	**Dyce**	158	35%	81%	From Inverness
16:31	**Dyce**	**Aberdeen**	158	88%	141%	
16:37	**Aberdeen**	**Stonehaven**	170	107%	125%	To Glasgow
16:38	**Inverurie**	**Dyce**	170	9%	4%	To Edinburgh
16:54	**Dyce**	**Aberdeen**	170	42%	32%	
17:05	**Dyce**	**Aberdeen**	158	43%	32%	Terminates Stonehaven
17:14	**Aberdeen**	**Portlethen**	158	91%	61%	
17:27	**Portlethen**	**Stonehaven**	158	80%	63%	
17:16	**Inverurie**	**Dyce**	158	45%	82%	From Inverness
17:30	**Dyce**	**Aberdeen**	158	127%	139%	
17:36	**Aberdeen**	**Stonehaven**	170	119%	140%	To Glasgow
17:52	**Inverurie**	**Dyce**	158	13%	21%	Local Service
18:06	**Dyce**	**Aberdeen**	158	33%	54%	
18:16	**Aberdeen**	**Stonehaven**	Class 43 HST	46%	54%	To Leeds via Edinburgh
18:30	**Aberdeen**	**Portlethen**	170	67%	82%	To Glasgow
18:40	**Portlethen**	**Stonehaven**	170	65%	79%	

4.9 Passenger Comments

Passengers on the busy services were pleased that surveyors were on board to record the levels of overcrowding. Most displayed an annoyance at the number of carriages or the frequency of service. Many passengers commented that standing was usual on the services between 1700 and 1800.

4.10 Summary

This chapter has presented the results of the on-board and station platform surveys undertaken on Thursday 27th October 2011 and Friday 28th October 2011.

Chapter 5 draws on these results by presenting the main outcomes of the station platform assessments.

Station Platform Assessments

5 Station Platform Assessments

5.1 Introduction

This chapter presents the key findings of the station platforms undertaken as part of the June and October Rail Overcrowding Surveys.

Photographs from this element of the survey comprise Appendix B.

5.2 June Station Platform Assessments

As noted in Chapter 2, station platform assessments were undertaken on Friday 24th June only at Stonehaven (AM only), Dyce and Aberdeen stations.

While conducting the station platform assessments, the number of passengers waiting on the platforms was also recorded, and these figures are presented with the Appendix A.

5.2.1 Stonehaven Station Platform Survey

A survey on the platform at Stonehaven station was undertaken on Friday 24th June (and for the AM peak on Monday 27th June, as surveyor positioning provided this opportunity).

Overall, no major problems or issues were reported with regard to overcrowding on the platform at Stonehaven. The maximum number of passengers waiting to board a train at Stonehaven was 67, for the 07:34 departure for Aberdeen.

The tidal nature of the flow at Stonehaven minimises platform congestion issues (e.g. in the AM peak the majority of passengers are boarding northbound services, in the PM peak they are alighting from southbound services). Furthermore, the passenger demand on the platforms would appear to be comfortably accommodated by the space available.

5.2.2 Dyce Station Platform Survey

A survey on the platform at Dyce station was undertaken on Friday 24th June.

Again, overall, no major problems or issues were reported with regard to overcrowding on the platform at Dyce. The maximum observed number of passengers waiting on the platform at Dyce was 66.

Similar to the pattern experienced at Stonehaven, there were few problems posed by passenger boarding/alighting, as the majority of passengers utilising peak period train services at Dyce are either all boarding, or all alighting, depending on time of day.

The likelihood of station platform overcrowding at Dyce is also more unlikely as:

- Trains calling at the station are typically stationed at the platform for several minutes (enabling passengers to board early); and
- The platforms themselves are wide, which can accommodate passengers without any difficulties.

However, we would note that there appears to be a relatively higher percentage of passengers using Dyce taking their bikes onto the train, possibly due to the location of the station in relation to the main employment sites. This does cause some localised congestion issues on boarding / alighting at specific points along the train, but not to the extent that would be considered particularly exceptional elsewhere on the network.

5.2.3 Aberdeen Station Platform Survey

This section presents the results of the platform surveys undertaken at Aberdeen station. The maximum number of passengers waiting on trains in the AM peak was 87, this was for the 08:23 departure to Inverness, calling also at Dyce. This uses platform 6 South, and with the train already waiting on the platform, no particular problems were reported.

Due to reported issues in the PM period, we undertook individual observations of each departure from Aberdeen.

Northbound Services

- 1643 (Platform 7N)

The 1643 departure from Aberdeen – Dyce was the first northbound service to be assessed as part of the station platform assessment in the PM peak at Aberdeen station. 25 passengers boarded the train, and no issues were apparent.

Any need for passengers to queue on the platform for this service was removed due to:

- The train being stationed on the platform prior to the departure time; and
- The barriers at Platform 7N were not in operation.

- 1718 (Platform 6N)

This departure was found to be the busiest northbound services (265 passengers boarding), although any boarding problems were not apparent, because the embarkation process began sufficiently in advance of departure time. As the train was starting from Aberdeen, there were no complications arising from passengers also trying to alight the service.

- 1756 (Platform 6N)

This service was found to have the most significant issues with regard to passenger embarkation at Aberdeen, although only 66 passengers boarded the service on the Friday. Three key issues are apparent from our observations.

- The train is a through train, originally commencing in Edinburgh, terminating in Inverurie. Therefore, upon arrival in Aberdeen there were a significant number of passengers alighting from this service.
- The platform used is 6 North, which is one of the narrower platforms at Aberdeen Station.
- The time available for total passenger alighting and embarkation is 3 minutes.

With passengers able to wait for the train in advance, this departure appeared to produce the greatest “friction” between passengers alighting at Aberdeen station, and those waiting to board to travel north, as there is only three minutes from the train arriving (from Edinburgh) in Aberdeen at 1753, and departing for Dyce at 1756. In this time, a high level of passengers leaving the train at Aberdeen had to alight, before the waiting passengers could board.

This led to a crowding of passengers on the platform as boarding and alighting passengers interacted. The ease of this interaction was constrained by the small gap between the drop off car park perimeter fence, and the train/platform edge.

Southbound Services

- 1637 (Platform 5)

The 1637 departure from Aberdeen was the first southbound service to be assessed as part of the station platform assessment in the PM peak at Aberdeen station. 107 passengers boarded this service.

With a barrier in operation prior to passenger embarkation, the passenger queue was sprawled behind and at the barrier. As the train started in Aberdeen there were no particular platform issues.

- 1707 (Platform 6S)

Queuing for this departure was more "organised", in that the passenger queue was on the platform rather than the concourse area behind the barrier. As the first stop for this service was Laurencekirk, it was not included in the on-board assessment. A total of 109 passengers boarded this service.

- 1716 (Platform 7N)

Passengers were able to wait on the platform as barriers at Platform 7N were not in operation. 54 passengers boarded this service.

Despite this being a through service, with passengers both alighting and boarding, no particular difficulties were observed for this service. This is probably due to the fact that the total numbers alighting / boarding were less than for the 17.56 Northbound departure.

- 1736 (Platform 3)

The level of queuing and platform activity was minimal for this service as boarding was enabled around 15 minutes prior to departure. 143 passengers were observed boarding this train.

It was also observed that passenger boarding was enabled well in advance of the 1816 departure, which prevented any queuing of passengers in the part of the concourse beyond the ticket barrier.

5.2.4 Summary

The most significant platform issues occurred with the interaction between alighting and boarding passengers appears to be on Platform 6N for the 1756 northbound departure to Dyce. This was due to a high number of passengers alighting and boarding this service, and relatively narrow platform space. However, it is not considered that the level of platform congestion could be considered particularly severe in comparison with other situations across the network.

This was the principal finding of this element of the survey, with no major conflicts appearing to arise on any other platforms at Aberdeen surveyed as part of the station platform assessment.

5.3 October Station Platform Assessments

As noted in Chapter 2, this element focussed specifically on PM departures only at Aberdeen station on Friday 28th October, due to the lack of issues observed at the station platforms at Dyce and Stonehaven in June.

5.3.1 Aberdeen Station Platform Survey

This section presents the results of the platform surveys undertaken at Aberdeen station.

As per the June survey, we undertook individual observations of each departure from Aberdeen in the PM period, but this survey excluded counts of passengers.

Northbound Services

- 1643 (Platform 7N)

There were no issues at this platform. As the train arrived at 1638, there was ample time for passenger boarding.

- 1718 (Platform 6N)

Any boarding problems were not apparent, as the embarkation process began sufficiently in advance of departure.

- 1756 (Platform 6N)
  - Passengers were able to wait for the train in advance.
  - In the June survey, this departure appeared to produce the greatest interaction between passengers alighting at Aberdeen station, and those waiting to board to travel north, as there is only three minutes from the train arriving (from Edinburgh) in Aberdeen at 1753, and departing for Dyce at 1756. In this time, a high level of passengers leaving the train at Aberdeen had to alight, before the waiting passengers could board.
  - However, on this occasion, there did not appear to be any major problems.
  - Passenger movement is constrained by the drop off car park perimeter fence, and the train/platform edge, but again on this occasion this did not appear to be causing a significant problem.

- 1820 (Platform 6S)

Passengers were able to board the train in advance.

Southbound Services

- 1637 (Platform 5)

There were no platform issues for this departure as the train was already stationed at the platform in sufficient advance of the departure.

- 1641 (Platform 6N)

This service arrived late (1650), but as Aberdeen was the final stop, there were no boarding/alighting issues.

- 1707 (Platform 6S)
    - Passenger queue on platform rather than concourse.
    - A number of passengers were observed alighting from the 1641 arrival from Dyce (noted above, which arrived at 1650) and making their way to Platform 6S for the 1707 departure.
    - The train for the 1707 service (arriving from Dyce at 1705), had a number of passengers alight at Aberdeen, and at the same time, coincided with the arrival of the 1709 train from London.
    - However, the London train arrived at Platform 5, and overall, passenger movement on the platform appeared to be well managed, even if the area was busy.

- 1716 (Platform 7N)
    - The majority of passengers travelling on this service were waiting for the train prior to its arrival.
    - Owing to the size of the platform, and the relatively small number of alighting passengers from the train at 1714, there were no particular issues on the platform.

- 1736 (Platform 3)

The level of queuing was minimal as boarding was enabled well in advance of departure.

- 1741 (Platform 6S)

There were no issues with this arrival as there were no passengers waiting to board services departing Aberdeen.

- 1816 (Platform 5)

Embarkation began sufficiently in advance of departure.

5.3.2 Summary

Overall, there did not appear to be any major conflicts on any platforms at Aberdeen station surveyed as part of the station platform assessment in October 2011. While alighting and boarding issues were identified on Platform 6N for the 1756 northbound departure to Dyce in June, there did not appear to be any major problems in the October survey.

In addition, although there were a number of passengers on Platforms 5 and 6S between 1705 and 1710, movement on the platform appeared to be well managed.

5.4 Summary

This chapter has presented the main findings of the station platform assessments undertaken in June and October.

Chapter 6 draws on the results presented in Chapters 3, 4 and 5 to present the key findings that have emerged from the surveys.

Key Findings

6 Key Findings

6.1 Introduction

This chapter presents the key findings of the Rail Overcrowding Survey.

6.2 Key Finding 1 – Occupancy Levels

The June results demonstrate that the majority of cases where the % occupancy exceeded the total number of seats available were on journeys between Aberdeen and Dyce rail stations. The distribution of these occurrences suggests a close alignment with commuting patterns between the two stations in the AM and PM peaks. This pattern was again apparent in the October survey.

It should be noted that the 0750 service from Aberdeen-Dyce on Friday 24th June and Friday 28th October, while not "over-subscribed", still had a very high occupancy of 96% and 92% respectively of the total seats available. However, the survey team did note that due to the short distances of the journeys, some passengers opted to stand rather than take a seat even if there were plenty available.

Table 6.1 – Aberdeen-Dyce

Scheduled Departure Time	From (station name)	To (station name)	% Occupancy (Fri, June)	% Occupancy (Mon, June)	% Occupancy (Thu, October)	% Occupancy (Fri, October)
07:50	**Aberdeen**	**Dyce**	96%	101%	113%	92%
17:30	**Dyce**	**Aberdeen**	141%	126%	127%	139%

However, although the June survey suggested that there appeared to be no capacity constraints on journeys between Aberdeen and Portlethen/Stonehaven, this did not appear to be the case in the October survey, with peak services to/from Portlethen/Stonehaven also appearing to be over-subscribed.

Table 6.2 – Stonehaven/Portlethen-Aberdeen

Scheduled Departure Time	From (station name)	To (station name)	% Occupancy (Fri, June)	% Occupancy (Mon, June)	% Occupancy (Thu, October)	% Occupancy (Fri, October)
07:59	**Portlethen**	**Aberdeen**	60%	69%	117%	118%
17:36	**Aberdeen**	**Stonehaven**	72%	60%	119%	140%

A particular stress point appears on southbound pm services into Aberdeen, on two car 158 services that originate in Inverness. These trains appear to be already experiencing high loadings when they arrive at Inverurie, but the loadings between Dyce and Aberdeen gave rise to the highest loading percentages withn the survey.

6.3 Key Finding 2 – Friday/Monday Comparison (June)

A comparison of the occupancy levels recorded for both the Friday and Monday in June surveys suggests that there was a higher level of patronage on the Monday survey, with total occupancies typically appearing to be higher than the equivalent services surveyed on the Friday.

Further analysis of the June results highlights some specific findings.

- There is a broad level of consistency between the results on Monday and Friday, although differences might be explained by reduced commuting levels on Fridays compared with Mondays, but increased leisure trips on Friday compared to Mondays.
- The majority of capacity issues appear to be associated with the deployment of two carriage class 158 trains, particularly Southbound services which started their journey in Inverness.
- With only one exception, all services greater than 80% capacity utilisation are on the Aberdeen – Dyce – Inverurie section of the local rail network.
- It is also noted that many passengers choose to stand or use flip-up seats, even if seats are available in the main carriage area.

6.4 Key Finding 3 – Thursday/Friday Comparison (October)

A comparison of the occupancy levels recorded for both the Thursday and Friday surveys in October suggests that there was a higher level of patronage on the Thursday survey, with total occupancies typically appearing to be higher than the equivalent services surveyed on the Friday. This was reported anecdotally by the survey teams, who noted, for some services, that it was difficult to pass through the carriage to conduct the passenger counts owing to the number of people on board.

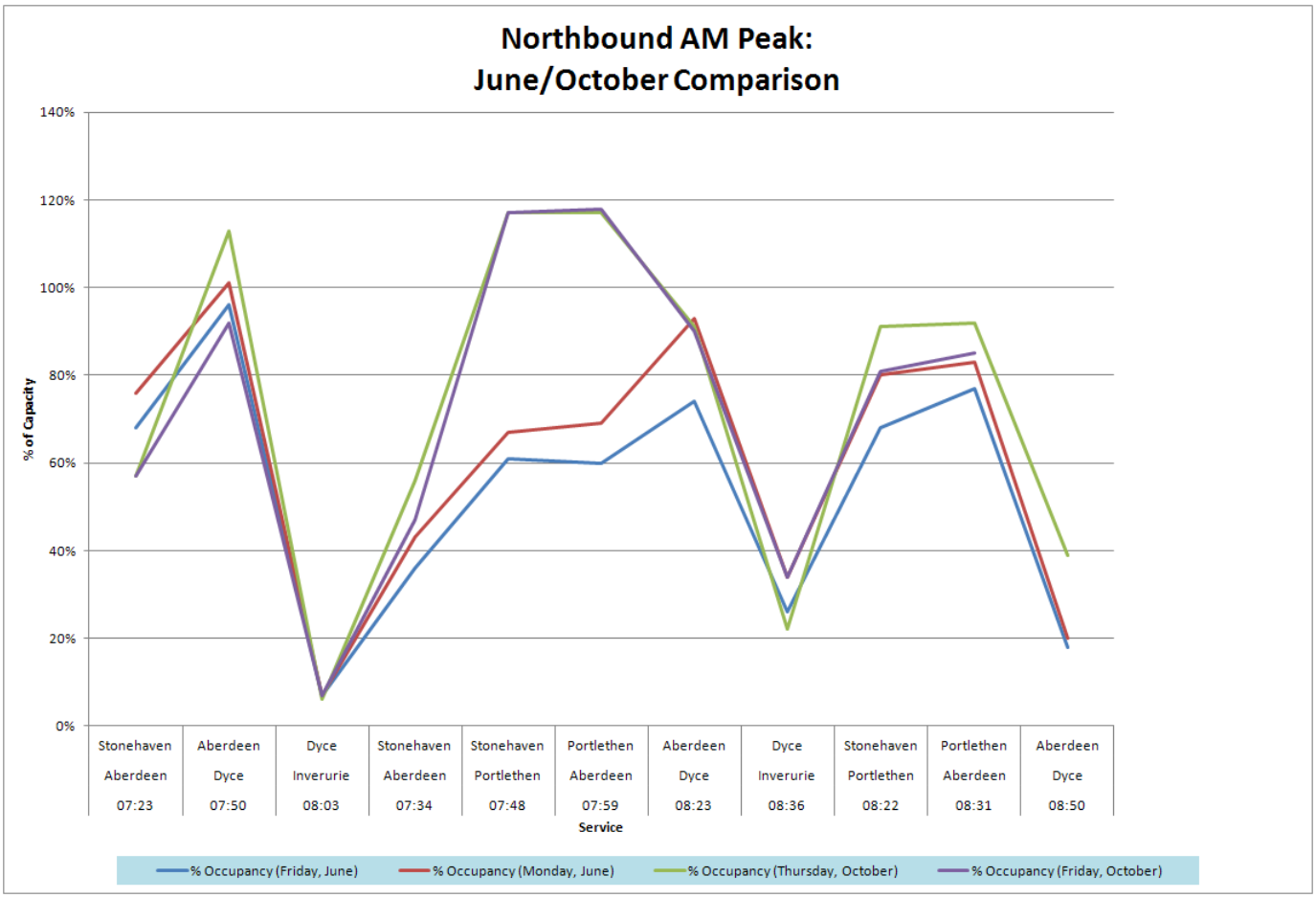
Further analysis of the October results highlights some specific findings.

- There is a broad level of consistency between the results on Thursday and Friday, although differences might be explained by reduced commuting levels on Fridays compared with Thursdays, but increased leisure trips on Friday compared to Thursday.
- The majority of capacity issues appear to be associated with the deployment of two carriage class 158 trains, particularly Southbound services which started their journey in Inverness. However, the capacity of a number of three carriage class 170 trains was exceeded during the survey, including on some Northbound services.
- The data also demonstrates that there were capacity constraints on some services south of Aberdeen.
- It is also noted that many passengers choose to stand or use flip-up seats, even if seats are available in the main carriage area.

6.5 Key Finding 4 – Overall June/October Comparison

This section compares the overall results of the June and October surveys.

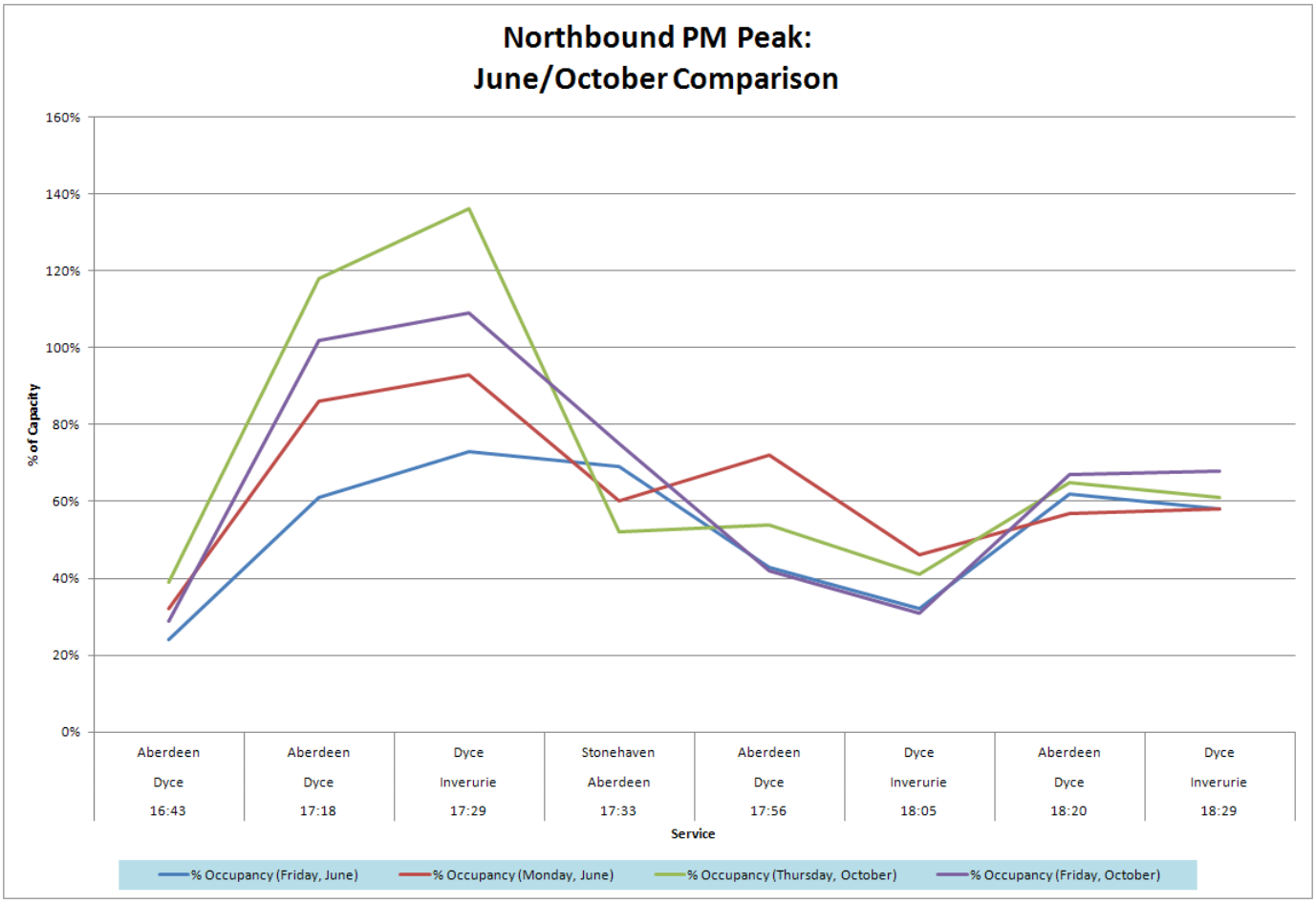
Figure 6.1 – Northbound AM Peak: June/October Comparison



Overall, the comparison of the June and October surveys for Northbound AM Peak services shows that there is a consistent pattern with regard to the busiest services.

However, a closer examination of the results shows that the same service was typically more likely to be carrying a higher number of passengers in October.

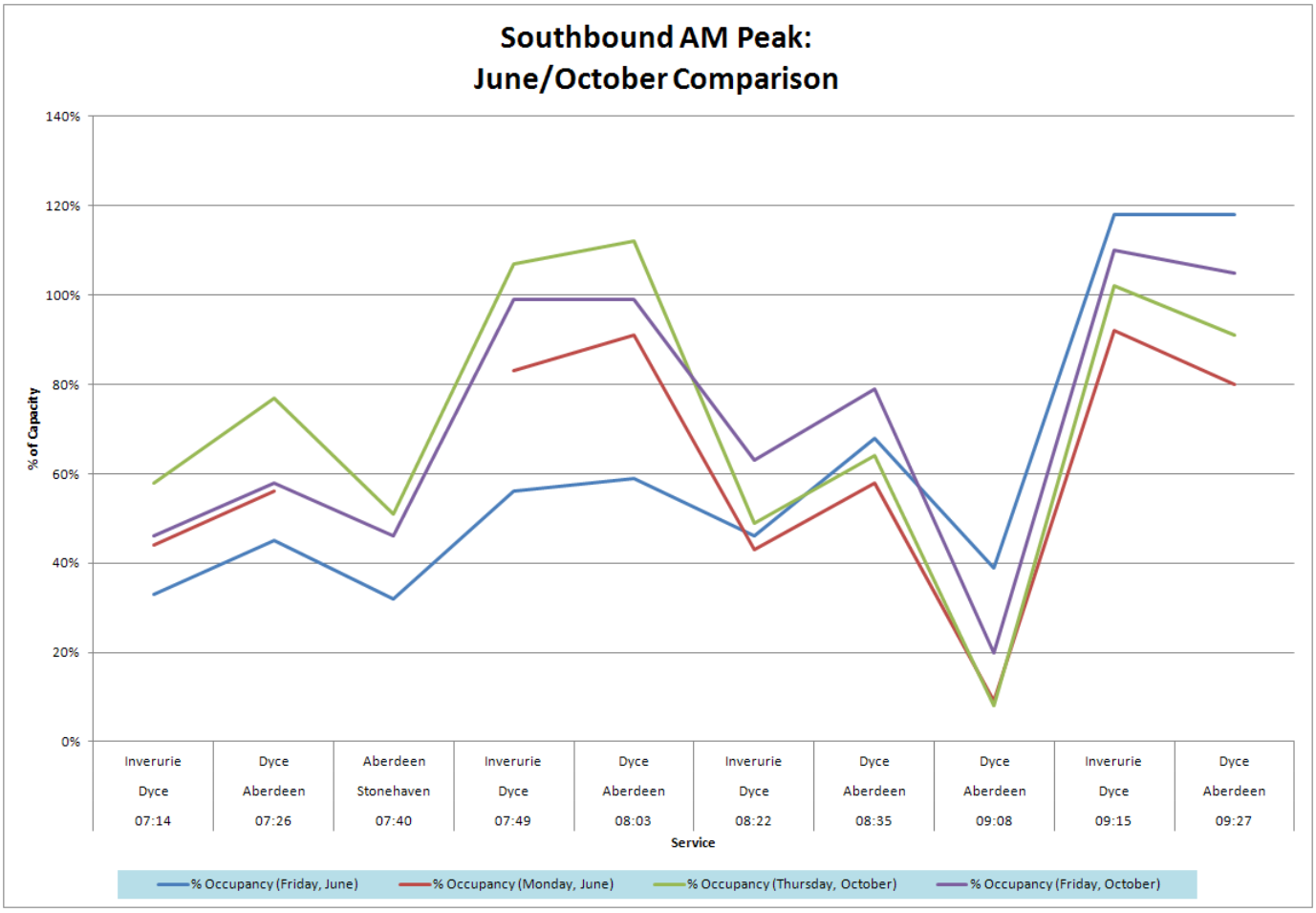
Figure 6.2 – Northbound PM Peak: June/October Comparison



Overall, the comparison of the June and October surveys for Northbound PM Peak services shows that there is a consistent pattern with regard to the busiest services.

However, a closer examination of the results shows that the same service was typically more likely to be carrying a higher number of passengers in October.

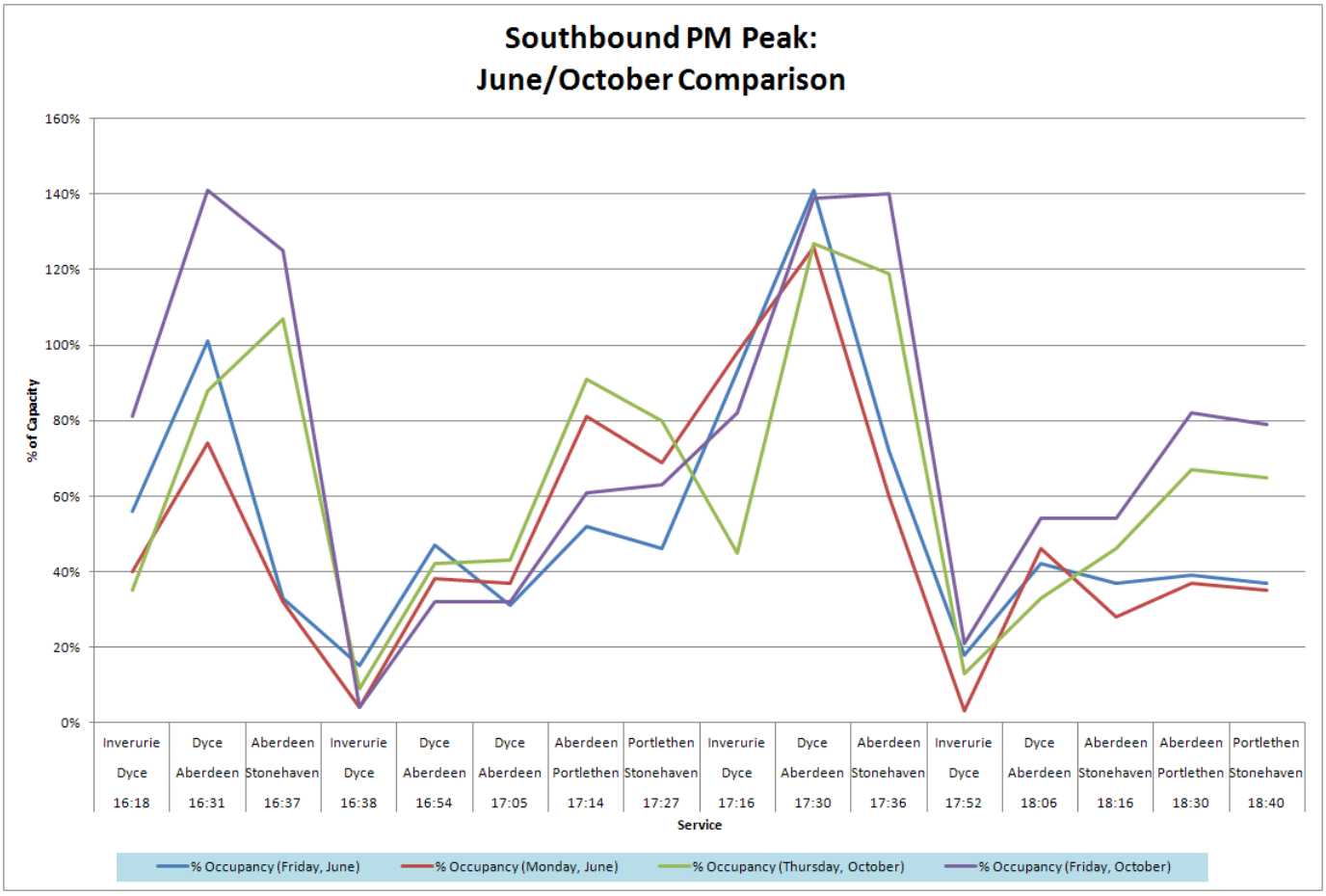
Figure 6.3 – Southbound AM Peak: June/October Comparison



Overall, the comparison of the June and October surveys for Southbound AM Peak services shows that there is a consistent pattern with regard to the busiest services.

However, a closer examination of the results shows that the same service was typically more likely to be carrying a higher number of passengers in October.

Figure 6.4 – Southbound PM Peak: June/October Comparison



Overall, the comparison of the June and October surveys for Southbound PM Peak services shows that there is a consistent pattern with regard to the busiest services.

However, a closer examination of the results shows that the same service was typically more likely to be carrying a higher number of passengers in October.

Overall, there was a notable increase in passenger levels in October compared to June, and this is reflected in the number of services that operated above their capacity. Increased passenger numbers may be attributed to the universities in Aberdeen being in session, and the surveys were undertaken following the school holidays, when commuting levels may be expected to be at their normal level.

6.6 Key Finding 5 – Station Platform Activity

The survey did not uncover any particular platform safety or overcrowding issues at Stonehaven, Dyce, or the AM Peak at Aberdeen.

However, the station platform assessment in June did confirm the limitations of Platform 6N to accommodate both embarking and alighting passengers on the 1756 service from Aberdeen – Dyce, with originated in Edinburgh.

This service was found to have the most significant issues due to the combination of a high level of passengers alighting the service, the number of passengers waiting to board the service, and the constrained space available on the platform. This interaction also has to occur within a relatively limited time period between train arrivals and departures.

However, the October survey did not appear to highlight a problem on the same scale as was observed in June, as there were not as many passengers waiting to catch the train at Aberdeen station when it arrived from Edinburgh at 1753.

Although this was the most congested platform observation that was made during the survey programme, we consider that comparisons with other rail stations elsewhere on the network would not identify this as a significant passenger safety concern.

6.7 Key Finding 6 – Level of Activity

In June, comments received by passengers suggested that the time of the survey did not necessarily correspond with peak loadings on the service. This is perhaps not surprising, as the survey was undertaken late June with the two Aberdeen Universities being in recess, and a proportion of regular travellers may have been taking annual leave just prior to the School Summer Holidays.

The targeted repeat of the surveys during late October was shown to correspond to the highest loading arising from commuter flows, and the results reflected that loadings were typically higher for all services surveyed in October than the corresponding one assessed in June.

6.8 Conclusion

Overall, it is considered that this work provides a valuable record of the pattern of train service utilisation in North East Scotland, and provides Nestrans with useful information to support their passenger rail policies.

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Appendix A

Capabilities on project:
Transportation

Appendix A – June Station Platform Passenger Counts

Capabilities on project:
Transportation

Friday 24th June

NESTRANS 24-Jun-11
PLATFORM SURVEYS 1510

ROUTE: Inverurie - Stonehaven

Station	Train	Scheduled dep time	Actual dep time	Destination	Platform number	No waiting before departure
Stonehaven	1	07:23	07:24	Inverurie	2	58
Stonehaven	2	07:34	07:34	Aberdeen	2	62
Stonehaven	3	07:48	07:50	Aberdeen	2	50
Stonehaven	4	08:22	08:23	Dyce	2	57
Dyce	1	07:26	07:26	Aberdeen	2	4
Dyce	2	08:03	08:03	Inverurie	1	36
Dyce	3	08:35	08:35	Aberdeen	2	45
Dyce	4	09:08	09:08	Aberdeen	2	66
Dyce	1	16:31	16:31	Aberdeen	2	59
Dyce	2	16:54	16:54	Aberdeen	2	51
Dyce	3	17:05	17:05	Stonehaven	2	12
Dyce	4	17:29	17:29	Inverness	1	42
Dyce	5	17:30	17:30	Aberdeen	2	52
Dyce	6	18:05	18:05	Inverurie	1	7
Dyce	7	18:06	18:06	Aberdeen	2	29
Aberdeen	1	07:50	07:50	Inverurie	7N	48
Aberdeen	2	07:40	07:40	Glasgow	6N	41
Aberdeen	3	08:23	08:23	Inverness	6S	87
Aberdeen	4	08:30	08:30	Dyce	6N	4
Aberdeen	5	08:42	08:42	Glasgow	6S	59
Aberdeen	1	16:37	16:37	Glasgow	5	107
Aberdeen	2	16:43	16:43	Dyce	7N	25
Aberdeen	3	17:07	17:07	Edinburgh	6S	109
Aberdeen	4	17:16	17:16	Stonehaven	7N	54
Aberdeen	5	17:18	17:18	Inverness	6N	265
Aberdeen	6	17:36	17:36	Glasgow	3	143
Aberdeen	7	17:56	17:56	Inverurie	6N	66
Aberdeen	8	18:20	18:20	Inverness	6S	Train already on platform
Aberdeen	9	18:16	18:16	Leeds	5	125

Monday 27th June

Although station platform assessments were only targeted on Friday 24th June 2011, station platform passenger counts for the following were also made on Monday 27th June 2011, as part of surveyor positioning:

NESTRANS 27-Jun-11
PLATFORM SURVEYS 1510

ROUTE: Inverurie - Stonehaven

Station	Train	Scheduled dep time	Actual dep time	Destination	Platform number	No waiting before departure
Stonehaven	1	07:23	07:24	Inverurie	2	49
Stonehaven	2	07:34	07:38	Aberdeen	2	67
Stonehaven	3	07:48	07:53	Aberdeen	2	60
Stonehaven	4	08:22	08:23	Dyce	2	50

Appendix B

Appendix B – June/October Station Platform Assessment: Observations

June Survey

Stonehaven, 0734 (Northbound)

Dyce, 0803 (Southbound)

Capabilities on project:
Transportation

Aberdeen, 1643 (Northbound)

Aberdeen, 1718 (Northbound)

Aberdeen, 1756 (Northbound) ***Passengers awaiting 1756 departure***

Aberdeen, 1756 (Northbound) ***Passengers alighting and boarding***

Capabilities on project:
Transportation

Aberdeen, 1637 (Southbound)

Aberdeen, 1707 (Southbound)

Capabilities on project:
Transportation

Aberdeen, 1716 (Southbound) ***Platform 7N, left hand side below***

Aberdeen, 1736 (Southbound) ***Passengers waiting 16 minutes before departure***

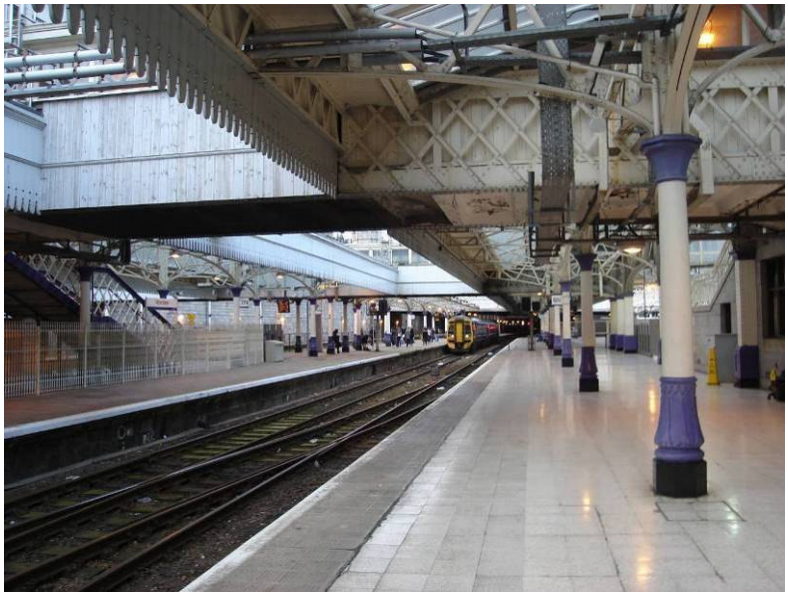
Capabilities on project:
Transportation

Aberdeen, 1736 (Southbound) ***Passenger boarding enabled – 14 minutes before departure***

Capabilities on project:
Transportation

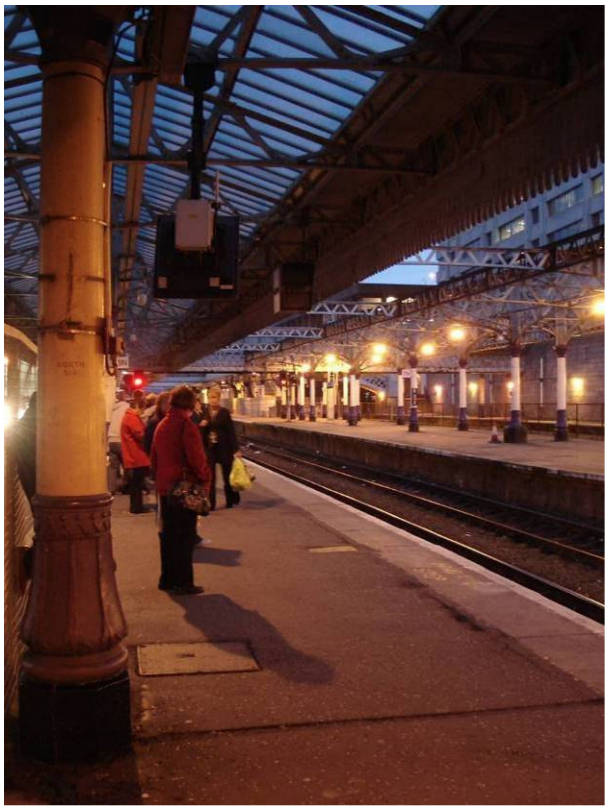
October Survey

Aberdeen, 1643 (Northbound)



Aberdeen, 1718 (Northbound)

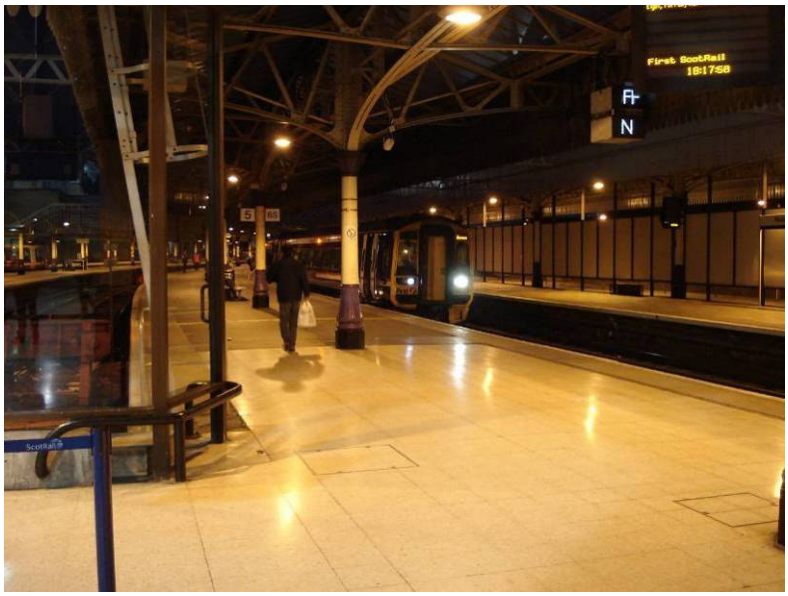
Aberdeen, 1756 (Northbound) ***Passengers awaiting 1756 departure***



Aberdeen, 1756 (Northbound) ***Passengers alighting and boarding***

Capabilities on project:
Transportation

Aberdeen, 1820 (Northbound)



Aberdeen, 1637 (Southbound)

Capabilities on project:
Transportation

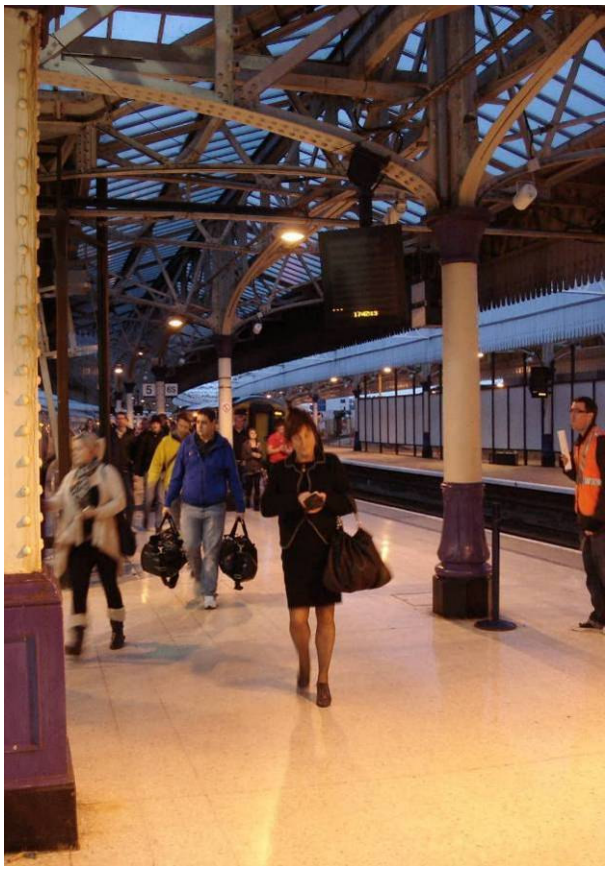
Aberdeen, 1641 (Southbound)

Aberdeen, 1707 (Southbound)

Capabilities on project:
Transportation

Aberdeen, 1716 (Southbound) *Platform 7N, left hand side above*

Aberdeen, 1736 (Southbound)

Capabilities on project:
Transportation

Aberdeen, 1741 (Southbound)