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BEFORE AND AFTER SURVEY OF A NEW STATION AT STEETON

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BEFORE AND AFTER SURVEY OF A NEW STATION AT STEETON

1.INTRODUCTION

This study has been performed to assist the validation of the Stated Intentions forecasting method and at the same time provide West Yorkshire PTE with a valuable insight into the travel patterns and demands of the population in the catchment area for the Steeton & Silsden station. The study was carried out in two stages comprising a before and after survey strategy.

The first stage involved the distibution of a questionnaire on the 25/26th March 1990, a few months before the station was re-opened. The questionnaire comprised two parts, the first of a more general nature and the second concerning the last trip made by a household member to the neighbouring town of Keighley. This town was chosen as it was considered to be the most popular destination for inhabitants of the area for both employment and leisure journeys. To encourage participation, pre-paid envelopes were provided with the questionnaires, copies of which are contained within Appendix 1.

The second stage involved an on-platform survey carried out on both Thursday 6th June and Saturday 8th June 1992, nearly one year after the re-opening of the station, Appendix 2 contains a copy of the questionnaire used.

2.STATION BACKGROUND

Steeton & Silsden station had originally been opened in 1892 as part of the Midland, and later the London Midland and Scottish Railways, to serve the villages of Steeton, Eastburn and Silsden and the surrounding area. In 1965 the station was closed during the Beeching era of network rationalisation but was re-opened by West Yorkshire PTE on 14th May 1990 and a year later is serving around 600 boarding passengers per day, apparently justifying the decision.

The station is on the Airedale Line of the West Yorkshire network.

Figure 1: Airedale Line Stations

Connections from Bradford are hampered by the inhibiting existence of two central area stations (Forster Square and Interchange) without a rail connection, yet Leeds is the centre of the West Yorkshire network and has excellent connections throughout the county and beyond. At Shipley one may change train for Ilkley and from Skipton the major destinations are Morecambe and Carlisle. The journey time to these latter two towns make these destinations unattractive for work and shopping trips and they are more popular for leisure pursuits.

Skipton and Cononley stations are in the county of North Yorkshire and, being subject to a higher fare structure, a real consequence may be the crossing of the county line to use Steeton & Silsden station and thus benefit from the lower fares. In particular, those inhabitants from Crosshills, Kildwick, Glusburn and Sutton-in-Craven may make this journey. West Yorkshire PTE consider this practise to have not taken off, inhibited by the limited car parking space available at Steeton and Silsden station which caters for around 80 vehicles.

3.THE PRE-STATION OPENING SURVEY : PART 1

3.1INTRODUCTION

The 1981 Census has been used to provide estimates of the population in the three villages to which survey forms were distributed and to provide comparative statistics where appropriate. In some sections of this report, data from the villages of Eastburn and Steeton have been combined to enable this comparison since they comprise one urban area for Census purposes. Urban areas are based on National Land Use classifications, the exact definitions to be found in the notes accompanying the Census. The Census figure for household numbers in the joint Eastburn/Steeton District was 1,300 and we have proportioned this by reference to statistics taken from a Craven Ward Profile, produced by the City of Bradford Metropolitan Council Policy Unit in July 1980, to give 306 and 994 households for Eastburn and Steeton respectively. The number of households in the Silsden District was 2,388.

The questionnaire distribution and response rates were as follows:

Village	Eastburn	Steeton	Silsden	Total
Estimated number of households	300	1000	2400	3700
Number of questionnaires distributed (as a percentage of households)	100 (33%)	500 (50%)	400 (17%)	1000 (27%)
Number of questionnaires returned	30	184	83	297
Response rate #	30%	36.8%	20.8%	29.7%

Note:# = Relates to survey form 1, the response rate to form 2 was marginally lower.

Our distribution of questionnaires was based on our rough perception of the station

demand from each of the three villages. Assuming the response rate is proportional to the interest, and hence likely demand, we feel the rates eventually achieved reflect our initial assumptions, that is, the station primarily serves Steeton but Eastburn and Silsden are important secondary centres.

3.2SAMPLE CHARACTERISTICS

Our sample has been weighted to give a full picture of both the existing and anticipated travel patterns of the Eastburn, Steeton and Silsden populations. The first weight (WF1) is simply the ratio of household numbers to questionnaires returned and is applied to household compositions and existing travel pattern data. The second weight (WF2) is applied to anticipated household travel data and is the ratio of household numbers to questionnaires delivered. The latter weight treats non-respondents as non-users of the railway by assuming that they would have returned their questionnaires if they perceived a gain from the re-opening of Steeton & Silsden station. The weights have different values for each village due to the variation in distribution and response rates.

The following tables give an indication of the composition of the station area population:

Table 1:Age:Sex Composition of Household

Count	Children (aged<16)	Adults<SPA	Adults>SPA	Household Size
	%	%	%	%
0	68.9	21.7	71.4	-
1	11.7	15.8	17.8	21.0
2	16.4	52.7	10.8	39.7
3	2.8	7.9	-	17.1
4	0.1	1.1	-	16.8
5	-	0.8	-	4.9
6	-	-	-	0.4
	99.9	100.0	100.0	99.9

Note:SPA=State Pension Age.Due to rounding, percentages may not sum to 100.
Table based on data weighted by WF1.

The average household size for the catchment area as a whole is 2.5 people which can be compared with the 1981 Census figure of 2.6. The Census data gives 14.3%, 14.8% and 4.0% for the percentage of households with one, two and three or more children respectively, and overall 66.9% of households having no children. The following table uses Census prepared categories with the unfortunately wide 25-SPA band. The State Pension Age (SPA) corresponds to the ages 60 for females and 65 for males.

Table 2:Age composition of households - comparison with census

	Eastburn/Steeton		Silsden	
	Study	Census	Study	Census
Age Band	%	%	%	%
0-4	7.4	7.0	6.4	6.2
5-15	13.8	14.7	15.7	15.5
16-24	11.4	12.3	5.9	12.0
25-SPA	49.0	47.9	57.4	46.8
>SPA	18.4	18.1	14.7	19.6
Total	100.1	100.0	100.1	100.1

Note:Table based on data weighted by WF1.

The significant difference in figures for Silsden residents aged over 16 may suggest an under-representation of these particular categories in our survey. Such residents may not be interested in Public Transport and may feel the re-opened station is not particularly local to them. An alternative explanation is that the age structure of the village may have changed radically since 1981, to be revealed on publication of the forthcoming Census. Our study reveals the following characteristics about households in the area:

Table 3: Household type composition - comparison with census

Household type	Study %	Census %
Single non-OAP	9.1	5.7
Single OAP	11.9	15.9
Two or more OAPs	9.8	12.3
Other	69.2	66.1
Total	100.0	100.0

Note:Table based on data weighted by WF1

Our sample household type composition is significantly different from that borne out in the Census (see Table 3) and either demonstrates further the changed population structure since 1981 or the slightly unrepresentative nature of our sample. In particular, Table 3 highlights the major difference as being the percentage of households comprised solely of older residents. From Table 2 we calculate that the residents aged over State Pension Age comprise 16% of the population of all three villages combined, 3% down on the 1981 Census figure. This may suggest a difficulty in completing the survey forms since OAPs are more reliant on Public Transport and benefit from concessionary fares so they should be more interested in its provision. Table A in Appendix 1 contains a more disaggregated summary.

Table 4: Car ownership - comparison with census

	Study %	Census %
None	21.5	33.9
One	55.3	51.1
Two or more	23.2	15.0
Total	100.0	100.0

Note: Table based on data weighted by WF1.

Table 4 above suggests the increase of car ownership among the population under analysis, as one would expect given the national trend over the last ten years. However, given that car owners are perhaps less likely to respond to a transport survey because of lack of interest in public transport, our findings are even more revealing.

3.3EXISTING WORK AND EDUCATION TRIP PATTERNS

A selection of travel modes and destinations were provided and survey participants were asked to describe their work and education journeys. In particular, the Airedale General Hospital, situated between Steeton and Eastburn, is a major employer in the area, and the College in Sutton-in-Craven caters for many educational needs.

The overall total for each of these destinations are as follows:

Table 5:Destination of trips

	Percentage of all trips %	Number of trips (per annum)	Work purpose trip percentage %
Steeton/Silsden	28	387,401	61
Keighley	27	369,076	90
Bingley	1	16,194	89
Shipley	2	29,182	100
Bradford	7	93,579	96
Leeds	5	70,521	90
Crosshills#	8	105,739	31
Skipton	3	42,143	73
Other West Yorks	14	192,630	84
Other/Unspecified	5	66,051	100
Total	100	1;372,516	77

= Crosshills, Kildwick & Sutton-in-Craven.
Note:Table based on data weighted by WF1

To convert our collected data into annual journey information we made the assumption that a working year comprises 46 weeks (an estimated four weeks being lost through holiday entitlement and a further two assuming Bank Holidays are granted as additional entitlement). We also assumed that on average a school or college year is 38 weeks long. These two assumptions correct the annual number of work and education related trips because an individual making a regular journey for these purposes would not be making the same trip during their holiday.

A discrepancy in Table 5 is contained within the unspecified trips since their actual destination may be one of the other categorised destinations which would therefore boost their count. The relatively large proportion of trips destined to "Other West Yorks." limits our analysis and, due to the close proximity of Ilkley and the likely employment and

Table 6:Mode used

Mode	Percentage of all trips %	Number of trips (per annum)	Work purpose trip percentage %
Car driver	56	771,910	95
Car passenger	2	25,977	80
Bus	23	322,528	55
Train	2	29,358	81
Pedal cycle	-	5,962	100
Motor cycle	-	3,726	100
Walk	15	206,408	43
Other	-	6,647	100
	98	1;372,516	77

Table 7:Mode used for journeys to work - comparison with census

Mode	Eastburn/Silsden		Silsden	
	Study	Census	Study	Census
Car#	63.3	53.5	74.6	57.8
Bus	14.4	9.7	17.7	15.2
Train	2.9	1.9	2.0	1.3
Walk	16.4	27.7	4.9	19.0
Other	3.0	7.1	0.9	6.8
	100.0	99.9	100.1	100.1

= both car drivers and passenger mode choice are included here.

Note:Census figures have been adjusted to exclude that proportion of the population

that work at home. Tables based on data weighted by WF1.

educational opportunities available there, with hindsight we perhaps should have created an additional destination category.

Table 6 shows the overall totals for the different modes of travel and Table 7 compares our study data with census data on modes of transport used for workplace journeys.

Data in Table 7 should be treated with caution as a nine year difference in the dates of data collection overlooks the likely dynamism of the employment market, especially that of local opportunities given national trends and the origins of the villages of Steeton and Silsden as textile centres. Nonetheless, the table does suggest that both public transport usage and car journeys are on the increase, which is in line with both the trend of increasing car ownership and the possible movement away from locally based employment. It may even indicate the growth of a dormitory area i.e. one in which a large number of commuters reside. These theories tie in with the large scale reduction in walk journeys. However, increased car use could simply confirm the increased level of car ownership noted in section 3 and the public transport usage figures may be subject to a degree of bias.

3.3.1Trips made to work

Table 5 at the beginning of this section shows that work trips comprise the vast majority of annual journeys with 77% of the total. Obviously this is partly due to the greater number of weeks in a working year relative to a school/college based one and also because of the greater proportion of the population of a working age. The car is by far the favoured mode and it will be interesting to analyse the increased rail usage due to the re-opened station and to discover from which modes these users have transferred, when we perform our follow-up study .

We calculate the total number of return trips made is 1,056,501 per annum and the table below shows their origin:

Table 8:Total number of work trips

Area	Estimated number of trips per annum	Percentage of trips Keighley bound %	Percentage of trips categorised as Other/Unspecified %
Eastburn	73,600	56	18
Steeton	246,413	28	6
Silsden	736,488	30	5
Total	1,056,501		

Note:Table based on data weighted by WF1.

For trips originating from Eastburn, the predominant modes of transport used were car driver (59%), bus (22%) and walk (16%). These journeys were mainly destined to

Keighley, accounting for 63% of car driven trips and 86% of bus trips, with walk based trips being all, unsurprisingly, locally destined. Train journeys only accounted for 3% of trips and all were destined to Bradford.

The Steeton population made 17% and 12% of work trips by walk and bus modes respectively, the latter in the main destined for Keighley (45%) and Skipton (20%). The most popular mode was car driver which accounted for 64% of trips. These trips were destined to Keighley (33%), Steeton/Silsden (12%) and Bradford (9%) with a further 8% being classified as Other/Unspecified.

Journeys from Silsden were predominantly made by car driver mode (72%) to the destinations of Keighley (29%), Steeton/Silsden (19%) and Bradford (12%). Bus journeys accounted for 18% of trips, the popular destinations being Keighley (52%), Steeton/Silsden (22%) and Leeds (10%), with only 5% made on foot.

Tables B and D in Appendix 1 show workplace destination and mode journeys made by average households per annum in each village.

3.3.2Educational trips

Although local trips accounted for the largest proportion of school/college trips at 48% a popular destination for these journeys was the group of villages, Crosshills, Kildwick and Sutton-in-Craven, to which a further 23% were bound. The two popular transport modes were bus (46%) and walk (37%) with train travel only accounting for 2% of trips.

We calculate the total number of return trips made is 316,016 per annum and the table below shows their origin:

Table 9:Total number of education trips

Area	Estimated number of trips per annum	Percentage of trips Keighley bound %	Percentage of trips categorised as Other/Unspecified %
Eastburn	9,880	_	_
Steeton	75,514	9	-
Silsden	230,622	12	-
	316,016		

Note:Table based on data weighted by WF1.

For the trips originating from Eastburn, the predominant modes of transport used were bus (38%), walk (38%) and car driver (23%). All bus journeys were destined to Crosshills, Kildwick and Sutton-in-Craven and all car driven trips to Skipton. Walk based trips were all unsurprisingly locally destined. There were no train journeys made.

The Steeton population made 20% and 18% of education trips by walk and car driver

modes respectively, the latter having a wide variety of destinations i.e. Bradford (15%), Crosshills, Kildwick & Sutton-in-Craven (15%), Skipton (21%) and Other West Yorks (43%). The most popular mode was bus which accounted for 50% of trips. These trips were destined to Crosshills, Kildwick & Sutton-in-Craven (57%), Keighley (16%) and Skipton (11%).

Education journeys from Silsden were predominantly made by walk (43%) and bus (45%). Bus destinations were Crosshills, Kildwick & Sutton-in-Craven (40%) and Keighley (26%) with Other West Yorks. and Steeton/Silsden equally sharing the remainder. Car driven journeys accounted for 11% of trips of which 17% involved travel to Leeds and the remainder predominantly local.

Tables C and E in Appendix 1 show education trip destination and modes for an average household in each of the three villages, and table F summarises total work and education journeys made each year by an average household.

3.4LONGER DISTANCE TRIPS

Respondents were asked to provide the frequency and travel mode of all long distance journeys made, where a long distance was defined as 50 miles or greater. The following table summarises our findings:

Table 10:Long distance trips - trip totals

	Total trips per annum			
Travel mode	Eastburn	Steeton	Silsden	Total
Car	5,560	26,741	68,782	101,083
Coach	320	2,203	4,277	6,800
Train	2,200	6,113	4,971	13,284
Aeroplane	-	410	231	641

Note:Table based on data weighted by WF1.

The above table gives a figure of 13,284 return rail trips per annum of the longer distance variety. Assuming that such trips are likely on any day of the year, this implies 36 trips per day are made on average. This figure should be treated with caution as we consider our method to overstate the existing rail use and further comment to this effect is made in our conclusion. It is hoped a comparison will be possible in the second stage of our survey such that we can assess whether the re-opening of Steeton & Silsden station has changed the mode chosen for these longer distance trips or indeed generated an additional number of journeys. Table 11 below is based on WF1 weighted data.

Table 11:Long distance trips - trips per household

Travel mode	Household trips per annum			
	Eastburn	Steeton	Silsden	Average
Car	19	27	29	27
Coach	1	2	2	2
Train	7	6	2	4
Aeroplane#	-	-	-	-

= Trips per annum per household less than 1.

3.5LEISURE TRIPS

The trip destinations and travel modes employed were sought for shopping, recreational and other leisure pursuits. Table 12 and 13 summarise the general travel patterns of the population for trips made for reasons other than work and education, but additional statistics make interesting reading.

The train was used for 55% of Leeds bound journeys and 21% of those destined to Bradford. This meant that Leeds and Bradford were the predominant rail destinations with 66% and 30% respectively of the total rail trip count. Both Skipton and Bingley are most often visited by car with 90% and 87% of journeys using this mode. Given the high number of annual trips to Skipton in particular (16% of the total), and the ease of rail access, it will be interesting to see whether the station re-opening proves a competitive alternative.

Table 12: Leisure trips - mode used

Travel Mode	Percentage of all trips %	Number of return trips (per annum)
Car driver	64	480,266
Car passenger	-	,799
Bus	25	183,318
Train	7	51,675
Pedal cycle	-	,270
Motor cycle	-	-
Walk	-	,186
Other/Unspecified	4	30,512
Total	100	747,026

Table 13: Leisure trips - destination

Area	Percentage of all trips %	Number of return trips (per annum)
Steeton/Silsden	-	2,620
Keighley	56	417,402
Bingley	-	,467
Shipley	1	10,203
Bradford	10	73,472
Leeds	8	61,628
Skipton	16	117,680
Other West Yorks.	7	51,520
Other/Unspecified	2	12,034
Total	100	747,026

Tables 12 and 13 based on data weighted by WF1.

Appendix 1 contains tables G and H which show mode and destination figures for annual return trips made by the average household and split by village of residence.

3.6ANTICIPATED RAIL USAGE

We asked respondents how useful they thought the new station would be for them with the following result:

Table 14:Attitude to rail service

Perceived station usefulness (as respondent percentage)	Eastburn %	Steeton %	Silsden %
Very useful	33	29	31
Useful	40	43	37
Not very useful	20	17	22
No use	3	5	8
Unspecified	3	5	1
Total	99	99	99

Note:Table based on data weighted by WF2.

These results are expected to be biased upwards with respondents exaggerating the station usefulness in order to influence transport policy. However, since the re-opening decision had already been made at the date of the survey, the effects of the bias should be minimal. Nonetheless, an element of bias is likely to be present with respondents being those more interested in Public Transport and likely to favour the presence of a rail alternative.

The table information highlights station usefulness as a function of geography with useful to not so useful ratios of 3.2, 3.3 and 2.3 for Eastburn, Steeton and Silsden respectively.

Table 15 shows the perceived mode of access to the station by residents of each village. These percentages relate to the existing transport available at the time of the survey and would not account for an improved bus link with the station which may lead to passengers altering their choices. The station car park size may be limiting car driven access and increased road congestion around the station may dissuade those considering a taxi journey instead of walking.

Stage two of the survey will allow a comparison of access mode statistics that may highlight access problems or points of congestion with possible car parking implications as well.

Table 15:Expected mode of access

Perceived station access mode (as respondent percentage)	Eastburn %	Steeton %	Silsden %
Walk	80	60	21
Bus	-	4	33
Taxi	-	-	1
Car driver	9	17	26
Car passenger	11	18	20
Motor/pedal cycle	-	1	-
Total	100	100	101

Note:Table based on data weighted by WF2.

Respondents were asked to indicate the likely frequency of trips made by rail once the Steeton & Silsden station had re-opened. The assumptions of a 46 week year for work related trips and a 38 week year for education related journeys were adopted as before. For shopping trips we assumed a 50 week year, on the basis that the majority of shops are closed during most bank holidays, and we also adopted a similar number for trips for pursuits other than work, education and shopping.

Our annual estimates for return journeys made, categorised by trip destination and household location, are shown in Tables 16-19.

Keighley and Leeds are by far the most popular destinations for perceived rail travel. For all travel purposes we estimate that the annual number of train journeys to each is to be 91,588 and 42,177 respectively. The total number of estimated trips is 180,001 per annum so the proportion destined to Keighley is 51% and to Leeds is 23%. Intended shopping trips clearly stand out as the predominant reason for travel with 54% and 49% of Keighley and Leeds bound trips for this purpose. Overall 46% of all anticipated rail journeys are shopping based with Leeds over five times more popular than Bradford for train accessed shopping.

Of the estimated 180,001 trips per annum, 13,601 originate from Eastburn, 89,549 from Steeton and 76,851 from Silsden. However, division by village size shows Steeton responding households to anticipate making 90.0 return journeys each per annum, far ahead of Eastburn (45.4) and Silsden (32.0). The estimated daily number of return journeys intended to be made per day is approximately 493. This figure is based on a 365 day year though it is derived from annual trip calculations in which assumptions varied depending on the trip purpose.

Table 16:Work purpose rail journeys

A)Number of trips

	Number of trips (per annum)				
Area	Eastburn	Steeton	Silsden	Total	%
Keighley	1,380	8,615	10,125	20,120	38
Bingley	-	1,380	2,760	4,140	8
Shipley	-	1,974	-	1,974	4
Bradford	-	1,305	7,452	8,757	16
Leeds	-	4,107	6,537	10,644	20
Skipton	-	1,104	891	1,995	4
Other West Yorks.	-	1,196	1,380	2,576	5
Other/Unspecified	1,035	1,899	126	3,060	6
TOTAL	2,415	21,580	29,271	53,266	101

B)Number of trips per household

	Number of trips per household (per annum)			
Area	Eastburn	Steeton	Silsden	Population
Keighley	4.6	8.7	4.2	5.4
Bingley	-	1.4	1.1	1.1
Shipley	-	2.0	-	0.5
Bradford	-	1.3	3.1	2.4
Leeds	-	4.1	2.7	2.9
Skipton	-	1.1	0.4	0.5
Other West Yorks.	-	1.2	0.6	0.7
Other/Unspecified	3.5	1.9	0.1	0.8

TOTAL	8.1	21.7	12.2	14.3

Note:Table 16 based on data weighted by WF2.

Table 17:Education purpose rail journeys

A)Number of trips

	Number of trips (per annum)				
Area	Eastburn	Steeton	Silsden	Total	%
Keighley	114	2,584	963	3,661	40
Bingley	-	380	-	380	4
Bradford	-	946	-	946	10
Leeds	57	2,200	735	2,992	33
Skipton	-	836	-	836	9
Other West Yorks.	-	-	228	228	3
TOTAL	171	6,946	1,926	9,043	99

B)Number of trips per household

	Number of trips per household (per annum)			
Area	Eastburn	Steeton	Silsden	Population
Keighley	0.4	2.6	0.4	1.0
Bingley	-	0.4	-	0.1
Bradford	-	1.0	-	0.3
Leeds	0.2	2.2	0.3	0.8
Skipton	-	0.8	-	0.2
Other West Yorks.	-	-	0.1	0.1
TOTAL	0.6	7.0	0.8	2.5

Note:Table 17 based on data weighted by WF2.
Due to the presence of rounding, totals may not sum to 100.

Table 18:Shopping purpose rail journeys

A)Number of trips

	Number of trips (per annum)				
Area	Eastburn	Steeton	Silsden	Total	%
Keighley	3,560	25,340	20,178	49,078	59
Bradford	386	1,520	1,704	3,610	4
Leeds	1,757	10,849	8,046	20,652	25
Skipton	519	2,306	2,271	5,096	6
Other West Yorks.	935	169	438	1,542	2
Other/Unspecified	69	1,507	1,038	2,614	3
TOTAL	7,226	41,691	33,675	82,592	99

B)Number of trips per household

	Number of trips per household (per annum)			
Area	Eastburn	Steeton	Silsden	Population
Keighley	11.9	25.5	8.4	13.3
Bradford	1.3	1.5	0.7	1.0
Leeds	5.9	10.9	3.4	5.6
Skipton	1.7	2.3	0.9	1.4
Other West Yorks.	3.1	0.2	0.2	0.4
Other/Unspecified	0.2	1.5	0.4	0.7
TOTAL	24.1	41.9	14.0	22.4

Note:Table 18 is based on data weighted by WF2.
Due to the presence of rounding, totals may not sum to 100.

Table 19:Other rail journeys

a)Number of trips

	Number of trips (per annum)				
Area	Eastburn	Steeton	Silsden	Total	%
Keighley	1,898	11,167	5,664	18,729	53
Bingley	-	146	-	146	-
Bradford	254	1,368	1,014	2,636	8
Leeds	605	4,692	2,592	7,889	22
Skipton	825	761	1,269	2,855	8
Other West Yorks.	-	-	669	669	2
Other/Unspecified	207	1,198	771	2,176	6
TOTAL	3,789	19,332	11,979	35,100	99

B)Number of trips per household

	Number of trips per household (per annum)			
Area	Eastburn	Steeton	Silsden	Population
Keighley	6.3	11.2	2.4	5.1
Bingley	-	0.1	-	-
Bradford	0.8	1.4	0.4	0.7
Leeds	2.0	4.7	1.1	2.1
Skipton	2.8	0.8	0.5	0.8
Other West Yorks.	-	-	0.3	0.2
Other/Unspecified	0.7	1.2	0.3	0.6
TOTAL	12.6	19.4	5.0	9.5

Note:The above table is based on WF2 weighted data.
Totals may not sum to zero due to the presence of rounding.

4.THE PRE-STATION OPENING SURVEY : PART 2

The second part of the survey form focused on the last journey made to Keighley by one member of the household. Keighley was chosen since it was considered the dominant destination, confirmed by the work and education analysis and anticipated future rail usage results in the first part of the survey.

The characteristics of the journey makers involved were as follows (based on WF2 weighted data):

Table 20:Sex, age and income composition of second survey

Sex	% of people	Age group	% of people	Household Income	%
Male	31	16-24	10	<5000	20
Female	62	25-39	37	5-10,000	18
Unspecified	7	40-59	23	10-15,000	22
		60-64	8	15-20,000	14
		65 plus	19	>20,000	11
		Unspecified	3	Unspecified	15

Note:Table based on data weighted by WF2.

In particular, note the large number of females making the last household Keighley bound journey. Without intending to add further to traditional female stereotyping, women are the more likely sex to be at home during the daytime and hence more likely to complete the survey form and bias the result. However, a comparison of Table 5, in which Keighley bound work and education trips numbered 369,076 per annum, with Table 13, which shows annual leisure based journeys to number 417,402, suggests that shopping trips may appear the predominant reason for travelling to Keighley.

This is apparently confirmed by the results of Tables 16-19 for intended rail travel from which we calculated shopping trips accounted for 46% of the total trip count. A high rate of female questionnaire completion could therefore be expected. At the same time, should a female bias exist then it may also lead to bias in favour of shopping trips, the extent of which we may discover from our follow-up work.

The journey departure times have been categorised and are shown in Table 21, with early morning times predominant. Thirty six percent of those making the journey had a specific time at which they were required to arrive at their destination, the remaining sixty four percent did not. Required punctuality had little effect on the travel mode chosen with one third of both car and bus travellers faced with a time constraint.

Table 21: Journey departure time

Departure time	Percentage of travellers
Before 0701	2
0701-0900	29
0901-1100	34
1101-1300	9
1301-1500	10
1501-1700	4
After 1700	6
Unspecified	6
Total	100

Note:Table based on data weighted by WF2.

Journey arrival time was more important on considering the reason for travel, with 92%, 12%, 46% and 78% of work, shopping, leisure and education trips respectively, constrained by the necessity to arrive at a particular time.

Table 22:Journey purpose and mode

Journey purpose	Purpose percentage	Travel mode %		
		Bus	Car	Other/Unspecified
Work	21	30	66	4
Shopping	65	41	59	-
Education	4	71	29	-
Leisure	5	21	79	-
Other/ Unspecified	5	48	48	4
Total	100			

Table 22 compares car and bus modes for the different travel purposes (car mode includes both car drivers and passengers) and is based on data weighted by WF2.

Overall bus mode journeys comprised 39% of Keighley destined trips with car mode accounting for 60%. Both the very young and very old travellers used the bus mode to a greater extent than car with the choice reversed for all other age groupings, except for the Eastburn data for the 40-59 age grouping (see Appendix 1 tables I and J). This does

not necessarily reflect preference of one mode over another, but perhaps a reflection of those owning a vehicle.

Table 23:Keighley trip travel mode choice by age

Age band	All Villages	
	Car	Bus
16-24	39	52
25-39	72	27
40-59	59	41
60-64	74	26
Over 65	36	64

Note:Due to the presence of other minor modes of travel, percentages do not sum to 100. Table based on data weighted by WF2.

Household income was reflected in those travelling by road with the ratio of car to bus users becoming greater on ascending the income bands. These travellers are more likely to own a car and more willing to pay the additional financial costs of doing so. However, the village of residence was insignificant in choosing travel mode.

Table 24:Keighley trip travel mode choice by household income

Income band	All Villages	
£	Car %	Bus %
< 5,000	35	65
5-10,000	62	38
10-15,000	57	42
15-20,000	76	24
> 20,000	78	14

Note:This table is based on data weighted by WF2. Other travel modes, which in this case were of negligible proportions, are not shown.

The table overleaf shows chosen access modes and as one would expect, they are similar to those shown in Table 15, the difference being that whilst we sought the respondents likely usual access mode earlier, the table above reflects a particular journey with a specific purpose and time constraint.

Table 25:Expected mode of access

Perceived station access mode (as respondent percentage)	Eastburn %	Steeton %	Silsden %
Walk	80	67	21
Bus	4	8	47
Car driver	16	22	26
Car passenger	-	4	4
Other	-	-	1
Total	100	101	99

Note:Table based on data weighted by WF2. Due to rounding, totals may not sum to 100.

Table 26:Expected egress mode

Perceived station access mode (as respondent percentage)	All Journeys %
Walk	84
Bus	7
Motor vehicle	2
Taxi	1
Other	6
Total	100

Note:Table based on data weighted by WF2. Due to rounding, totals may not sum to 100.

Respondents were asked to state their likely form of travel from Keighley station to their final destination in Keighley had they arrived in Keighley station after making a train journey from the re-opened Steeton & Silsden station. This egress mode information is summarised on the preceding page in table 26 and on the whole indicates that Keighley station is well located with as many as 84% of travellers able to reach their final destination on foot.

5.STATED INTENTIONS/STATED PREFERENCE METHOD VALIDATION

The first stage of this study has in the main been geared towards providing an acid test of the Stated Intentions/Stated Preference demand forecasting method. Fully documented elsewhere (Fowkes and Preston, 1991), the method is a two stage one that

accommodates the likelihood of trip generation and re-distributed journeys.

Respondents are asked to state their future rail travel intentions once a station is opened or, in the case of Steeton & Silsden station, once it is re-opened. In doing so they introduce a series of systematic biases which lead to the overestimation of demand, even on assuming that non-respondents are non-users. Stated preference, widely used in market research, is used to check the degree of policy bias inherent within the responses to reduce the variability around the true perceived travel expectations. This involves a collection of hypothetical situations from which an individual's response determines a boundary value at which he/she is indifferent between two offered alternatives. Whilst the method is complex in nature it is crucial that simplicity is maintained in order to determine the true subjective preferences.

Results from survey form part one were used for the Stated Intentions calculations and part two for the Stated Preference bias correction work. The probabilistic forecasting method was adopted whereby separate probabilities were calculated for each household for the Stated Intentions part and for each individual for the Stated Preference part.

Two separate Stated Intentions probabilities (SIP), combining all trip purposes, were calculated using the equation below, in which the denominator includes Keighley bound trips made on all transport modes:

$$SIP = \frac{\text{Anticipated number of rail trips to Keighley (pa)}}{\text{Present number of trips to Keighley (pa)}}$$

The first of these allows for the re-distribution and generation of trips so that a particular household may have a Stated Intentions probability greater than one. The second type places an upper bound of one on all Stated Intentions probabilities, thus reducing the effect of these journeys and providing an insight into their contribution to the total.

These Stated Intention probabilities were then weighted using WF2 and summed across those households with complete records for both surveys. Unfortunately this meant a reduction in our sample size yet we considered this a reasonable sacrifice for the maintenance of accuracy.

For the Stated Preference probabilities we calculated the likelihood of choosing a train mode when faced with alternatives, in our case bus and car (both driver and passenger combined) for each individual. This took the form of calculating the utility of rail travel when faced with the two alternatives and using a binary logit model to derive probabilities of mode switching (Utility is an economic term developed to numerically evaluate the total benefit derived from an event so that comparison of alternatives is possible). The model adopted was that outlined by Fowkes and Preston (1991, page 20):

<u>Present bus mode users</u>

Rail utility, (U_{RB}) = - 0.086IVT - 0.067OVT + 1.327FREQ
+ 0.359MALE - 0.189 LEISURE - 0.056COST

Bus utility, (U_B) = - 0.086IVT - 0.067OVT + 0.863FREQ - 0.056 COST

$$\text{and } P_{RB} = \frac{\exp(U_{RB})}{\exp(U_{RB}) + \exp(U_B)} = \frac{1}{1 + \exp(U_B - U_{RB})}$$

Present car mode users

Rail utility, (U_{RC}) = - 1.907 - 0.064IVT - 0.082OVT + 1.452FREQ
- 0.135AGE - 0.151INCOME + 0.592 LEISURE - 0.035COST

Car utility, (U_C) = - 0.064IVT - 0.040OVT - 0.035COST

$$\text{and } P_{RC} = \frac{\exp(U_{RC})}{\exp(U_{RC}) + \exp(U_C)} = \frac{1}{1 + \exp(U_C - U_{RC})}$$

A brief definition of the terms are:

IVT = time spent in the car/bus/train during journey (mins),
OVT = time spent walking and waiting during journey (mins),
FREQ = number of buses/trains per hour,
COST = journey cost in pence,
INCOME = income indicator (0=household income less than £10,000, 1=other),
MALE = sex indicator (0=female, 1=male),
LEISURE = journey purpose indicator (0=work/education, 1=other),
AGE = age indicator (0=under 39 years, 1=other),
P_{RB} = probability of choosing rail ahead of bus,
P_{RC} = probability of choosing rail ahead of car.

Train frequency figures were based on the British Rail timetable for the period 1st October 1990 to 12th May 1991. The derived probabilities were weighted and summed across the households with complete records for survey parts one and two.

In section 7 of this report, we calculated that respondents intended making 493 daily return journeys by train from Steeton & Silsden station. This is equivalent to 986 boardings per day and is our unadjusted Stated Intentions estimate of station usage. Our calculation of Stated Intentions probabilities indicate that rail travel to Keighley will account for around 64.7% of Keighley bound trips made by respondents completing both parts of the questionnaire. It must be borne in mind that this figure has been derived from WF2 weighted data and relates to our sample of likely rail users and hence cannot be applied directly to the journey totals in sections 4-6 of this report.

On placing an upper bound of 1 on each individual Stated Intentions probability we reduced the above figure to 34.3%. This method restricts the intended number of future rail journeys so that they are not greater than the total number of past journeys made to the destination in question. Due to the presence of alternative modes of travel and the expectation that their share of travellers will be greater than zero, this assumption will not eliminate all generated and re-distributed trips. However, the difference in figures calculated suggests the average respondent expects to greatly increase the number of annual journeys made to Keighley and, were intentions to be borne out in practise, at least 50% of rail trips would be of a generated or re-distributed nature.

Using the Fowkes and Preston model our Stated Preference calculations highlighted the greater level of utility deriving from a train journey when compared with both bus and car alternatives. Table 27 (based on WF2 weighted data) gives the mean utility values and shows the differential to be greater both proportionately and in magnitude for the rail to car comparison. This suggests that were an individual to choose their travel mode using a derived welfare criteria and, assuming the Fowkes & Preston model was representative of the circumstances and choice variables in the Steeton & Silsden surrounds, then rail should find it more easy to attract car than bus travellers.

Table 27:Travel mode utility

Mode	Mean utility measure (standard deviations)
Bus mode Rail mode (in competition with bus)	-0.502 (1.431) -0.421 (0.949)
Car mode Rail mode (in competition with car)	-1.225 (1.144) -0.831 (1.167)

From the utility calculations our Stated Preference probabilities reveal 58% of bus journey makers would switch to rail on making a similar Keighley bound journey after the re-opening of the Steeton & Silsden station. In addition, 61% of car travellers would switch to a train and rail would become the dominant travel mode. The mode switches would effect the distribution of users as shown in table 28 below.

Table 28:Keighley trip travel mode

Mode	Actual %	Predicted %
Bus	35.5	14.9
Car	62.8	24.4
Train	-	59.0
Other	1.7	1.7

Note:Based on data weighted by WF2.

The Fowkes and Preston model did not include an equivalent utility model for comparing rail with modes other than bus and car. Faced with this dilemma, and the knowledge that these travellers comprised only 1.7% of our sample, we choose to assume they would continue to use their present choice of travel.

Of those respondents returning questionnaires, 40% were discarded for the Stated Intentions/Stated Preference forecasting calculations as we sought only to use those households who had completed both parts of the survey to a reasonable standard. To

this end we undertook a thorough programme of checking to ensure the exclusion of both coding errors and illogical responses. After the application of weight WF2, our Keighley trip sample involved 589 travellers of which, based on our utility mode comparisons above, 59% were predicted to switch to rail travel for a similar journey made in the future.

Our Stated Intentions probabilities suggest that 64.7% of journeys made before Steeton & Silsden station re-opened would be made by rail in the future. From our Stated Preference calculations 58.9% of travellers would switch to rail travel once it was an alternative. Given that our unadjusted Stated Intentions estimate of station usage is 986 application of the Stated Preference adjustment, to correct the Stated Intentions biases, gives a usage figure of 899 (i.e. 986*59.0/64.7) daily boardings predicted from Steeton & Silsden station using the Stated Intentions/Stated Preference forecasting method.

6.THE POST-STATION OPENING SURVEY

6.1INTRODUCTION

The survey was carried out over two days. On the Thursday we surveyed between the hours 0700 and 1400, the weather being miserable and cold with light showers. Three people were used in the peak period in anticipation of the high passenger demand per train and the short time available in which to complete each survey questionnaire. On the Saturday, we assumed a later start for travellers, and began at 0800. Unfortunately we were caught unawares by a large number of travellers boarding the 0750 to Leeds. Two researchers were used and the weather was bright, with temperatures on the moderately warm side.

Table 29 summarises the basic details of the two day survey, the method adopted captured a good percentage of travellers justifying the choice of approach over the self-completion alternative.

Table 29:Survey information

	Thursday	Saturday
Questionnaires completed	142	103
Passengers surveyed #	151	200
Average number of passengers per questionnaire (standard deviation)	1.06 (0.272)	1.94 (1.327)
Percentage of passengers surveyed	51.4%	77.5%

=six questionnaires had incomplete information as regards the numbers travelling, and have thus been designated the minimum one passenger per form.

The majority of Thursday travellers journeyed alone, very much different to Saturday patronage. The consequence for our survey was the relatively lower capture rate for Thursday, being compounded in the peak periods by the high concentration of travellers. Despite the presence of three researchers on this weekday, we were unable to achieve a better rate than 35% during the peak period.

The total numbers of passengers travelling between the hours specified on these days are shown in table 30. Although both boarding and alighting passengers are highlighted it was only the former who we sought to survey.

Table 30:Travel numbers

Day	Direction	Boarders	Alighters	Total
Thursday	Skipton Lds/Bradford	14 280	39 5	53 285
	Total	294	44	338
Saturday	Skipton Lds/Bradford	28 230 *	71 5	99 235 *
	Total	258 *	76	334 *

* =these figures exclude 41 passengers on the 0750.

Appendix 2 tables A and B show boarders and alighters for each scheduled train.

During the periods covered the demand for rail travel was predominantly for travel in the Leeds and Bradford direction and in seeking to capture a high proportion of these passengers we unfortunately poorly covered Skipton bound ones. To be more exact we failed to survey passengers in the Skipton direction on three Thursday trains and four Saturday ones. Twenty passengers in all were involved, a high proportion of the travel count in this direction. In particular, 11 boarded one train which caught us totally by surprise both due to our pre-occupation with greater travel numbers in the opposite direction and the time needed to traverse the line.

An additional handicap was the station car park, situated on the Skipton bound side of the station, which gave travellers the option of waiting in their vehicle until the train approached the platform. The concealment of boarders and alighters on this side of the station may explain any inaccuracy in our count summarised in table 30 and tables A and B in Appendix 2.

Table 31 shows the number of passengers surveyed on each of the days, split by travel direction. The bracketed percentages give the ratio of boarders surveyed to the total numbers of boarders as shown in Table 30.

Table 31:Travellers surveyed

Direction	Thursday		Saturday		Total	
Skipton	8	(57%)	7	(25%)	15	(36%)
Lds/Bfd	143	(51%)	193*	(84%)	336*	(66%)
Total	151	(51%)	200*	(78%)	351*	(64%)

* =these figures exclude 2 passengers surveyed on the 0750.

It is interesting to compare the Thursday figures of Table 30 with those in a West Yorkshire PTE survey carried out on Friday 20th July 1990. The weather that day was very hot and sunny and the figures shown in Table 4 are for the same 0700 - 1400 period as those above.

Table 32:WYPTE survey travel numbers

Direction	Boarders	Alighters	Total
Skipton	20	41	61
Lds/Bradford	198	3	201
Total	218	44	262

Although one cannot jump to too many conclusions in comparing the figures, being founded on travel patterns for two days only, they do suggest a dramatic rise in rail usage from Steeton & Silsden station of around 29% in the 10 month period. One should however remember that the WYPTE survey was carried out only 3 months after the station re-opened and thus the initial growth in demand, distinct from that required to reach a stable level, had not yet fully developed.

The figures correspond to travel on one particular day and are hence subject to bias e.g. weather differences may account for variation in off-peak travel, seasonal variation on family travel patterns etc.

The apparent increase has come predominantly from demand to travel in the Leeds & Bradford direction with Skipton bound travel remaining relatively stable. The WYPTE figure of usage in the time period 0700 - 1400 was 57% of the total daily patronage which, assuming a similar distribution of trips in existence in early June 1991 as were in force in July 1990, suggests 593 would be the anticipated daily patronage on a weekday around the survey date.

6.2SAMPLE CHARACTERISTICS

We have applied two weights to our sample to reflect the railway patronage on each of the two days. The first weight (WF3), is simply the number of travellers included on each questionnaire and is used to produce information on those travellers counted as having been surveyed. The second weight (WF4), is the number of travellers boarding each train,

its application converting information based on patrons surveyed to that for all boarders of a particular train. This latter weight produces information expected to have resulted had all Steeton & Silsden station boarders been surveyed on the days and hours in question, assuming all boarders not surveyed had similar travel patterns as those that were.

The following tables give an indication of the composition of the patronage surveyed:

Table 33:Age composition of passengers (where given)

	Thursday		Saturday	
Age Band	Number	Percentage	Number	Percentage
0-4	-	-	6	3.0
5-16	-	-	18	9.1
Adults	141	100.0	173	87.9
Total	141	100.0	197	100.0

Throughout each day there were periods when we were unable to ask all the questions contained on the questionnaire, especially when large numbers of patrons arrived shortly before the departure time of their train or were too great in number for a particular train being surveyed. Our policy in these situations was to capture the more important data, such as towns of origin and destination, resulting in a variation in the amount of "Unspecified" data throughout.

Further, Thursday and Saturday rates of omitted data may vary due to the smaller spread of patrons on a Thursday (65% of boarders surveyed travelled in the peak period, 77% for all boarders) and the smaller size travel groups. In particular about 7% of survey forms had age information omitted during the Thursday session and 3% on the Saturday. Similarly, sex data was missing from 14.8% and 11.7% of Thursday and Saturday survey forms respectively.

Table 34:Sex composition of passengers (where given)

	Thursday		Saturday	
Sex	Number	Percentage of daily total	Number	Percentage of daily total
Female	56	43.8	70	45.2
Male	72	56.2	85	54.8
Total	128	100.0	155	100.0

Travellers were asked if their household possessed a vehicle and, if so, how many. The response to this question is tabulated below and is prepared from unweighted data. Compared with both predicted and Census derived data, summarised in our previous

report, the number of travellers not owning vehicles has fallen dramatically in both the time periods between the two reports and between this report and the 1982 Census. National growth trends in car ownership and the increasing percentage of rail using car owners contribute here.

There is a positive correlation between day of travel and the vehicle ownership, with few weekday patrons unlikely to have access to a vehicle, though wealth is the more direct connection with weekday trips predominantly for work related purposes and hence made by wage earning individuals likely to be able to afford a vehicle. Very few non-car owners made a journey during Thursday yet on the Saturday the figure rose considerably. These households have a greater reliance on rail travel for making leisure orientated trips which Saturday journeys in particular tend to be.

The availability of a car alternative is given in table 36 and shows that at least 45% of car owners providing details had access to a vehicle for making their trip but chose the rail alternative. The decision not to use the car alternative varied little with day of travel.

Table 35:Car ownership

Cars owned	Thursday %	Saturday %
None	5.6	16.5
One	49.3	42.7
Two or more	31.7	32.0
Unspecified	13.4	8.7
Total	100.0	99.9

Table 36:Vehicle availability
(for those travellers with at least one vehicle in their household)

	Thursday		Saturday
Vehicle available	Peak %	Off-Peak %	%
Yes	55.9	46.9	47.6
No	30.1	26.5	27.2
Unspecified	14.0	26.5	25.2
Total	100.0	99.9	100.0

Note:Tables 35 and 36 based on un-weighted data.

6.3TRIP PATTERN CHANGES

Those boarders surveyed were asked if they would have made a similar journey in the past before the station was re-opened, table 37 summarises their answers. At firstglance table 37 suggests that a large number of trips have been generated from the station re-opening (i.e. those responding "no" to the above question), especially given the table 38 results when asked if more or less trips were made at this time than before the station re-opened. However, caution should be applied when studying these figures because 44% of Thursday travellers and 11% of Saturday travellers indicated specific reasons why their trip frequency had changed (e.g. changed workplace, house move etc) and should not be included among the generated trip count. The table 38 figures bias a possible conclusionand suggest there has been no direct increase in midweek trip frequency through train introduction, although 10% of Saturday patrons had increased their journey number.

Secondary generated effects have not been accounted for here i.e. individuals having moved into the area with consideration of the good rail communications with their workplace. However, it is impossible to determine the extent of this or to quantify such trips i.e. What importance would a new resident attach to the existence of a good rail network in making his decision to move into the area?

Table 37:Journey familiarity

	Thursday %	Saturday %
Yes	45. (59% peak)	61
No	45. (72% peak)	32
Unspecified	10	7
Total	100	100

Table 38:Frequency of journeys

	Thursday %	Saturday %
More	45.4	21.4
Same	24.5	36.9
Less	1.4	1.0
Unspecified	28.7	40.8
Total	100.0	100.1

Those patrons who made a similar journey before the station re-opened (45% of Thursday patrons and 61% of Saturday ones), were asked to describe the route which they used

previously. This is given below in Table 39.

Together tables 37 and 39 provide a guide to the extent of redistributed trips. They indicate that for similar journeys made previously, the mode of travel from the immediate area was car for 61% of Thursday trips, predominant over bus at around 34%. Saturday patrons are just as likely to have originally travelled by bus mode (42%) as car (45%). Overall, previous travel was made by car by 52% of journeys and by bus by 38%.

These rates include patrons who travlled to Keighley to catch a train but not those in the `other' category who may have travelled to an alternate station by bus or car modes because the breakdown is unknown. Of those patrons who originally travelled to Keighley to catch a train, 58% of them travelled by car and the remainder by bus.

Table 39:Previous route used

	Thursday %	Saturday %
Bus to Keighley to catch train	26.9 (44% peak)	25.2
Car to Keighley to catch train	35.8 (67% peak)	36.6
Bus	7.5	16.3
Car	25.4	8.1
Other #	4.5	13.8
Total	100.1	100.0

=trains from Cononley, Bingley, Skipton, Ilkley.

There is a slight confusion regarding the rates of abstraction derived in our original work which suggested 58% of bus and 61% of car travellers to Keighley would switch to rail to make the trip. Obviously the majority of these users would have been travelling to Keighley to make a train connection anyway, given the small number of rail trips destined to Keighley now, and have simply been saved the inconvenience of travelling there. The rates of pure car and bus abstraction are very low at 15% and 13% respectively and the whole issue is complicated by the Keighley confusion.

We estimate that of those Thursday travellers who are making journeys similar to those made before the reopening of Steeton and Silsden station, two thirds travelled by train previously. This figure rises to three quarters for Saturday travellers.

Overall around 72% of station users making a similar journey to that made before the station re-opened had previously used rail to make their journey. Hence, based on the figures in table 37, around 40% of existing users of Steeton & Silsden station had previosly used rail. Of these users 13% of trips were made from stations other than Keighley, and based on the extrapolated figure of 593 in section 6.1 this approaches 205 trips per day made from the Steeton & Silsden station that had formerly been made from Keighley

station.

The Stated Intentions/Stated Preference (SI/SP) forecast from our initial work had been 155 trips per day abstracted from Keighley station, around 17% of the estimated usage once a state of equilibium had been reached and assuming everyone travelling to Keighley to use the train from the Steeton, Silsden and Eastburn villages would in future use the local station.

Trips calculated to have been abstracted from Keighley station at the present are unlikely to increase further and hence can be compared directly with the predicted equilibium figure. However the 13% of trips abstracted from other stations should really be included here as our previous assumption was that Keighley station was the destination to which local rail users travelled, hence the 155 trips per day prediction would allow for these additional journeys indirectly. Overall we calculate our original predicted rate of abstraction was around 65% of the actual rate, amending the predicted 155 trips per day abstracted from Keighley station to 135 trips per day in the light station alternatives and comparing with the 205 actual trips taking place originally made from Keighley station.

There are two further points to bear in mind here. Firstly, because the equilibium state of Steeton & Silsden station patronage has not yet been reached, the percentage of trips previosly made from Keighley station (40%) will fall through time given our assumption that all abstracted trips have been exhausted. Secondly, the calculations and comment made here is independent of other considerations that may come to light in the remainder of this report.

6.4TRIP DESTINATION AND PURPOSE

Overall, 77% of passengers were travelling in the peak period (64% of patrons surveyed demonstrating the difficulty in capturing these passengers for the reasons previously noted). For weekday travel, Leeds was by far the dominant destination accounting for around half of all trips. In particular, using WF4 weighted data, 52% of Leeds bound journeys were work and 12% college/school related. Shopping trips accounted for 15% of these trips.

Bradford was the second most popular destination with a high percentage of travel made in the peak period (84%) reflecting the purposes for which these journeys were made. The most popular reason for travelling to Bradford was for work purposes (69%) with college/school trips contributing a further 21%. Most journeys to Skipton, Bingley and Shipley were work related.

Work related travel is the dominant purpose for travelling by rail during the week, and such trips are mainly destined to Leeds (46%), Bradford (30%), Shipley (7%) and Bingley (7%). They are all made in the peak period. College/school trips account for around 16% of rail trips with Leeds and Bradford as equally popular at 37% and 36% of these respectively. Shopping trips are all made in the off-peak period and 70% are destined to Leeds.

Leeds was by far the dominant destination for Saturday rail trips accounting for over half of all trips (56%). In particular, using WF4 weighted data, 61% of Leeds bound journeys were shopping trips confirming the city to be the most popular shopping location accessed

by rail. In addition 20% of Leeds bound journeys were made for entertainment reasons with work trips totalling a mere 7%.

Table 40:Trip destination - Thursday

Destination	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
Leeds	51.0 (60% peak)	49.1 (73%)
Bradford	21.2 (75% peak)	24.4 (84%)
Skipton	4.0 (67% peak)	3.6 (75%)
Keighley	2.0	1.8
Crossflats	2.0	1.7
Bingley	3.3 (100% peak)	4.0 (100%)
Saltaire	1.3	0.8
Shipley	4.0 (83% peak)	4.1 (91%)
Frizinghall	0.7	0.9
Carlisle	1.3	0.9
Giggleswick	0.7	-
Wakefield	0.5	1.0
Other W.Yorkshire	1.9	1.8
Places over 50 miles away	6.0	5.5
Total	99.9	99.6

Table 41 gives a more aggregated summary of journey purpose for midweek trips.

Table 41:Trip purpose - Thursday

Purpose	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
To/from work	46.4 (91% peak)	55.6 (96%)
Firms business	2.6	3.0
To visit a friend	4.0	3.0
Personal	5.3	4.7
To/from college/school	14.6 (64% peak)	15.9 (77%)
Shopping	15.9 (0% peak)	10.6 (0%)
Entertainment	4.0	2.7
Other/Multi-purpose	6.6	3.9
Going home	0.7	0.8
Total	100.1	100.0

Table 42:Trip destination - Saturday

Destination	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
Leeds	61.0	56.3
Bradford	15.0	12.8
Skipton	3.5	10.8
Keighley	5.0	4.6
Shipley	1.0	1.2
Carlisle	0.5	0.5
Silverdale	0.5	0.5
Wakefield	4.5	4.3
E.Yorkshire	0.5	-
Other W.Yorkshire*	1.5	1.5
Places over 50 miles away	7.0	7.1
Total	100.0	99.6

* =all stations on the Airedale line have been shown separately unless no travellers etc.

Bradford and Skipton were important secondary destinations with Bradford bound trips predominantly made to shop (79%) and Skipton bound ones made for entertainment (64%) and work (36%). All Wakefield bound trips were shopping ones and Keighley trips mainly entertainment (35%) or shopping (49%) based. Table 43 gives a more aggregated summary of journey purpose for Saturday trips.

From our earlier Stated Intentions work, when householders surveyed were sought their future level of use of the new rail station, 51% of all future journeys were stated as being destined to Keighley. The above tables 40 and 42 show Keighley is in fact hardly a major destination with barely 2% and 5% of trips made there on the Thursday and Saturday respectively. This emphasises the problem of choosing Keighley as the basis for the Stated Preference adjustment with a fundamental lack of foresight on the effect the opening of the station would have on trips there. However, the Aire Valley Trunk Road should also be considered here, as at the time of the original survey it would have been difficult to fully appreciate the reduction in car travel time to the centre of Keighley.

In the Stated Intentions work, Leeds had been predicted as being the second most popular destination, capturing 23% of future rail demand. But Leeds has become the dominant attraction, whether due to re-distribution or over-estimation of Keighley importance, with over half of all rail trips destined there. Assuming the original forecast of Leeds destined rail travel were accurate and given that around 57% of rail travel from Steeton & Silsden station is now destined there, a revised SI/SP rail forecast would suggest an equilibium figure of around 400 trips per day. Current station usage is already greater than this and we conclude Leeds is either greatly underestimated or has grown in attraction. Midweek trips are made to and from work, reflecting its growth as a commercial centre, and weekend trips predominantly for shopping, rewarding the investment in the shopping facilities.

Table 43:Journey purpose - Saturday

Purpose	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
To/from work	5.5	8.3
To visit a friend	4.5	4.3
Personal	3.5	3.1
Shopping	55.5	51.4
Entertainment	25.5	27.8
Going home	3.0	2.8
Hospital	2.5	2.2
Total	100.0	99.9

We now consider those journeys categorised as being over 50 miles. Ten travellers surveyed on the Thursday (6% of the total) were making such trips, two to London Kings Cross and Manchester Picadilly, and single travellers to Oxford, Coventry, Birmingham, Carlisle, Brighton and Plymouth. Travel reasons varied and six journeys were made in the peak period, yet there was no apparent connection between destination, purpose or time of departure and all travellers travelled alone.

The Saturday destinations were Newcastle and Carlisle, to which single trips were made, London Kings Cross and Scotland, to which two single trips to each were made, and Nottingham, to which a group of nine holidaymakers were travelling. In all, fifteen trips were undertaken, four of which were to visit friends.

Based on households surveyed initially our predictions had estimated 33 longer distance train trips were made per day before the station re-opening. Departure times for such trips are very much dependent on journey purpose and day of travel, special rail fares and time constraints and we have no way of extrapolating our half daily counts to allow for such a distribution. Hence, we cannot comment further than to say it seems unlikely these figures are being surpassed i.e. it is unlikely longer distance trips have been generated as a result of opening the Steeton and Silsden station.

6.5TOWN OF ORIGIN AND ACCESS MODE

Table 44 summarises the villages from which the traveller journeyed to the station. Travellers originating from small villages have been included within the count for those larger villages to which they are adjacent. The Skipton classification is a little extreme in its catchment area definition yet highlights those patrons who journey across the county border from that surrounding area, to perhaps take advantage of cheaper fares and hence serves the necessary purpose.

Table 44:Town of origin - Thursday

Origin	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
Steeton #	20.5 (61% peak)	18.4 (72%)
Silsden #	43.0 (65% peak)	44.3 (78%)
Eastburn	2.6	2.4
Sutton-in-Craven #	15.2 (65% peak)	15.6 (78%)
Kildwick #	2.0	1.3
Cononley #	4.0	5.0
Keighley #	0.7	0.4
Skipton #	8.6	8.5
Addingham	1.3	1.1
Unspecified	2.1	2.9
Total	100.0	100.0

=Data is grouped as follows :
Steeton - Steeton, Whitley Head
Silsden - Silsden, Swartha
Sutton-in-Craven - Sutton-in-Craven, Crosshills, Glusburn, Cowling
Kildwick - Kildwick, Farnhill
Cononley - Cononley, Bradley, Carleton
Keighley - Keighley, Utley
Skipton - Skipton, Grassington, Long Preston

The significant statistic is that only 66.1.% of travellers surveyed (65.1% using WF4) originate from the local areas around the station, Steeton, Silsden and Eastburn. These were the areas targeted for self completion questionnaires in the first part of our survey strategy and the population on which we based our station demand forecasts. The consequence is that our predictions were only relevant to 66.1% (65.1%) of the station rail usage and should perhaps be increased by up to 50%.

Sutton-In-Craven and its surrounding villages contribute strongly to the total rail patrons and, given the dominance of travel in the Leeds and Bradford direction, it would have been useful to have included this area for our self completion questionnaire survey. Unfortunately, the county line separates West from North Yorkshire here and our knowledge of the travel patterns for the area as a whole was restricted.

Table 45:Town of origin - Saturday

Origin	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
Steeton #	22.5	20.7
Silsden #	37.5	42.8
Eastburn	1.5	1.6
Sutton-in-Craven #	15.1	13.5
Kildwick #	2.5	2.1
Cononley #	3.0	2.6
Nelson	6.5	5.9
Keighley #	2.0	1.5
Skipton #	6.5	6.1
Bingley	1.5	1.6
Unspecified	1.5	1.3
Total	100.0	99.7

=as for table 44.

The origin characteristics of Saturday rail patrons are similar to those on the Thursday with Steeton, Silsden and Eastburn residents accounting for 61.5% (65.1% with WF4) of demand. The one difference is the appearance of patrons originating from the Nelson area, attracted by the shopping and entertainment alternatives offered in Leeds. The conclusions reached for the prediction of midweek travel similarly apply here.

Overall 66.6% (WF4 weighted) of patrons specifying their origin were from West Yorkshire, the remaining 33.4% from across the border. Whilst the attraction of a cheaper fare structure will play a part, the majority of this number are travelling to the nearest available station, bearing in mind the elliptical nature of a catchment area around a station. The exceptions are those in the Skipton and Cononley Classifications, 13.5% of the total, the former who one can only assume are indeed attracted by cheaper fares, and the latter by a combination of this and the higher frequency of trains from Steeton & Silsden station relative to Cononley.

Of those using the bus to access the station, 89% (86% WF4 weighted) came from the Silsden area, in all 37% (38% WF4) of Silsden originating patrons choosing this mode. Car access featured strongly with Silsden and Sutton-in-Craven, accounting for 45% (50%) and 74% (75%) respectively on combining the various car classifications. The Sutton-in-Craven patrons in particular may welcome an improved bus service.

Seventy four percent (69%) of rail users living in the Steeton area favoured walking to the station and this on a cold gloomy day. On the Saturday the temperatures were a lot higher yet the figure fell to 44%. The implication maybe that car availability is greater at the weekend or that the larger travel groups on this day include children who are unlikely to take kindly to a walk of even moderate distance.

Bus users on the Saturday are still more likely to come from the Silsden area, 81% (84%) although taxis become significant for these residents with 12% (10%) using them. Sutton-in-Craven based rail patrons take to their car (77%) with more Steeton originating travellers using a car access mode (51%) than those from Silsden (44% and 42%). Tables 46 and 48 give a summary of access modes for the two days.

Table 46:Access mode used - Thursday

Mode	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
Walk	19.2 (59% peak)	16.2 (69%)
Bus	17.9 (67% peak)	19.2 (77%)
Pedal cycle	2.6	1.8
Car passenger- dropped off - driver also	23.2 (71% peak) 7.3	24.4 (84%) 5.7
Car driver- park car park - park elsewhere - did not park	13.9 (90% peak) 8.6 2.6	19.2 (96%) 6.2 2.9
Taxi	2.6	1.5
Unspecified	2.0	2.8
Total	99.9	99.9

Table 47:Access mode used - Saturday

Mode	Percentage of all trips - boarders surveyed (WF3 used) %	Percentage of all trips - total boarders (WF4 used) %
Walk	14.0	13.9
Bus	18.0	20.9
Pedal cycle	-	-
Car passenger - dropped off - driver also	20.5 20.0	21.3 18.8
Car driver - park car park - park elsewhere - did not park	20.5 0.5 -	18.3 0.6 -
Taxi	6.0	5.8

Unspecified	0.5	-
Total	100.0	99.6

In the first stage of our work, respondents were asked which access mode they thought they would use with up to 80% of Eastburn, 60% of Steeton and 21% of Silsden residents stating a walk preference. Given the origin patterns from tables 44 and 45, at least 50% should walk based on these earlier preferences. Whether the reality of walking or the car park facility, aided by increased car ownership levels, explain this is unclear because it is car access that has increased from an originally predicted 25% based on this sample of origins.

Part of the unexpected high level of car mode access is of course due to the high percentage of passengers that live outside the immediate vicinity, 33.9% of boarders surveyed. Additionally, one would imagine that choosing to walk to the station is influenced strongly by the prevailing weather yet the percentage of walk access mode passengers fell at the weekend, the day of brighter/warmer weather, suggesting that such factors as car ownership and availability may be more important. From table 35, car ownership levels were greater for weekend patrons and rates of vehicle availability similar.

Local residents using the station does not differ substantially between the two days though the higher number of children travelling on Saturday discourages walking access on this day.

The station car park offers patrons a door to door facility and thus encourages vehicle use. Indeed, the number of car parking patrons may be greater than our survey suggests because the car park location meant many users sat in their vehicle until just before the train arrived, reducing the time available for survey and in many cases giving us no opportunity. However, we noted the car park was full before 9am on the Thursday, substatiated by the Table 46 percentage for patrons parked outside the car park, and one wonders whether the patronage number is affected by the inconvenience of parking elsewhere.

7.CONCLUSION

By June 1992 Steeton & Silsden station was being used to make approximately 593 trips per day. This figure is based on our stage two survey work with adjustment to account for a WYPTE survey carried out on 20th June 1990. We have assumed journey distribution to be similar for each of these surveys. A dramatic rise in the use of the station has taken place since the WYPTE survey was conducted 10 months previouly, yet as this was only 3 months after the station re-opened, the initial growth in demand, distinct from that required to reach a stable level, had not yet fully developed.

The main aim of our study was to validate the Stated Intentions/Stated Preference forecasting method. Our forecast was that around 900 boarding and alighting passengers per day would use Steeton & Silsden station, of which about 155 will be abstracted from rail services in existance before the station re-opened. However this figure related to rail demand once a state of "equilibrium" was reached and it is still too early to say that this is yet the case as it will take between 3 and 5 years for this to be achieved. Previous work

suggests that usage in the first year of operation would be between 57% and 70% of that in year 3 i.e. between 510 and 630 trips per day, and hence the actual figure of usage is within the approximate band.

However there are worrying implications from the analysis of origin town from which patrons travel which suggests only 65% of boarders are from the Steeton, Silsden and Eastburn vicinity. These villages were those targeted for self-completion questionnaires in stage one of our survey and the population on which we based our station demand forecasts. The realisation that such a high proportion of patrons originate from outside the immediate vicinty suggests that our SI/SP forecasts were relevant to only 65% of the present users. Hence only 385 (i.e. 593*0.65) of the present daily trip count should be compared with the original estimate of 899. This figure is below the lower bound of growth for the first year and throws into doubt the ability of the station to attract anywhere near our original forecast. A rough calculation based on the initial growth and the expected growth would suggest that a figure around 630 trips per day would seem a more reasonable equilibrium level of patronage.

The additional 35% of journeys made at present by residents from outside the area will add to this level of patronage and whilst it has worrying consequences for the validity of our prediction methodology, it is nonetheless a valuable source of additional demand. It is uncertain whether this patronage is long term and it may depend on the discrepancy in pricing policy between the counties of North and West Yorkshire. Further, one does not know the effect this demand may have on the area immediately around the station in terms of train congestion and size restictions on the car park.

Our estimates did not provide support for the belief that Stated Intentions demand forecasts are higher than those resulting from a Stated Preference approach, which is contrary to experience from elsewhere (e.g. Leics, Notts - Preston, 1991). At the very most our work suggests that a Stated Intentions forecast may be 10% greater than a Stated Preference one but there are several reasons why our study does not lend itself to more substantial support.

Due to the attraction of Leeds and Bradford (for work, education, shopping and leisure pursuits) and the competitive nature of WYPTE pricing policy, especially at off-peak periods, rail travel is an attractive mode of travel for residents in the villages covered by this study. As a consequence, many journeys to Keighley have in the past been made to make a train connection and subsequently with the Steeton & Silsden station re-opening, many of these journeys are no longer required and rail demand at Keighley station has fallen as a consequence of Eastburn, Steeton and Silsden residents using their local station for future rail travel.

From our WF1 weighted information shown in tables 6, 10 and 12, we estimated some 520 single rail trips per day were being made before the station was re-opened. However, this sample is biased towards rail users and hence WF2 is more appropriate. Using this weight we estimated that 155 trips per day were to be abstracted from existing rail services (i.e. around 17% of estimated usage at Steeton & Silsden station). This estimate assumed all residents in the vicinity of Steeton & Silsden station (i.e. those in the villages of Eastburn, Steeton and Silsden) would in future use this station instead of travelling to Keighley or Cononley stations. Of course some residents living on the outskirts of Eastburn, Steeton and Silsden may still find these alternatives more accessible but for the purpose of our study we assumed these to be negligible.

Keighley was the major trip destination for local residents before the opening of the station, yet being adjacent to the newly opened station on the rail network caused problems in our predictive work. Rail journeys to Keighley from Steeton & Silsden station are few in number and around 35% of demand for the new station arisen from patrons previously using Keighley station to travel further afield by rail. In addition, 5% of demand has been abstracted from other stations. Abstraction from rail will presumably have taken place already and as the station patronage increases these rates will fall being based on total usage. However we estimate that on reaching a state of equilibium 26% of patrons will have been rail users before the re-opening of the station, much higher than the 17% predicted.

Policy response bias, recognised as a particular feature of Stated Intentions work, has a minimal affect on our study since the station re-opening was well known to respondents at the date of the first stage of our survey, performed only two months prior to the event. Further, our study did not focus on investment issues to assist appraisal, and in particular the advantages and disadvantages of re-opening the station, since a decision had already been made. Consequently, opportunities for response biasing were perhaps limited within the questionnaire. The effect of this point will be to reduce the overestimation inherent in Stated Intentions forecasts.

The adopted Fowkes and Preston model evolved from a Leicestershire County Council sponsored study to appraise the merits of restoring passenger traffic on the freight line between Leicester and Burton, serving the towns of Coalville and Ashby. The population data from which the parameters were estimated may not necessarily be of a similar composition as that of Eastburn, Steeton and Silsden and the model may not be appropriate. Further, the survey methodology used in formulating the model over-represented traders and under-represented non-traders (i.e. people who will not switch to rail under any circumstance) and may therefore lead to overprediction.

An alternative model to use may have been the Brighouse/Elland one developed by Transportation Planning Associates in association with ourselves in our study of May 1990. However, whilst it may represent the villages and towns of West Yorkshire better than our adopted model it is based on the Revealed Preference approach and it was on these grounds that we did not use the model.

The Stated Preference adjustment was also a major concern because our Stated Intentions calculations allowed for the existence of generated and re-distributed trips whilst our Stated Preference ones did not. The result was an inconsistent restriction on the Stated Preference and Stated Intentions figures.

These adjustment concerns result from our inability to produce disaggregate counts for trips of the abstracted, generated or re-distributed variety. In particular, we feel that were it possible to determine the generated and re-distributed trip counts, a more appropriate adjustment could be made than the Stated Preference model adjustment used. Unlike abstracted trips we feel the bias adjustment should be of a different nature since it is not modal competition that determines the count but other factors (i.e. the perceived quality of train service, the attractiveness of particular destinations etc.).

We believe these trips are particularly susceptible to overestimation as in the long run the average respondent is unlikely to deviate much from their present lifestyle and allocation

of time. Further, it is to be expected that trip purpose is a major determinant for these journeys with both education and work trips unlikely to be generated or re-distributed with weekend shopping trips and excursions the most likely source.

It should also be noted that we have used the probabilistic forecasting method in preference to a deterministic approach. The mean utility measures shown in table 27 suggest that rail travel is considered dominant to car and bus in this study, for individuals using this welfare criteria, in which case the alternate use of the deterministic approach would lead to higher Stated Preference figures.

Unfortunately the predicted level of mode switches, 58% for bus and 61% for car travellers, cannot be verified easily because of the re-distibution of trip destinations i.e rail travel to Keighley is negligible.

Table 48: Return by train

Return intended	Thursday %	Saturday %
No	7.3	11.5
Yes	87.4 (66% peak)	80.5
Unspecified	5.3	8.0
Total	100.0	100.0

WF3 weighted table 48 shows the response of surveyed patrons asked if they intended returning from their journey to Steeton & Silsden station. The unspecified percentage was too diverse to specify and included returns made to alternative rail stations and by alternative modes. Combined figures suggest 83% of patrons returning to the station and hence making return journeys. An important assumption in our prediction technique is that all journeys are considered to be of this kind, yet this single statistic suggests a possible 9% over-prediction could have been made in our SI/SP work. However counterbalancing this are those patrons returning to Steeton & Silsden statiom having departed from an alternate station and those having made their outward journey by an alternate mode. We conclude that our assumption seems reasonable in the light of this.

8.RESPONDENTS' COMMENTS

On our survey forms, respondents were offered an opportunity to comment on the Steeton & Silsden station re-opening and any other local transport issues. The following list briefly summarises the more widely held opinions:

-More car parking facilities to be made available at the station site,
-Criticism of peak time train overloading,
-Criticism of the station location given the importance of the Airedale General Hospital and, given the station completion a footpath linked to the Hospital is recommended,

-Poor transport access to the station from West Steeton and Eastburn,
-The integration of bus and train timetables to minimise station access time, especially for Silsden residents,
-The unlikely use of rail services for short distance trips due to proximity of bus stop, yet expected demand for trips further afield, especially Leeds and Bradford,
-The completion of the Aire Valley Trunk Road makes road travel between Silsden and Keighley very much easier.

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APPENDIX 1

Table A:Household type composition by village

Composition	Steeton %	Eastburn %	Silsden %
Single non-OAP	6.5	13.3	9.6
Single OAP	14.1	13.3	10.8
Two or more OAPs	10.9	16.6	8.4
Other	68.5	56.8	71.2
Total	100.0	100.0	100.0

Note:Data based on data weighted by WF1.

Table B: Work trip destinations by household (per annum)

Destination	Eastburn	Steeton	Silsden
Steeton/Silsden	15.3	55.0	73.7
Keighley	138.0	69.3	93.1
Bingley	-	7.7	2.8
Shipley	7.7	11.0	6.7
Bradford	7.7	19.5	28.3
Leeds	-	11.8	21.6
Crosshills#	-	12.5	8.3
Skipton	1.5	10.5	8.3
Other West Yorks	30.7	36.5	48.2
Other/Unspecified	44.5	14.3	16.1

= Crosshills, Kildwick & Sutton-in-Craven.

Note:Table B based on data weighted by WF1

Table C:Education trip destinations by household (per annum)

Destination	Eastburn	Steeton	Silsden
Steeton/Silsden	6.3	14.5	56.3
Keighley	-	7.0	11.9
Bingley	-	1.9	-
Bradford	-	4.1	-
Leeds	-	0.4	2.7
Crosshills#	12.7	25.8	18.3
Skipton	7.6	9.1	-
Other West Yorks	6.3	13.2	6.9

= Crosshills, Kildwick & Sutton-in-Craven.

Note:Table C based on data weighted by WF1

Table D:Work trip modes by household (per annum)

Mode	Eastburn	Steeton	Silsden
Car driver	145.7	157.5	221.1
Car passenger	-	2.3	7.8
Bus	53.7	30.3	54.3
Train	7.7	7.0	6.1
Pedal cycle	-	6.0	-
Motor cycle	-	3.8	-
Walk	38.3	41.3	15.0
Other	-	-	2.8

Note:Table D based on data weighted by WF1.

Table E:Education trip modes by household (per annum)

Mode	Eastburn	Steeton	Silsden
Car driver	7.6	13.8	10.5
Car passenger	-	5.2	-
Bus	12.7	38.2	43.5
Train	-	3.3	0.9
Walk	12.7	15.5	41.2

Note:Table E based on data weighted by WF1. All other modes were not used.

Table F: Education and work trips per household

Area	Estimated number of education trips per household (per annum) %	Estimated number of work trips per household (per annum) %
Eastburn	32.9	245.3
Steeton	76.0	248.0
Silsden	96.1	307.0

Note:Table based on data weighted by WF1.

Table G:Leisure trips by mode per household (per annum)

Mode	Eastburn	Steeton	Silsden	All
Car driver	147.7	147.1	120.8	130.1
Car passenger	-	0.8	-	0.2
Bus	35.2	64.4	45.3	49.6
Train	19.6	14.1	13.3	14.0
Pedal cycle	-	0.3	-	0.1
Walk	-	0.2	-	0.1
Unspecified	11.9	16.4	4.4	8.3

Note:Table based on data weighted by WF1.

Table H:Leisure trips by destination per household (per annum)

Destination	Eastburn	Steeton	Silsden	All
Steeton/Silsden	3.3	1.6	-	0.7
Keighley	124.1	143.7	273.0	226.1
Bingley	-	0.5	-	0.1
Shipley	-	0.8	3.9	2.8
Bradford	19.9	24.3	18.1	19.9
Leeds	17.4	17.6	16.2	16.7
Skipton	31.5	37.3	29.7	31.9
Other West Yorks	14.1	9.0	16.0	14.0
Other/Unspecified	4.1	8.4	4.5	5.5

Note:Table based on data weighted by WF1.

Table I:Keighley trip travel mode choice by age and area

Age Band	Steeton		Eastburn		Silsden	
	Car %	Bus %	Car %	Bus %	Car %	Bus %
16-24	40	55	100	-	29	57
25-39	81	17	83	17	64	36
40-59	71	29	33	67	56	14
60-64	60	40	100	-	86	-
Over 65	42	58	40	60	31	69

Note:Percentages will not necessarily sum to 100 due to the presence of other modes of travel. Table based on data weighted by WF2.

Table J:Keighley trip travel mode choice by household income

Income band	Steeton		Eastburn		Silsden	
	Car %	Bus %	Car %	Bus %	Car %	Bus %
< 5,000	39	61	33	67	31	69
5-10,000	56	44	67	33	64	36
10-15,000	75	22	75	25	44	56
15-20,000	79	21	71	29	75	25
> 20,000	70	25	50	50	88	-

Note:Table based on data weighted by WF2.

APPENDIX 2

Table A:Passenger numbers - Leeds/Bradford direction

Train time	Thursday		Saturday	
	Boarders	Alighters	Boarders	Alighters
0712 to Lds	18	-	N/A	N/A
0730 to Lds	25	-	N/A	N/A
0749 to Lds	38	-	N/A	N/A
0750 to Lds	N/A	N/A	41	-
0803 to Bfd	45	-	3	-
0812 to Lds	43	-	12	-
0819 to Bfd	27	-	N/A	N/A
0849 to Lds	13	1	27	2
0917 to Lds	8	1	36	-
0949 to Lds	16	-	41	-
1017 to Lds	3	-	24	-
1034 to Bfd	2	-	8	-
1049 to Lds	5	1	9	-
1117 to Lds	6	-	14	-
1124 to Bfd	1	-	4	-
1202 to Lds	2	-	7	-
1217 to Lds	9	1	6	-
1224 to Bfd	5	-	3	-
1249 to Lds	1	-	8	-
1317 to Lds	4	1	22	2
1324 to Bfd	3	-	2	-
1349 to Lds	6	-	8	1
Total	280	5	275	5

Table B:Passenger numbers - Skipton direction

Train time	Thursday		Saturday	
	Boarders	Alighters	Boarders	Alighters
0734 to Ski	1	6	N/A	N/A
0751 to Ski	-	1	N/A	N/A
0833 to Ski	3	2	-	1
0907 to Ski	3	1	1	-
0934 to Mor	2	2	4	1
1003 to Ski	-	4	-	1
1026 to Ski	-	2	-	1
1033 to Ski	1	-	N/A	N/A
1034 to Ski	N/A	N/A	1	-
1104 to Ski	1	-	4	7
1126 to Ski	-	2	-	2
1134 to Ski	-	2	-	7
1204 to Ski	-	4	-	10
1226 to Ski	1	4	-	3
1234 to Ski	-	1	-	7
1304 to Mor	-	2	4	14
1326 to Ski	1	6	11	2
1334 to Ski	1	1	3	15
Total	14	40	28	71

Table C:Return time (WF1 weighted)

Time Band	Thursday %	Time Band	Saturday %
1600	4	1300	3
1630	5	1400	6
1700	9	1430	7
1730	16	1500	4
1800	17	1530	3
1830	11	1600	13
1900	3	1700	10
1930	3	1800	8
-		1900	3
-		2100	4
Other	6	Other	14
Unspecified	26	Unspecified	25
Total	100	Total	100

Note:Patrons are grouped into convenient time bands, the mid-time being shown.

Table D:Egress mode used - Thursday

Mode	Percentage of all trips - boarders surveyed (WF1 used) %	Percentage of all trips - boarders surveyed (WF2 used) %
Walk	81.6 (65%	82.1 (77%)
Bus	peak)	9.9 (91%)
Pedal Cycle	7.9 (83% peak)	0.5
Car	0.7	1.4
Tube	2.0	0.7
Ferry	0.7	0.4
Taxi	0.7	0.4
Train	0.7	2.0
Unspecified	0.7	2.8
	5.0	
Total	100.0	100.2

Table E: Egress mode used - Saturday

Mode	Percentage of all trips - boarders surveyed (WF1 used) %	Percentage of all trips - total boarders surveyed (WF2 used) %
Walk	80.9	80.7
Bus	7.0	6.5
Pedal Cycle	-	-
Car	2.0	2.8
Tube	1.5	1.6
Ferry	-	-
Taxi	-	-
Train	5.5	5.2
Unspecified	3.1	3.1
Total	100.0	99.9

Table F:Ticket type - Thursday

Ticket type	Percentage of all trips - boarders surveyed (WF1 used) %	Percentage of all trips - total boarders surveyed (WF2 used) %
Saverstrip	3.3	3.3
Cash	35.8 (50%	30.7 (63%)
Metrocard	peak)	47.1 (96%)
Day Rover	39.1 (93%	6.7
OAP/Disabled Permit	peak)	2.6
Child Permit	8.6	1.3
Annual Season	4.0	0.7
BR Pass	1.3	0.7
Return	0.7	0.5
Supersaver	0.7	1.0
Saver	0.7	0.4
Young Person Supersaver	0.7	3.2
Unspecified	0.7	1.8
	3.3	
	1.1	
Total	100.0	100.0

Table G:Ticket type - Saturday

Ticket type	Percentage of all trips - boarders surveyed (WF1 used) %	Percentage of all trips - total boarders surveyed (WF2 used) %
Saverstrip	1.5	1.6
Cash	51.0	54.6
Metrocard	4.5	3.6
Day Rover	24.0	22.4
OAP/Disabled Permit	7.0	6.3
Family Rover	4.0	3.5
Half Fare	0.5	0.5
Return	0.5	0.4
Supersaver	1.5	1.7
Saver	4.5	4.4
Young Person Supersaver	1.0	1.0
Total	100.0	100.0