



# The Railway Consultancy Ltd

Specialists in Planning Economics and Management

By e-mail

Mr C Hoskins,  
Hertfordshire CC Passenger Transport Unit,  
County Hall,  
Pegs Lane,  
Hertford. SG13 8TJ.

1st Floor South Tower  
Crystal Palace Station  
London SE19 2AZ

T +44 20 8676 0395  
F +44 20 8778 7439  
E [info@railcons.com](mailto:info@railcons.com)  
[www.railcons.com](http://www.railcons.com)

12<sup>th</sup> November 2012

Dear Christian,

Re: Abbey Line Surveys, Autumn 2012

We have now completed our latest counts of rail patronage on the St Albans Abbey branch, along the length of the line to and from Watford Junction. We undertook passenger counts last month on Wednesday (24<sup>th</sup>), Thursday (25<sup>th</sup>), Saturday (20<sup>th</sup> and 27<sup>th</sup>) and Sunday (21<sup>st</sup> and 28<sup>th</sup>), covering all trains once in the process. The later shifts this year fell during the Autumn 'leaf-fall' timetable, which provides for an amended service with one fewer round trip per day. Unfortunately, there were also a few train cancellations during the shifts we surveyed: on the morning of the 25<sup>th</sup> there was no conductor for the first train of the day, and no driver was available for the last four return trips on Sunday 21<sup>st</sup>. The morning shift was resurveyed on the 1<sup>st</sup> November (which was during half-term week). A summary of our findings is provided in this note, while the full data collected can be found in the attached spreadsheet.

### *Surveying Methods*

The method used for the passenger counts has remained unchanged to that used in previous counting campaigns. As agreed, this exercise included only passenger counts, and no survey on passengers' travel purposes or ticket types.

### *Passenger Counts*

Overall, the number of passengers travelling on the Abbey Line has decreased by nearly 6% between May 2012 and October 2012. This is the first year in seven where the October count has been lower than the preceding May count; the effect of Queen's Jubilee may have caused the May count to be higher than usual, but the October count is still down significantly, and is nearly a 7% decrease compared to October 2011. As can be observed from Figure 2, the overall trend has generally been upward, and on previous occasions when the count has been lower it has picked up again when next measured. Having said that, patronage has now dropped by roughly 700 passengers per week compared to the October 2011 count, equivalent to 100 passengers per day. Figure 1 shows a summary of the Abbey Line weekly patronage for the last 7 years.

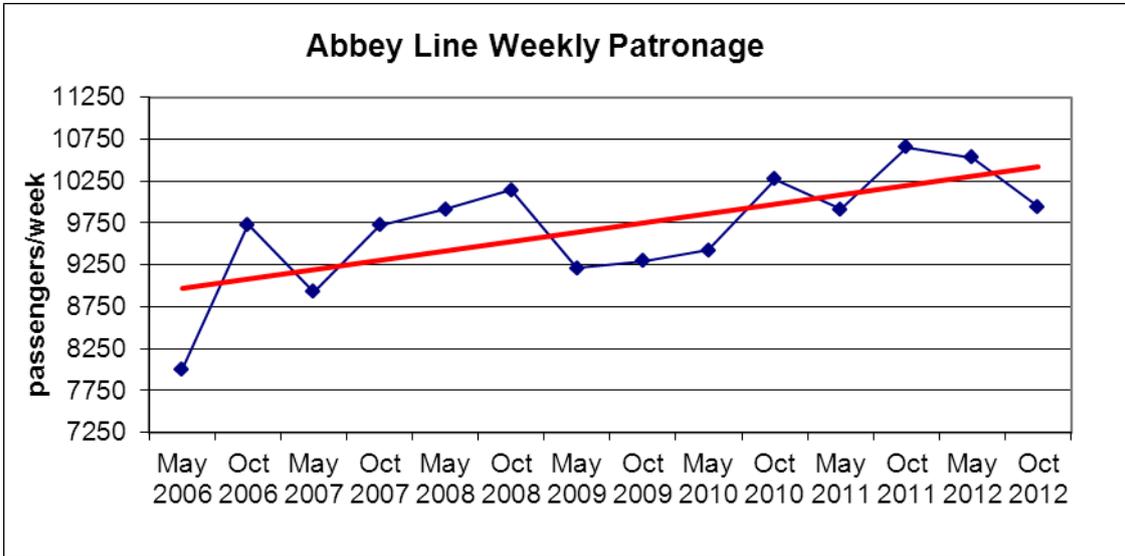


Figure 1. Summary of Abbey Line Patronage 2006-2012

Although there is a drop in usage this October, the implication of the trend line is that, over the seven years we have undertaken these surveys, patronage on the Abbey line has risen by almost 3% p.a., equivalent to nearly 1 person per train p.a. Moreover, as Figure 2 below shows, on a year-on-year basis, traffic has increased on all days of the week. A breakdown of the passenger usage from May 2006 to October 2012 is as follows:

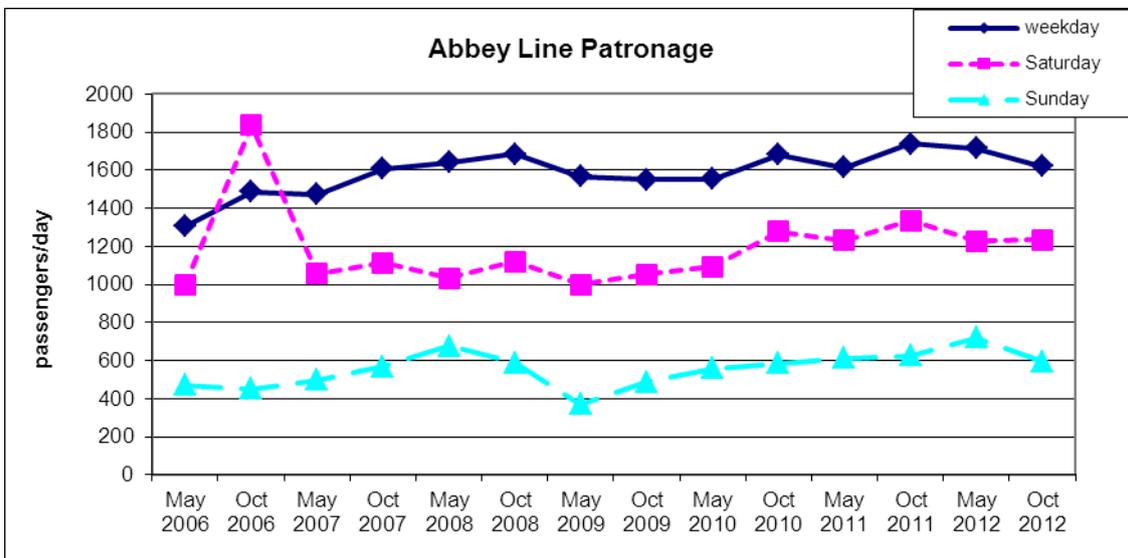


Figure 2. Comparison of Recent Abbey Line Patronage Figures by Day of Week

Seasonally there are differences: historically, October counts have been higher than May. Separating out the counts to October and May counts (see Figure 3), it is clear to see that October patronage is far more erratic whilst May more closely follows the increasing trend, the latest counts have again shown October to be unpredictable.

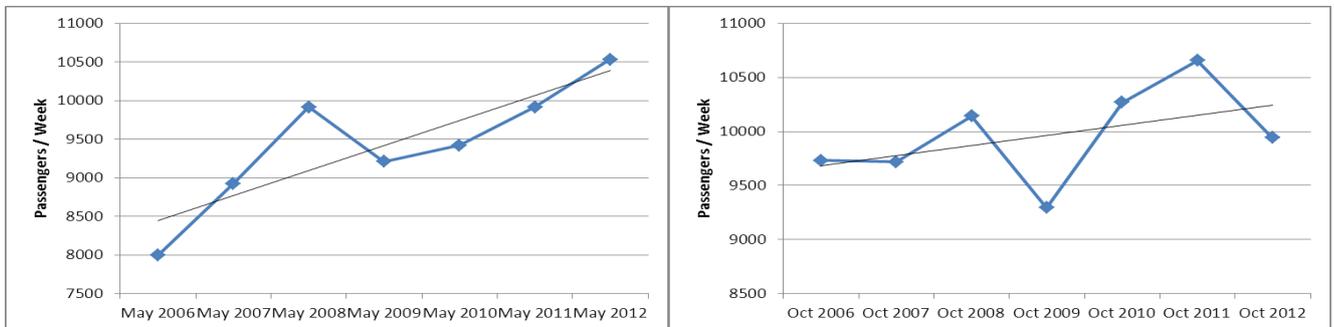


Figure 3. May and October Trends

#### Weekday traffic

A nearly 7% decrease in total boarders from 1739 per day to 1622 per day has been observed between October 2011 and October 2012. This decrease takes weekday traffic to its lowest level since 2009. There has also been a decrease of nearly 6% since May 2012; this is the first time the October count has been lower than the preceding May count and the causes are somewhat unclear.

Whilst the average train load is still only 25 passengers, it is not distributed evenly with the busiest train remaining in the morning, as has been recorded in previous surveys: 135 passengers alighted the 0741 from St. Albans Abbey, when it arrived at Watford Junction at 07:59; this is the prime train for commuting to Central London, similarly there were 105 passengers alighting at Watford Junction on the 08:45 arrival. This is a slight decrease from last October when there were 164 and 119 passengers alighting on the respective trains. Because the peak is very important to the line, we have done an analysis of the peak and off peak numbers, which can be found in Table 1 and Figures 4 and 5. The figures may not tell the whole story; it is unknown whether the leaf fall time table adversely affects patronage, or (because the early morning trains had to be resurveyed) if the half-term holiday meant some regular commuters were not travelling as they would usually do.

Table 1. Peak arrivals at Watford Junction

Train arriving in Watford at:	07:19 (07.13)	08:01 (07.59)	08:46 (08.45)	09:38 (09.34)
Passengers alighting Oct 08	58	151	127	30
Passengers alighting May 09	60	145	104	29
Passengers alighting Oct 09	71	140	84	38
Passengers alighting May 10	59	134	106	40
Passengers alighting Oct 10	87	130	118	31
Passengers alighting May 11	83	117	110	43
Passengers alighting Oct 11	73	164	119	48
Passengers alighting May 12	117	133	124	43
Passengers alighting Oct 12	82	135	105	35
Change Oct 08 – Oct 09	+13 (+22%)	-11 (-7%)	-43 (-34%)	+8 (+27%)
Change Oct 09 – Oct 10	+16 (+22%)	-10 (-7%)	+24 (40%)	- 7 (-18%)
Change Oct 10 – Oct 11	-14 (-17%)	+34 (+26%)	+1 (+1%)	+17 (+55%)
Change Oct 11 – Oct 12	+9 (+12%)	-29 (-18%)	-14 (-12%)	-13 (-27%)

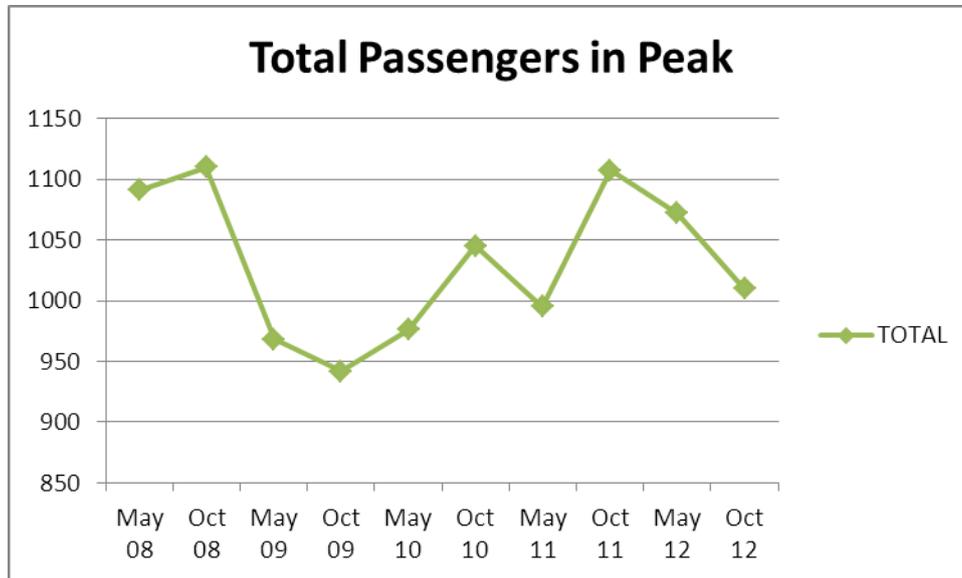


Figure 4. Comparison of Total Peak Passengers

Overall, peak traffic has dropped again, with a decrease of 9% year-on-year, and 6% from May 2012. This shows that the commuter traffic has to some extent reflected recent economic conditions, although this may not be the only reason behind the fall in patronage.

The off-peak analysis shown in Figure 5 shows a general rise in patronage over the years, but a drop in October 2012. This drop in patronage may be similar to May 10 when the numbers were temporarily lower and bounced back up next count. Nevertheless, there is some random variation; whilst early and late trains can be very quiet, fortunately this was more than balanced by demand for other services throughout the day which had loads of around 15 to 20 passengers.

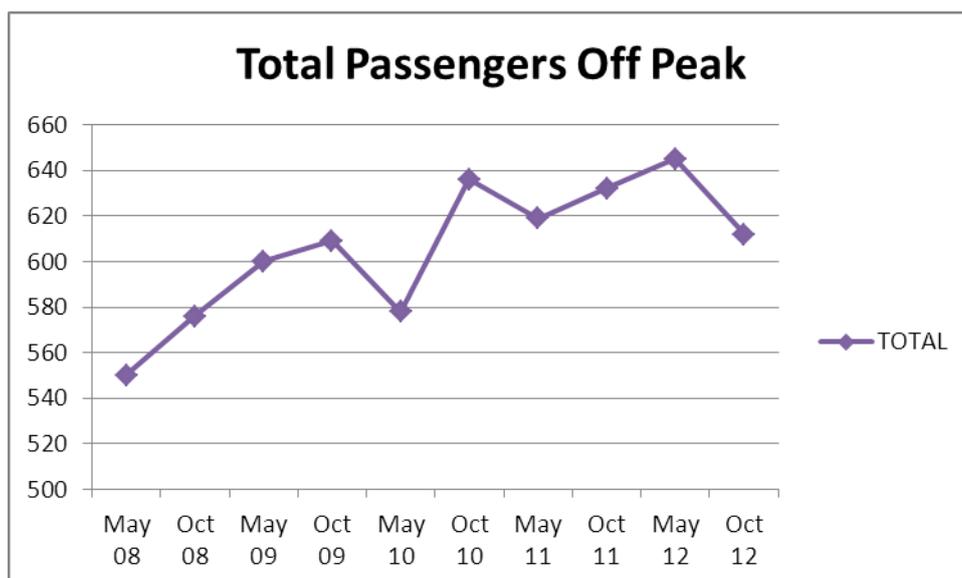


Figure 5. Comparison of Total Off-Peak Passengers

Figures 6 and 7<sup>1</sup> show the allocation of weekday passengers to trains arriving at the two key stations; note how St Albans functions as both an origin and a destination, whilst Watford Junction is overwhelmingly a destination. There has been a small decrease in peak trips to Watford Junction compared to May, which seems to be mostly on the 08.30. Perhaps the change in timetable does not allow for a convenient interchange on to London. Numbers on the 06.21 and the later trains have been quite steady over the years. The three trains arriving at Watford Junction between 07.00 and 09.00 as expected are by far the busiest trains of the day. The last train before peak fares finish, whilst being too late for a conventional commute, has a higher patronage than those after it and may be used by local workers.

As noted above, St. Albans alighting traffic shows two peaks. The figures show that the morning peak at St Albans Abbey has not changed very much since last October, but that there has been a large increase in alighters in the evening. This would suggest that the increase in morning peak alighters at Watford Junction is of passengers travelling from St Albans Abbey.

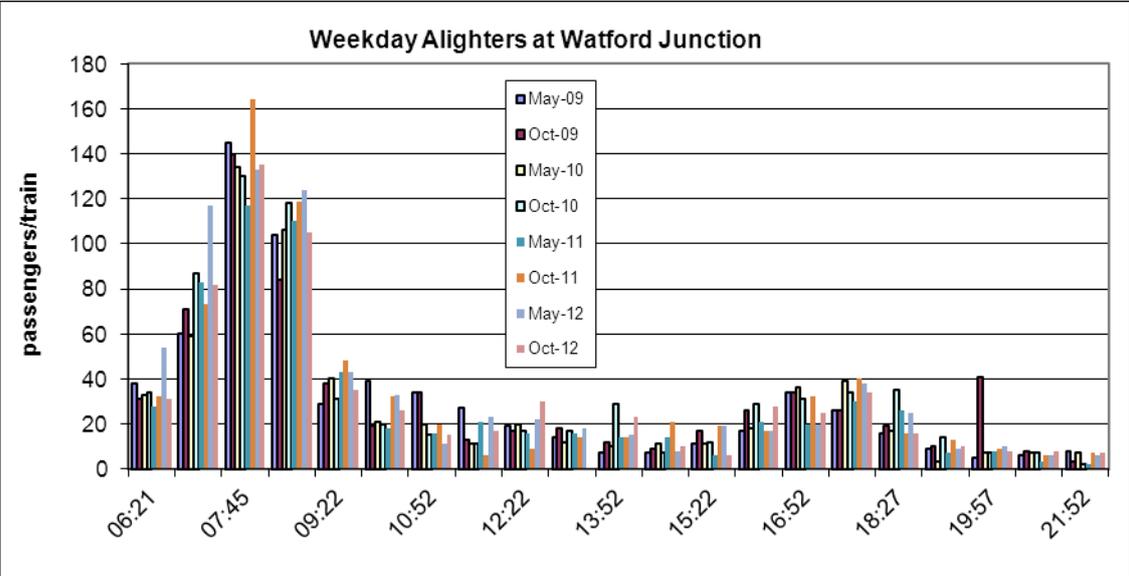


Figure 6. Comparison of Weekday Abbey Line Alighters at Watford Junction

<sup>1</sup> Train times for figures 6 + 7 may have slight variations over the years (e.g. Leaf fall timetable)

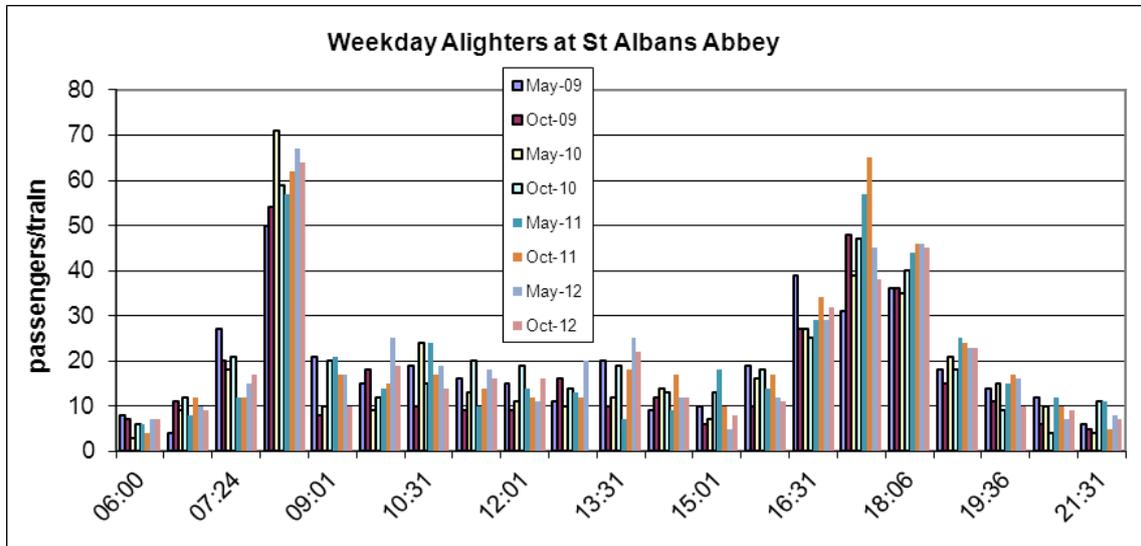


Figure 7. Comparison of Weekday Alighters at St. Albans Abbey

#### Saturday traffic

Other than the obvious 'spike' in demand of the fireworks/football events in November 2006, Saturday traffic has been historically fairly stable over the years (see Figure 2), albeit with a seasonal variation. This is to be expected, with Winter Saturdays normally having more sporting events. The increase from May 2012 to October 2012 is effectively nothing (from 1229 to 1234), which unlike previous years does not reflect the usual seasonal increase; even though there was a train carrying passengers after a Watford FC match on the Saturday afternoon. 109 passengers boarded the 18.01 from Watford Junction to St. Albans Abbey and this was by far the most occupied train of the day; apart from this, the trains going both ways around midday were most well used with between 40 and 50 passengers on board. The average Saturday train load is still around 20 passengers. Saturday surveys were again spread across two consecutive weekends so that any events (e.g. football matches) that happened had less of a biasing effect.

#### Sunday traffic

The 597 people travelling on Sunday comprises a decrease from October 2011 of nearly 5%, bucking the four year trend of increasing Sunday patronage. This is also a fall of around 120 passengers compared to the May 2012 count. Potential reasons for this include poor weather, and the recent spell of general unreliability of London Midland services. Nevertheless, the average trainload on Sundays is still 13, despite the decrease. In this count two mid-afternoon trains had a loading of over 30 (the 14.07 from Watford Junction and the returning 15.27), this is similar to previous year's counts where two trains have had a loading of 30 passengers or more. However, whereas in October 2009 there were no trains with a loading of more than 20, this count found 9 trains with 20 or more passengers.

#### Other Comments

When trains run, punctuality continues to be generally very good, although early morning trains were affected by adhesion problems both during the week as well as during the weekend. However, whilst the Railway Consultancy was out surveying the Abbey line considerable disruption was encountered; on a Sunday evening, four return trains were cancelled, and one weekday morning the first train was cancelled (we therefore re-surveyed the second return trip as well, in order not to count passengers left over from the previous cancelled trip). In total, 10 (i.e. 9% of) of the 110 trains we tried to count

were cancelled. Clearly, if passengers start to consider the service unreliable, then it will start to get a bad reputation and patronage will start falling.

As has been the case in previous counts, Watford Junction and St Albans Abbey dominate the passenger flows, with over 40% of passengers boarding at Watford Junction, and 25% boarding at St. Albans Abbey. Bricket Wood and How Wood are the quietest stations.

Although more thorough ticket-checking occurs at the barrier at Watford Junction and a ticket machine is now available at St Albans Abbey, revenue protection on the branch itself is generally relatively weak. An RPI was in evidence during the morning peak and on some evening trains, but the guards' efforts to sell tickets are restricted because of the requirement for them to return to the rear cab at every station. This may have encouraged some local trips, for instance amongst teenagers not wishing to pay. By any reasonable calculation, the cost of employing an additional ticket inspector to ensure a higher degree of ticket compliance is far less than the current revenue losses which might be stemmed. Hertfordshire CC is encouraged to take up this issue of revenue collection with London Midland, in order to improve the commercial performance of this line.

As noted above, this year's counts did partly fall during the leaf fall timetable, which includes 20 return trips a day instead of the usual 21. This may be one cause of the drop in passenger numbers. Instead of the demand moving to a different train, people may no longer find it convenient and instead make their journey using another mode of transport. It may also affect the interchange times at Watford Junction and commuters may change their habits on how they travel to work.

#### *Annual Patronage Estimate*

Our best estimate of current annual patronage is as set out below. Factors are required to gross up one-off counts to the annual figures. A factor of 245 has been used for weekdays, which is slightly less than the actual number of weekdays per year, because a number of these (e.g. between Christmas and New Year) are particularly quiet. A factor of 56 has been used for Sundays, which includes the 6 Bank Holidays on which a service is operated, but also allows for some loss of demand on those Sundays when a substitute bus is used. The annual estimate is therefore as follows:

Weekdays = 1622 \* 245 = 397,390

Saturdays = 1234 \* 52 = 64,168

Sundays = 597 \* 56 = 33,432

This gives a total annual figure of a little under 500,000 but there are obviously inevitable inaccuracies involved in the surveying and calculation process. We therefore recommend that you take a figure of 490,000 as the best current estimate of demand on the line. This is a 24% increase on the annual patronage estimate of 395,000 derived from our first surveys in May 2006 (compared to a more general rail patronage increase in the South East of about 31% over the same period, as suggested by ORR's National Rail Trends 1112 quarter 1, published recently). Nevertheless, it does appear that Abbey Line patronage peaked one year ago, in October 2011.

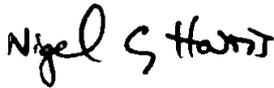
The numbers are down compared to previous counts for a variety of reasons. Bringing forward next Autumn's counts by a week should eliminate any impact of the leaf-fall timetable and half-term school holiday, and this is recommended. However, it is possible that the numbers observed this October truly reflect the usage of the line, and that the May 12 and October 11 figures were abnormally high. Alternatively, these results may simply be a reflection of random variation. Whatever the reason, it will be interesting to see if the numbers pick up in May 2013 or continue to fall.

*Conclusions*

With passenger counts having been carried out 14 times now over the last seven years, trends in patronage are relatively clear. Whilst October traffic has generally been higher than that in May, the overall annual level of demand has now dropped over the last 12 months and this year for the first time saw a lower figure in October than May. As discussed there could be a number of causes for this recent drop in patronage, including poor train service reliability, the impacts of the 'leaf fall' timetable and half-term holiday, and general or local poor economic conditions. However, cumulative growth since the beginning of our survey programme in 2006 has been about 3% p.a., equivalent to an increase of around one passenger per train per year.

Our best estimate of annual patronage is now 490,000 passengers per annum (ppa). This reflects the seasonal increase we see every Autumn, and represents a 5.7% decrease on the May figure, and a 6.7% decrease from last Autumn.

Yours sincerely,

A handwritten signature in black ink that reads "Nigel G Harris". The signature is written in a cursive style with a large initial 'N' and 'H'.

(Dr) Nigel G Harris,  
Managing Director

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