

Fen Line growth analysed

- 1 **A ten year perspective: 2004/5 to 2014/15** (Part I refers).
 - 1.1 Taken together, **the six Fen Line stations** have grown from 2.6m journeys to 4.3m over the ten year period, **an increase of 66.6% [Compound Annual Growth Rate (CAGR): 5.24%]**.
 - 1.2 *Percentage* growth was evenly distributed: the **four stations north of Ely North Junction** saw growth from 1.1m to 1.8m, **an increase of 64.1% [CAGR: 5.08%]**, the **two stations south of Ely North Junction** grew from 1.5m to 2.4m, **an increase of 68.6% [CAGR: 5.36%]**. Biggest risers in *percentage* terms were Littleport (+99.7%) [CAGR: 7.16%] and Waterbeach (+92.9%) [CAGR: 6.79%].
 - 1.3 The largest *absolute* growth was seen at Ely (some 813,000 additional journeys per year, compared to 2004/5 (+64.8%) [CAGR: 5.12%] and King's Lynn grew by 329,000 additional journeys (+51.3%) [CAGR: 4.23%].
 - 1.4 **Despite 66.6% growth [CAGR: 5.24%], the Fen Line under-performed the average GB growth of 78.3% [CAGR: 5.95%] over the ten-year period.**
 - 1.5 **It is noteworthy, however, that the Fen Line now carries over 1.7m extra journeys than it did in 2004/5 – taking a rough estimate of 270 seats per 4-car train, that equates to some 17 extra trains, every day of the year.**
- 2 **A five year perspective: 2009/10 to 2014/15** (Part II refers).
 - 2.1 Over the five year period, **the six Fen Line stations** have grown from 3.2m to 4.3m journeys, **an increase of 33.6% [CAGR: 5.96%]**.
 - 2.2 *Percentage* growth was again fairly evenly distributed: the **four stations north of Ely North Junction** saw growth from 1.4m to 1.8m, **an increase of 34.8% [CAGR: 6.16%]**; the **two stations south of Ely North Junction** grew from 1.8m to 2.5m, **an increase of 32.7% [CAGR: 5.82%]**. Biggest risers in *percentage* terms were Littleport (+59.3%) [CAGR: 9.76%] and Waterbeach (+43.3%) [CAGR: 7.46%].
 - 2.3 The largest *absolute* growth was seen at Ely (some 489,000 additional journeys per year, compared to 2009/10 (+30.9%) [CAGR: 5.53%]; King's Lynn grew by 220,000 additional journeys (+29.3%) [CAGR: 5.28%].
 - 2.4 **The Fen Line (+33.6%) [CAGR: 5.96%] out-performed the average GB growth of 30.7% [CAGR: 5.50%] over the five-year period.**
- 3 **A one year perspective: 20013/14 to 2014/15** (Part III refers).
 - 3.1 During the year, the six Fen Line stations grew from 4.05m to 4.3m journeys, an increase of 6.0%.
 - 3.2 Once more, *percentage* growth was fairly evenly distributed: the **four stations north of Ely North Junction** saw growth from 1.73m to 1.84m, **an annual increase of 6.6%**; the **two stations south of Ely North Junction** grew from 2.3m to 2.4m, **an annual increase of 5.5%**. Biggest risers in *percentage* terms were Waterbeach (+10.6%) and Watlington (+9.2%).

3.3 The largest *absolute* growth was at Ely (some 92,000 additional journeys per year, compared to 2013/14 (+4.7%); King's Lynn grew by some 57,000 additional journeys (+6.3%).

3.4. With 491,744 journeys in 2014/5 (+6.9%), **Downham Market has risen to overtake Great Yarmouth (436,834, an annual decline of -5.2%), as the fourth busiest station in Norfolk.** This is after Norwich (4,071,502, an annual decline of -1.7%), King's Lynn (970,890, +6.3%) and Diss (682,142, +1.0%).

3.5 King's Lynn has now almost reached the '1 million or more' mark; Ely has been in this category since 2002/3.

3.6 **Over the year, the Fen Line's annual growth of 6.0%, once more outperformed the GB average (+4.5%).**

4 The periods compared: *rates of growth* (Part IV refers).

4.1 The Compound Annual Growth Rate (CAGR) shows the mean annual growth rate over a defined period of time longer than one year. It is a number which describes the rate of growth over the period, *had this occurred at a constant rate* (i.e. it is a geometric progression). Thus it smoothes out those variations in growth rates which actually occurred during each period under consideration.

4.2 The 5 year CAGR is greater than the 10 year CAGR in the cases of all six Fen Line stations; the same observation applies to the Fen Line as a whole, to those parts of it both north *and* south of Ely North Junction, but *not* to the GB figures.

4.3 Comparing the latest (2013/4-2014/5) annual growth rates to the ten-year and to five-year CAGRs, however, shows that not all of these current rates are greater than those for the previous periods. This applies to Littleport and Ely stations, where the growth rate has not continued to accelerate (though the growth rate is still firmly positive). This also applies to the part of the Fen Line south of Ely North Junction and to the GB figures (again, all of these still remain positive).

4.4 The same comparison of the 10-year and the 5-year CAGRs with the latest annual growth rates shows continuous and **continuing acceleration in the rate of growth for King's Lynn, Watlington, Downham Market and Waterbeach stations, as well as for that part of the Fen Line north of Ely North Junction.**

4.5 Growth rates are useful in prioritising investment decisions but it should be kept in mind that passengers, trains, and seats on those trains come in *absolute* numbers. That leads back to the point made in paragraph 1.5 above that **the Fen Line would require, every day of the year, some 17 extra trains than there were in 2004/5, just to seat the 1.7 million extra passengers it is now carrying each year.**

The 2014/15 figures are the most recent released by the Office of Rail and Road (ORR) and are available at: <http://orr.gov.uk/statistics/published-stats/station-usage-estimates>

The ORR are estimates; please see the above web link for the methodology and for limitations to the official figures.

Please also note that the figures for Ely include all services calling there and therefore overstate Fen Line journeys to and from Ely. Fen Line journeys include all journeys between Cambridge and Ely (irrespective of train operator) but journeys starting or finishing at Ely to or from stations such as Birmingham or Norwich (both served by direct trains from Ely) should be excluded from the total Fen Line figures for Ely. The official statistics published by ORR do not permit this downward adjustment to be made.

PART I TEN-YEAR CHANGE

Fen Line Passenger Growth (Stations north of Cambridge)	2004/5 (a)		2014/15 (b)	
King's Lynn	641668		970890	
Watlington	85231		143904	
Downham Market	277744		491744	
Littleport	119198		238062	
Ely	1255362		2068240	
Waterbeach	197594		381202	
Cambridge North - due to open 21 May 2017	N/A		N/A	
TOTAL	2576797		4294042	
<i>Stations north of Ely North Junction</i>	1123841	43.6 %	1844600	43.0 %
<i>Stations south of Ely North Junction</i>	1452956	56.4 %	2449442	57.0 %
		100 %		100 %
Great Britain	1,562,255,597		2,785,070,620	
	Change			
	2004/5-2014/15			
	(c)			
King's Lynn	329222	+5 1.3 %	CAGR: 4.23%	
Watlington	58673	+68.8 %	CAGR: 5.38%	
Downham Market	214000	+77.0 %	CAGR: 5.88%	
Littleport	118864	+99.7 %	CAGR: 7.16%	
Ely	812878	+64.8 %	CAGR: 5.12%	
Waterbeach	183608	+92.9 %	CAGR: 6.79%	
Cambridge North - due to open 21 May 2017	N/A			
TOTAL CHANGE 2004/5 -2014/15	1717245	+66.6 %	CAGR: 5.24%	
<i>Stations north of Ely North Junction</i>	720759	+64.1 %	CAGR: 5.08%	
<i>Stations south of Ely North Junction</i>	996486	+68.6 %	CAGR : 5.36%	
Great Britain	1,222,815,023	+78.3 %	CAGR: 5.95%	

Note: Ely figures include all services calling there

CAGR: Compound Annual Growth Rate

Source: Office of Rail and Road - Estimates of station usage

<http://orr.gov.uk/statistics/published-stats/station-usage-estimates>

For methodology and limitations refer to above link.

PART II FIVE-YEAR CHANGE

Fen Line Passenger Growth (Stations north of Cambridge)	2009/10 (d)		2014/15 (e)	
King's Lynn	750738		970890	
Watlington	107956		143904	
Downham Market	360032		491744	
Littleport	149428		238062	
Ely	1579948		2068240	
Waterbeach	266020		381202	
Cambridge North - due to open 21 May 2017	N/A		N/A	
TOTAL	3214122		4294042	
<i>Stations north of Ely North Junction</i>	1368154	42.6 %	1844600	43.0 %
<i>Stations south of Ely North Junction</i>	1845968	57.4 %	2449442	57.0 %
		100 %		100 %
Great Britain	2,130,772,509		2,785,070,620	

	Change 2009/10-2014/15 (f)		
King's Lynn	220152	+29.3 %	CAGR: 5.28%
Watlington	35948	+33.3 %	CAGR: 5.92%
Downham Market	131712	+36.6 %	CAGR: 6.43%
Littleport	88634	+59.3 %	CAGR: 9.76%
Ely	488292	+30.9 %	CAGR: 5.53%
Waterbeach	115182	+43.3 %	CAGR: 7.46%
Cambridge North - due to open 21 May 2017	N/A		
TOTAL CHANGE 2009/10 -2014/15	1079920	+33.6 %	CAGR: 5.96%
<i>Stations north of Ely North Junction</i>	476446	+34.8 %	CAGR: 6.16%
<i>Stations south of Ely North Junction</i>	603474	+32.7 %	CAGR: 5.82%
Great Britain	654,298,111	+30.7 %	CAGR: 5.50%

Note: Ely figures include all services calling there

CAGR: Compound Annual Growth Rate

Source: Office of Rail and Road - Estimates of station usage

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PART III ONE-YEAR CHANGE

Fen Line Passenger Growth (Stations north of Cambridge)	2013/14 (g)		2014/15 (h)	
King's Lynn	913460		970890	
Watlington	131742		143904	
Downham Market	460060		491744	
Littleport	225024		238062	
Ely	1976150		2068240	
Waterbeach	344726		381202	
Cambridge North - due to open 21 May 2017	N/A		N/A	
TOTAL	4051162		4294042	
<i>Stations north of Ely North Junction</i>	<i>1730286</i>	<i>42.7 %</i>	<i>1844600</i>	<i>43.0 %</i>
<i>Stations south of Ely North Junction</i>	<i>2320876</i>	<i>57.3 %</i>	<i>2449442</i>	<i>57.0 %</i>
		<i>100 %</i>		<i>100 %</i>
Great Britain	2,665,123,512		2,785,070,620	

	Change 2013/4-2014/5 (i)	
King's Lynn	57430	+6.3 %
Watlington	12162	+9.2 %
Downham Market	31684	+6.9 %
Littleport	13038	+5.8 %
Ely	92090	+4.7 %
Waterbeach	36476	+10.6 %
Cambridge North - due to open 21 May 2017	N/A	
TOTAL CHANGE 2013/14 -2014/15	242880	+6.0 %
<i>Stations north of Ely North Junction</i>	<i>114314</i>	<i>+6.6 %</i>
<i>Stations south of Ely North Junction</i>	<i>128566</i>	<i>+5.5 %</i>
Great Britain	119,947,108	+4.5 %

Note: Ely figures include all services calling there

Source: Office of Rail and Road - Estimates of station usage

<http://orr.gov.uk/statistics/published-stats/station-usage-estimates>

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PART IV THE PERIODS COMPARED

	<i>Compound annual growth rates (CAGR) -----</i>			Annual growth
	Ten years to 2014/5 (j)	Five years to 2014/5 (k)	One year to 2014/5 (l)	
King's Lynn	4.23%	5.28%	6.30%	
Watlington	5.38%	5.92%	9.20%	
Downham Market	5.88%	6.43%	6.90%	
Littleport	7.16%	9.76%	5.80%	
Ely	5.12%	5.53%	4.70%	
Waterbeach	6.79%	7.46%	10.60%	
Cambridge North - due to open 21 May 2017	N/A	N/A	N/A	
TOTAL CHANGE 2009/10 -2014/15	5.24%	5.96%	6.00%	
<i>Stations north of Ely North Junction</i>	5.08%	6.16%	6.60%	
<i>Stations south of Ely North Junction</i>	5.36%	5.82%	5.50%	
Great Britain	5.95%	5.50%	4.50%	

BOLD type shows continuous acceleration

Note: Ely figures include all services calling there

Source: Office of Rail and Road - Estimates of station usage

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