

Friends of the Derwent Valley Line

The Case for Additional

Main Line Stops at Belper

CONSULTATION DOCUMENT

2013



The Friends of the Derwent Valley Line is a voluntary group representing passengers and local communities along the Derby – Matlock Railway Line. Our aim is to work with Train Operating Companies, Government, the Derwent Valley Line Community Rail Partnership, and all other stakeholders who seek to increase ridership, improve services and enhance facilities on the Derwent Valley Line.

EXECUTIVE SUMMARY

This document presents a case for increasing the number of main line trains that stop at Belper Station in Derbyshire. At present only one main line train stops each weekday providing an early morning service to Chesterfield and Sheffield, there is no return service. This arises out of a historic requirement in the Service Level Commitments (SLC) specified for the East Midlands Trains franchise. The case is made that there would be significant benefit if there were a total of two main line trains stopping in each direction at peak times. This should be made by amending the SLC to a more practical specification that recognises the growth of passenger demand on this corridor. This improvement would not require any investment and the additional revenue is likely to cover the increase in operational costs. This improvement would provide considerable benefit to the town and other benefits are likely to outweigh any added costs or revenue loss on existing services.

Belper is a fast growing and dynamic town that is popular for commuters, its population has increased by 5% in 10 years. Rail passenger traffic has doubled since 2008 as a result of an improved service on the Derwent Valley Line. The Belper Station catchment area contains between 30,000 and 60,000 people, of whom 10,000 are within walking distance of the station.

There are no direct bus services between Belper and Sheffield and connections are unattractive. There is however one direct bus for students to and from Chesterfield College. Belper station is well located, attractive and extremely convenient for local services and bus connections. It also has a large pay and display car park that would accommodate commuter traffic.

The need to travel south from Belper to Derby in order to catch a train to the north that runs back through Belper without stopping is unique on Britain's rail network. It results in very slow journeys (14-18mph average speed) and relatively high fares (62-65p per mile) when the direct distance is considered. This makes northward rail travel from Belper very unattractive.

It would be feasible and would not involve any capital cost to stop some of the 127 passenger trains that currently pass through without stopping. The existing ticket machine at the station would provide the facility for passengers to purchase or collect tickets before boarding.

It is proposed that there should be one additional train arriving in Sheffield between 0825 and 0905 and two departing from Sheffield between 1630 and 1800 about one hour apart.

The impact on long distance passengers using the through trains would be minimal. Surveys have shown that trains at these times are fulfilling more of a regional than an InterCity role. Also the slower East Midlands Trains services, in which the two southbound stops might be made, currently leave Sheffield just 8 minutes later than the faster trains so only passengers who had missed the earlier trains would be affected. The 2 minutes required for a Belper Stop would not be noticed considering that the timings between Derby and Sheffield vary between 31 and 41 minutes and there is even one that takes 53 minutes. Services between Sheffield and St.Pancras are likely to be retimed and made faster from December 2013 so they should be even more attractive than they are now. Any loss in revenue resulting from Belper stops needs to be considered in that context.

Surveys did reveal some resistance to an extra stop (4% of passengers surveyed, equivalent to 8% in terms of annual journeys), but most of the surveys made were on the fastest trains, not the ones that are proposed for stops and there had been disruptions affecting opinions. In addition a concern about opening the “floodgates” to further stops was found but the survey form did not explain the unique anomaly that Belper suffers, and how its service compares with towns already served.

There is evidence of latent demand for travel between Belper, Chesterfield and Sheffield. The surveys showed that existing Belper rail passengers are already using rail to reach the north despite the difficulties. In fact Sheffield was a significantly more popular rail destination for the 92 people surveyed than Birmingham, Leicester or London. This contrasts sharply with the popular destinations for other Derwent Valley Line passengers. Alfreton Station, which is on the parallel railway, 9 miles from Belper, has a half-hourly rail service to Chesterfield and Sheffield. The town is very similar in size and character to Belper. Based on the number of passengers using those rail services it is estimated that at least 90 people a day would make regular use if the service at Belper were increased from one train per day in one direction to two trains per day each way.

Future main line electrification is likely to cause a significant passenger growth from Belper and providing some main line stops, would then be both easier and would help manage peak demand. The alternative of providing longer or more frequent trains on the Derwent Valley line, as a way of coping just with increased Belper peak demand, could well be more expensive.

There are opportunities to introduce the proposed improvements when franchise renewals take place for the three operators providing service on the route in the years 2014-2016.

Belper is an important location in the Derwent Valley Mills World Heritage Site (DVMWHS). Local authorities and other bodies have worked together to maximise its value. The proposals advocated in this report are based on the needs of commuters and will not provide a service at times that will benefit visiting tourists. However if the proposals were taken forward then they could be the basis for introducing a more frequent service in future at times that would suit visitors. The Friends of the Derwent Valley Line would work with any of the local authorities and other bodies to whom this consultation document is initially sent, such as the DVMWHS, if they wished to submit a combined broader proposal developed from this one.

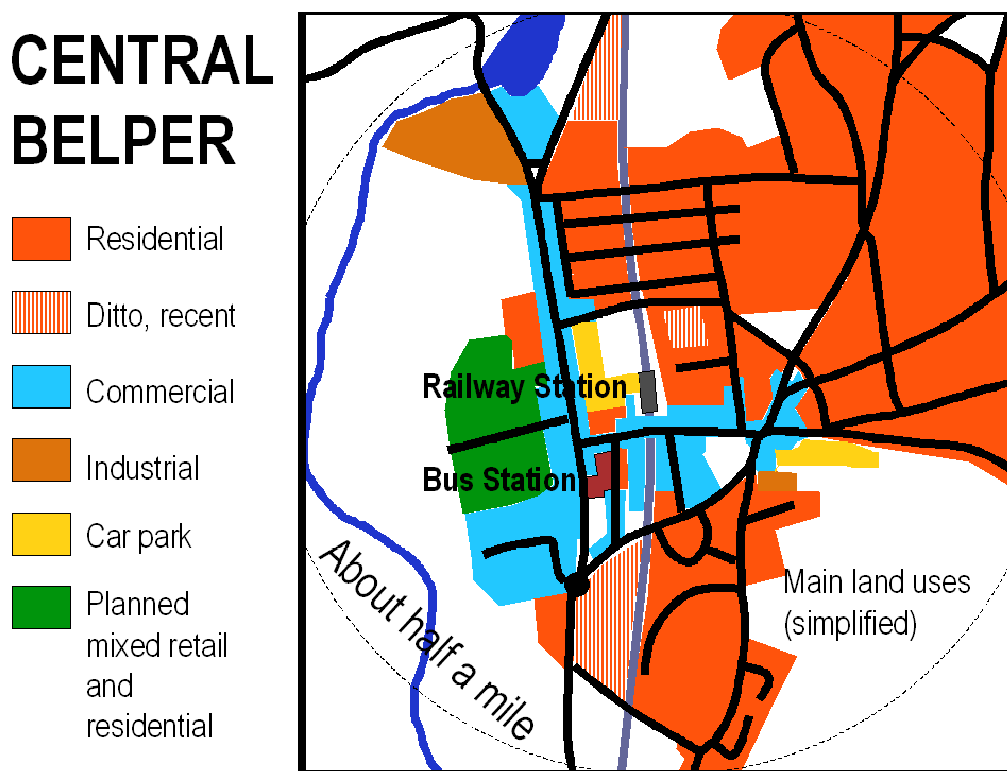
In the next ten years main line electrification and the development of HS2 with a station at Toton can reasonably be expected to have a significant effect on the surrounding area. It is likely many people moving to the area will prefer to have access to countryside. Belper, just 11 miles away, will be in prime position to take new residents, who are likely to have more disposable income and expect good transport systems. This is because it is close to the Peak District and attractive countryside, has a rail service of its own and is "protected" from adverse development by the World Heritage Site Status. The role of the existing railway in moving people at high speed between London and Sheffield will change. So for example, the introduction of regional Birmingham-Sheffield trains serving Belper as well as other intermediate stops will be easier to implement and are likely to match future travel needs along the corridor.

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1. INTRODUCTION – BELPER AND ITS RAIL SERVICES

Belper is a town situated 8 miles north of Derby on the main London to Sheffield railway. The population grew from 20548 to 21604 (5%) between 2001 and 2011. The housing stock increased from 8790 to 9304 in the same period. This includes significant residential development in the town centre on “brownfield” sites near the railway station. It is a long established economic centre for a much wider area with a lively and much appreciated shopping centre; its High Street won a national award last year as the best in the country.



It is also attractive and of interest. The town centre is within the Derwent Valley Mills World Heritage Site and thanks to this is finding its way into becoming a tourist destination drawing in visitors from around the world who want to see this early purpose built industrial town. Its proximity to the Peak District, Britain’s heaviest used National Park strengthens this attraction. Recent developments such as the rejuvenation of the River Gardens and reopening of the highly successful Ritz Cinema demonstrate that it is a vibrant community. It has become a venue for street events, arts festivals and other cultural events.

Over the past 30 years the character of the town has changed from being primarily industrial to being a popular place to live in easy reach of neighbouring cities. It has a “market town” character in an attractive setting close to the Peak District. This new found positive attitude is epitomised by

the fact that the town won the top prize in the “Large Town” category of the national “Britain in Bloom” competition last year. Further developments are proposed and the town will continue to expand.

Belper is fortunate in that its railway station is located in the heart of the town on the main shopping street at the hub of the local bus network and with easy car access.

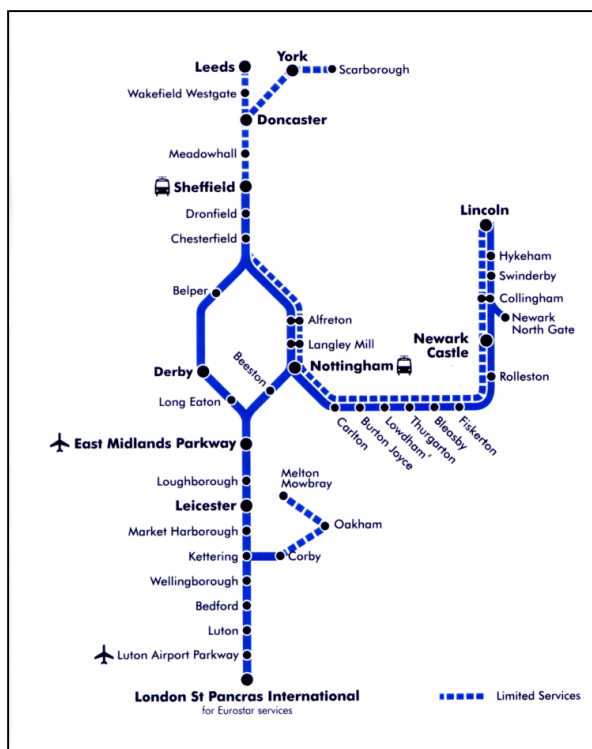
East Midlands Trains now serve Belper by an hourly train service on weekdays directly linking it to Derby, Nottingham and Matlock. This was thanks to an initiative of the Community Rail Partnership

Since the introduction of this service in 2008 the number of passengers using the station has doubled to 174,000 per year.

Every weekday at 0727 one further train calls at Belper, this is the 0720 East Midland Train from Derby which continues onto Chesterfield (0741), Dronfield (0748) and Sheffield (0800).

Around 10 people use this commuting train each day. It is hardly surprising that the usage is low since there is no return service!

It is possible to travel by train at other times of day between Belper, Chesterfield and Sheffield but it involves travelling 8 miles south to Derby and catching a northbound train from there retracing your steps. Instead of taking 33 minutes the journey to Sheffield will take at least 54 minutes with the added indignity that after 22 minutes you will be back where you started!



Returning from Sheffield to get to Belper involves taking a train at 54 minutes past the hour that arrives at Derby at 26 minutes past. You must then wait 24 minutes for the Matlock train to return to Belper, which you passed through 40 minutes earlier! This journey from Sheffield to Belper will have taken 68 minutes.

Belper is a main line station, as shown on the East Midlands Trains system map. Chesterfield and Belper are 16 miles apart and are two of the largest towns in Derbyshire. There is significant traffic between the two. They are linked by the A38 trunk road and the M1. Sheffield, as one of the largest cities in the region, is a popular destination from Belper as well.

The limited one way service is an anomaly and the need to travel in the wrong direction from a town

of this size to reach a neighbouring city is unique to the entire British railway network.¹

There are up to 35 local trains that stop at Belper in both directions on weekdays with up to a further 127 passenger trains that pass through without stopping. The Derwent Valley Line Service and the London to Sheffield services are operated by East Midland Trains, others are operated by Cross Country and Northern Rail.

Since the replacement of the former Midland Main Line franchise by the East Midlands Trains franchise the number of weekday main line trains calling at Belper has reduced from 4 to 1. During the same period the number of trains passing through without stopping has increased by around 50%. This is despite the facts that:

- All Belper stops are now operated by the same franchisee.
- Passenger numbers at the station have doubled.
- There is no other direct public transport service between Belper and Chesterfield or Sheffield.

The Friends of the Derwent Valley Line (FDVL) believe that there is a strong case to stop at least two main line trains in each direction at peak hours at Belper station. This could provide significant economic, social and environmental benefit for the town, its surroundings and other places served by the Derwent Valley Line. These extra stops would require no infrastructure or other capital costs and should not have any real impact on operating costs or main line revenue.

In the longer term the FDVL would wish to see more trains linking Belper to Chesterfield and Sheffield if the demand justified it but a basic two train service would be an effective way of testing the market. It would also be an appropriate adjustment to the Service Level Commitment (SLC) that creates the current anomaly of the one way train. As a group the FDVL favours modifying the SLC because this would require Franchisees to incorporate it in their planning. The alternative of expecting them to operate it as a commercial venture would be both vulnerable to change and the risk of not being taken up by a new operator. The FDVL therefore considers that modifying the SLC in advance of creating the next franchise specification is the best and fairest proposal for all concerned.

¹ Drem, Longniddry, Prestonpans and Wallyford Stations served by the North Berwick line in Scotland have a “one way” service into Edinburgh and one cannot travel from there down the main line towards England without going into Edinburgh first. But the combined population of these four villages is less than 13,000 and the distance to Newcastle is over 100 miles.

2. BACKGROUND

2.1 The development of the existing services

A station was provided at Belper in 1840 when the North Midland Railway opened between Derby and Normanton (near Leeds). This railway eventually became part of the Midland Railway main line between London and Manchester via the Peak district. During its early existence Belper was served by main line trains, not only between London, Sheffield, Leeds and Manchester but towards Birmingham and Bristol as well.

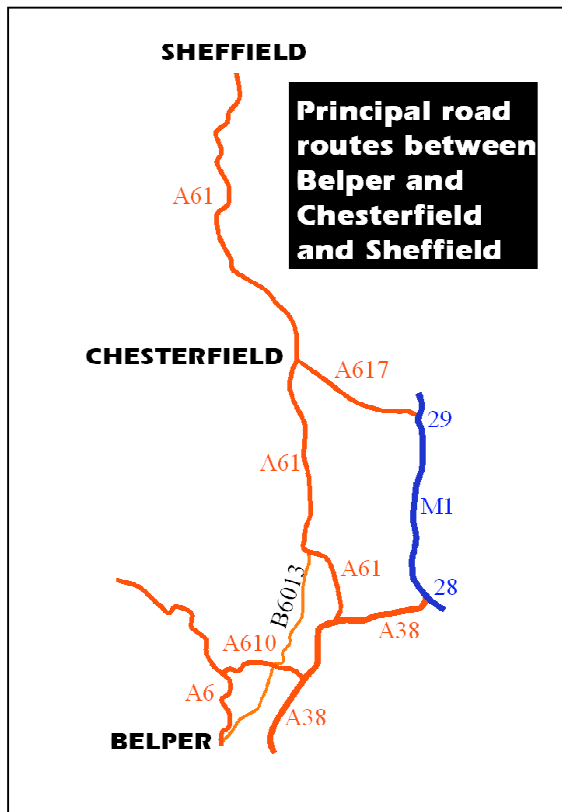
In 1967 British Rail closed the local train service that then operated between Derby and Sheffield. The Minister had consented to this closure on condition that one train continued to provide a service between Belper and Chesterfield each weekday. Unfortunately this condition was taken literally and although the service has remained no return service was provided!

In the same year Belper's access to the rail network was further reduced when the main line from London to Manchester via Matlock was closed and a local commuter service introduced between Derby and Matlock.

Following rail privatisation the London-Sheffield service was part of the National Express Midland Main Line franchise (MML). The Derwent Valley Line was operated by Central Trains. MML chose to operate some London services through from Matlock and for a short period Belper gained some more direct main line stops. This situation ended when East Midland Trains took over operation of both routes. Belper reverted to the one train per day one way "parliamentary" main line service.

The 50% increase in passenger trains passing non-stop through Belper Station has been due to the growth of passenger traffic generally since privatisation. In late BR days the main line London-Sheffield service was provided exclusively by High Speed Trains (HSTs) which were not suited to services with frequent stops. For this reason they operated an irregular and complex "skip stop" service. National Express introduced Turbostars that provided fast stopping services connecting with fast HST services in a simpler and more useful timetable. This innovation created more traffic and was eventually developed into the service operated by East Midland Trains using mostly Meridian diesel electric trains. Meridians are capable of high speed and can make intermediate stops due to their higher acceleration without the time penalty that HSTs experience. The current main line train service pattern developed into one London-Derby-Sheffield, one London-Derby and one London-Nottingham service per hour. Then from 2009 financial support was provided by South Yorkshire PTE to allow the London-Derby service to be extended to Sheffield so that there were now two trains per hour via this route. This service has continued despite the withdrawal of the grant support.

2.2 Public transport facilities in Belper.



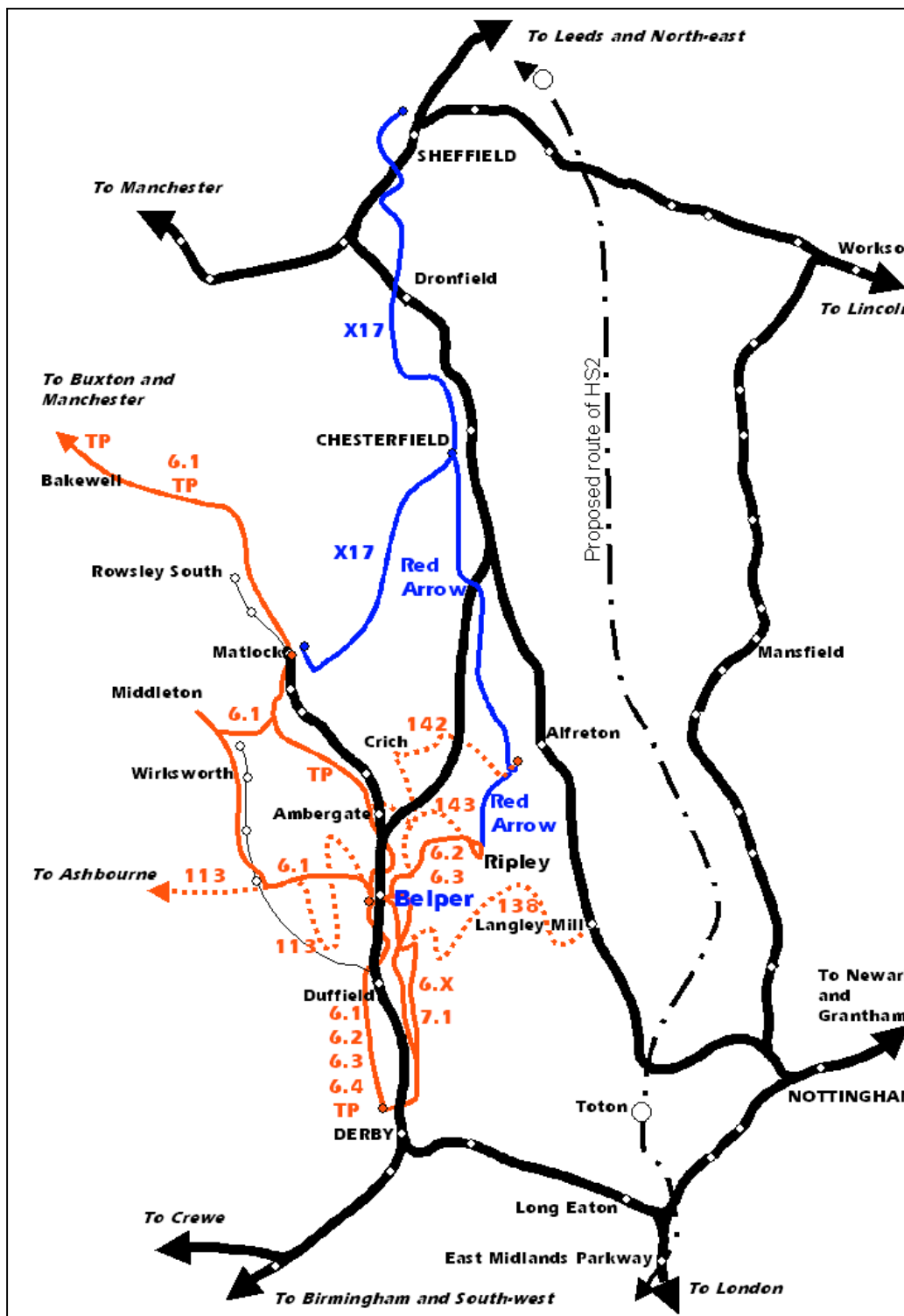
Belper has good public transport and this is one reason why the town's residential population is growing. However services are poor towards the northeast, despite the fact that this corridor is served by one of the major road links in the area, the A38 leading onto the M1.

As already stated rail services are provided by East Midland Trains and run at "clockface" hourly intervals for most of the time, making them easy to use without reference to a timetable. The service provides a direct link to Derby, Nottingham and other Derwent Valley line stations. By changing at Derby passengers can easily reach London, Birmingham and Cardiff. The Eastern Counties are accessible via Nottingham or Leicester and the West and Northwest via Crewe. As explained earlier, it is also possible to change at Derby onto trains for Sheffield, Leeds, the northeast and Scotland but this involves retracing the route already travelled. There is just the one main line stopping service from Belper at 0727 to Chesterfield, Dronfield and Sheffield.

The principal bus services are provided by Trent Barton. The 6.1, 6.2, 6.3, and 6.4 routes now combine to provide a 15-minute interval service direct from Derby and Belper via the A6. The 6.1 continues to Bakewell via Wirksworth and Matlock, the 6.2 and 6.3 continue to Ripley. The 6.4 operates as the 6X to provide another hourly service between Derby and Belper via the A38 and this is popular since it provides a fast service between Derby and the new estates to the east of Belper. The 7.1 is a further hourly service between Derby and Belper via Little Eaton and Holbrook. Superimposed on this the Transpeak service (now operated by another firm) provides an hourly fast Derby-Belper-Matlock-Bakewell-Buxton-Manchester bus service. The Transpeak is a very popular and well used service. It has replaced the "missing link" in the national rail network between Derby and Manchester via the Peak District that was removed when the main line north of Matlock was closed in 1967.

The fastest bus timings between Derby and Belper are 28 minutes by the "sixes" and 20 minutes by Transpeak, compared with only 12 minutes by rail. The 6X takes just 19 minutes to reach the edge of Belper but a full 40 minutes to reach the town centre after weaving through the estates.

In Belper all bus routes serve stops within a 100 and 275m walk from the railway station whereas in Derby most bus services operate from the bus station which is 1000m from the railway station, a very long walk. So bus services do not really compete with the Derwent Valley Line in terms of providing a link between Belper and the national rail network at Derby.



This map shows the passenger rail network. Connecting heritage railways with infrequent service are also shown.

Bus routes serving Belper are shown in red. Broken lines indicate infrequent services.

Connecting bus routes to Chesterfield and Sheffield are shown in blue.

Bus stations are indicated by coloured dots.

The proposed route of HS2 is indicated.

Local bus services also operate from Belper to Ashbourne, Crich, Alfreton and Heanor. There is one daily National Express Coach service from Buxton via Belper to London.

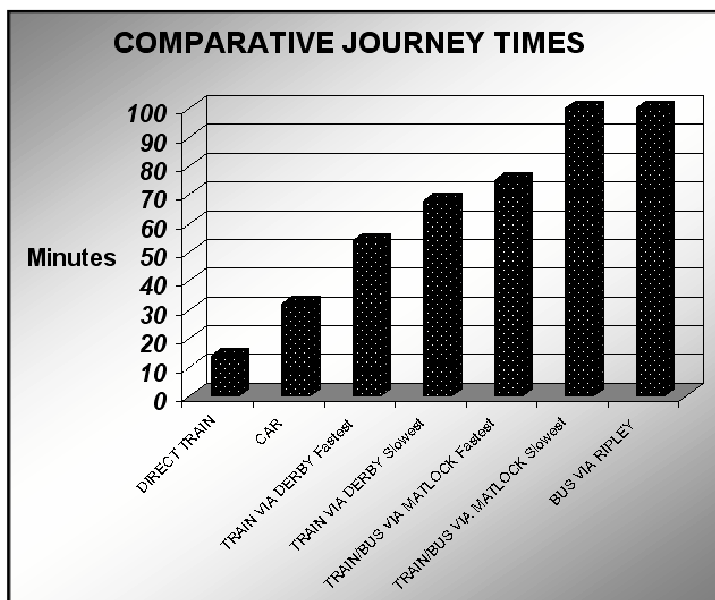
There is no direct bus service to Chesterfield or Sheffield. To reach Chesterfield there are two main options. One of these is to take the 6.2 or 6.3 bus to Ripley and then the Red Arrow express bus from there. This would take 1 hour 40 minutes and is possible every 30 minutes during the day on weekdays. The “connections” at Ripley are very poor requiring nearly a half-hour wait unless there is an early arrival. The alternative is to take the train to Matlock and Stagecoach bus X17 from there. This will take exactly the same amount of time due to poor connections. The return journey is quicker taking 1 hour 15 minutes with a comfortable 16-minute connection in Matlock. Unfortunately, despite the fact that Stagecoach are currently the operators of both the train and bus services, the Chesterfield buses continue to operate out of the old bus station in the centre of the town which is 370m from the new bus station alongside the railway station! However the X17 does continue through to Sheffield.

Bus usage between Belper and Derby is relatively high and at peak times buses carry standing passengers. Based on observation the average bus loading is around 20 and therefore daily usage is around 1800 passengers in both directions, excluding Sunday and overnight buses. This compares with rail usage of Belper Station at about 480 passengers per day (to and from all destinations). So rail perhaps has less than a 27% share of the public transport market between the towns. Clearly the pattern is determined by the relative usefulness and quality of the two services. Belper people do use public transport and in increasing numbers.

Unfortunately the options available for Belper people to use public transport to reach Chesterfield are very poor indeed when compared with the services available on other routes.

2.3 The Market

If there were no demand for it poor public transport would not be an issue. The previous sections have shown how bad the service between Belper and Chesterfield is and this is summarised below.



The one direct train provides a good quality service that performs the journey at an attractive average speed of 69mph; this compares very well with the estimated average speed of a car journey at 31mph over this route. Rail via Derby is not competitive at 14-18mph average speed. Bus options average 10-13mph for the journey, which is clearly unsatisfactory.

This level of service needs to be considered in the context of fares. As the table below shows passengers are charged more to travel from Derwent Valley Line stations to Chesterfield than from Derby even though they are actually nearer. When road distances are considered the fares become prohibitive and absurd. Travelling via Derby detracts from the value of the rail journey it does not improve it. Clearly for the customer the anomaly of the lack of direct trains from Belper is much worsened by these charges.

Single fare to Chesterfield from:	Peak	Off-peak	Road	Cost per mile	
			distance	Peak	Off-peak
			(miles)		
Derby	£ 10.40	£ 10.10	24.1	£ 0.43	£ 0.42
Duffield	£ 10.50	£ 10.10	20.7	£ 0.51	£ 0.49
Belper	£ 10.60	£ 10.10	16.2	£ 0.65	£ 0.62
Matlock	£ 15.60	£ 10.10	10.2	£ 1.53	£ 0.99

Buses provide a cheaper means of travel between Belper and Chesterfield even though there is a fare penalty in changing buses. The Trent Barton fares via Ripley total £7 single or £5.25 single if their Mango smartcard system is used.

In reality however passengers on any of these services, train or bus via whatever route, need only pay £11.10 return. This is the current price of a “Derbyshire Wayfarer” that allows unlimited travel for one day at any time of day except before 0900 on weekdays. This reduces the cost of a Belper to Chesterfield return journey to just 34p per mile and could be used for other travel at no extra cost that same day. The extent to which a casual traveller by rail boarding at Belper would know about this needs to be considered however. They cannot be purchased at Belper Station or on the train.

Counting passengers who currently use other public transport passenger routes between Belper and Chesterfield is unlikely, based on the foregoing arguments, to give an idea of who might use more direct rail services. Its likely that many people are doing the journey, but by car.

Belper Station serves a wider catchment area than just the town itself. The geography of the road network means that it is also a convenient “railhead” for places along the A517 to the west as far as Turnditch at least; to the north-west to Heage and possibly Ripley; to the south-east to Holbrook, Denby, Kilburn and Coxbench. In addition main line services stopping at Belper would attract people from Ambergate and Duffield. On this basis a reasonable estimate of the total population of the catchment area of the station is between 30 and 60 thousand people.

Many passengers would need to access the station by car and there is a large pay and display car park alongside the station, which allows long stay parking². However the station is well served by a good network of local bus services that run to all parts of this catchment area. Furthermore the HMA Accessibility Study of 2009 estimated that 10,000 live within an acceptable walking distance of the station.

Cycling would also be a convenient means of reaching the station but to date storage facilities have not been provided although this is a location that would generally benefit from having them.

For 2001 Amber Valley Borough Council provided the following statistics for Belper:

25% of households do not own a car
68% of residents travel to work by car
4% travel to work by bus
1% travel to work by train

The figure for commuting by rail is likely to have increased since 2001 since recorded rail patronage has doubled as mentioned earlier.

In addition the same statistics show that 0.9% of the population that live in Amber Valley work in Chesterfield compared with 15.1% who work in Derby. Therefore it might be expected the demand for commuter rail travel from Belper to Chesterfield, given an improved service, to be roughly about 6% of the number of rail commuters between Belper and Derby.

Its important to consider why people might wish to travel between Belper and Chesterfield. The two towns used to be the second and third largest in Derbyshire after Derby itself and are relatively close together (16 miles) without any natural barriers between. Derbyshire despite being a long county north to south and narrow from east to west does retain strong cultural and community links. So Belper people will be more inclined to visit Chesterfield as a neighbouring town than say Mansfield or Burton-on-Trent, which will seem more “foreign” and beyond their natural social and economic horizon. Chesterfield on the other hand is a popular shopping destination retaining the

² The Field Lane Car Park charges £2.70 to park for over 4 hours. It is managed by Amber Valley Borough Council. When visited at 10am on Monday 12th November 2012 it had empty spaces available for at least 50 cars.

street market and lively town centre that Derby has lost. It is also a centre of employment and higher education.

Although Belper is an unstaffed station it is now a pleasant place to wait for a train with modern shelters and seats and attractive gardens. There are sandwich shops, a newsagent, card shops, pubs, cash machines, toilets, cafes and other shops all within a couple of hundred metres. So it has facilities available that would be appropriate for small city stations.

It would be possible to model the demand but this would be an expensive and uncertain process based on assumptions that cannot be verified. In the case of Belper-Chesterfield traffic there is however another method available that may give an equally accurate result. This is to compare Belper and Alfreton.

Alfreton Station is just nine miles from Belper and has a frequent direct rail service to both Chesterfield and Sheffield on the parallel railway that runs through the Erewash Valley. Both towns are within the Amber Valley Borough and are similar in character in terms of commercial, residential and employment issues. The two towns are roughly the same size in terms of population. Alfreton Station is a mile from the town centre; it was reopened in 1973 as a “parkway” station, so is easily accessed by car but this is less convenient to walk to than Belper Station. Alfreton, unlike Belper, has a direct bus service to Chesterfield, so there is more bus competition on the route. Alfreton is 11 miles from Chesterfield and it takes about 20 minutes to drive there.

On weekdays Alfreton has a half hourly service consisting of an hourly fast train provided by East Midland Trains to Chesterfield, taking typically 11 minutes and to Sheffield typically 31 minutes. Northern provides an additional train every hour (all of which call at Dronfield) these typically take 12 minutes to reach Chesterfield and 37 to reach Sheffield.

It is therefore reasonable to assume that an equivalent level of train service between Belper and Chesterfield/Sheffield would in due course attract a similar number of passengers to those who currently use the Alfreton service.

An informal count of the number of passengers boarding and alighting from trains at Alfreton on Monday 12th November 2102 obtained the following results:

Trains to Chesterfield and Sheffield	Passengers boarding at Alfreton	Trains from Sheffield and Chesterfield	Passengers alighting at Alfreton
0737	31	1707	See note
0807	53	1733	43
0839	13	1812	39

Note: This train ran 70 minutes late it may be assumed that its passengers travelled on the 1733.

On this basis it would appear that as many as 90 people a day might make return journeys from Belper towards Chesterfield and Sheffield if there were two trains per day in both directions.

Of course some of these passengers might be Belper residents driving across to Alferton to use the train service. This has been considered in the on train survey (see section 3.1.1) but the numbers appear insignificant. Passengers are unlikely to travel to Alferton from Belper by bus to use the rail service because there are only four buses per day and the station is a mile from the town.

It is argued therefore that if an equivalent service of trains were provided at Belper Station very similar passenger numbers would be seen to those using trains at the same times on the service from Alferton. If the number of trains were restricted initially to say two each way per day at peak times then the actual numbers might be less since the restricted service would suit fewer people. But it should not be substantially less.

2.4 How does the service at Belper compare?

If the northbound service from Belper is compared with other towns that are served by the main line from London to Sheffield Belper can be seen to be getting a vastly inferior service. The table below lists towns from Luton northward by distance from Sheffield and compares their population and the number of direct and connecting trains to that city. “Journey Planner” has been used to calculate the number of daily Monday-Friday services, ignoring any that required more than one change or a reversal of travel. Connections from slow services into faster ones have been omitted. Populations are restricted to the town itself without catchment area assumptions.

Town	Distance from Sheffield (miles)	Population (000)	Direct trains to Sheffield	Connecting trains to Sheffield
Luton	135	203	3	22
Bedford	115	80	4	16
Wellingborough	100	49	6	15
Kettering	93	51	5	16
Market Harborough	82	19	7	22
Loughborough	54	55	17	15
Long Eaton	45	45	14	10
Langley Mill	29	5	18	0
BELPER	28	22	1	0
Alfreton	23	23	31	0
Chesterfield	12	104	86	0
Dronfield	7	23	18	0

This exercise demonstrates how the anomaly that arose by historical accident over 40 years ago results in a comparatively poor deal for Belper in the totally re-structured rail business of today?

2.5 Which trains might stop at Belper?

2.5.1 East Midlands Trains options

The main line service that currently calls at Belper only operates between Derby and Sheffield so its use by long distance passengers is limited. It is in effect a “local service” operated with main line rolling stock. An equivalent service should be retained.

The next EMT train going north Mondays to Fridays is now the 0747 that arrives in Sheffield at 0825. Departures from Belper at 0727 and 0754 might be considered too close together although the arrival time in Sheffield of 0825 might be attractive for commuters. The next train is the 0824 from Belper. This would provide a Belper stop roughly one hour later than the present one arriving in Chesterfield about 0846 and in Sheffield at 0904. Arrival in Sheffield at 0904 is appropriate for business travel and good for ongoing connections. The equivalent train on a Saturday leaves Derby and arrives in Chesterfield at the same time but arrives in Sheffield 3 minutes later.

Inserting a stop in either the 0825 or 0904 arrival in Sheffield would have consequences for longer distance passengers. The 0825 provides the earliest arrival in Sheffield from places south of Derby and this is already a train that stops frequently. The 0904 arrival is a fast service so a Belper stop might be considered inappropriate.

It might be argued that journey time for early evening passengers is less sensitive than early in the day travel when people are going to work, school or meetings. Evening arrival time is less critical unless connections have to be made.

Commuting passengers, assuming a standard working day, would normally look for a train that returned about 9 hours after they arrived. Trains leaving Sheffield around 1630 and 1730 would be appropriate for people using the suggested morning trains. And these would be suitable for both Chesterfield and Sheffield commuting.

The East Midland Train service pattern provides weekday departures from Sheffield at 27 minutes past the hour with stops at Chesterfield, Derby and Leicester arriving in London just over 2 hours later. The other hourly departure follows just 8 minutes behind and these trains call additionally at Long Eaton, East Midlands Parkway and Loughborough, taking around 2½ hours to reach London. Anyone who needed to get to London or anywhere south of Derby in a hurry should go for the 27 minutes past the hour train, not the 35 minutes past. They are only likely to be on the 35 minutes past if they have just missed the earlier one. On this basis adding Belper stops in the 1635 and 1735 services, which are already “stopping trains”, should have very little impact on InterCity passengers.

It is important to note however that East Midlands Trains plan to improve the service by making the 35 minute past the hour departure from Sheffield later and accelerating these trains. These changes are planned to take effect in December 2013.

2.5.2 Cross Country options.

Another option would be for all the “new stops” to be made in services operated by Cross Country. These operate over much longer distances than EMT and interact with many other services. This tends to make them less reliable. Reliability is crucial for short distance commuting traffic. These trains are also likely to be more crowded between Derby and Sheffield. This consideration as well as making this option less attractive to passengers also means that revenue protection could be a problem. In the current timetable the Cross Country trains that might serve Belper, based on criteria already discussed, would be:

<i>From</i>	<i>Birmingham</i>	<i>From</i>	<i>Newcastle</i>	
<i>at</i>	<i>0730</i>	<i>at</i>	<i>1442A</i>	<i>1541</i>
Derby	0811	Sheffield	1654	1754
Chesterfield	0832	Chesterfield	1706	1807
Sheffield	0854	Derby	1726	1826
<i>To</i>	<i>Newcastle</i>	<i>To</i>	<i>Plymouth</i>	

A = 1444 Saturdays

The choice for stopping Cross Country trains is limited by the fact that not all serve Chesterfield.

In making its case FDVL can go no further than identify which train services might be amended to allow some Belper stops. Train planning is a specialised activity with many “hidden” consequences to consider. However the section that follows considers which trains might be affected by the FDVL proposals.

3. THE IMPACTS OF THE PROPOSALS

3.1 The six surveys

The Friends of the Derwent Valley Line have carried out a number of surveys in order to better understand the issues behind providing an improved main line service at Belper:

1. An informal station count of the number of passengers using trains at equivalent times between Alfreton and Chesterfield or Sheffield, see section 2.3. The data have been used as a method of roughly estimating the potential market.
2. An interview with a long term user of the existing 0727 Belper to Sheffield service in order to understand how current passengers use and see the service.
3. A survey carried out on busy Derwent Valley line trains to assess the interest of these current rail passengers in using the new service (see 3.1.1).
4. A questionnaire sent to 4 academic institutions in Chesterfield and Sheffield that recruit students from Belper and the surrounding area (See 3.1.2).
5. A questionnaire sent to 5 major employers in Belper to establish what use they might make of rail for business travel (see 3.1.3).

6. A survey undertaken on main line trains passing through Belper to study the reactions of passengers about their trains making an extra stop (see 3.1.4).

The findings of these surveys have been used to develop the proposals that follow.

3.1.1 Interest of Derwent Valley Line passengers in main line stops at Belper.

It was decided that interviewing existing rail passengers was more practical for us than a wider survey and might be more meaningful since these are people who already use rail.

The survey was made using forms that were distributed and collected on the trains or on the platforms. The detailed results of the survey have been made available and what follows is a summary of the analysis and the significant results.

The trains that were surveyed are shown in the following table:

Date	Day	Time	From	Surveyed to	Maximum passengers on the train at one time	Passengers interviewed
7/11/2011	Monday	0836	Matlock	Derby	80	49
7/11/2011	Monday	0950	Derby	Matlock	12	5
7/11/2011	Monday	1036	Matlock	Belper	18	10
9/11/2011	Wednesday	0836	Matlock	Derby	41	41
9/11/2011	Wednesday	0950	Derby	Matlock	9	9
12/11/2011	Saturday	0836	Matlock	Derby	42	33
12/11/2011	Saturday	0950	Derby	Matlock	55	40
14/11/2011	Monday	0736	Matlock	Derby	187	66
14/11/2011	Monday	0850	Derby	Matlock	17	19
16/11/2011	Wednesday	0736	Matlock	Derby	178	38
16/11/2011	Wednesday	0850	Derby	Matlock	17	11
19/11/2011	Saturday	0736	Matlock	Derby	24	24
19/11/2011	Saturday	0850	Derby	Matlock	19	10

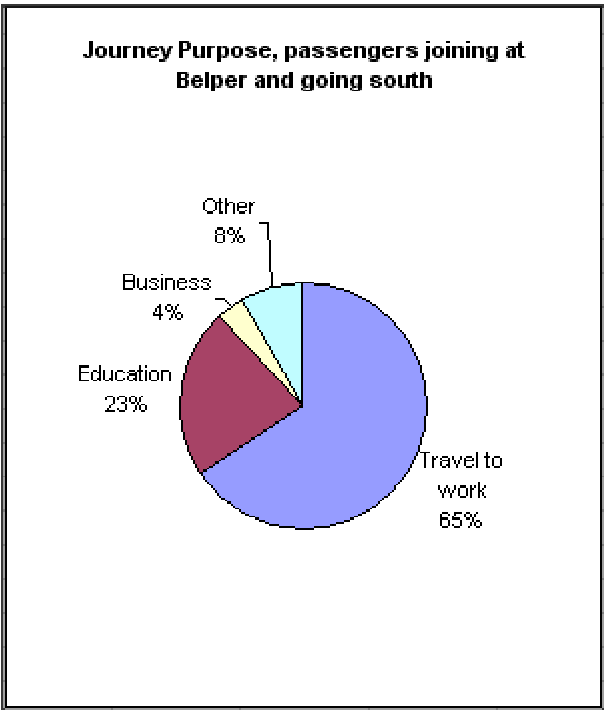
The passengers can be considered in three sub-groups:

1. Passengers who were boarding at Belper and going south to Derby or beyond.
2. Passengers who boarded the trains at Belper going north.
3. Passengers who were boarding trains at Derwent Valley Line stations between Matlock and Ambergate and from Duffield.

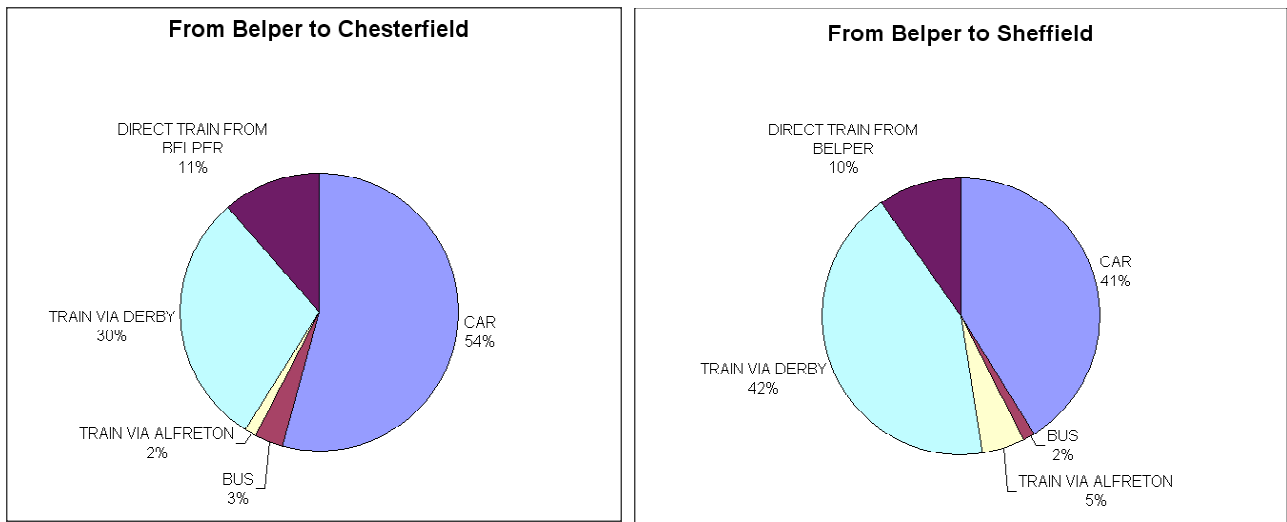
63 of the forms relate to sub-group 1 and represent 69 passengers who, based on the data they provided, are collectively making about 7000 trips per year on the Derwent Valley line.

The journey purposes for this sub-group are shown below.

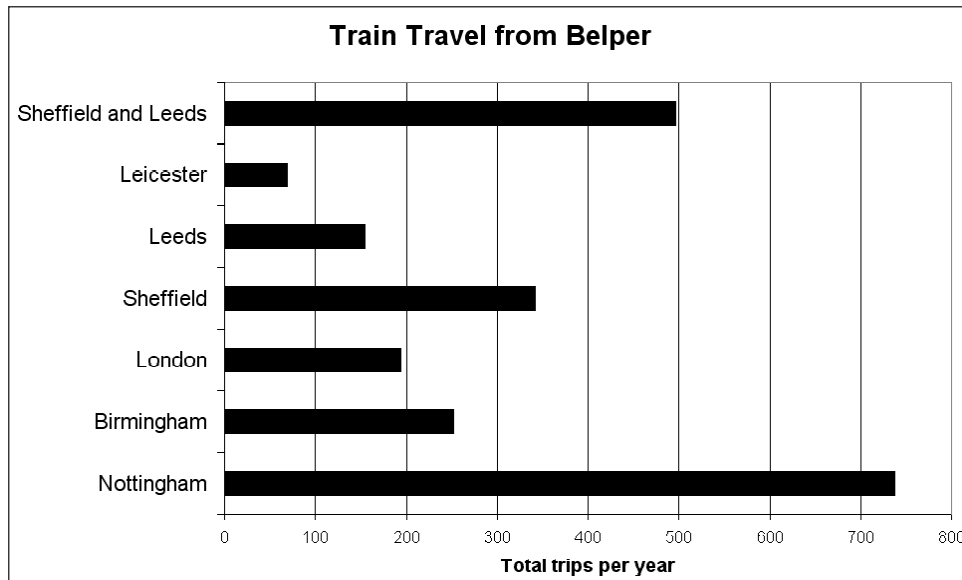
As would be expected at the time of day most of the passengers use the train service for commuting, either to work or to education and there were also many business travellers.



The results for sub-group 1 were added to those for sub-group 2. Sub-group 2 was smaller, just 8 forms completed by 23 passengers in total. Their journeys represented 563 annual trips on the Derwent Valley Line of which 400 are travel to work and the rest “other”. Together these two sub-groups represent people who make use of Belper Station as a departure point. Some of the results that were completed by a group of girl guides in sub-group 2 were filtered out.



The two combined sub-groups are making relatively heavy use of rail to reach Sheffield. 57% claim to use the train as against 41% a car to get there. Of this a relatively high 10% are using the one train per day from Belper and 5% are heading to Alfreton to use the train service from there. More drive to Chesterfield but still claim to be using similar use of the one train from Belper.



The result was unexpected. It might have been thought that such a group used to travelling by train and in view of the good service to London would have travelled there by train more frequently than to Sheffield to which, as has been demonstrated the service is poor from Belper. But the survey suggested that this is far from the case, in fact Sheffield is a comparatively popular train destination from Belper, second only to Nottingham and ahead of Birmingham, London and Leicester. Also Leeds scored ahead of Leicester, even though it's easier and faster to get to Leicester from Belper by train. The 92 people in the two sub-groups claim to be travelling 496 times per year by train to Sheffield or Leeds. This represents about 5 trips per year per person as against just 2 per year to London.

The combined sub-groups were asked how they might make use of trains towards Chesterfield and Sheffield if there were more trains directly to from Belper.

- 13% said that they would use them to get to and from work and education.
- 74% said that they would use them occasionally.
- 1% said that they would continue to change at Derby even if there were Belper stops.
- 11% said that they would probably never or very rarely use them.

These people were also asked how they would get to Belper Station in order to make use of Chesterfield/Sheffield stopping services; the results were as follows:

- 47% would walk there, which suggests that a high proportion of rail users live near the station.
- 29% would drive there and be dropped off.
- 6% would drive there and park close to the station.

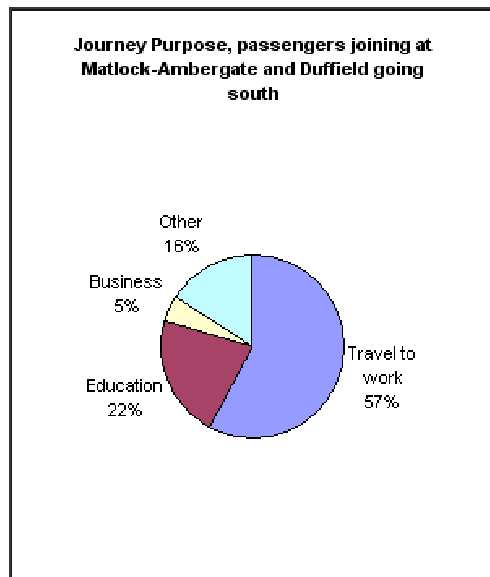
Only 3% would drive there and park at the station (clearly only a minority of car users are paying to park).

10% would come by bus, reflecting the good quality of local bus services at the station.

2% would arrive by bike and another 2% by taxi.

2% would travel from another Derwent Valley Line Station and change at Belper; these represent people who although they boarded at Belper when our survey took place may not actually live there.

The third sub-group covered other Derwent Valley Line Stations. Only passengers who lived in the catchment area of these were included.

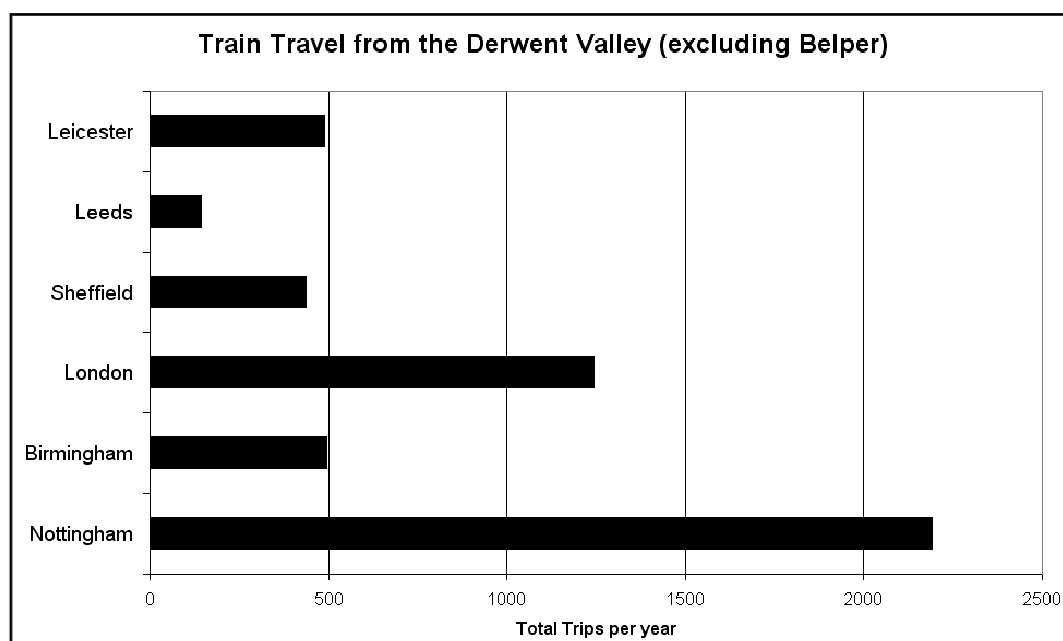


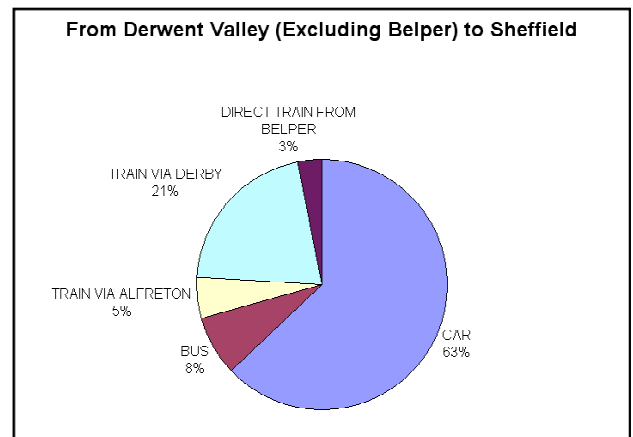
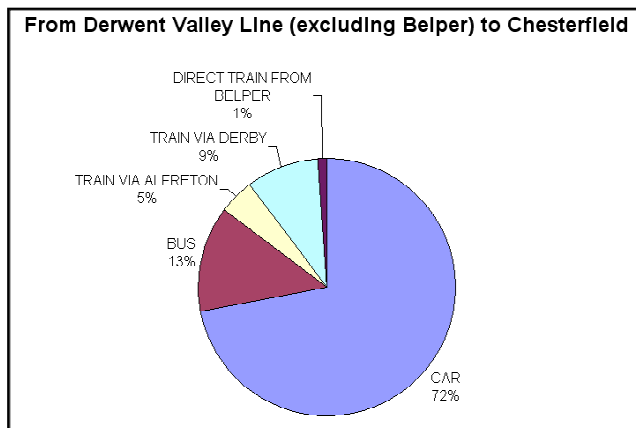
Again, as expected at this time of day, most passengers were commuting either to work or education.

This sub-group makes more use of car in order to reach Chesterfield (72%) and Sheffield (63%) than Belper passengers and many fewer are using the direct train from Belper. Bus is also significant. These figures seem to reflect the relative ease of using the different forms of transport for each group. So for example bus travel to Chesterfield and Sheffield is relatively easy from Matlock whereas train travel is more difficult.

Destinations for these passengers by train are very different from the Belper group. London, Birmingham and Leicester all get more trips than Sheffield and Leeds.

This survey does show that Belper people are tending to use rail to reach the northeast despite the fact that the direct service is only one train per day.





3.1.2 Survey of Academic Institutions

Four academic institutions in Chesterfield and Sheffield were identified that might draw students from the Belper Area. They were written to asking some simple questions. The institutions were as follows:

1. Chesterfield College, Infirmary Road, S41 7NG. (Sixth form and vocational) Also in High Street S43 4JY and Brimington Road S41 0TD
2. Sheffield College, PO Box 345, Sheffield S2 2YY, (Sixth form and vocational) Also at Granville Road S2 2RL, Livesey Street, S6 2ET, Dyche Lane S8 8BR, Waterthorpe Greenway S20 8LY
3. Sheffield Hallam University, City Campus, Howard Street, S1 1WB, Also at Collegiate Crescent, S10 2BP.
4. University of Sheffield, Western Bank, S10 2TN.

The text of the questionnaire was as follows:

“The Friends of the Derwent Valley Line are undertaking research as part of a study to see if an improved rail service between Belper and Chesterfield/Sheffield Station can be justified (at present there is just one train per weekday in one direction only).

We would appreciate if you could help this research by providing the following information:

- 1) *Do any of your students travel from Belper or the Derwent Valley between Duffield and Matlock either on a daily or weekly basis?*
- 2) *If so how many?*
 - *From the Belper area (DE56 postcode).*
 - *From the Matlock area (DE4 postcode).*
 - *From Duffield.**(Approximate numbers are sufficient)*

3 Does the University/college:

- a) Have any serious problems with student transport to site such as parking, congestion, lack of public transport etc.?
- b) Provide any dedicated and or subsidised transport facilities that might be used by Belper/Derwent Valley students?
- c) Have a policy or specific objectives relating to student transport that might benefit from improved rail access to and from Sheffield/Chesterfield from Belper?
- d) What is the normal timetable of the “academic day” by day of the week?
- e) How many full time students are there in total?”

Sheffield College replied to say that they then had no students from the Belper area apart from one who travelled from Ripley. They then had 6736 full time learners at their three sites. They also provided other useful information that answered all the questions.

The other three did not reply beyond an acknowledgement. It was noted however that Chesterfield College do provide a daily bus service for its students that operates from Belper. The bus service 610 runs from Allestree via Duffield, Belper, Ripley, Swanwick and Higham. It leaves Belper at 0740 arriving at the college (Infirmary Road) at 0845; it leaves there at 1700.

3.1.3 Survey of Belper businesses

Early in 2012 four Belper businesses that employ large numbers of people were contacted to determine their interest in more main line trains stopping in the town. The text of the questionnaire is shown below:

BELPER BUSINESS TRAVEL SURVEY – Friends of the Derwent Valley Line, 2012

Name of firm (or firms where a number of companies share the same premises)			
Address of premises in Belper. Please include postcode.			
Number of employees at these premises (very approximate)		Number who regularly undertake business travel (very approximate)	

Please tick any of these statements that reflect your company policy on business travel:

- ☐ Company cars are provided for appropriate staff
- ☐ Expenses are paid to staff who use their own cars for business travel
- ☐ Employees are encouraged to use trains for longer journeys
- ☐ Expenses are paid to staff to cover public transport fares for business travel
- ☐ If rail fares are paid for business travel then the use of first class is restricted

Please select one director or employee who travels frequently and whose travel behavior is fairly typical for the company and ask them to answer the next question:

Approximately how many times a year do you travel to the following cities (or their surrounding urban areas) for business and how do you usually get there?

City region	How many times a year?	Usual means of getting there			
		Air	Train	Car	Other
London					
Birmingham					
Sheffield					
Leeds					
Manchester					
Newcastle					
Edinburgh					
Glasgow					

If some more main line trains were to stop in Belper at peak times providing a direct service to and from Chesterfield and Sheffield, with connections from there to the north and north west how valuable do you think this might be to your firm's travel needs? (Please tick one box):

Of no value	
Of limited value	
Of value	
Of significant value	

Please provide your details in case we have any queries:

Name _____ Position: _____

Contact phone: _____ If you wish to add any comments please do so.

Thank you for your assistance.

The four firms that we contacted were:

- Brettles
- Courtaulds
- D.S.Smith (Packaging)
- Vaillant (Central heating boilers)

Only the first two firms replied.

Gary Spendlove, the Managing Director of Brettles, said that 15 people are employed at the Queen Street premises (DE56 1NR), of these 6 regularly undertake business travel. All five of the statements suggested in the form are reflected in the company policy. The approximate travel pattern for a frequent employee was given as:

20 trips to London (4 by train, 16 by car).
40 to Birmingham (10 by train, 30 by car)
10 to Sheffield, all by car.
20 to Leeds, all by car.
40 to Manchester, all by car,
20 to Newcastle (4 by train, 16 by car)
20 to Edinburgh, all by car
40 to Glasgow (2 by air, 3 by train and 35 by car)

He considered that more trains stopping at Belper at peak times to link to Chesterfield and Sheffield would be of limited value to the firm.

Melanie Freeman, the HR Manager of Courtaulds Brands Ltd., said that 422 people are employed at the West Mill factory (DE56 1BH). None regularly undertake business travel although she said that one employee might travel by train every week to London. All five of the statements suggested in the form are also reflected in the company policy. She also considered that more trains stopping at Belper at peak times to link to Chesterfield and Sheffield would be of limited value to the firm.

3.1.4 Survey undertaken on main line trains

Stopping main line trains at Belper might have a negative impact on other passengers travelling on those trains because of the increased overall journey time. The purpose of this survey was to assess how serious this impact might be.

The impact of journey time on passenger usage is usually assessed by use of MOIRA, a computer programme that was developed by the Operational Research department of British Rail as a key element of the "Passenger Demand Forecasting Handbook." It was based on experience of how passengers react to timetable changes. It is recommended by the Department for Transport as a method for investment analysis.

However a simple application of MOIRA principles to the issue of Belper stops may not be appropriate for the following reasons:

1. MOIRA is based on the journey time of all trains on a given service whereas in this case it is proposed that 3 out of 127 trains that pass through the station should stop.
2. Because there are now twice as many London-Sheffield trains as there were a few years ago the overall impact of the proposed stops on overall usage might not be as great as theory suggests (the passenger who needs to get to Sheffield quickly has much more choice now).
3. The stops are proposed in slower train services that already make intermediate stops, so the fastest train services would not be affected.
4. There are variations in timings throughout the day and small delays of a few minutes into St.Pancras, Sheffield and Derby, awaiting platforms are quite normal. Passengers expect such delays and allow for them.

5. Since the reconstruction of St.Pancras International Station, East Midlands Trains passengers have had to walk further to reach taxis, Euston Road and the Underground. This has effectively added several minutes to overall journey time but despite this passenger numbers have continued to grow.

It was therefore decided that it would be more meaningful to survey passengers on trains that might be affected and determine what reaction there might be. The key question in the survey was, “How much longer a journey would have made you choose another means of travel (car, bus, etc.)?” A choice of 1, 2, 5 and 10 minutes was given. Other questions were included in order to understand the context of the answers given.

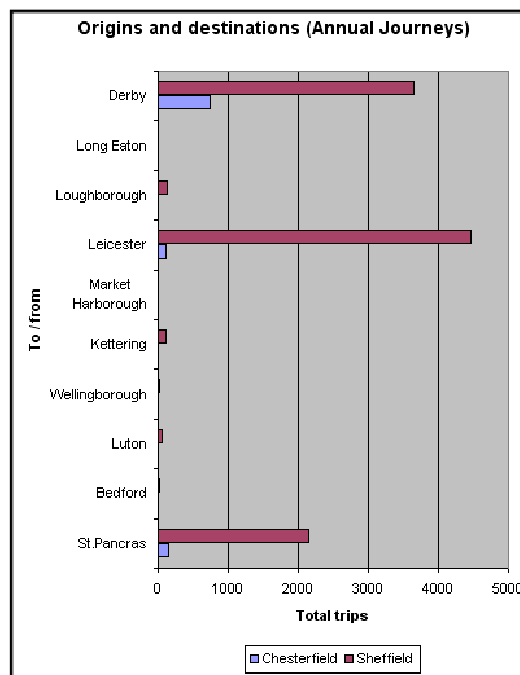
The survey was undertaken in November 2011 on 9 trains over 6 days, including two Saturdays. One morning Derby to Sheffield train and two evening Sheffield to Derby trains were surveyed, roughly corresponding to the times at which stops might be added in at Belper:

Date	Day	Time	From	Surveyed to	Maximum passengers on the train at one time	Passengers interviewed
7/11/2011	Monday	0828	Derby	Sheffield	83	29
7/11/2011	Monday	1627	Sheffield	Derby	181	41
9/11/2011	Wednesday	0828	Derby	Sheffield	97	38
9/11/2011	Wednesday	1627	Sheffield	Derby	160	59
12/11/2011	Saturday	0818	Derby	Sheffield	41	30
12/11/2011	Saturday	1627	Sheffield	Derby	148	53
14/11/2011	Monday	1727	Sheffield	Derby	237	57
16/11/2011	Wednesday	1727	Sheffield	Derby	233	72
19/11/2011	Saturday	1727	Sheffield	Derby	209	53

On the 7th and the 9th of November the 0810 arrival from Matlock was delayed so passengers from the Derwent valley Line who would have travelled north using the 0818 would have caught the 0828. Consequently the 0828 not the 0818 was surveyed on those days.

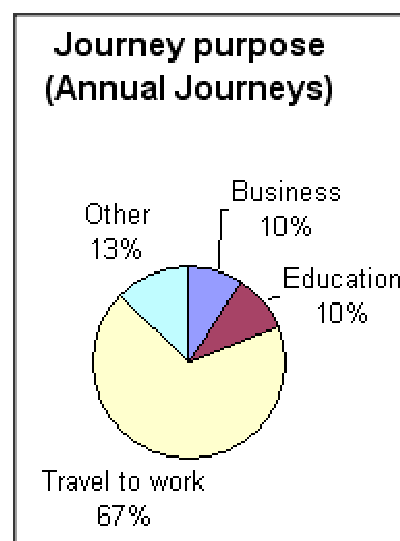
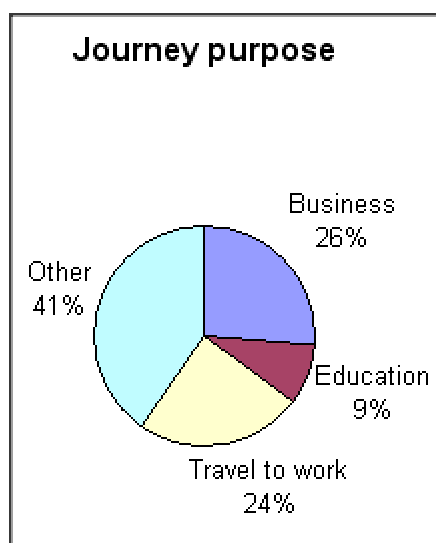
The survey included the 1627 and 1727 trains from Sheffield, these the fast services not the slower 1635 and 1735 that are the more likely candidates for a Belper stop. It might be expected that if there were an adverse reaction to a Belper stop it would be higher on faster than the slower services.

Travel between Sheffield and Derby, Leicester and London dominated the origin and destination pattern of the passengers surveyed. Travel to and from Chesterfield was comparatively small and to other main line stations quite light. Based on information that these passengers gave about their annual travel patterns it was found that travel to Derby and Leicester was more common than to London.



Many passengers were using the service to travel between other locations not served by the train by making connections at one or both ends. Manchester and Leeds dominated this although the latter was distorted by the fact that an East Coast diversion took place. It was interesting that Belper appeared relatively high on this list, although the sample is small.

Connecting origins and destinations of passengers surveyed	
Passengers	Origin/destination
32	Manchester (Piccadilly or Oxford Road)
21	Leeds
13	Kettering
5	Belper
4	Barnsley, Buxton, Doncaster, Ebbsfleet, Hull, Luton Parkway, Manchester Airport, Meadowhall.
3	Beeston, Bolton, Burton-on-Trent, Durham, Hope, Long Eaton, Market Harborough, Syston,
2	Bedford, Duffield, East Croydon, Hathersage, Hawthorns, Hinckley, Huddersfield, Luton, Mexborough, Mill Hill Broadway, Northallerton, Oakham, Rotherham,



The journey purpose that dominated the survey was “other” perhaps due to the busy Saturday trains and diversions. However when this was converted into annual trips then travel to work and education dominates (77%). The results showed in fact that on this section of the route between London and Sheffield the trains were primarily serving a regional rather than an inter-city market.

The following table shows the answers to the important question, “How much longer a journey would have made you choose another means of travel (car, bus, etc.)?” This was only addressed to passengers who were travelling over the Chesterfield-Derby section.

Minutes delay	Individual responses		Based on their annual trips	
	Number	Percent	Number	Percent
1	9	2	890	7
2	8	2	140	1
5	39	10	2650	20
10	328	85	9282	72

The annual trip figures are more meaningful in reflecting possible passenger loss and seem relatively high for a 1 or 2 minute delay at 8%. However among the 72% who were not that bothered many commented that they could not understand why we were asking the question because the train was so much quicker for them and small delays occur all the time. It’s important to note and assess the comments of those who could not accept a 1-2 minute increase in journey time. So for example one person who commutes from Leicester was very worried about a longer journey time due to personal circumstances. This was on one of the 0828 Derby-Sheffield services and was related to the fact that if she had to take an earlier train from Leicester her journey would have been 45 minutes longer.

61% of those surveyed said that varying the departure time would be a problem for them and 75% wanted the train to arrive at the same time but leave earlier if the journey time was extended. Issues about connections perhaps mainly influence this.

6% of the passengers surveyed said that they thought that a stop at Belper would be of benefit to them, 82% did not and 13% did not answer this question. The percentage is relatively high and one needs to consider the “be kind to the surveyor” attitude here.

One reaction from those who did not want extra stops was that if the train were to stop at Belper then this would open the floodgates for stops at many other places. It was perhaps not realised by the respondents that for all other stations serving towns and located on the Derby-Sheffield main line it is possible to catch a local or regional train and travel on to another station to catch an inter-city train. Belper is in the unique position that this is not possible for travel towards Sheffield, except once per day or by a time consuming “reverse” connection. Many people had no idea where Belper actually was or how large a town it was either.

3.2 The practicality of stopping main line trains at Belper

There is no feasibility issue about stopping main line trains at Belper; one main line train already does and there have been no changes at the station since a more intensive main line stopping service was provided just a few years ago. In fact the situation has improved in that tickets can now be purchased from a machine at the station, reducing any potential issues of fraudulent travel.

The two platforms at Belper are about 120m long, which are too short to allow direct boarding from every vehicle of all main line trains that might stop. However this should not be a problem with modern rolling stock with selective door opening.

Should demand increase in future it would be possible to re-extend the platforms to their previous length since nothing obstructs the site.

3.3 The time penalty of stopping trains at Belper

By comparing timings of trains that stop and do not stop at Belper one can see that a Belper stop is likely to add just 2 minutes to journey time. But it’s necessary to consider how journey time varies.

In the current weekday timetable there is considerable variation in the advertised journey times for East Midlands Trains. The time shown between departing Derby and arriving in Sheffield is 32 minutes for just 3 trains; 34 minutes for 11 trains; 35 minutes for 4 trains; 36 minutes for 6 trains and 37 minutes for 2 trains. There is also one train that takes 38, another 40, another 41 and one 53 minutes. The train that does stop at Belper takes 40 minutes but this also has a stop at Dronfield.

On this evidence it is unlikely that provided the stops were not made in the fastest trains passengers would really perceive any real impact from Belper stops.

3.4 Franchise issues

The Service Level Commitment (SLC) for East Midlands Trains currently include the requirement to stop the one train per day at Belper, but, as has been shown above, this is an inheritance that has been handed down for a reason now virtually forgotten. If this is left unchanged then it will continue to be provided by whoever takes on the franchise currently operated by East Midlands Trains. However the SLC could be changed so that a new franchisee could be required to provide additional stops at Belper and this could be for any of the franchises currently serving the corridor.

The first opportunity to do this would be the renewal of the Northern Rail franchise, which expires on 31st March 2014. Currently Northern operates only one train per day between Derby and Sheffield but there is scope to use this opportunity to specify a basic Derby-Sheffield regional service at commuting times in a revised SLC.

The East Midlands Train Franchise expires on 1st April 2015 and it is this event which provides the real opportunity for change. The new franchisee should be required to provide an improved service at Belper.

Finally the Cross Country franchise expires on 31st March 2016.

3.5 Electrification issues

When the Midland main line electrification is extended via Derby to Sheffield around 50% of the trains running non-stop through Belper will be using electric traction. Main line electrification is expected to increase passenger numbers due to faster journey times to the capital and other destinations. Part of this increase will occur from stations between Duffield to Matlock and the option of stopping some peak main line trains at Belper ought to be considered for coping with additional numbers likely to use Belper Station. Increased use of Derby will put pressure on car parks and the access routes to them and main line passengers from the north side of the city may see joining a through service from Belper as a more attractive proposition.

3.6 Competition issues

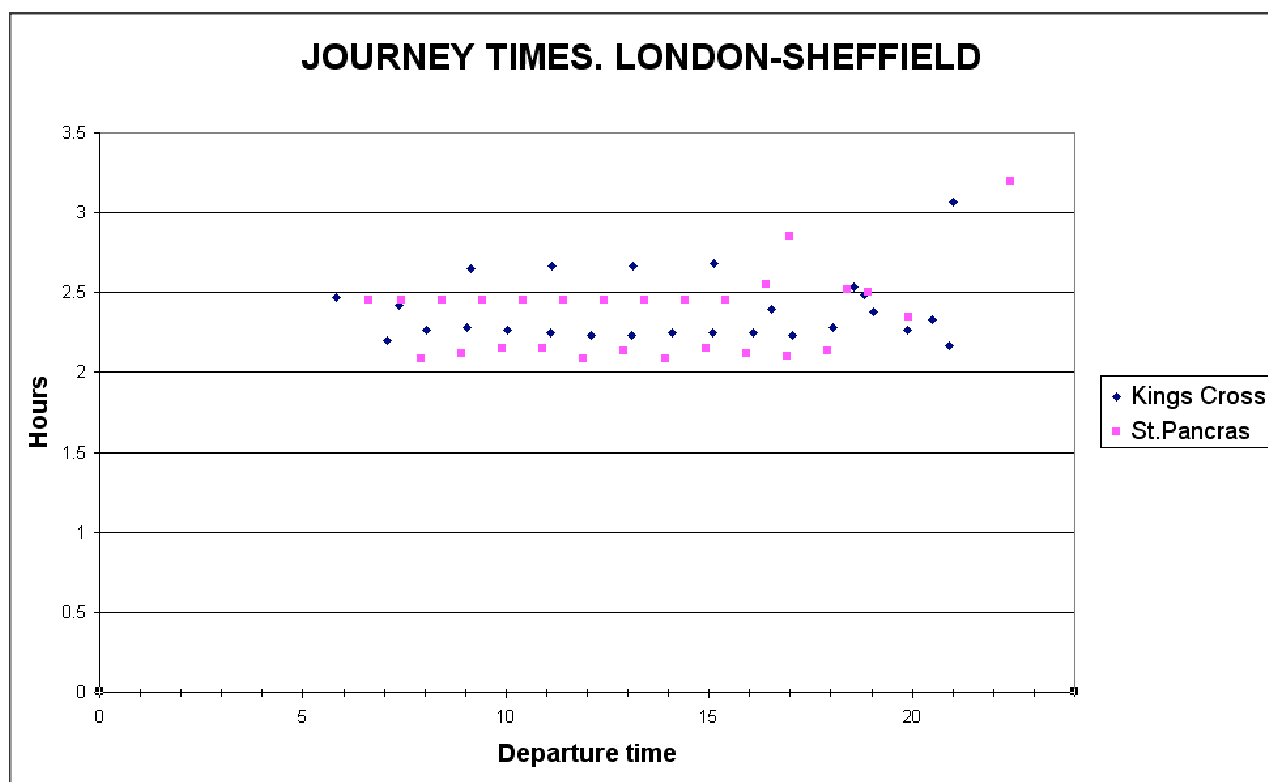
At present there is strong competition for London-Sheffield passenger traffic on two routes, i.e. East Midlands Trains from St.Pancras and East Coast from King's Cross. Any increase in journey time on an EMT service may lose that franchisee revenue to East Coast. Just a small loss of the equivalent of two first class or three standard class full fares each weekday would reduce overall revenue by over £200,000 per year. This seems to be huge but must, of course, be considered in the context of overall franchise revenues.

The extent to which passengers might actually switch between services, if a specific train timing increased slightly, needs to consider the following factors as well as the change in journey time:

- Attractiveness of specific departure and arrival times.
- The comparative crowding and ease of getting a seat on fast services leaving at the same time on each route.

- The ease of access to the platforms at each London termini from the Underground, taxi ranks, etc.
- The passenger's attitude towards changing trains during the journey, including the fact that the East Coast timings depend on making a relatively tight connection at Doncaster. One could end up waiting there 20 minutes or more.
- The variable quality and timings of Doncaster-Sheffield trains, these are provided by three operators, Cross Country, First Transpenine Express and Northern.
- Passenger comfort on the trains including catering and facilities given to first class passengers.
- The perceived difficulty of booking via a different route for just one train, including the fact that the full fare on the East Coast is £1 more each way – is it worth it for a few minutes?
- The relative reliability of the two routes.

The diagram below shows that the competitiveness of journey times via the two routes varies through the day. It shows mid week timings. Journey times exceeding 4 hours are excluded from this diagram.



From December 2013 East Midlands Trains are planning to cut the London-Sheffield journey time to less than two hours. From 2020 even faster journey times should be achieved with electrification. On this basis the East Coast route will clearly cease to be competitive in journey time terms. By then making a few stops on certain trains at Belper will no longer threaten the overall competitiveness of the St. Pancras route, if such a threat exists.

3.7 Assessment

There should be no capital costs involved in stopping additional trains at Belper. There would be small operating costs and in simple terms making the stops is justified providing:

$$R_b - R_{ot} > OC$$

Where R_b is the revenue gain from stopping trains at Belper, R_{ot} is the revenue loss on other train services caused by stopping trains at Belper and OC is the operating costs of making the stops.

In addition other net benefits such as reduction in car use, and economic benefits from facilitating mobility between close urban areas need to be considered. The reduction in car use could be significant because as has been demonstrated many people are travelling between Belper and Chesterfield and Sheffield but not by public transport.

On balance it is believed that the overall benefits would outweigh the costs.

4. Future development.

Belper has become more important as a tourist destination. Since the creation of the Derwent Valley Mills World Heritage Site, within which Belper is an important location, local authorities and other bodies have worked together to maximise its value. Initiatives have included improving facilities for visitors, promotion and organising events that attract thousands of visitors to visit the town on one day. This is very important to the local economy since tourism is replacing manufacturing as the main industry of the town. Clearly the proposals advocated in this report, which are based on the needs of commuters, will not provide a service at times that will benefit visiting tourists. However if the proposals were taken forward then they could be the basis for introducing a more frequent service in future and one that would serve visitors' needs.

In the next ten years the character of the population of the town and its immediate area is likely to change, as will the role of the main line railway passing through the town. Main line electrification and the development of HS2 with a station at Toton can reasonably be expected to have a significant effect. Very soon the Erewash Valley will be within one hour of London and become a popular residential location. At present house prices are relatively low but this is likely to change as the attraction of the area becomes known. The area around Toton is already urbanised and runs into the suburbs associated with Nottingham and Derby. Although infill and redevelopment to a higher density is likely many people moving to the area will prefer to have access to countryside. Belper will be in prime position to take these new residents, who are likely to have more disposable income and expect good transport systems. This is because the town is on the edge of the countryside, close to the Peak District, has a rail service of its own and is "protected" from adverse development by the World Heritage Site Status. It will be just 11 miles from the High Speed Rail station.

At the same time the role of the existing railway in moving people at high speed between London and Sheffield will change. There will be scope to provide improved regional services to feed into the faster links and meet the travel needs of people moving to the area who will have experienced

better quality rail service elsewhere. So for example, the introduction of regional Birmingham-Sheffield trains serving Belper as well as other intermediate stops is more likely to be considered.

5. CONCLUSIONS

- 1) Belper is a fast growing town that is popular for commuters; its population has increased by 5% in 10 years. Rail passenger traffic has doubled since 2008 as a result of an improved service on the Derwent Valley Line. The Belper Station catchment area is between 30,000 and 60,000 people, of whom 10,000 are within walking distance of the station.
- 2) Compared with other towns that have stations on the main line Belper has a very poor service to Chesterfield, Sheffield and the North, just one train per day and no return journey.
- 3) The need to travel south from Belper to Derby in order to catch a train to the north that runs back though Belper without stopping is unique on Britain's rail network. It results in very slow journeys (14-18mph average speed) and relatively high fares (62-65p per mile) when the direct distance is considered.
- 4) It would be feasible and would not involve any capital cost to stop some of the 127 passenger trains that currently pass through without stopping. The existing ticket machine at the station would provide the facility for passengers to purchase or collect tickets before boarding.
- 5) It is proposed that there should be one additional train arriving Sheffield between 0825 and 0905 and two departing Sheffield between 1630 and 1800 about one hour apart.
- 6) The impact on long distance passengers would be minimal. Surveys have shown that trains at these times are fulfilling more of a regional than an InterCity role. Also the slower East Midlands Trains services, in which the two southbound stops might be made, currently leave Sheffield just 8 minutes later than the faster trains so only passengers who had missed the earlier trains would be affected. The 2 minutes required for a Belper Stop would not be noticed considering that the timings between Derby and Sheffield vary between 31 and 41 minutes and one that takes 53 minutes. Services between Sheffield and St.Pancras are likely to be retimed and made faster from December 2013 so they should be even more attractive than they are now, so any loss in revenue resulting from Belper stops needs to be considered in that context.
- 7) Surveys did some high resistance to an extra stop (4% of passengers surveyed, equivalent to 8% in terms of annual journeys), but most of the surveys were on the fastest trains, not the ones that are proposed for stops in Belper. Furthermore there had been disruptions affecting opinions. In addition there was a concern about opening the "floodgates" to further stops but the survey did not explain the unique anomaly that Belper suffers, and how its service compares with towns already served.
- 8) There is evidence of latent demand for travel between Belper, Chesterfield and Sheffield. The surveys showed that existing Belper rail passengers are already using rail to reach the north despite the difficulties. In fact Sheffield was a significantly more popular rail destination for the 92 people surveyed than Birmingham, Leicester or London, this contrasts sharply with the popular destinations for other Derwent Valley Line passengers.
- 9) There are no direct bus services between Belper and Sheffield and connections are unattractive. There is however one direct bus for students to and from Chesterfield College.
- 10) Belper station is well located, attractive and extremely convenient for local services and bus connections. It also has a large pay and display car park that would accommodate commuter traffic.

- 11) Alfreton Station, which is on the parallel railway, 9 miles from Belper, has a half-hourly rail service to Chesterfield and Sheffield. The town is very similar in size and character to Belper. Based on the number of passengers using those rail services it is estimated that at least 90 people a day would make regular use if the service were increased from one train per day in one direction to two trains per day each way.
- 12) Providing this improvement would bring considerable benefit to the town and other benefits are likely to outweigh any added costs or revenue loss on existing services.
- 13) Future main line electrification is likely to cause a significant passenger growth from Belper and providing some main line stops, would then both be easier and help manage peak demand.
- 14) There are opportunities to introduce the proposed improvements when franchise renewals take place for the three operators providing service on the route in the years 2014-2016.
- 15) The proposals could provide the basis for further improvements in future. These could meet both the need for the town to continue to develop tourism based on its World Heritage status and the likely attraction to the town of new residents with higher transport expectations as result of the opening of a High Speed Rail station only 11 miles away.