

## 6

# LEWES-UCKFIELD REOPENING AND THE TUNBRIDGE WELLS LINK

## 6.1

## THE PROPOSALS: LEWES-UCKFIELD LINE

Our discussions with stakeholders revealed several proposals for reinstating a rail link between Lewes and Uckfield. These are summarised in the diagram in Figure 23. The variants are as follows:

### Reopening of the original Lewes-Uckfield alignment

- South end faces east towards Lewes, using the original (1858) route via Hamsey (or near equivalent) to meet the existing Wivelsfield-Lewes line west of Lewes
- Optional stations at Isfield and Barcombe Mills, and option for a turnback siding/loop east of Lewes to allow Uckfield line trains to continue to/from Brighton.

### Reopening of the original Lewes-Uckfield alignment, plus a new Ashcombe Tunnel

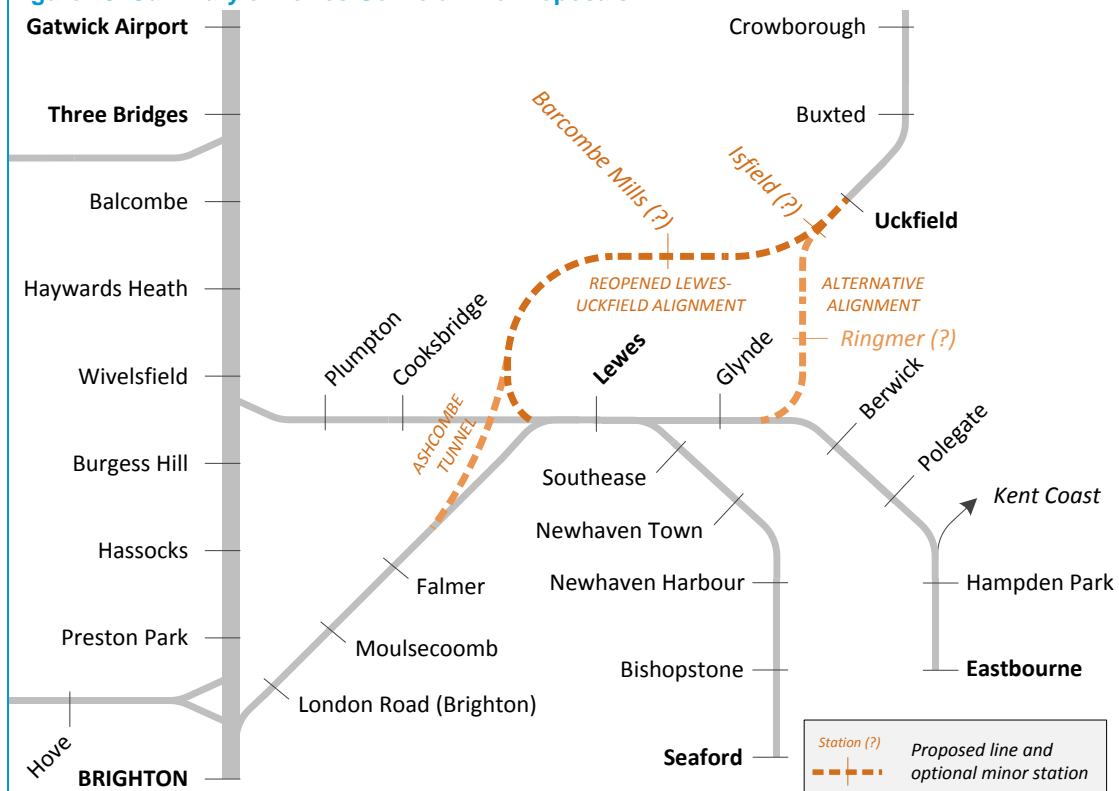
- As above, plus a new direct tunneled connection between the Uckfield-Lewes line near Hamsey and the Lewes-Brighton line west of Lewes, allowing direct train services between Brighton and the Uckfield line.

- Additional platforms at Brighton, to accommodate the additional trains.

### New alignment between Uckfield-Isfield-Ringmer-Glynde

- South end faces west towards Lewes, with optional stations at Isfield and Ringmer.

Figure 23: Summary of Lewes-Uckfield Line Proposals



Network Rail's 2008 'Lewes Uckfield Railway Line Reinstatement Study'<sup>7</sup> (hereafter 'the 2008 study') looked at an east-facing connection at Lewes and assumed the existing single-track sections north of Uckfield would be retained. It looked at extending the 2tph Uckfield services to Lewes, or Eastbourne, or Newhaven. It also looked at options with or without intermediate stations between Lewes and Uckfield. It found that the reopening was technically feasible, but there was insufficient case for it under any of those options. The revenue and social benefits were insufficient to make the BCR viable. The resilience and regeneration benefits were considered to be negligible.

## 6.2

**OUR ASSESSMENT: LEWES-UCKFIELD LINE**

Our assessment of Lewes-Uckfield reopening is provided in Figure 24.

**Figure 24: Lewes-Uckfield Reopening feasibility assessment**

CATEGORY	OUR ASSESSMENT
Demand impacts	<p>In general, our analysis has found that the construction of a link between Lewes and Uckfield will not have a significant impact on patronage in the London direction. This is because there is already a tranche of demand which elects to travel north to London from both Lewes and Uckfield. In the case of Lewes this demand travels via Cooksbridge to the BML. For Uckfield, demand uses the existing Uckfield branch, or 'railheads' to the BML (i.e. elects to travel from home to a departure station on the BML to benefit from reduced GJT, even when this is further away than the nearest station).</p> <p>In relation to flows south to Lewes and beyond, including Brighton, the starting-point is that the 2008 study found relatively low flows in comparison to the scale of the reopening scheme. That study assumed a 2tph service on the Uckfield line with interchange at Lewes for Brighton. On this basis it forecast daily demand (two-way single flows) of around 500 trips between Uckfield/Crowborough/Buxted and Lewes, but only around 170 between Uckfield/Crowborough/Buxted and Brighton, and a similar figure for Eastbourne<sup>8</sup>.</p> <p>Our modelling has provided an independent estimate of journeys into Brighton from Uckfield line stations (excluding Lewes), with a forecast of between 150-270 trips in the morning peak, equivalent to an annual demand of approximately 75,000-132,500 trips before background growth and housing development are applied. Our low-end estimate aligns closely with the flow estimates in the 2008 study, using similar assumptions. The high-end estimate reflects the much improved GJTs offered by the most complex scheme (Package 2F), which includes 4tph direct to Brighton via the Ashcombe Tunnel and an electrified and redoubled Uckfield line.</p> <p>Notwithstanding the scale and significance of Brighton as a city, it is not clear whether in reality it represents a major potential commuting market from Uckfield line stations:</p> <ul style="list-style-type: none"> <li>→ As noted above, the 2008 study forecast Lewes to be a much larger market than Brighton.</li> <li>→ Census data show more Uckfield residents currently commuting to Lewes than to Brighton.</li> <li>→ GTR advised us that Polegate, with direct trains to Lewes and Brighton, sells nearly three times as many season tickets to Lewes as to Brighton.</li> </ul> <p>The question then becomes whether background growth, housing growth and a different service pattern (including potentially faster direct services to Brighton) could change this picture significantly, particularly as commuting patterns change in response to new services. It is beyond the scope of this study to determine this question, but our recommended way forward reflects it.</p> <p>In terms of wider housing growth and its impact on demand, the currently anticipated pattern of housing growth in the Weald is not always a close match with the existing or potential rail</p>

<sup>7</sup> *Lewes Uckfield Railway Line Reinstatement Study, FINAL*. Network Rail, July 2008.

[https://eastsussexgovuk.blob.core.windows.net/media/2148/lewes\\_uckfield\\_network\\_rail\\_final\\_report.pdf](https://eastsussexgovuk.blob.core.windows.net/media/2148/lewes_uckfield_network_rail_final_report.pdf)

<sup>8</sup> The 2008 study: paras 3.4.5, 3.4.36 and the table following the latter

	<p>network. Wealden District Council has allocated growth of 1,000 homes in Uckfield and 300 homes in Crowborough as part of the current Wealden Local Plan Core Strategy. The council recently went to consultation on the Issues, Options and Recommendations stage of the Wealden Local Plan review<sup>9</sup>. This is looking to provide 19,500 homes in the District, based on a forecast of around 832 dwellings per year up to 2037. In the consultation document's 'preferred option for testing', much of this growth would be in Hailsham (9,380 dwellings), partly in response to Eastbourne's needs that cannot be accommodated within the Eastbourne boundary. There would be little growth along the Uckfield line. An alternative option, which spread housing more evenly across the district and included around 3,000 dwellings along the Uckfield line, was not considered feasible due to its impacts on Ashdown Forest. None of the currently planned housing growth sites specifically relies on Lewes-Uckfield reopening for deliverability, so this is not currently seen as a reason for doing so.</p>
<p>Network design factors and engineering feasibility</p>	<p>We accept the 2008 conclusion that <u>reopening Lewes-Uckfield</u> as the core infrastructure is technically feasible. There is no evidence that this situation has changed significantly. Although a station car park has been built over the former trackbed at Uckfield, this is a relatively minor issue and the design makes passive provision for a future reopening. The key risks are:</p> <ul style="list-style-type: none"> <li>→ The Lavender Line heritage railway uses part of the route at Isfield, and the 2008 study assumed this would be retained in parallel with a single-track reopened route that could accommodate 2tph. If a double-track reopened route were required (to accommodate more than 2tph), the Lavender Line would probably need to close.</li> <li>→ Acceptability of the probable need to sever Uckfield High Street at the railway, in view of current Office of Rail and Road (ORR) policy pertaining to new level crossings<sup>10</sup>. Alternative vehicular and pedestrian routes would need to be provided. For vehicles this would probably involve bridging the railway west of High Street near the bus station.</li> </ul> <p>There is little existing engineering evidence on the three <u>turnback/turnround options at Lewes</u>. A feasibility study in 1998<sup>11</sup> looked at the turnback siding option, but this was not available for review in the present study and in any case is now dated. All three options are within the South Downs National Park and all raise potential operational or deliverability concerns. Any selection between them could only be made based on a full comparative engineering / timetabling study, cost estimation and business case assessment.</p> <p><u>The Ashcombe Tunnel</u> would be a much greater infrastructure commitment than the turnback/turnround. A 2-3km tunnel under the National Park, and surface approaches within the National Park, would be required. Again there is no significant engineering evidence. Key issues include:</p> <ul style="list-style-type: none"> <li>→ The northern approach to the tunnel, as currently postulated, would run through a Site of Special Scientific Interest (SSSI). It is possible that the route could be adjusted to avoid this, but there has been little or no technical investigation.</li> <li>→ In a tunnel of this length, the Safety in Rail Tunnels Technical Specification for Interoperability (SRT TSI) requires a partitioned or twin-bore tunnel for evacuation reasons. The BML2 proposal has made a technical and cost comparison with the HS1 North Downs tunnel, but that predated the SRT TSI and is no longer a direct comparator. A more appropriate comparator would be the recently-completed A3 Hindhead road tunnel, a single bore of which is broadly comparable in diameter to a double-track rail tunnel. We discuss this under the cost estimates heading below.</li> </ul>
<p>Operational feasibility, journey time savings and resilience benefits</p>	<p>There would be very significant rail journey time savings between Uckfield line stations and Lewes/Eastbourne/Newhaven/Brighton, even if changing at Lewes were required. This is likely to attract passengers who currently railhead to BML stations, although this relates to the counter-peak direction where the capacity issues are less severe on BML. For trips to/from Brighton, the Ashcombe Tunnel would enhance these journey time savings considerably.</p>

<sup>9</sup> *Wealden Local Plan: Issues, Options and Recommendations Consultation*. Wealden DC, October 2015.

<sup>10</sup> ORR's strategy for regulation of health and safety risks – Chapter 4: level crossings  
[http://orr.gov.uk/data/assets/pdf\\_file/0019/6427/safety-strategy-chapter-4.pdf](http://orr.gov.uk/data/assets/pdf_file/0019/6427/safety-strategy-chapter-4.pdf)

<sup>11</sup> *East Sussex Central Rail Corridor Feasibility Study*. Mott MacDonald, 1998. [link not available]

Journey times between Lewes (or points east) and Croydon/London via Uckfield would be slower than via the BML, thus making the Uckfield route less attractive for those trips. Our analysis suggests Lewes-London Bridge journeys via Uckfield would take 91-98 minutes, compared to around 75 minutes via the BML. However, the attractiveness will depend on the interplay between BML timings and Uckfield line timings. Although the latter is indeed slower, at certain times within the morning peak an Uckfield train could (depending on the actual timetable) give the earliest arrival at London Bridge (or the latest departure from the origin for a given arrival time requirement at London Bridge). Furthermore, some passengers may prefer to take a train with a longer journey time if this avoids an interchange or (depending on the relative loadings) crowding.

We assessed the resilience benefits as part of our investigation and concluded that the resilience benefits of Lewes-Uckfield as a diversionary route are limited but may not be negligible. The key factors were:

- Journey times would generally be extended. A Victoria to Brighton journey, timed for 51 or 59 minutes via BML, would take between 76-96 minutes via Uckfield dependent on the infrastructure layout at Lewes. However, journeys between London and Lewes or Eastbourne via Uckfield would have only a 20-25% time penalty compared to BML.
- The route does not serve BML stations between South Croydon and Lewes or Brighton (exclusive), importantly omitting Gatwick Airport and commuter stations from Balcombe to Preston Park.
- The reopened section and the existing Hurst Green-Uckfield section would need to be electrified, and capacity limitations north of Uckfield mean it is unlikely that more than 1tph could be diverted without doubling the existing single line sections. Even then, the likely maximum diversion would be 2tph in unplanned disruption and possibly slightly higher in planned disruption.
- Potential planned diversions via Uckfield would (on the basis of current 2016-17 possession plans) be relevant for only eight weekend days per year. They would also be relevant for a much larger number of overnight closures in the small hours (currently diverted via the Arun Valley, reversing at Littlehampton).
- Overall, a reopened Lewes-Uckfield line would have only partial capability (even with suitable upgrades) to cover specific incident locations and specific passenger flows. It could not act as a complete 'backup' to the BML, even during planned disruption.

We have carried out a high-level assessment of the capacity available for additional paths between Lewes and Brighton (whether for Uckfield line trains or additional East Coastway trains). It focused on Lewes-Brighton line capacity and also platform capacity at Brighton, starting from the existing timetable as a basis. Junction conflicts at/near Lewes, and capacity on the Lewes-Eastbourne/Newhaven lines, were beyond the scope of the assessment. Key results were:

- An additional 2tph into Brighton from the Lewes direction is likely to be possible, subject to some consequential adjustments to existing services, but would require one additional platform at Brighton.
- A further 2tph (total increase 4tph) is also likely to be possible, with consequential adjustments, but would require a second additional platform.
- These results assume the existing Lewes-Brighton short workings remain in place. However, if they were replaced by the new services, and/or if the timetable were recast, it may be possible to reduce the requirement for additional platforms.
- There are potential opportunities to create the additional platform(s), within the train shed (as proposed by BML2) or outside it, but the engineering feasibility would need to be assessed. The throat would need to accommodate as many parallel moves as possible.
- Additional stabling would be required.

The 2008 study found BCRs in the range from 0.64 to 0.79 depending on the service pattern and whether or not intermediate stations were included. This did not include monetised Wider Impacts. Current appraisal guidance, particularly for a locally-promoted scheme, allows for Wider Impacts to be included in an Adjusted BCR and to be taken account of in the overall Value for Money assessment. It is beyond the scope of this study to recalculate the 2008 results under current guidance with Wider Impacts added. However, Wider Impacts are generally expected to

	<p>be in the range of 10% to 30% of user benefits<sup>12</sup>. Using the data from the 2008 study, the top end of this range would imply Adjusted BCRs in the range from 0.69 to 0.83, which is still well below a viable level<sup>13</sup>.</p>
Estimated cost	<p>No costings that are both reliable and up-to-date exist for any of the components. The 2008 study estimated that the basic Uckfield-Lewes reopening would cost around £150m (at 2008 prices including land and 30% contingency, but not optimism bias). However, this figure is now outdated. No costings exist for the Lewes turnback/turnround options. For the Ashcombe Tunnel, as noted above, the cost comparison that BML2 has made with the HS1 North Downs tunnel is no longer appropriate. Using Hindhead as an alternative comparator, and subtracting services that only apply to road tunnels, but adding partitioning, we estimate the tunnel alone (excluding land, approach routes and railway systems) might cost around £120m. A twin-bore design with cross passages is likely to cost more than this. However, costs depend on ground conditions, which are currently unknown.</p> <p>With limited evidence available to inform costs, we have produced our own high level cost estimates for the Lewes-Uckfield reopening schemes as follows:</p> <ul style="list-style-type: none"> <li>→ £150-250m for basic Lewes-Uckfield reopening. This comprises a single unelectrified track on former alignment with potential turnback siding at Lewes, excluding intermediate stations. Increases to more than £250m if turnback loop at Lewes is required.</li> <li>→ £500m-£1bn for Lewes-Uckfield reopening plus Ashcombe Tunnel. This comprises a double-tracked reinstated Lewes-Uckfield line, new Ashcombe Tunnel, grade separation with Lewes branch and skewed viaduct over the A27. Increases to more than £1bn if AC electrification and redoubling of existing Uckfield branch are included.</li> <li>→ £250-500m for new unelectrified Lewes-Uckfield alignment via Ringmer and Glynde. As this route is longer than and does not follow the former alignment, the civil engineering works required to maintain an acceptable vertical alignment while crossing existing features such as roads and rivers will be significant.</li> </ul>
Funding options	<p>In principle, developer contributions could be made, but current site allocations along the line are not on a scale that would generate a significant proportion of the reopening cost. Although some local planning authorities expect housing growth to continue and accelerate, there is no evidence that the additional growth would naturally be focused along the line.</p> <p>In principle, the scheme could be suitable for CIL or business rate contributions, particularly given the wider economic benefits, but other pressures on these sources would need to be considered.</p> <p>If the anticipated pattern of development were to change and become more closely matched with the Lewes-Uckfield corridor, and if the reopening scheme were part of a wider package that could draw in additional locations, then the potential for private sector contributions might be greater. We say more about this in Section 6.6.</p>

*Source: WSP | Parsons Brinckerhoff project team assessment. High level final cost estimates presented are based on relevant pre-existing work (if listed) or the cost of projects of a similar nature. The cost range reflects the degree of design/option development that has already been undertaken and the evidence that was available to the project team during the study.*

### 6.3

## THE PROPOSALS: TUNBRIDGE WELLS LINK WITH THE UCKFIELD LINE

In this section, for clarity we describe Network Rail's existing Tunbridge Wells station under its former name of Tunbridge Wells Central ('TW Central'), to distinguish it from Tunbridge Wells West ('TW West'). References to Tunbridge Wells, without specifying a station, relate to the town as a whole.

<sup>12</sup> *WebTAG Unit A2.1, Table 6.* January 2014

<sup>13</sup> The 2008 study: based on the TEE estimates in Table 1.

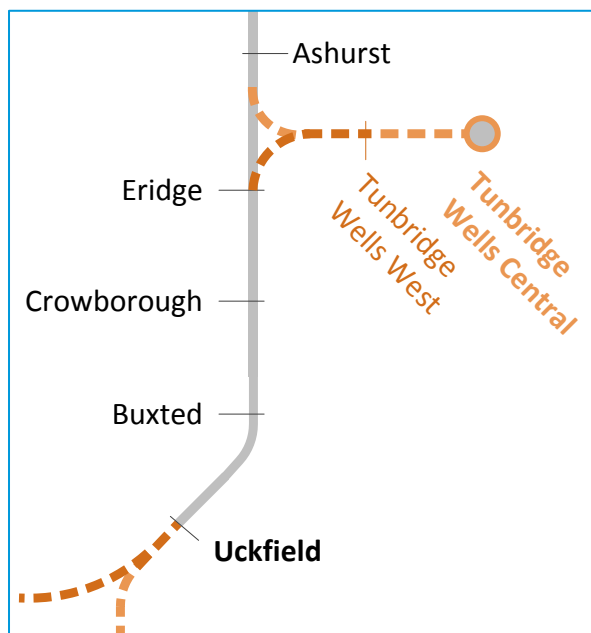
As with the Lewes-Uckfield line, our discussions with stakeholders revealed several proposals for a rail link to Tunbridge Wells. These are summarised in Figure 25. The variants are as follows:

**BML2 scheme:** The BML2 'Kent Phase' proposal includes a link between TW Central, TW West and the Uckfield line, with junctions pointing both north and south on the Uckfield line (our ref TUN-01 and TUN-02). It would include a station at TW West. Infrastructure work, including some realignment, property reconfiguration and accommodation or displacement of the existing Spa Valley Railway, would be needed along the route. The main rationale is to:

- Relieve existing crowding on existing TW Central-London trains via Tonbridge, by allowing Tunbridge Wells to London trains via the Uckfield line (if paths were available towards London – which is assumed to be possible with full implementation of BML2).
- Allow direct services between Tunbridge Wells (or north thereof) and Brighton and/or Lewes and points east. Currently such journeys are circuitous by train.

**Railfuture scheme:** Railfuture has proposed a smaller-scale alternative (our ref TUN-03): running national rail services over the Spa Valley Railway's (SVR) existing single track (with some infrastructure enhancements) between Eridge and TW West, by commercial agreement. In conjunction with Lewes-Uckfield reopening, this would allow an hourly TW West to Brighton service. The link between TW West and TW Central would not be reinstated, at least initially.

Figure 25: Summary of Tunbridge Wells Link Proposals



## 6.4

### OUR ASSESSMENT: TUNBRIDGE WELLS LINK WITH THE UCKFIELD LINE

Our assessment of a Tunbridge Wells link with the Uckfield line is provided in Figure 26.

Figure 26: Tunbridge Wells Link with the Uckfield Line feasibility assessment

CATEGORY	OUR ASSESSMENT
Demand impacts	The scheme does not respond to the core BML peak capacity challenge, nor is it intended to. Instead it responds to potential demand for travel, or wider value of having connectivity, along a Tunbridge Wells–Uckfield–Lewes–South Coast axis. As with Uckfield-Lewes, this demand would need to be demonstrated in the context of future planning scenarios. We have not modelled the incremental demand impacts for a Tunbridge Wells link to the Uckfield Line, but expect that demand impacts to/from the south coast would be similar in scale to Lewes-Uckfield re-opening

	<p>due to the improvements in GJT that would result from the scheme. If a north-facing chord towards London is provided, we expect additional London-bound demand to be limited as Tunbridge Wells already has a main line link to London.</p>
<p>Network design factors and engineering feasibility</p>	<p>From <u>Eridge to TW West</u>, the existing Spa Valley Railway (SVR) heritage railway would generally be used. Between TW West and the point where it meets the Network Rail route at the former Birchden Junction, the SVR currently runs in its own corridor. From Birchden Junction to Eridge, the SVR and TOC services run in parallel on adjacent but not connected tracks. The SVR leases its trackbed here, which originally carried the second track of the Uckfield branch, from Network Rail. There are termination provisions in this lease which would allow the Network Rail line to be re-doubled<sup>14</sup>. At Eridge the SVR shares the Network Rail station as the beneficiary of a Station Access Agreement with GTR.</p> <p>National Rail services using this heritage line would be a unique situation and the best deliverable operational model would need to be determined. We have seen no evidence that SVR has been involved in any discussions about this, but that is to be expected given the very early stage of the proposals that have been made.</p> <p>The main options would be:</p> <ul style="list-style-type: none"> <li>→ SVR remains in place, with National Rail services operating over SVR infrastructure. Southern or a successor TOC would operate the National Rail service as the beneficiary of bespoke track and station access agreements with SVR. Heritage and National Rail services would coexist and compromises may be required in their times of operation etc.</li> <li>→ SVR remains in place, and by commercial arrangement provides routine day-to-day service between Tunbridge Wells-Eridge as if part of the national network as well as being a heritage operation. Compromises may be required to suit the two very different travel markets.</li> <li>→ A promoter (Government or Network Rail) obtains powers to acquire the route and operate it as part of the national network. SVR could retain the land not required for the main line railway, and could operate heritage services similar to today as the beneficiary of bespoke track and station access agreements. Heritage and National Rail services would coexist and compromises may be required in their times of operation etc.</li> <li>→ As above, but SVR operations would cease. The BML2 proposal envisages this.</li> </ul> <p>Each model would have its own delivery, commercial, regulatory, engineering and operational issues and risks. We have been unable to identify an exact precedent for routine day-to-day National Rail services operating over a heritage railway. However, there are partial parallels:</p> <ul style="list-style-type: none"> <li>→ Freight services and occasional TOC-operated special passenger services cross between Network Rail and heritage infrastructure at various locations.</li> <li>→ Great Western Railway (GWR) routinely operates timetabled summer Sunday services over private infrastructure (Devon and Cornwall Railways) to Okehampton, connecting with heritage trains between Okehampton and Meldon. In this case, however, GWR and heritage operations do not directly share track.</li> <li>→ The North Yorkshire Moors Railway runs trains on a significant length of Network Rail infrastructure, shared with TOC services, between Grosmont (junction with its own heritage operation) and Whitby. However, this is an expansion of heritage services onto an NR branch rather than vice versa.</li> <li>→ The Swanage Railway expects to begin in 2017 a two-year trial of services between Swanage and Wareham, over a combination of its own and Network Rail's infrastructure, initially on a limited number of days. This represents the first fulfilment of a long-held local aspiration to provide an 'amenity' service (i.e. one focused on mainstream travel demand rather than a heritage focus). This service would coexist with the railway's existing heritage service, on the proviso that the latter should not be detrimentally affected. This has required consideration of commercial factors (e.g. minimising abstraction from heritage fares) and operational factors (prioritising use of line capacity during the peak summer season).</li> </ul>

<sup>14</sup> The 2008 study: paragraph 10.1.4.

	<p>A service initially to/from TW West by agreement with SVR offers the basis for a potential low-cost, initial scheme. However, there is little evidence to date about its feasibility. Key risks include:</p> <ul style="list-style-type: none"> <li>→ Securing a means to operate routinely over the SVR's infrastructure. SVR's likely commercial approach is not known. Unlike at Okehampton, National Rail and heritage trains would need to work around each other. There has been no assessment to date of potential impacts on each other or potential respective periods of service.</li> <li>→ The deliverability of a station at TW West, either using the existing SVR platform or acquiring powers and land to construct a new platform.</li> <li>→ The extent of infrastructure work needed to support the speeds and frequencies required to make National Rail services viable on this route. (Our assessment of potential timetable patterns has identified a range of options with varying requirements for speeds and track layout.) The majority of this work is likely to come under permitted development rights.</li> <li>→ Depending on the operational model, a reinstated connection between the two systems for either passenger services or empty stock movements may be needed.</li> </ul> <p>A shuttle service between TW West and Eridge does not appear to have been proposed previously, but its feasibility should be considered as part of a potential low-cost initial solution.</p> <p><u>From TW West to TW Central</u>, there are substantial incremental cost and delivery challenges. A key factor is the physical safeguarding/obstruction of the corridor. The main issue is with the former TW West site. Although a safeguarding policy exists, it is essentially a 'line on a map' and it does not appear feasible to reinstate a railway (even without a TW West station) without major reconfiguration of the site, including substantial or complete demolition of the supermarket building. In our view this should be seen as a longer-term goal than reaching TW West, and our recommended way forward includes a potential incremental strategy for this.</p>
Operational feasibility, journey time savings and resilience benefits	<p>The link, as part of a wider Lewes-Uckfield package, would bring Tunbridge Wells and Brighton within around 75 minutes of each other by rail, compared to around 2 hours by rail today. There would also be large journey time benefits for other rail flows along the corridor to/from Tunbridge Wells.</p> <p>The BML2 proposal for Tunbridge Wells-London services via the Uckfield line, as described above, would run those services on BML2 and therefore not require BML paths into London. However, in principle, and in the absence of BML2 London section, those services could run into London via BML using any new available paths. Our assessment of Package 2C has found that from Tunbridge Wells the journey times via the Uckfield line of more than an hour, even to London Bridge, were poorly competitive with existing peak journey times of around 45 minutes to London Bridge via Sevenoaks. The issue of capacity from Tunbridge Wells should be considered in more detail as part of the Kent Route Study, but is not critical to any of our recommendations.</p>
Estimated cost	<p>No costings that are both reliable and up-to-date exist for any of the components. As such, we have produced our own high level cost estimates for the Eridge-TW reopening schemes as follows:</p> <ul style="list-style-type: none"> <li>→ £10-50m for the basic Railfuture single line scheme, running to TW West only.</li> <li>→ £50-100m for the BML2 'Kent Phase' double-track scheme to TW Central, assuming line unelectrified and single bore through Grove Tunnel. Increases to £100-250m if line electrified and Grove Tunnel doubled.</li> </ul>
Funding options	<p>Our comments under this heading for Lewes-Uckfield broadly apply to this link, which should be seen as part of a wider Lewes-Uckfield package rather than in isolation. Specifically, there is the potential for any future redevelopment of the former TW West station site (Sainsbury and Homebase) to contribute to a funding package, but such redevelopment is not part of current site allocations and would require further consideration.</p>

*Source: WSP | Parsons Brinckerhoff project team assessment. High level final cost estimates presented are based on relevant pre-existing work (if listed) or the cost of projects of a similar nature. The cost range reflects the degree of design/option development that has already been undertaken and the evidence that was available to the project team during the study.*

## 6.5

## STAKEHOLDERS' VIEWS

Reopening of Lewes-Uckfield and Eridge-Tunbridge Wells remains an aspiration of some local stakeholders, in order to:

- Provide improved local connectivity between towns, particularly if a link to Tunbridge Wells is also made, establishing the town as the 'centre of the Weald'
- Help to mitigate general highway congestion in the area
- Support regeneration, particularly the Enterprise Zone at Newhaven
- Provide a diversionary route during planned or unplanned disruption on BML.

Some stakeholders, including local authorities, have concerns about the outcome of the 2008 study into Lewes-Uckfield reopening. This is one of the drivers for the latest proposals that include direct links to Brighton. Their concerns include (in no order of importance):

- The ridership potential, and the resilience benefits as a diversionary route, would both be greater if services ran to Brighton, the single most important destination in the southern part of the study area. The City of Brighton and Hove is significant as:
  - An employment centre, with 155,000 jobs. This is more than Portsmouth, Southampton, Reading or Croydon, and third largest in the south east region after London and Milton Keynes<sup>15</sup>.
  - A further/higher education centre, including the University of Sussex and the University of Brighton, with key campuses close to stations at Falmer and Moulsecoomb as well as in central Brighton.
  - A visitor destination, with around ten million tourism trips per year<sup>16</sup>.
- The demand growth picture has changed. Demand growth is accelerating generally, and additional housing development is now planned (or emerging in forthcoming plans).
- The resilience benefits, regeneration benefits and connectivity (i.e. access to jobs and services) benefits were seen as having been underplayed in the 2008 study. Furthermore, there is now an enterprise zone at Newhaven.
- Reopening is seen as a necessary component of a sustainable transport policy, in the context of concerns over highway capacity constraints. While there are no specific development sites whose delivery requires this reopening, overall growth and congestion issues will demand a general level of investment in alternatives to car travel.
- Finally, the reopening should be seen as a component of a wider package (including redoubling and electrification, a Tunbridge Wells link or ultimately perhaps the full BML2 scheme), and to assess it in isolation is considered a limitation of work to date.

Other stakeholders point to factors acting against the Lewes-Uckfield reopening:

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<sup>15</sup> *Local area data LI01, Local labour market indicators by unitary and local authority*. ONS. Figures are 2013 jobs for the relevant local authority areas. <http://www.ons.gov.uk/ons/rel/subnational-labour/regional-labour-market-statistics/january-2016/rft-lm-table-li01-january-2016.xls>

<sup>16</sup> *The Economic Impact of Tourism: Brighton & Hove 2012, Section 1.2*. Tourism South East, for Brighton and Hove City Council, undated. [http://www.coast2capital.org.uk/images/Brighton\\_Hove\\_Tourism\\_Economic\\_Impact\\_Estimates\\_2012.pdf](http://www.coast2capital.org.uk/images/Brighton_Hove_Tourism_Economic_Impact_Estimates_2012.pdf).

- The 2008 study identified a poor BCR (much less than 1), and circumstances would have to change very significantly to bring the BCR up to a viable level (normally 2 or above).
- Journey times between Lewes / Eastbourne / etc and London would be longer via Uckfield than via BML.
- Both Network Rail and GTR consider that the resilience benefits are limited.

## 6.6

## RECOMMENDED WAY FORWARD

### A NEW APPROACH TO LEWES-UCKFIELD

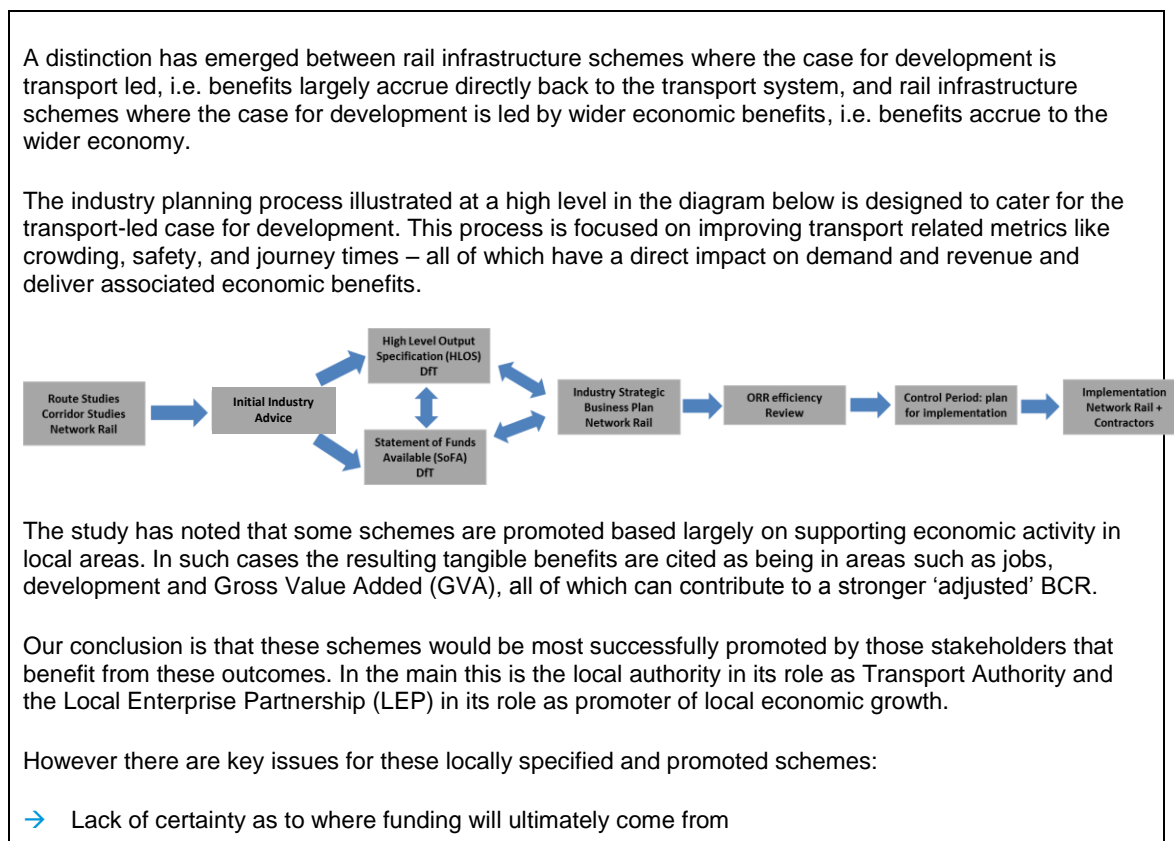
Our analysis has shown that core demand is expected to be relatively low for a reopened Lewes-Uckfield line, and that the traditional transport case for the scheme is likely to be relatively poor. In this regard, our conclusions are similar to the 2008 study.

However, we recognise that some of the circumstances have changed since the 2008 feasibility study. In particular, strong interest from stakeholders in a direct service to Brighton, and the emergence of a range of infrastructure options to allow this, means Uckfield-Lewes(-Brighton) represents a different economic opportunity to what was assessed in 2008.

The growth and devolution agendas mean that not only are the wider economic impacts of transport investment accepted, but also that local authorities, LEPs and Combined Authorities are increasingly tasked with leading the agenda.

Meanwhile, although there is still strong government support for and funding of rail schemes, the focus is increasingly on funding packages involving development contributions, other local funding, and locally-determined use of central funding pots. This is explored further in Figure 27.

**Figure 27: The Transport Case versus the Economic Case**



- Difficulty in measuring benefits that accrue to the schemes
- Lack of payback for any private sector investor

Ultimately it would appear that Central Government may still be the source of funding but not necessarily via a transport-related 'pot'. We have noted rail schemes being developed under the following funding sources:

- UK Government's Growth Deal
- UK Government's City Deal
- UK Government's Devolution proposals

Almost without fail the key to unlocking these sources of funding would be the need to develop robust business cases following Central Government's five-case business case model, supported by an economic appraisal following DfT's WebTAG guidance.

There are two aspects to the economic growth agenda:

- Increased economic output (GVA) per capita, created by new connections (bringing people and businesses closer together in time terms, even if not in physical terms) having agglomeration effects and raising productivity levels.
- Accommodating and attracting additional housing and jobs. The extent to which this can be done here, and is acceptable in order to secure the desired investment, is ultimately for the region's planners and stakeholders to judge, as well as relying on local communities' willingness to accommodate growth.

If there is enough local support for Lewes-Uckfield to proceed, all these factors add up to the need for an entirely new approach; not simply an updated feasibility study. This new approach would consider the need for the investment within the context of the region's economic ambitions.

Figure 28 summarises how we see this new approach working. Figure 29 illustrates the connectivity issue and how it is different from the 2008 approach.

Figure 28: Transport as a potential enabler of economic growth

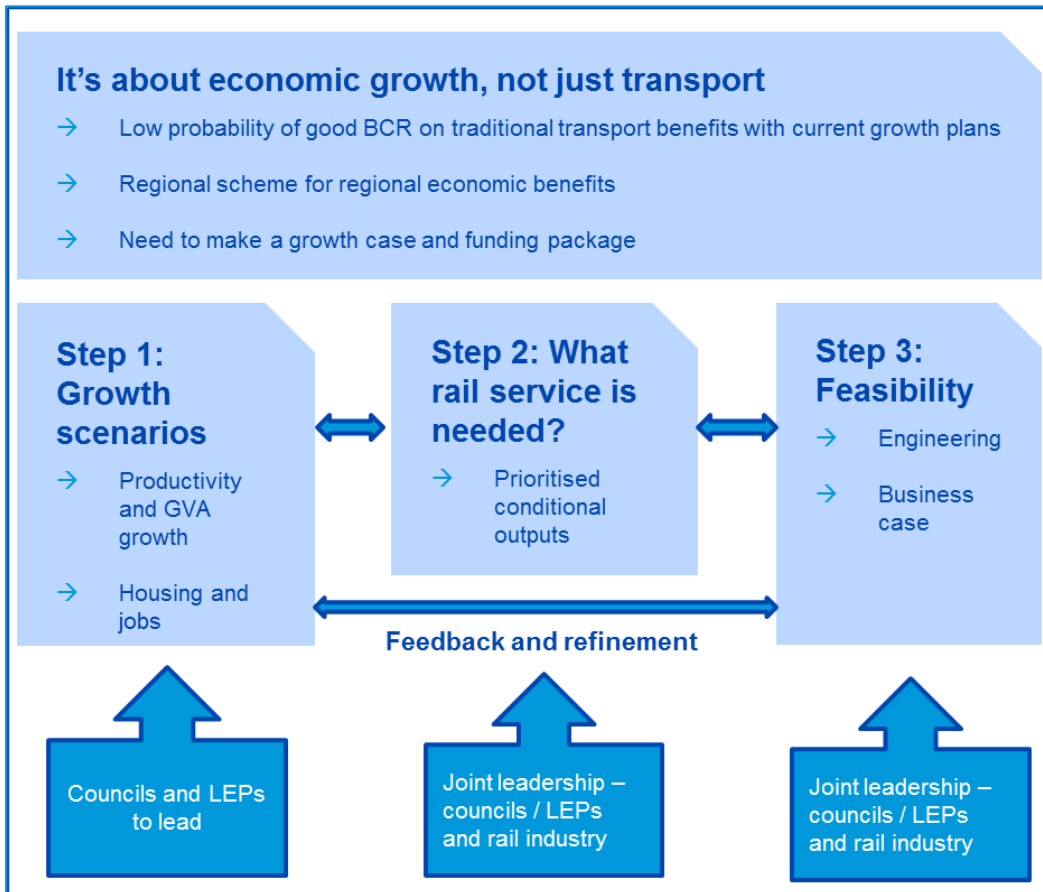
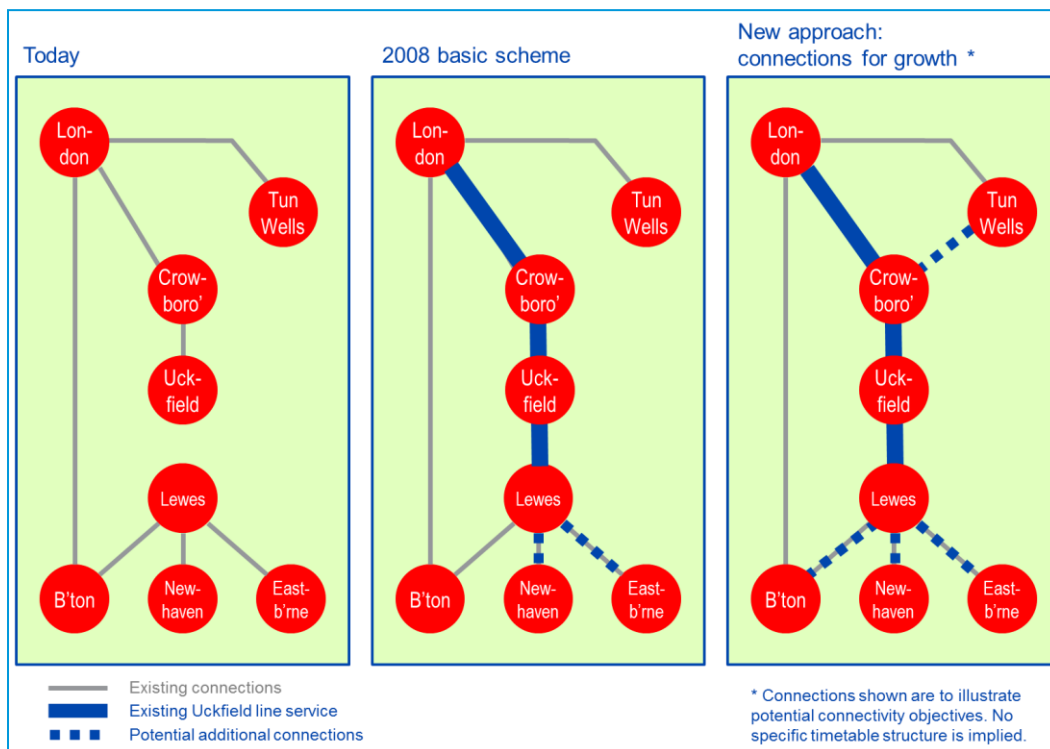


Figure 29: Connections for growth



The three key steps are:

- In Step 1, the region's stakeholders identify potential economic growth scenarios, including support for significant additional housing and anticipated job creation.
- In Step 2, the rail services needed to support those scenarios are identified and prioritised as Conditional Outputs. These are service requirements that are subject to identifying a feasible and affordable scheme to deliver them and may be adjusted in the light of engineering development.
- In Step 3, investment schemes to achieve the Conditional Outputs would be identified, developed and assessed through the usual Governance of Railway Investment Projects (GRIP) processes.

The recent ACES study<sup>17</sup> made some initial progress in this regard, looking at comparative rail-car journey times on a Tunbridge Wells-Uckfield-Lewes-Brighton axis. It identified that there was potential for rail to be very competitive relative to car on a number of these flows.

However, further stages are required to identify (for specific flows and under the different growth scenarios) indicative time savings, demand, transport user benefits and GVA benefits. This would then allow specific and prioritised Conditional Outputs to be agreed.

The new approach will also need to:

- Be a joint effort between the rail industry and local authorities / LEPs, so that each are engaged, each can lead where they are best placed, and each can buy in to the other's technical assessments.
- Be locally led overall, and particularly in the first stage to identify economic growth opportunities and connectivity aspirations.
- Learn from projects of a similar nature, including the development of the proposed East West Rail network's central section between Bedford and Cambridge.
- Assess (and wherever possible, monetise) the potential resilience benefits in a transparent way, even if these are ultimately found to be a negligible figure.
- Identify a funding package covering both capital costs and any ongoing operational support required.
- Assess links between East Coastway towns and Brighton in the same way, to help prioritise use of East Coastway capacity into Brighton. Our capacity analysis highlighted the potential trade-offs in use of East Coastway capacity. Adding Uckfield line trains may impose an opportunity cost against alternative improvements to connectivity between Newhaven/Eastbourne/Hastings and Brighton. The intention is not to bring all East Coastway issues into the mix, but rather to confirm what the Step 2 priorities should be.
- Take account of the impact of any capacity requirements imposed on the existing section from Uckfield northwards.
- Answer the question "What level of housing and employment growth along the Tunbridge Wells-Uckfield-Lewes-Brighton corridor would be needed in order to create viable demand levels and a viable funding package?" This will help stakeholders to understand the potential for securing Lewes-Uckfield reopening and potentially also the Tunbridge Wells link as part of a wider sustainable development package focused around rail links. The ability to do this, and the preferred scenario, will be for the region's planners and stakeholders ultimately to judge.

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<sup>17</sup> *Access and Connections East Sussex*. JRC Ltd for Railfuture, July 2013.

- Consider the overall public transport connectivity picture, taking account of parallel bus services. In particular, route 29 provides Brighton-Lewes-Uckfield-Crowborough-Tunbridge Wells services, broadly half-hourly Monday to Saturday and hourly on Sundays with variations at peak times. Routes 28 and 29B provide additional services on part of this corridor. Rail will offer substantially shorter in-vehicle times for many journeys, particularly to Brighton, but in some intermediate locations the bus route is more conveniently located than the station (such as for parts of Uckfield and much of Crowborough). The potential for the bus service to be weakened, and the potential impacts on intermediate locations not served by the railway, should be considered as a risk.

As noted in Figure 27, any scheme that emerges from this new approach may be best sponsored (i.e. promoted and 'cliented') or co-sponsored by local/regional partners, rather than through national transport investment processes such as the High Level Output Specification (HLOS). This is particularly true in the current policy and financial climate, because:

- Its role would be primarily regional, and supporting economic growth rather than simply transport needs
- The devolution agenda points to local leadership of schemes such as this
- Given the focus of the scheme, and wider pressures on central government budgets, the funding package is likely to be primarily locally-based (including, in this context, devolved funds or non-transport grants, even if they ultimately come from national-level sources as described in Figure 27)
- Central government and the rail industry are already committed to an extensive and challenging programme of investment and change. It may not be possible in the near future for those parties to take on sponsorship of all new schemes.

The regulatory framework allows for third party sponsorship of projects<sup>18</sup>. It allows debt-financing either conventionally through the Regulatory Asset Base (RAB), subject to Government approval, or through non-RAB-based commercial arrangements. The scope for RAB-based debt finance is increasingly constrained, particularly since Network Rail's reclassification into the public sector, and a non-RAB approach may be appropriate here. Governance can be through Network Rail's network licence (monitored by ORR), or through contractual mechanisms (monitored by the sponsor).

However, it is rare for parties outside national government or the rail industry to sponsor large rail projects (on the scale of a new line), because of their specialist nature and the interfaces with the operational railway. Options include seeking co-sponsorship with DfT, or an industry partner such as a train operator to act as sponsor's agent.

It is also possible for a third party to directly deliver an enhancement, through either conventional procurement routes or alternatives such as design-build-finance-operate (DBFO). However, this too is rare on the national network and Network Rail is normally engaged for delivery.

The focus of our proposed approach is on providing additional connections within the Weald/Brighton area. The packages we have assessed do not require additional paths into London from the Uckfield line.

In the medium or long term, Network Rail's BML Upgrade will create additional paths into London. These could in principle be used for Uckfield line services or indeed any other services. Network Rail's position is that the lengthened 2tph peak Uckfield line service will meet that line's capacity

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<sup>18</sup> <http://orr.gov.uk/what-and-how-we-regulate/investments>

needs for the near future (supported by our own analysis), and that any additional paths would be better used to serve BML destinations with ongoing capacity needs.

In terms of resilience benefits of reopening Lewes-Uckfield, we expect there to be some but that these should contribute to any wider case being made for a Lewes-Uckfield package. There is no case on resilience benefits alone. This concurs with the similar conclusion in the Route Study. The potential diversionary benefits should be assessed and monetised/quantified as part of developing that package. Depending on the scale of the package and the capacity/capability it offers, the diversionary value could be greater than what is possible from a minimal scheme. This recommendation is irrespective of whether or not further resilience measures on BML are funded, although such measures if successful could reduce the resilience benefits of Lewes-Uckfield.

## ADDITION OF A TUNBRIDGE WELLS LINK

The value and feasibility of a Tunbridge Wells link should be considered as part of the new approach to Lewes-Uckfield that we are recommending.

The aim should be for a deliverable, low-cost initial link. The key rationale for a Tunbridge Wells link is the connectivity (and hence economic) goal of connecting Tunbridge Wells with Brighton, and connecting other parts of the Weald with Tunbridge Wells. This can be achieved to a large extent without making the West-Central link which has significant additional cost and deliverability challenges.

Thus we have considered incremental packages that connect the Uckfield line at Eridge to TW West initially, without continuing to TW Central. This initial stage would not allow through-running or direct interchange to the Hastings line (e.g. for Sevenoaks-Brighton trips), and would not offer such good connections with buses in the town centre. However, it would help to build demand.

In line with this, the relevant local authorities and LEP should consider a possible incremental strategy for Tunbridge Wells, linking rail and spatial planning. This could be as follows:

- An initial, relatively small-scale TW West terminus for National Rail services, using either the existing Spa Valley Railway platform, or a new dedicated platform immediately to the south (using the Homebase outdoor garden centre plus part of the car park). Access and parking would need to be negotiated, or powers secured for this.
- A later stage in which the line would be extended through to TW Central. The initial terminus could be retained (as a through station) or replaced with a station closer to the centre of the site, perhaps more integrated with development and/or the original station building. Alternatively, appraisal might determine that best value is obtained by closing the initial terminus without replacement. At this later stage:
  - As noted above, substantial reconfiguration of the TW West site would be required, with or without a station there.
  - The BML2 proposal assumes the Sainsbury's building would be reconfigured, and decked parking provided, clear of the railway.
  - Alternatively, bearing in mind growth pressures and the proposed site allocations nearby which are for relatively high densities, the later stage could be associated with an eventual redevelopment of the site, in line with principles of transit-oriented development. By tying the extension to a future redevelopment, this would sidestep the issues associated with the existing site layout. It would also provide a valuable worksite for the reinstatement in what is a constrained area.

The results should feed into the new approach. The results of the new approach would then in turn feed into a future Local Plan update.