

Response to the Anglia Route Study Consultation



Jonathan Roberts, 29th January 2015

This response by Enfield Council is structured in three parts:

- (A) Setting out the North London policy background against which Enfield is judging the Anglia Route Study's offer.
- (B) What we consider Route Studies are generally there to achieve.
- (C) Observations about the Anglia Route Study's proposals, against these parameters.

(A) Policy background – the future vision for outer North London

Enfield Council's role

Enfield Council is providing an active and responsible role in investment to stimulate economic growth in outer North London and to provide a better environment for its communities and businesses. It is masterplanning the reshaping of the Upper Lee Valley (ULV) with Greater London Authority (GLA) support. This has the objectives of achieving locally at least 5,000 extra homes and 3,000 jobs, with 20,000 extra homes and 15,000 new jobs across the broader ULV catchment (see link [here](#)), as well as regenerating heavily deprived areas on the eastern side of the borough where some local zones are among the 5% worst deprived in England, not just London.

West Anglia services in Enfield

These are the areas served by:

- The West Anglia main line through Angel Road and stations to Enfield Lock.
- Busy suburban routes from Liverpool Street via Edmonton Green to Enfield Town, Southbury and towards Cheshunt.
- The newly-authorized 'STAR Line' from Stratford via Tottenham to Angel Road. There, Enfield is proposing investment in a relocated station, alongside Meridian Water, and is preparing to make a multi-million contribution towards that new station.

A vision for public transport quality

The Council sees improved public transport as a fundamental agent for change and to underpin the new vision of a *trusted, quality lifestyle* for existing and incoming residents and businesses. Enfield is determined that the quality and quantity of public transport shall be transformed from the era when universal car use was seen as the solution to accessibility and connectivity.

Initiatives such as London Overground have already transformed public belief and trust in some inner suburban services once the property of British Rail, with services such as the North London Line and Gospel Oak-Barking entrusted to the care of Transport for London since 2011. Passenger numbers have responded to TfL's positive investment in new trains, cared-for and staffed stations, greater passenger information, more frequent services and new direct routes, with a growth in usage

from 39 million journeys in 2006-07 to nearly 140 million now, a 3½-fold increase. It is that type of approach to train service and route planning which Enfield Council sees as the most worthwhile to support now and during the decades going forwards.

Reliance on National Rail and Network Rail infrastructure

Against this vision for the Borough, and more broadly for the supply and policy priorities for the local rail services – where eastern Enfield has no tube station and is wholly reliant on National Rail – we have reviewed the current Network Rail consultation about its vision for the next thirty years for the Anglia route network, and its short term priorities for investment in the next regulatory Control Period (No.6, from April 2019 to March 2024). The map alongside shows the dependence of eastern Enfield on the West Anglia rail services.



Strategic planning perspectives

(1) London’s future population and jobs, and their rail transport needs

There are two strategic perspectives to test the Route Study’s proposals against. First, there is the long-term London 2050 spatial planning for population and jobs, which looks to a similar long-term timescale as the Route Study’s 2043 date. Within detailed forecasting, the two perspectives are actually very similar in their expectations, providing that London’s economy doesn’t wither – which is not a plausible scenario. See for example the assessment of London 2050 plans and expectations, and foreseen demands on National Rail corridors (which present the Network Rail 2043 estimates), in the (so far) five-part series on the London Reconnections website:

- <http://www.londonreconnections.com/2014/suburban-commandos-transport-london-2050/>
- <http://www.londonreconnections.com/2014/london-2050-part-1-trillion-pound-time-warp/>
- <http://www.londonreconnections.com/2014/london-2050-part-2-whether-forecasts/>
- <http://www.londonreconnections.com/2014/london-2050-tracks-future/> (part 3)
- <http://www.londonreconnections.com/2014/london-2050-part-4-towards-maximum-rail-capacity>

London 2050 planning is being led by the GLA and the Deputy Mayor for Transport. It foresees a Greater London population of 10m and more by 2031, and over 11.3m by 2050 (central estimate), compared to 8.2m in the 2011 Census. Jobs in Greater London would expand from 4.9m in 2011 to 6.3m (again, a central estimate).

Enfield's forecasts

As part of that, Enfield is looking to a 70,000 growth in its own population by 2050, as outer London is foreseen as a location for rapid population growth over the future 30 years, and probably continuing beyond that date.¹ In parallel it is expected that there will be polarisation of additional employment into fewer but denser areas of inner and Central London, and with satellite activity zones potentially designated in places such as Stratford, and, on a sub-regional scale, in Opportunity Areas such as Meridian Water.

80% more capacity needed on National Rail in London

The GLA and TfL have forecast that tube capacity must expand by 60% in the period – a huge challenge for an already hectic and packed network, which in turn leads to relief line schemes such as Crossrail 2 and more lines after that. National Rail in London faces a ‘game changer’, needing to expand capacity by 80% because there is a finite limit to tube volumes and only the main line railways have enough latent capacity – with major forward investment – to keep London supplied with enough mobility and capacity to keep a much more densely populated and congested suburban London on the move.

This is a fundamental shift in strategic requirement for National Rail’s performance across London, and especially in areas such as outer North London, compared to the past generation of Network Rail’s Route Utilisation Strategies. Those generally tried to fit passengers (and freight) into the existing network with incremental changes to train frequency and capacity, and in some cases had to rob some of Peter’s capacity to help Paul, while above all trying to leverage more total capacity into a creaking network while aiming to avoid spending a significant amount of extra money on capital investment. That ‘Micawberish’ approach will have to cease, to deal with the radical scale of additional capacity now required in London, while nevertheless seeking to squeeze more efficiency out of the existing networks.

Inner suburban pressures for the West Anglia routes

All stakeholders along the West Anglia lines saw that the last major timetable change, in December 2011, squeezed the inner suburban services to create some further capacity gains and journey time improvements for outer services. It was close to a tipping point, for inner suburban services to start to deteriorate – exactly what North and NE London cannot afford to tolerate with their emerging population and jobs pressures.

A competitive environment for rail schemes

With London 2050 now setting the policy parameters looking forwards, the requirement for a radical scale of investment on a number of major rail corridors is now emerging, including the West Anglia main line and its suburban network. There

¹ An increase of over 58,000 in Enfield’s population between 2011 and 2050, after deducting 11,500 for a household increase of 5,000 at 2.3 persons per home at Meridian Water, represents a 14.8% increase across the rest of Enfield.

is expected to be large competition between rail schemes across the country, for a share of the constrained available investment funds, starting as soon as possible. For example, the Brighton Main Line versus West Anglia, or the demands of Northern authorities that too much rail investment was awarded to London in the decade leading up to the Olympics, and that that has to stop and money should head north for the next investment period.

Rail schemes add to economic growth and GVA

Enfield states here and now that such a scrabble for funding is a zero-sum game. The fundamental point of the required investment, pretty well everywhere, is to grow the economy and to improve the nation's quality of life. In London, and no doubt elsewhere, the last decade's investment has been an incomplete catch-up on what needed to be done years ago, and that many rail corridors, including West Anglia, are still in catch-up mode. In the case of some rail franchises, it is only recently that there has been official acceptance that accommodating growth and providing better quality is an appropriate policy. The West Anglia lines had a torrid time with bare-minimum investment in trains and stations in the first (WANG) franchise in 1997-2004.

Recent changes on West Anglia

National Express took over the redefined Greater Anglia network in 2004, until 2012, and started to turn that corner. As noted above, there was a risky change in service proportions on the inner lines in December 2011. However, on the positive side, the Lea Valley was reconnected to Stratford from December 2005, and following a doubling of the offpeak service in 2011 has proved a resounding success in new travel flows, with over 2½m passengers now being carried to Stratford yearly. Abellio's ownership of Greater Anglia, underpinned in Greater London by funding support for inner station refurbishment from TfL, has continued that trend of stronger demand for inner suburban rail services as well as outer commuters.

TfL Overground to come this May – positive outcomes expected

TfL's imminent takeover of an Overground-style concession for the segregated inner services from the end of May 2015 (to Enfield Town, Cheshunt via Southbury and Chingford) will strengthen the inner service proposition, and if the outcomes from the existing Overground is repeated on any scale, there will be a significant growth in ridership – in turn stimulating a significant growth in economic activity and GVA in the areas served.

Stratford – a nationally significant hub reflecting rail and spatial investment

Stratford itself, when including all rail, tube and DLR services and inter-rail service interchange flows, is already the sixth busiest rail hub in the whole of the country, catering for over 100m journey stages annually, following the previous two decades of investment in rail services and in successful area replanning, including 'Stratford

City', Westfield and the post-Olympic new land uses. This is exactly the sort of process which is now foreseen, albeit on a more modest scale, in the Upper Lee Valley, such as at Meridian Water – and for which rail services need to be prepared and in good shape.

Stratford will itself become much busier with further Lea Valley developments, and the STAR Line, Crossrail 1 and Great Eastern main line improvements during the next few years. Stratford already exceeds the volume of many London termini plus their counterpart tube stations, and is well ahead of any National Rail station volume throughout the rest of Britain. It is busier than the combination of Euston terminus and Euston/Euston Square LU stations, for example.

Where this points the requirement for rail investment along the Lea Valley

Four-tracking of the Lea Valley main line was an objective back to the 1980s. Yet only now is a limited scheme going ahead to put in 3 miles of third track, with funding required from many stakeholder sources. This is the STAR Line scheme – Stratford-Tottenham-Angel Road – currently estimated to cost over £120m but unlocking at Meridian Water alone £15m per year in 2016, £72m per year by 2031, and over £200m per year by 2050. A sound investment, with more rail capacity and more GVA also sought along the whole of the Lea Valley corridor – subject to four-tracking, with Crossrail 2 then to follow.

Network Rail's 2011 London & South East Route Utilisation Strategy had evaluated numerous capacity gap options, such as four-tracking to Brimsdown plus new Stratford services. The nominal cost was £250m then but realistically rather more in 2015 prices – and this still wasn't the full four-tracking along the complete suburban corridor to Cheshunt and Broxbourne, where a more recent price tag is of the order of £1 billion – still cheap in relation to GVA returns.

Scoping Crossrail 2

So four-tracking is still needed from a London perspective, although planners are now seeking to align that scheme towards the emerging proposition of a regional Crossrail 2 (outline cost £27bn). That is intended to serve existing highly stressed corridors within SW, North and NE London, including West Anglia, and to be open by around 2030,. It will provide a further 10-12% overall Central London rail capacity plus transform accessibility for key development corridors in suburban London, the Lea Valley being a prime example.

Already it is clear that London will have to bear at least 50% of the financing burden for that new railway. It is also clear that the new railway – as with the £3½bn Jubilee Line Extension and the £14½bn Crossrail 1 – will easily repay the investment through expanded economic growth and Gross Value Added. Therefore such schemes are a core part of the stimulative wealth-creating processes which were set in motion by the Coalition Government as part of the national objective of countering recession and growing out of the budget deficit.

Get on with Lea Valley strategic rail investment, for wider benefits

Enfield counsels Network Rail and its sponsors – especially the Department for Transport and HM Treasury – to press on with such vital investments wherever and whenever they are needed in Britain, and to continue to embrace the dynamo of the national economy which is London and the wider Home Counties. The Lea Valley corridor and the wider West Anglia network is a vital part of that engine for growth, now and in the future. Enfield Council is proud to be partnering and pressing that case.

In practical terms, it is an affront to London's orderly development that the compressed route capacity along the Lea Valley has not yet been addressed fully nor even funded. It is a two-track main line with delay inducing and capacity limiting flat junctions. There are competing slot requirements from the conflicting demands of limited stop outer services seeking to go fast through the inner suburbs, and the all-stations preferred pattern for inner suburban services. The quart doesn't fit into the pint pot, so all service types and passengers lose out through a compromise timetable structure which is vulnerable to incidents and simple late running with knock-on consequences and less-than-trusted service quality. Four-tracking would give quality services for all.

From Enfield's perspective, this would liberate the spatial and GVA gains which depend on a 'walk-on' timetable and a trusted offer of reliable 24/7-type services, and will stimulate private sector investment to commit to high volume growth with new housing including affordable homes, and many new jobs. This is a virtuous circle.

(2) The London Stansted Cambridge Corridor's requirements (LSCC)

The wider corridor issues lead to the second strategic perspective. The LSCC is reinforcing the inherent economic and growth strengths of this fast growing corridor, through a partnership of local authorities and major stakeholders. There is recognition of agglomeration benefits with better accessibility and connectivity along the West Anglia and M11 transport arteries, within and well beyond Greater London, over the 50 miles to Cambridge. Centres of education and skills-training, new population and inwards plus internal jobs growth, world-class further and higher education clusters including the Cambridge Science hub, and the scope for back office support for major employment zones such as Central London, Stratford and Canary Wharf, all coalesce the case for transport investment to deliver step change in quantity and quality of transport capacity.

Here we see the counter-point that unlocking rail capacity through four-tracking will advantage Home Counties travel as well as London suburbs – a win-win, with GVA gains throughout. Rail services do not stick within local authority territories, but are dispassionate about local advantage or disadvantage, depending to the constraints that the rail operator and infrastructure owner face. The LSCC points the preferred spatial and transport policies towards all-for-one and one-for-all. The economic

successes of the LSCC corridor can be expanded further, if the transport inhibitor that is the West Anglia infrastructure and its present service offering can be unblocked through investment in four-tracking and much other parallel investment in other aspects of the current railway.

(B) What are Route Studies there to achieve?

Route Studies are a means for the rail industry to plan ahead for its infrastructure and service requirements, and particularly to align options into the regulatory 5 year periods.

In 2013, Network Rail (NR) looked ahead in broad forecasts to 2043, a 30 year horizon, through various long term market studies for different sectors of travel: Freight, Long distance, London & South East (actually the London & Home Counties area), and Regional outside LSE. A link to the location of those reports is here: <http://www.networkrail.co.uk/Long-Term-Planning-Process/?cd=1>.

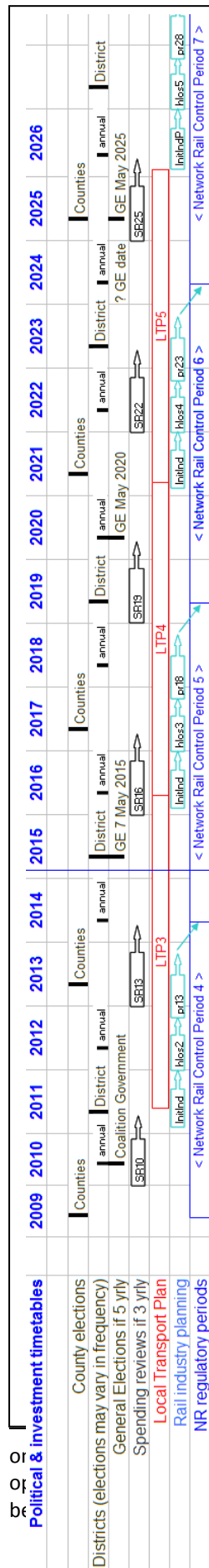
Converting those broad forecasts into the implications for specific routes is the task of the next tier of work – Route Studies. These are divided into the different Network Rail regions, which have Route Directors. Complex regions can be sub-divided into groups of main lines.

Route Studies review in more detail for each part of the country the foreseen economic and population changes, spatial plans established by local authorities or under discussion, inputs from local enterprise partnerships, transport policies, and other aspirations expressed by authorities and wider stakeholders about what they would like the railway to be delivering in terms of services, stations, facilities, journey times etc. Anticipated changes to infrastructure such as a new line, train replacement policies, or electrification are also relevant.

The Route Studies then estimate what is feasible to achieve, and be plausibly worthwhile, line by line, in 5 year chunks which align with the regulatory 5 years periods. These ‘conditional outputs’ are not always what stakeholders would prefer. Factors such as value for money, affordability and deliverability within constrained railway engineering periods and available resources, are just some of the constraints and pressures.

While the Route Studies are looking ahead 30 years, a large element of these is focused on the next 5 year regulatory period and, indicatively, to the following 5 year period and on to 2043. At present, we are in NR Control Period 5 (April 2014-March 2019). Not all projects approved by Government for further development and potential delivery in this period have yet been authorised fully. NR is still working up many scheme details to a defined costing estimate ready for contractual go-ahead, through a GRIP² project stage gate process.

² GRIP = Governance of Rail investment Projects. There is a sequence from GRIP 1 (basic proposition) to GRIP 4 (single costed project) to GRIP 5 (go-ahead) to GRIP 8 (project completion). This sequencing can take a number of years. The Government will generally consider a project for outline approval



The Office of Rail Regulation reviews the economic merits of the projects, as well as efficiency targets for NR. It may propose approval, changes or deferral. In association with the Department for Transport and devolved administrations, it also previews the gross volume of funding required to maintain the existing and future railway infrastructure, before and after the government/devolved administration statements on what the railway is expected to deliver in the next 5 years. A diagram alongside shows the 5-yearly sequence for each Control Period.

So planning is critical now for Control Period 6 (2019-24), as an Initial Industry Plan has to be assembled by Summer 2016 (18 months hence) and published in September 2016. This requires sufficient prior acceptance at NR / rail operator / Rail Delivery Group / DfT level. Schemes which are supported will then be put forward for formal consideration by the Government, who are legally required to published a High Level Output Statement (HLOS) in July 2017, accompanied by a Statement Of Funding Available (SOFA). The ORR then pursues its review process in detail, while NR publishes a Strategic Business Plan in early 2018, in time for decisions on final schemes and funding to go forward, in Autumn 2018, for Control Period 6 to begin in April 2019.

The process then begins again almost immediately, preparing for Control Period 7, leading to that starting date in April 2024. While it is possible for a very few highly supported schemes to be able to leapfrog this process, this is generally because of urgency, not for projects which were foreseeable in preceding years. Clearly funding would then have to be identified for any supplementary projects.

The Route Studies therefore have to be viewed as a 'direction of travel' for projects and general priorities in CP7 and beyond, and as vital bidding and prioritisation documents, the closer the potential project timetable is to the present day – especially for sequencing schemes by area and by topic for CP6. They will present choices, not decisions, and propose competing priorities. The timescale for specifying changes close to franchise renewal dates is also a constraint – NR tries to pin down priorities in good time ahead of such franchise consultations, for bidders and stakeholders, to be well informed already about the state of relevant rail projects.

ed valid at a GRIP 2 level (value for money and other project merits, with basic understood in outline). Generally projects require much project development work

(C) Observations about the Anglia Route Study's proposals

Method adopted for commentary

Enfield Council has taken these observations in three levels, looking first at a range of general issues across the board, then the foreseen long term 2043 outputs and taking a view on the appropriateness of these proposals against the foreseen demand and other dynamics, and thirdly at the specifics for Control Period 6 in 2019-24. These are all beyond the extent of schemes planned to complete by 2019 during CP5, which are dealt with now.

The Anglia Route Study describes the West Anglia Main Line (WAML) and its associated branches as one of the four main elements of the Anglia management division of Network Rail. The other three are:

- Great Eastern Main Line, whose originating and destination passenger and freight services overlap with WAML services in the Liverpool Street-Bethnal Green section and in the Stratford-Orient Depot-Tottenham area.
- North London Railways network which is mainly Overground and through freight services.
- the predominantly commuter and freight Essex Thameside/London Tilbury & Southend network.

Projects to be completed by 2019

This commentary focuses on WAML, and where relevant on the GEML overlaps. The Route Study assumes that WAML work by 2019 will have included delivery of the following elements:

- Some safety works at level crossings (potentially including elimination of some).
- Crossrail 1 open by 2019 through Stratford (Crossrail through tunnel services are due to begin in May 2019).
- Transfer of some WAML inner suburban services to TfL Overground (due in May 2015).
- Remodelling of Ely North Junction which increases capacity for more freight and passenger services.
- All signalling control eventually to be located at Romford.
- The STAR Line service, increasing passenger capacity along the Lea Valley to and from Stratford.

If not all these schemes were completed by 2019, then the CP6 position would start with a capacity deficit.

Enfield considers it is important that all current projects works must be concluded by 2019 at the latest. In the case of STAR Line, which is intimately associated with the strategic GLA priority of population and jobs growth in the Upper Lee Valley and the Meridian Water major development, it is essential that the service and related station works, including a relocated station south of the present Angel Road station (and its

renaming to Meridian Water), are complete by the operational date of the first tranche of housing, at the start of 2018. Network Rail in discussions with Enfield Council has advised that it has a target delivery date of May 2018, and is seeking to time works to an earlier completion in December 2017 if possession management and construction phasing permits that. Delivery dates should be committed contractually, with penalties for delayed completion.

Given the potential for some early starts on approved CP6 schemes, ahead of April 2019, if projects are 'oven-ready' and have ORR and Enhanced Cost Adjustment Mechanism (ECAM) approvals in place, then Enfield would also advocate that if possible early project development priority and approvals are focused on CP6 schemes which deliver:

- Support for additional housing capacity and new jobs in the Upper Lee Valley.
- Works to improve service reliability such as consulting on and specifying replacements to level crossings particularly in Enfield (where the Council wishes to have a close engagement in discussion with Network Rail and other authorities and stakeholders).
- Further action to enhance capacities and if possible service levels on the suburban route via Seven Sisters and Edmonton Green, to Enfield Town and Cheshunt, where previously unforecasted growth in local passenger travel may arise from Overground marketing.

Schemes such as level crossing removal will be a necessary precursor – and are very sensitive issues locally within Enfield – before Conditional Output aims for shorter journey times on outer suburban and Stansted Express services could be adopted as a project. A 100 mph railway through an urban area cannot be juxtaposed with intense road traffic seeking to cross main lines at every available second – it is a major threat to all travellers' safety.

Conditional Outputs which could damage capacity, to be reviewed

On a parallel matter, shorter journey times if insisted on along the two-track Lea Valley main line would make it harder, not easier, to offer a better level of local service frequencies or capacities, at precisely those stations which are needed to serve the additional housing growth. This is because faster trains will eat into the stopping times taken by all-stations or local skip-stop trains - and there are already too many of the latter, instead of the greater utility of all stations trains, with passengers currently facing irregular waiting times for successive trains so risking passenger trust and not offering a 'walk-on' lifestyle railway.

So it will be important to ensure that the proposed Conditional Output WAC03: *“To provide journey time improvement for services from both Cambridge and Stansted Airport to London Liverpool Street - West Anglia services”* does not cut across other Conditional Outputs focused on capacity – which is a far greater priority in the view of Enfield Council. Conditional Output WAC01 says: *“To provide sufficient capacity for passengers travelling into central London and other employment centres during*

peak hours, taking into account anticipated growth over the period to the end of Control Period 6”.

However a nominal sufficiency of capacity does not address the issue of minimum standards of frequency in a rigorous way. Here the Anglia Route Study unfortunately conflates aspirations for frequency requirements across the board for stations such as Hertford East and for Enfield Town and Enfield Lock. They are rolled into one nostrum in page 43: “For inner suburban stations to and from London, the Anglia Route Study should aim to provide three to four direct trains per hour [tph] on an even pattern and provide incremental journey time improvements”.

So the Anglia Route Study still focuses on the historic RUS means of measuring outputs, through a combination of capacity, frequency and journey times – all of which can be measured through existing valuation procedures such as the DfT’s WebTAG. What are lacking are three other yardsticks.

GVA and wider economic growth valuations. These should also incorporate the emerging habit of lifestyle preferences between different standards of railway service, particularly in urban areas. Here TfL is well ahead of National Rail and Network Rail in successfully valuing passenger sensitivities over a wide range of travel qualities, and building those in to the business case. Enfield Council fundamentally disagrees with the Anglia Route Study’s stance that this is really better addressed “through the franchise specification and management” (page 44). It is at the heart of what the core railway proposition is all about. If you approach these matters as a ‘bolt-on’, you’ll create the railway that London *doesn’t* merit. Passenger service qualities are at the heart of the TfL railway specification process, not a bolt-on. On its own, this statement within the Anglia Route Study shows that Network Rail risks being the wrong specifier for railways and their infrastructure in city regions, however good it might be for inter-urban or shire lines.

The second missing yardstick is disaggregation of minimum service levels. The draft conditional outputs specify no distinction between service frequencies to Hertford East or Enfield Town or Angel Road. It’s all a 3-4 tph objective. Nowadays this is the wrong approach in Greater London. The tube – which sets the benchmark for the London urban area - is now moving to almost-peak level of services during offpeak and at weekends. London 2050 wants National Rail to become a second tube-style network. A common tube offer, including on the Piccadilly Line in western Enfield, is over 20 tph at almost all urban stations in the offpeak and throughout weekends, with plans to move towards 30-36 tph in peaks. On West Anglia 3-4 tph? This is inappropriate, and the wrong focus on external requirements and comparisons.

As an absolute minimum, the Anglia Route Study should be moving towards 6-8 tph in zones 5-6, and 8-10 tph at stations within Zones 2-4, driven by London 2050 policy priorities where National Rail has to match and better the tube in gross passenger volumes attracted to rail (because the tubes will be full), and deliverable in phases from the end of CP5. Otherwise Network Rail’s planning process as a whole, and the Anglia Route Study, will become unfit for purpose as a planning instrument, before

London 2031 let alone London 2050, with the National Rail network still lagging far behind the Underground or established Overground networks.

The tensions and comparisons and politics which will arise when comparing the TfL-sponsored elements of WAML from May 2015, with new trains from 2017, and the rest of the WAML inner services, ensure that this will be a focus for future debate, where Enfield Council would expect (and support) TfL to become the predominant planning organisation for all West Anglia inners – and their required infrastructure and service concessions – over a period of time (not Network Rail, which could become a contractor). To match the TfL proposition, Network Rail has to step up to the plate, quickly.

There is inadequate recognition in the Anglia Route Study of the large extent of contra-flow peak travel to places elsewhere in London, not Central London, on the West Anglia inner network. Stations such as Cambridge Heath and London Fields have 56-83% of the AM peak passenger flows heading outwards to the suburbs and inwards only as far zone 2, not inwards to Liverpool Street or beyond, according to December 2014 on-site station counts. Enfield would expect Angel Road/Meridian Water to become a major destination attractor; similarly at many other stations with mixed use catchments. Service specifications will ignore this travel pattern at London's peril. We recognise that page 43 references consideration of "exploiting opportunities to connect to employment centres in London other than the natural terminus on the rail corridor". But it goes on to say: "That could be achieved through connectivity into the tube network or through direct connectivity to other Central London locations".

We take this to mean that the Anglia Route Study isn't interested in the National Rail network doing much of this itself, and it all still sounds very Central London-minded – yet contra-peak flows and orbital travel are precisely what already occurs in large numbers, every weekday, across WAML and its branches. The addition from May 2015 of the Hackney Interchange between the Enfield/Cheshunt/Edmonton Green and Chingford Lines and Lea Valley local services at Hackney Downs station, and the London Overground orbital network at Hackney Central station, should be seized as a vital transformation of the characteristics of the WAML inner services into a comprehensive go-anywhere system, combining through connectivity with Overground as well as tubes, and with plenty of direct services as well.

Stratford of course is already a beneficiary of this approach, which will be enhanced with the STAR Line service where Network Rail is taking a significant role – so it can be done. The Route Study in page 55 discusses multi-direction travel flows in relation to Stratford, and comments that such opportunities "could have a significant impact on peak capacity and suburban frequency requirements on the line". Enfield Council agrees with this observation, and asks for the next iteration of the Route Study to enlarge this matter comprehensively.

Enfield Council would also welcome a further stimulus to growth in contra-peak travel, orbital connectivity across London suburbs, and with interchange with

Overground ahead of Crossrail 2, with creation of a passenger interchange between Seven Sisters station and the adjoining Gospel Oak-Barking Line (GOBLIN). This should be added to CP6 objectives.

It would also be possible to site a 'Tottenham South' station on GOBLIN, within walking distance of Tottenham Hale station. That would tie in a much larger catchment, giving access to the LSCC corridor including growth points in Enfield, and the Home Counties including Cambridge and Stansted Airport.

There is a further general source of concern, that in the example of Heathrow Airport, there is a 'Heathrow Connect' service, which is to be taken over by Crossrail 1 in 2018. There is no such vision in the Anglia Route Study of a 'Stansted Connect' service, offering to tie a major passenger and workforce catchment along the Lea Valley and Hertford Road lines (the latter via Edmonton Green) directly into their airport. Enfield Council simply asks –“why not”. Once four-tracking were in place, there's more capacity and elbow room to offer such a service, to an airport possibly then heading towards current Gatwick levels of air traffic and employee density.

We turn now from these general observations on the Anglia Route Study's general approach to Conditional Outputs, to some specific observations in relation to 2043 (long term) and to 2023 (CP6).

(1) The long term outputs to 2043 and their merits

Network Rail and TfL have forecast a 39% growth in peak hour demand over all WAML services, to 2023. This is equivalent to a 10% growth per decade, from 2023. Enfield Council understands from the actual service deficiencies set out in the preceding 2043 Long Term L&SE Market Study, that the shortfall in capacity (based on demand forecasts for an economic environment of *Planning in Global Stability*) represents a gross 2,700 passengers in the busiest single inbound AM peak hour in 2023, and 6,300 by 2043. By then, without changes there would be a 600 shortfall on Stansted trains, 1,500 on Cambridge trains, and 4,200 on inners including Hertford East and urban trains). That is crudely equivalent to another 9 trains per hour, spread across the WAML network, depending on your preferred loading standards and rules on standing conditions (see pages 51-52 for some details). However this is before unforecastable growth in demand occurs, such as may derive from the 'Overgroundisation' of the WAML inners.

Enfield Council expresses great caution about the stability of the forecasts as far ahead as 2043. There could be more demand in a scenario with a higher than expected Overground impact (as already seen with the 3½-fold growth on the existing Overground network, in just eight years on inner services), or in circumstances where London Mayors insist on doubling the volume of housing in a decade against planned volumes and there are many more commuters between homes and jobs in inner or Central London. This is quite likely to have an impact on WAML services where much additional housing and some higher housing density can be located. London 2050 planning is overall looking to an 80% increase in National Rail capacity in the London

area. Aiming for just half that (39%) by 2043 might indeed fall well short of the emerging requirements.

As the busiest hour (approx 8AM to 9AM) usually equates to 45% of a typical 3 hour AM peak, this points to the risk of a 14,000 capacity shortfall during those 3 hours, just on Network Rail's own figures, so with 15,000+ journeys to work (if Central London based) potentially at risk if a further 50% margin were needed.

Enfield advises in the strongest terms that Network Rail and TfL must allow in their planning for a considerably greater volume of passengers than currently forecast, with possible consequences for infrastructure requirements. This would be equivalent in forecasting terms to the high risk levels applied to early GRIP stages of infrastructure projects. As the project narrows down in specification – in equivalent terms, as the time horizon gets shorter – the capacity requirements will become clearer. Infrastructure works to accommodate say 50% more additional passengers than currently foreseen, eg up to an 13-14 tph equivalent, would cost more – that will depend on route and train capacities – but it is likely to cost a great deal more to retrofit such capacity after a capacity expansion project had already been approved.

It is self-evident that a capacity shortfall of this scale requires a new railway line - somewhere. Four-tracking / Crossrail 2 will be essential. The alternative in the absence of Crossrail 2 would be urgent adoption of the safeguarded 8-track approaches into Liverpool Street, and new terminal platform capacity (underground if need be) at or near Liverpool Street terminus. A double-ended terminus might be able to connect also with the Overground's Shoreditch High Street station, for onwards travel in an orbital and cross-river direction, as well as, normatively, into Central London.

Crossrail 2 planning is also building in to its early business case development that a ramping-up of housing volumes could be a productive example of a chicken-and-egg overlay between spatial investments and transport investments – the new railway, potentially along the Lea Valley, and the extra housing supply, can be planned as a co-ordinated whole. Enfield Council supports Crossrail 2 having a major branch along the Lea Valley from Tottenham northwards to Cheshunt and Broxbourne. Planning for this should explicitly accommodate the potential for greater housing numbers than are currently signed off in growth plans. Design for Lea Valley four-tracking should take this precautionary output on board, including safeguarding for 12-car platforms, and preliminary designs and consultation to prepare for replacement of the remaining level crossings on the Lea Valley main line, along with higher frequency of commuter services.

GEML impacts on Liverpool Street and Stratford

The impact of the foreseen growth on the Great Eastern main line also has knock-on impacts. GEML planning relies on a 32 tph signalled capacity – better than a train every 2 minutes – approaching perfectly and consistently from origins as far afield as

Norwich, Clacton, Braintree and Southend, to manage at least 28 tph in the busiest AM peak hour.

The removal of most GEML local suburban trains from Liverpool Street and their diversion into the main Crossrail tunnels (except 4tph retained upstairs) will therefore have fewer benefits transferable to WAML services. At best, we believe that one additional platform might be allocatable in peaks to WAML. So any large-scale growth pressures on WAML services which still pointed to Liverpool Street as a destination rather than Crossrail 2 (see ARS page 15) would have to look to 8-tracking into a mix of existing and new (?underground) platforms at or next to Liverpool Street. One might consider the eventual scope to create a mini-Crossrail via the City to London Bridge and the South London Lines irrespective of Crossrail 2 (the City Link scheme was proposed by the GLC in the mid 1980s), in order to join up two inner suburban service groups and also relieve the overcrowded East London Line, as part of London 2050 transport planning options. Enfield Council commends this possibility to Network Rail, TfL and the GLA, for modelling of benefits.

Stansted access

Also looking towards 2043, there is reference to a potential direct access railway from north of Harlow into Stansted Airport. This would avoid the lengthy, curved, slow and limited capacity route via Bishops Stortford and the single track tunnel under the airport runway. This potentially has a lot of merit in shortening access times from London and intermediate stations. A shorter, direct railway could alternatively be constructed from Broxbourne Junction, which would avoid a further, severely curved section of line through Roydon and Harlow. The principle is the same – delivering journey time benefits and getting towards the ‘Stansted in 30’ objective.

Enfield Council notes that such a railway could be extended onwards to the Cambridge main line, beyond the airport, so further cutting Cambridge/Audley End times to London by a further 4-5 minutes without impairing (and indeed opening up) the existing railway to a greater range of ‘Stansted Connect’ type services serving intermediate communities. However this may await further changes in demand to justify investment in faster access, or a positive stimulus by the Airport owners to take the lead on such improvements. The LSCC corridor as a whole would benefit from faster overall journeys, and between principal intermediate railheads, including ones accessible within Enfield, if a comprehensive four-track scheme looked at other elements of a total package which added greater net value to the basic suite of works intended to improve Stansted connectivity.

The future of the ‘digital railway’

Network Rail is corporately putting great emphasis on the concept of a ‘digital railway’. This heads to removal of lineside signalling, replacing it with ‘in cab’ data. It can progress to automatic driving in some circumstances, as on tube lines. The digital data can also be exported for a huge variety of uses – passenger information, train efficiency, real-time energy use and systems monitoring, and so on.

Enfield Council welcomes Network Rail's ambition for this. It can lead to many passenger and capacity benefits, including an ability to train safely closer together, so securing more trains per hour. However, we are at the starting point of this process, so that the actual as opposed to aspirational timescales, may extend the timescale outwards. At this stage, we consider it would be unwise to rely on quantified Control Periods for capacity or journey time or quality outcomes.

(2) The short term outputs during CP6 to 2024, and their merits

Network Rail and TfL have forecast an 18% growth in demand over all WAML services, to 2023. This is nearly twice as fast the growth in the later two decades, from 2023 to 2043. Consequently, Enfield Council considers that getting the train service and capacities right by the end of CP6, is a fundamental requirement, and will provide the building blocks to expand capacity in an orderly way, in those following decades.

The Council considers that Network Rail and National Rail need to get ahead of the trend of demand in the first decade, leading to the end of CP6. To the extent that the potential scale of future demand was not anticipated in the planning and justification for CP5 projects, this forecasting shortfall must be made good for CP6. So CP6 needs to be more ambitious than CP5, not less, for both the inner and outer service groups.

As part of this basic review of capacity and journey times, there is an associated metric – accessibility. Within Enfield, there are two potential catchments for new stations, poorly served by existing stations, which the Council requests Network Rail and TfL to consider:

- A new station at Carterhatch on the Southbury loop, south of Turkey Street. This would put a major deprivation area on the Overground map in CP6. It would probably benefit from a basic 4 tph stopping service to score well on benefit levels, instead of the present 2 tph.
- With four-tracking, at Picketts Lock between Angel Road and Ponders End. This may depend on any new development proposals in this part of the Upper Lee Valley.

Enfield Council welcomes the proposals to review the case for 12-car platforms at 18 stations on WAML, to support longer trains in suburban services. We recognise the increased operational flexibility that this would allow.

Enfield Council is determined that, before the end of CP5, Angel Road/Meridian Water development station will have a full 4 tph service to support the new population, jobs and developer investment in this major economic growth site in the Upper Lee Valley. At present the new STAR Line shuttle is foreseen as operating at 2 tph, and the council has initiated a review into options on how a further 2 tph can be secured from existing Lea Valley services. A consultancy report on possible options is now with the Council, and is attached for initial consideration and joint discussion with Network Rail.

Enfield has considered the position set out in the draft Anglia Route Study, that it is not currently value for money, with present analyses, to advance four-tracking forward much from a Crossrail 2 time scale – the principal early outputs of improved capacity and improved journey times are said to be achievable in other ways.

West Anglia Main Line

0.4.3 In order to meet the conditional outputs WACO1 and WACO3, the options presented to funders are:

- platform lengthening to 12-cars at 18 stations
- increases in linespeeds up to 100 mph.

0.4.4 Further journey time improvements on services to Cambridge and Stansted Airport would depend on the ability to separate fast trains from slow trains south of Broxbourne. This is likely to require an additional pair of tracks between Broxbourne and Tottenham Hale, the cost of which, however, may not be justified by journey time improvements alone. Additional benefits (and funding streams) would need to be captured, such as the connectivity and capacity improvements proposed by the Crossrail 2 project or the need for additional capacity triggered by development in the Lea Valley. Some early enabling works are presented as options for CP6 including level crossing removal and land purchase.

This is a source of disappointment, as scoping before CP6 began might at least accelerate delivery during the 2020s, which is when additional capacity beyond the limits of a two-track railway is likely to become essential. The GVA consequences of failing to keep pace with economic growth along the LSCC corridor might start to count for significant government income foregone from that point, and with further years before a fully functional four-track railway was in business.

Enfield Council requests that the priority and business case for four-tracking is kept under review, and that the wider economic and GVA benefits are included in subsequent scheme assessments. Meanwhile, stakeholders and the rail industry should review the emerging designs for four-tracking – we understand there is a large range of options which have been considered – so that the scheme is available to be adopted quickly when positive decisions are taken.

The trains on the TfL Overground part of WAML are to be replaced during 2017-18. This is welcome news. The Council seeks a discussion with TfL and other relevant stakeholders, about parallel actions to improve the standard of inner suburban stations. The business case for investment in stations are services may be weaker than it should be, at present, because the WARG-commissioned on-station counts are most reliable than the official counting methodology which relies on transformation of generalised zonal fares sales in the London area, with other assumptions on travel frequency, into point-to-point station flows.

The latter process generally underestimates the actual demand for rail travel, so minimises the merits of new investment. This requires changes in demand and appraisal methodology, with greater use of on-station counts in the short term, and when available with new trains, loadmeter counting on new trains. The additional revenue gains then identified should be re-invested in the inner network.

Conclusions

Enfield Council agrees with the thrust of the WARG/LSCC commentary on the draft Anglia Route Study, that there is under-valuation and under-estimation of the likely passenger demands up and down the West Anglia routes – and worse still, insufficient appreciation of the economic growth and GVA benefits from taking a

stronger line on updating the railway infrastructure and service offer to align with the corridor's external rate of change.

We are aware that the former Route Utilisation Studies were focused on catering for the maximum Central London commuters along a route as a whole, preferably while avoiding major infrastructure expenditure. The start to the new Route Studies, with the 2013 Market Studies, stressed that the new approach would be willing to redefine the railway outputs, to better meet the wider area's economic, population and development preferences and priorities.

It is a matter of regret that in practice the draft Anglia Route Study appears to have reverted to a RUS style. It says, for example, in the CP10 (2043) assumed service specification for WAML (page 57), that the "stakeholder preference is for the Hertford East Services to be routed via Tottenham Hale rather than Seven Sisters as shown. Unless other services running via Tottenham Hale were diverted to run via Seven Sisters this would increase the need for additional infrastructure". It is a small but telling example.

There must of course be various value for money assessments, but unless these capture elements such as GVA from better rail access, it will not be a full valuation of the benefits of responding positively to the externalities which are emerging within Enfield and within the LSCC corridor.

This will also deny the government of the day the realisation of the full range of economic benefits sought to leverage Britain out of recession and budget deficit. The railway in London and along the whole corridor should be the servant, not the arbiter.

The balance between CP6 baseline priorities, and when to press on with wider actions on major works such as four-tracking, and many other initiatives, is questioned in this note. So Enfield Council requests discussions with the authors of the draft Anglia Route Study, to give joint consideration of CP6 and 2043 priorities to a further stage.