

Strategic Transport Leadership Board

24 May 2024

Agenda Item 4 - Addressing Regional Productivity

Recommendation:

It is recommended that the Board:

- **Reflects on the current economic trends for the EEH region, emerging from the analysis recently completed by Cambridge Econometrics.**
- **Notes that more tailored evidence, specific to individual areas in the region, will be set out in the seven "Investment Brochures" due to be considered by Board members in June and published following the next meeting of the Board in July 2024.**
- **Agrees the four priority areas of focus over the coming months that EEH will continue to work on as important factors in supporting productivity.**

1. Purpose of report

- 1.1. To update members on recent evidence regarding productivity in the region, and to set an agreed position on how we steer infrastructure investment forward in a way that levers the greatest impact for economic growth in the long term.

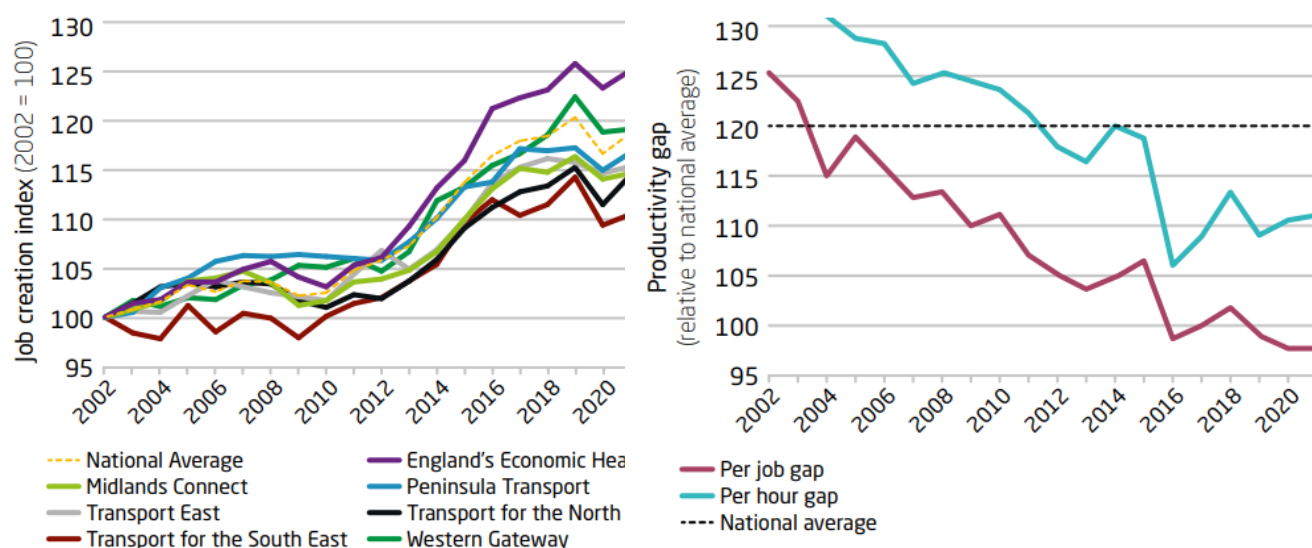
2. Key points to note

- 2.1. This paper highlights some of the evidence emerging from EEH's 'investment brochures' project, which highlights the economic rationale for improving connectivity and the priority interventions which support this. The brochures are nearly complete and being shared with officers in draft form. They will be shared with members through June, ahead of going before Board in July.
- 2.2. On a number of metrics, the EEH region is the most important to the UK economy outside of London.
- 2.3. However, below average productivity rates highlight the infrastructure gap in the region, and the need for improved connectivity.
- 2.4. As examples of this, the paper includes the priority road schemes identified by the Oxford-Cambridgeshire Connectivity: Roads Study, which EEH will work with partners to progress.
- 2.5. It also highlights work being done to improve connectivity by rail in the wider south east.

3. Context

- 3.1. In support of the forthcoming investment brochures, EEH has commissioned economic analysis of the region broken into corridors and further down into smaller economic areas¹.
- 3.2. The research, completed by consultants Cambridge Econometrics, identified some concerning trends in regional productivity.
- 3.3. Members of the Board will be well-aware of the significant role of productivity in determining sustained long term economic growth. As such, while it is recognised that large parts of the Heartland area net contributors to the Treasury, a downward trend in productivity places this position at risk and reinforces some of the major challenges that the Heartland faces.
- 3.4. Our success to date has been despite under investment in infrastructure. The region is reaching a point where it can no longer sustain economic growth because there is not the commercial space, skills or connectivity to link it all together.
- 3.5. The regional transport strategy, published in February 2021 and our three-year business plan, published in May 2022 have set a plan of action for how transport and connectivity should be planned in the Heartland region for the region to thrive – in both economic and environmental terms.

4. Productivity trends in the Heartland region



- 4.1. With an economy of 2.68m jobs (2022), no STB region (outside of London) has created more jobs than EEH over the past 20 years. The region's economic growth (2.4% p.a. real terms) was also faster than the national average (2.2%), making EEH the fastest-growing STB region outside London. EEH has the highest exporting intensity outside London, with total exports £56bn in 2021 (up 22% on 2016 – only London increased faster).
- 4.2. However slow productivity growth (only 0.2% p.a) means EEH is now less-productive than national average. This is a concerning trend: 20-years ago, it was more productive.

¹ The smaller economic areas are not confined to local authority boundaries, places have been grouped based on advice from Cambridge Econometrics as a fair way to present economic connectivity.



- 4.3. Productivity rates do vary across the region. They are higher in places such as Swindon and Milton Keynes, while lower in and around North Northamptonshire, areas of Fenland, Luton and Aylesbury. Oxford's productivity is a little below the national average, while Cambridge's matches the national average. Further information about the Heartland's economy, captured by Cambridge Econometrics, has been set out in Annex 1.
- 4.4. The link between connectivity, infrastructure and productivity is well documented. Annex 2 sets out some of the key issues that Board members will wish to be aware of.

5. Actions

- 5.1. Board members will be concerned by the productivity data presented to them.
- 5.2. But there are some key initiatives that EEH can, and is already, taking forward to address this. This paper sets out four areas of action that EEH will focus on in the coming months. The areas build on, and do not detract from, our three-year business plan. Instead, they are the basis for ensuring EEH is in the best possible position to contribute towards addressing our productivity challenges.
- 5.3. It is worth noting that across the four areas of action, the EEH Board should retain its commitment to the vision and principles of the regional transport strategy which placed shared priority for planning for net zero and supporting economic growth, leveraging the benefits to the region that can be achieved in doing so.

6. Action 1 – Securing the investment needed to reverse the declining trend in productivity in the region

- 6.1. Annex 2 sets out some of the economic theory between connectivity and productivity. For a region like the Heartland, where appetite for innovation is so high, productivity trends should be on an upward trajectory.
- 6.2. Success in the region is dependent on addressing the major connectivity gaps that have existed for some time. While delivering East West Rail will transform east west connectivity, this alone will not address our existing infrastructure gap.
- 6.3. EEH's regional evidence base, including the near complete connectivity studies and the investment prioritisation framework, provides a comprehensive suite of evidence of strategic connectivity challenges in the region. In recognition of this, in July 2024, EEH will launch six of the seven regional 'Connecting Economies' investment brochures. The brochures expand in greater detail the economic narrative for parts of the region and set the case for a suite of connectivity priorities that are necessary to enable our economy to thrive. During June, EEH Board members will be asked to consider the investment brochures that cover their own areas to ensure they capture individual partner priorities for strategic transport and connectivity.
- 6.4. In parallel, there are some overarching investment and infrastructure priorities that Board members will wish for EEH business unit to continue maintain our focus on given their significance:
- 6.5. East West Rail – ensuring a lasting legacy of East West Rail for communities and businesses across the Heartland is a key priority for the Board, and for Government.
- 6.6. Ely Area Capacity Enhancements – in November 2023, following a successful programme of activity led by EEH, the Government announced its commitment to proceed with rail capacity improvements at Ely junction. While this was welcomed, there remains a need to continue to press for Ely to be delivered as soon as possible.
- 6.7. Delivering regional rail priorities as soon as there is opportunity to do so – our continued work on strategic rail priorities provides the evidence base on which EEH can act with agility when a rail improvement opportunity arises – as has been the case with capacity between Oxford and Bristol (via Swindon).



- 6.8. Highways Improvements - A well-functioning highways network is vital to the economy of our region and often provides the only realistic way people and goods can travel from one place to another.
- 6.9. A first principle must be to ensure the region's existing road capacity is well maintained, managed and utilised so the maximum amount of benefit can be leveraged from our existing road capacity. For local authorities this means receiving appropriate levels of roads maintenance funding which take account of the impact of climate change and also that of traffic which has been generated by the strategic road network. It also means flexibility of funding, through a long-term regional transport fund, to give the region greater certainty to plan and address capacity pinch points in the highway network as efficiently as possible.
- 6.10. But maximising and maintaining the infrastructure alone will not address some of the most significant road connectivity challenges facing the Heartland region. During 2023, National Highways, in partnership with EEH and the Department for Transport completed its analysis through the Oxford-Cambridge Connectivity: Roads Study. The work identified areas on the region's MRN and SRN network which performed most poorly against expected service levels. The evidence called from the study identified a series of priority connections on the Heartland's Road network that must be either addressed (Tier 1) or investigated further (Tiers 2 and 3). Areas identified were:

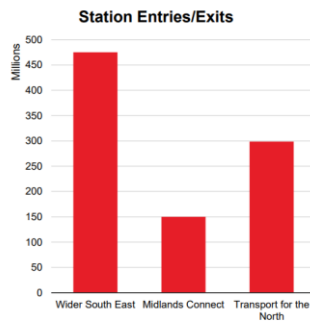
Tier 1	
Schemes scoring poorly across the defined level of service areas. These are identified as the most important (of the locations studies) to be taken forward for further development	
<u>Scheme</u>	<u>Current Position</u>
A1 Sandy - Biggleswade	Further work is required to identify the most appropriate solution for addressing the A1 challenges, from Huntingdon to Biggleswade. EEH continues to press the urgency for a solution to the A1.
M1 Junction 13	National Highways is working with local partners to consider options for a solution at M1 Ju 13.
A1139 (east of Peterborough)	Further work is required to consider the benefits of an intervention at this location.
A6/A421 junctions	National Highways is working with local partners to consider options for a solution.
Aylesbury	There remains a pressing case to address road connectivity in and around Aylesbury (see Action 5).
Tier 2	
Schemes scoring poorly across some of the defined level of service areas. These are identified as viable for further study to understand if investment in the location would improve levels of service	
A605 (SW of Peterborough)	Further work is required to consider the benefits of an intervention at this location.
A43 Corby and A43 Broughton	Further work is required to explore the function of the A43, particularly in the context of freight flows on this corridor.
A14 J33 – J36 (Eastbound)	Further work is required to consider the benefits of an intervention at this location.
Tier 3	

Schemes scoring poorly across some of the defined level of service areas. These are identified as viable for further study to understand if investment in the location would improve levels of service	
A421 (A43 to M1 Ju 13)	Further work is required to consider the best way of addressing the challenges on the A421.
A141/A142	Further work will consider the best way of addressing the challenges and identify solutions for this junction.
A43/A5 Roundabout	Further work will consider the best way of addressing the challenges and identify solutions for this junction.
A5 Old Stratford Roundabout	Further work will consider the best way of addressing the challenges and identify solutions for this junction.
A5 Kelly's Kitchen Roundabout	Further work will consider the best way of addressing the challenges and identify solutions for this junction.
A5 Hockcliffe	Further work will consider the best way of addressing the challenges and identify solutions for this junction.
Bicester (M40 – Bicester)	Further work will consider the best way of addressing the challenges and identify solutions for this junction.
A507 (M1 – A6) safety improvements	Further work will consider the best way of addressing the challenges and identify solutions for this junction.

- 6.11. Buses and Mass Transit – in March 2024, Board members received an update from the Director of Local Transport regarding support for buses. This area remains a major priority for EEH and we will continue to press the need for investment in our region's public transport system, including the HERT and MK MRT.
- 6.12. Strategic active travel proposals - Varsity Way remains a key priority for EEH. The need for investment in the scheme will be well documented across the EEH investment brochures.
- 6.13. Clarity of local transport funding - It is vital that the long-term funding which benefits the strategic road network and our railways is matched by long term settlements for local transport. Authorities in the north and Midlands (including West and North Northamptonshire) are now benefitting from Local Integrated Transport Settlements announced by government in 2024. Similar arrangements should be made for the rest of the country, enabling all authorities to better plan and deliver transport improvements while removing the risk of inconsistencies in transport provision due to two different funding regimes.

7. Action 2 – A rail system fit for the future

- 7.1. Demand for rail services in the wider south east is significantly higher than anywhere else in the country. While there is a strong demand for rail through connections to London, the wider south east rail market in its entirety is a core part of supporting a wider functioning rail system. Despite this, investment in rail schemes outside of London (and East West Rail) remains low.



- 7.2. As the Government considers rail reform, it is vital that the wider south east rail network must be planned as one. Following agreement from the Board in 2023, officers from EEH, Transport East and Transport for South East have created the Wider South East Rail Partnership. The Partnership is designed to ensure that the rail industry, STBs and Transport for London have a focus for developing the rail network to meet wider objectives for the south east – given its significance in terms of supporting the performance of the wider rail network in the UK.
- 7.3. The Partnership is now well underway, securing senior level engagement from TfL, GBR TT and DfT. Emerging areas identified for further investigation include: the role of the wider south east in supporting the rail network back to pre-pandemic levels; managing demand for rail freight; identifying major pan regional investment priorities; and the role of integration and land use planning in maximising patronage on the railway.

8. Action 3 – Innovation

- 8.1. It is well documented that a successful and growing economy in the 21st century needs to have innovation at its heart.
- 8.2. The region is a leader in the development of the technology associated with the future of mobility, the use of electric vehicles, connected autonomous vehicles and the internet of things (IoT): technology that has the potential to be a key part of our transport system moving forward.
- 8.3. Harnessing the potential of this sector in the development of new solutions and businesses will not only benefit the region, it also provide the UK with a competitive edge, bringing benefits well beyond transport. The work underway in and around Oxfordshire, Cambridgeshire and Milton Keynes provides the region with access to experience on which it can build. Delivering new approaches, ownership and business models that facilitate access to transport is a key part of the transition to net zero.
- 8.4. But for innovation to be scalable, it must be supported by the right funding and supportive business models. EEH, through its innovation Board Champion and innovation working group is working with several projects and increasingly government to maximise the opportunity for scalable solutions for the future of mobility: ensuring funding is in place; regulatory reform is supported where necessary; and by raising the profile of the opportunity.
- 8.5. In addition, good digital connectivity is vital for good physical connectivity: allowing people to avoid travel altogether where appropriate, enabling them to be more productive on their journeys; and helping make the transport system itself smarter and more efficient. In a region world renowned for its science and technology innovation, it cannot be right that a quarter of all our homes and more than half of our firms lack access to ultrafast broadband, with coverage particularly poor in many rural areas. It should be standard practice that when roads and rail construction takes place, the opportunity is also taken to install digital infrastructure



9. Action 4 – Identifying Trends and Tailored solutions (Case study: Aylesbury)

- 9.1. In addition to our strategic programmes there remains pinch points within the region where connectivity challenges have reached a critical point. Their impact is far reaching and severely limiting the potential for that location to thrive and grow as it could.
- 9.2. Aylesbury serves as an example of this. Cambridges Econometric's research put productivity for the area in and around Aylesbury² at -12% to the national average.
- 9.3. Aylesbury has severe congestion issues caused by strategic traffic travelling through the town centre (as the roads connectivity study has most recently identified). It is also a rail 'cul-de-sac' with services only heading southwards towards London.
- 9.4. The town is also undergoing significant housing growth – with more than 16,000 new homes in the local plan.
- 9.5. When the local plan was agreed, there was an expectation that the East West Rail link would be delivered between Aylesbury and Milton Keynes. It was only in it was only in 2021, eight years into the local plan, that the link was removed from the first phase of construction work. Since this point, the likelihood of the link being delivered has become less certain.
- 9.6. In response, EEH has supported Buckinghamshire Council not only make the case for the Aylesbury link, but to highlight how such a link unlocks the strategic opportunity for a rail corridor linking Northampton, Milton Keynes, Aylesbury, High Wycombe and Old Oak Common – which will provide fast, high frequency services to Heathrow Airport, Reading and central London.
- 9.7. This has been supported by the emerging economic analysis by Cambridge Econometrics, which highlights the opportunities of improving connectivity along this north-south spine from the East Midlands into the Thames Valley. This includes through boosting productivity rates, unlocking affordable commercial floorspace and connecting skilled labour to jobs.
- 9.8. We will continue to work with partners (also including West Northamptonshire Council) to advocate for the Aylesbury link and the wider opportunity for could be called 'Global Britain Rail': linking international economic and cultural assets such as the Silverstone cluster, Milton Keynes and Bletchley Park, the birthplace of the Paralympics, Pinewood Studios and Heathrow Airport.

10. Conclusion

- 10.1. The need to reverse the decline in productivity in the region will be a key priority for the EEH Board. In line with the principles above and the action plan , it is possible for EEH to work with local partners to maximise these opportunities.

Naomi Green
Managing Director
May 2024

² The area used also includes the settlements of Princes Risborough, Thame and Tring



Annex 1 – Further evidence about EEH’s economy (as set out in the investment brochures)

PRIME SECTORS

The EEH area is home to several sectors of national importance, many of which produce knowledge, ideas and innovations that then flow across the entire national innovation ecosystem, benefiting firms across a far wider geography than the region itself. This cannot be overstated in the context of national strategic economic priorities.

Cambridge Econometric’s analysis found the following sectors are ‘prime’ capabilities across EEH: highly-concentrated sectors that typically exhibit above average productivity, export and R&D/innovation intensity, and pan-regional representation. These are:

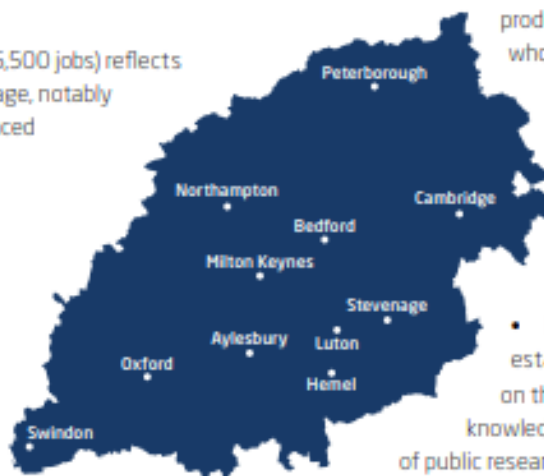
- **Life Sciences** (36,900 jobs across EEH) includes the region’s historic, research-based strengths related to pharma, medicinal manufacturing and bioscience
- **Advanced Physics & Engineering** (295,500 jobs) reflects diverse engineering specialisms and heritage, notably automotive, electronics, machinery, advanced materials, related consulting and R&D

- **Logistics & Freight** (140,700 jobs) capitalising on the region’s central geographic location and connectivity assets, this includes freight and goods storage, handling and transport across road, rail and air
- **Digital & Creative** (139,300 jobs) includes a wide range of digital-based activities, including software publishing, IT services and consulting, film, TV and media, and telecoms
- **Higher Education** (97,800 jobs) captures the many leading universities and higher education institutions across the region, and associated teaching, research, and support activities
- **Agri-food** (71,100 jobs) reflecting the rural and agricultural heritage of the region, this includes farm-based agriculture and support services, food and drink production and processing, and related wholesale

- **Circular Economy** (22,600 jobs) vital to addressing the region’s environmental pressures, includes activities related to water and waste

INNOVATION

- **R&D:** Almost 1 in 10 jobs (240,000 total) in EEH are R&D-intensive, the highest share of any STB region (including London). Almost a third (28%) of EEH firms report undertaking R&D, more than any other STB region, whilst a quarter (24%) are innovation active, introducing new methods of work
- **Patents:** WIPO ranks Cambridge as the most intense scientific & technology cluster globally, with Oxford 5th. Collectively they account for 2 in 10 UK patents. EEH generated 20,700 patent filings (2010-2015; most up to date complete data) more than any other STB region (including London), equivalent to 46 patents per 10,000 residents
- **Innovation clusters:** There are 183 established innovation clusters centred on the EEH region, hosting 15,900+ knowledge-intensive firms & receiving £855m of public research funding. 33 of the clusters have a UK top-10 ranking – these are located in Cambridgeshire, Oxfordshire, Milton Keynes and Hertfordshire See page 7 for more information on innovation clusters.
- **Universities:** University of Oxford tops The Times’ global university rankings with Cambridge fifth. EEH universities employ 6,100 dedicated research staff, whilst there are 2,900 central government research staff based in the region
- **Innovate UK:** Almost 2 in 10 Innovate UK funding projects are awarded to research projects in the EEH region, more than any other STB region (incl. London)



Annex 2 – Connectivity, Productivity and Agglomeration – The Theory

CONNECTIVITY: THE THEORY

Connectivity is critical to enabling economic expansion and cluster development, to ensure accessibility to key centres and enabling and attracting labour supply growth, and the sustainability of existing and new communities.

Broadly, there are two ways in which improved connectivity can unlock economic growth.

Static impacts are those which capture the various direct effects on existing firms and residents:

For firms:

- Reduction in costs of shipping and freight movements
- Reduction in costs of business travel
- Access to a larger labour pool, as previously unattractive commuting movements become more viable
- Access to a larger pool of customers in physical attendance at premises

For residents:

- Interventions that improve speed, safety and reliability of local transport networks and reduce congestion and pollution
- Improvements in inter-regional or inter-national connectivity provides local residents with better access to tourism and recreation opportunities
- Increases in access to employment opportunities, providing residents with a greater choice and selection of jobs
- Increased access to education and training opportunities

Dynamic impacts are the subsequent impacts of new economic activity entering a local market as a result of better transport connectivity. Their long-term effects can significantly outweigh the scale of the initial static effects:

- Firm-worker proximity benefits: Positive feedback between the presence of workers with specific skills, and firms that require said skills
- Firm-firm proximity benefits: The co-evolution of sector value chains, with the presence of downstream actors attracting upstream suppliers, and vice versa, or firms in similar sectors co-locating/clustering
- Agglomeration-growth cycle: whereby the productivity and competitiveness benefits of co-location allows firms to win greater market share and expand operations (see right)

- Some of the other induced effects of dynamic impacts include an increase in property prices (often seen as a negative) and an increased amount of money spent locally by better-paid workers (generally seen as a positive)

Productivity and agglomeration

A key theme for the EEH region is improving productivity: the ways in which individual workers are able to produce more, or higher quality, output, as measured by the revenues the firm is able to capture less the direct costs of the inputs. Some obvious reasons for productivity growth might be: more skilled workers, better equipment, and smarter processes. Some less obvious, but equally important, reasons might be lower costs of inputs and higher prices of outputs, both of which may be a result of local economic conditions, or the firm's increased market power.

One of the most important ways in which transport systems help drive productivity growth is through agglomeration. Agglomeration benefits are the benefits that firms experience from being connected to, and interacting with, a wide number of other economic actors. This brings two benefits: efficiency, and innovation.

Agglomeration drives efficiencies through economies of scale and matching benefits. Firms that are able to access and serve larger markets, and have greater choice of suppliers and workers are often able to run their businesses more efficiently than those with smaller markets and more limited choices. This boosts revenue, decreases costs, and helps productivity grow.

Agglomeration also helps firms innovate, through expanding the network of contacts with which they are able to interact. This helps them access the knowledge and ideas that they can use to improve their business. Innovation is a major driver of productivity; in fact, many of the most beneficial ways we conceive of productivity growing, be it through better equipment, a more efficient workflow, or a better end-product, are forms of innovation. Helping firms invest and innovate, either directly or by creating the right incentives and conditions, is probably the main way of driving productivity growth in the long-run.

