

Connecting East Lincolnshire

A case study in meeting the connectivity needs of a rural
and coastal area at a time of climate crisis



A report by *Greengauge 21*
August 2021



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Shaping tomorrow's railway



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I.O Overview

East Lincolnshire is remote. Its rural geography is peppered with a collection of (mainly small) towns, some of them on the coast. To the east is the North Sea, to the north the Humber estuary and to the south the Wash. It's a coastal region that is inevitably peripheral.

The county of Lincolnshire as a whole does a poor job of attracting passers-by. Along its western flank lie the old Great North Road (the A1) and the East Coast Main Line railway. Traffic on both is long distance. Stop-off points and intermediate stations are for a small minority, and entrées into the large county of Lincolnshire unadvertised and easily missed by the casual traveller. The motorway network gives the County a miss (apart from an encroachment of the M180 along the south side of the Humber), and dual carriageways are rare.

There is little in the way of funding support for such areas as East Lincolnshire. It's true that since 2015, The **Coastal Revival Fund** provided over £7.5 million to support 184 projects in coastal areas to help “kick-start regeneration of ‘at risk’ coastal heritage that has the potential to create opportunities for new economic uses”. And with an eye to helping economic recovery from Covid, in March 2021 Communities Secretary Robert Jenrick announced a new £65m fund that would also “spruce up” high streets and help councils welcome visitors to coastal areas back safely.

But these funds, while no doubt welcome, are not designed to improve access and connectivity for coastal areas. That would require joining the queue for Department for Transport investment funding, and coastal areas such as east Lincolnshire are to be found at the back of that particular line. Seasonal demand patterns and an absence of through traffic see to that.

Is better transport needed for east Lincolnshire? Our analysis¹ would suggest definitely so in the case of **North East** Lincolnshire: it is in the bottom 10% of all local authorities in England and Wales in terms of social mobility. The economic and social decline of the once-busy fishing port of Grimsby in NE Lincolnshire has of course not gone unnoticed², but something big will have to change if its economy is to recover.

1. See economic performance, rail connectivity and social mobility scores of all local authorities in Annex A, *Beyond HS2*, May 2018, available at www.greengauge21.net

2. See, for example, James Meek's essay from 2015 <https://www.lrb.co.uk/the-paper/v37/no8/james-meek/why-are-you-still-here>

Along the coast, the resorts of Skegness, Mablethorpe and Sutton survive—as does the rail-served port at Boston. The heritage resort towns have high percentages of elderly residents and have notably poor scores on public health and life expectancy. It is hard to attract new businesses and to deter the young from leaving after school to settle elsewhere. So here too, economic revival is needed to help sustain communities that are feeling ‘left behind’. Part of the levelling up agenda for these central and southern parts of East Lincolnshire should also include better transport connectivity—to help secure investment and diversify the employment base—as well as to provide better access to regional education and health facilities.

The coastal strip and nearby towns, including Louth, have a transport system that has been as much cut back as improved over the last 50 years, and which is unsuited to the now urgent need for improvement and reform to adapt to the challenge of the climate crisis.

Remote from the national motorway network, and with poor access to the national rail network, the wide swathe of Lincolnshire’s coastal strip is not an easy visit for international or domestic tourists. Nor is it well-rated for those contemplating, post-Covid, longer distance commuting from a rural home location into the capital or other major employment centres such as Leeds. This simply isn’t a viable option for home-workers who nonetheless need to get to head office when required. The reality is that poor transport connectivity is a real constraint on economic development.

The Government’s levelling up agenda cannot ignore rural areas on the UK’s coasts. These are places that inevitably experience less overall transport demand than more central areas and so suffer from less congestion. As a consequence, they are less likely to score highly on transport investment priorities. Lincolnshire’s poor road accident statistics don’t change this picture. Improving road safety is under-valued.

In this short report, we explore what could be done to improve East Lincolnshire’s connectivity. First we look back over the last 50 years or so and observe a pattern of under-investment and dis-investment in its transport networks.

2.0

Lincolnshire's highway network

The Humber Bridge opened in 1981 with the world's longest bridge-span but rather disappointing traffic levels. A private sector group, led by amongst others, transport planner John Wootton, proposed an East Coast motorway, connecting the Humber Bridge southwards, across the length of Lincolnshire, serving Lincoln itself, and on southwards to join the M11 at Cambridge to make better use of the new bridge. It was the Thatcher decade of 'private sector good/public sector bad', and here was a chance to test out what the private sector could offer. Use of toll-funding would avoid any call on the public purse. Indeed, this idea was still on the radar of transport planner David Bayliss, who prepared a report calling for increased national motorway provision for the [RAC Foundation in 2008](#). But such motorway-based dreams were by then no longer on the Government's agenda. Through the 1980s, Twyford Down and the Newbury Bypass (A34 – the trunk route from Southampton to the West Midlands) were the sources of major environmental protests: the major new road building programme had run its post-war course by the 1990s.

Absent the East Coast motorway scheme, Lincolnshire has had to make do with a programme of upgrades to trunk roads such as the A16, which roughly follows the coastline, connecting Grimsby and Peterborough, bypassing Louth and Spalding (but not Boston) along its north-south route. Still a single carriageway road, the A16 has been twice re-aligned to take over sections of the track-bed of the closed East Lincolnshire railway (discussed below). The road take-overs are on two dead-straight sections of the former railway line: its approach into Grimsby and the route between Boston and Spalding.

These new sections of highway have proven to be valuable, but it's still a long journey by road from east Lincolnshire to the south (although the M11 has now reached Peterborough, having been extended northwards from Cambridge).



East Lincolnshire roads: lacking motorways and with few dual carriageways

Source: OpenStreetMap Contributors

3.0

Lincolnshire's rail network

Grimsby and Cleethorpes

The County's rail network is a but a shadow of what it once was. A plethora of branch lines have closed and remaining services have been cut back. Martin Vickers, MP for Cleethorpes and, amongst others, the late Austin Mitchell, former MP for Grimsby, campaigned for the restoration of direct train services from Cleethorpes and Grimsby to London for decades. Through services last ran, (via Lincoln) in May 1993. In its dying days, with privatisation about to take place, British Rail was not averse to killing off services with little patronage and low revenues, and at that time it had a clear handle on what cost savings could be achieved. Disinvestment was not unique to Lincolnshire, but the county took more than its fair share of the hit.

But things are now, at long last, looking up. Cleethorpes joined the Trans Pennine Express route network when this franchise was created in 2003 and, along with nearby Grimsby, it has enjoyed an hourly service to Manchester (and until recently Manchester Airport) ever since—an early model of Northern Powerhouse thinking.

Cleethorpes, along with Lincoln, as noted, had lost its direct London rail service ten years earlier. But then, after a 16-year gap, a pair of once/day train services reappeared, with two franchises competing for the Lincoln–London market in 2009.

Frequencies have recently improved. Since late 2019, Lincoln has enjoyed a 2-hourly direct intercity service to London Kings Cross operated by LNER's Azuma train fleet—and even a once daily service to St Pancras International too. The sheer scale of Lincoln University's student population is likely to be driving some of the demand for these trains: up 16% in three years to 16,400 by 2019.

And—Martin Vickers will be pleased—from May 2022, there are plans that a daily LNER London-Lincoln train will be extended across the county to serve Grimsby and Cleethorpes directly once again. The North East corner of Lincolnshire has desperately needed some good fortune and this should help.



LNER Azuma from London Kings Cross at Lincoln, June 2021
Photo: Greengauge 21

East Lincolnshire

But southwards along the Lincolnshire coast and into the Wolds inland from the coastal strip, all but one of the railway lines were closed 50 years ago or more. The East Lincolnshire Railway, which had been built to main line standards, largely level and straight, closed in October 1970. It had linked Grimsby through Louth, Boston and Spalding to Peterborough, where the East Coast Main Line was joined.

In the 1960s, as BRB Chairman Dr Beeching's team did the accounts line by line, they found annual revenues from passengers on the Grimsby-Peterborough line and its branches to Lincoln, Skegness and Mablethorpe were £147,000, meeting a low proportion of these lines' £381,000 running costs, according to transport writer Howard Johnston. On the Lincolnshire branch lines, passenger numbers were below 5,000/week, but the East Lincolnshire line itself was better used (between 5,000 and 10,000 passengers/week).

This was in fact one of three critical longer-distance Beeching railway closures on which a decision was for a while deferred. Richard Marsh, Barbara Castle's 'bemused' successor at the Ministry of Transport, was grappling with decisions on the Central Wales line, the Waverley route and the East Lincolnshire line. The politics around these closures was worrying—marginal constituencies in mid Wales and recent nationalist election successes in Scotland. Prime Minister Wilson elected to close the Waverley line (since partially re-opened, with possibly full re-instatement to follow) and spare the Central Wales line. The East Lincolnshire closure

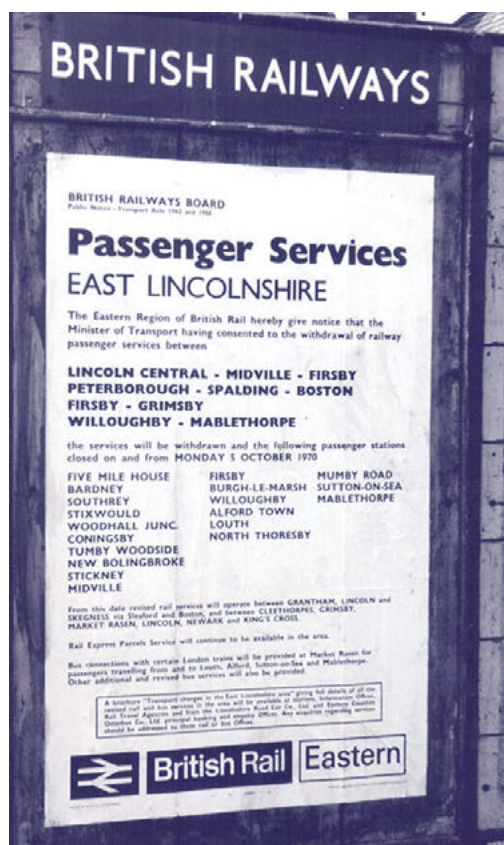


Photo: <https://www.spaldingtoday.co.uk/news/rail-closures-were-doomed-to-happen-9125175/>

proposal, “although it had aroused considerable opposition, posed fewer political problems”.³ An example, perhaps, of the penalty England pays for its democratic deficit within the UK. As Charles Loft adds: “[this] has left a significant area, much of which suffers deprivation, cut off from the rail network”. His book explains that a key focus of the Beeching cuts was the removal of lines serving coastal resorts, with services found to be little used apart from during summer holiday weeks. The closure line in Lincolnshire had to be drawn somewhere, and in this case Mablethorpe and Sutton-on-Sea lost out, but Skegness kept its rail connection.

Earlier, John Hibbs OBE, later doyen of bus deregulation, had put forward an interesting proposal in response to the Beeching closure plan in 1963–64, when he was working at BR’s Eastern Region. He proposed a licensed express bus replacement for the East Lincs line⁴. The Hibbs plan was not implemented, and only a fragmentary pattern of replacement bus services, some short-lived, was provided for the links affected by its closure.

“There were few areas of England that were hit harder by the Beeching closures than Lincolnshire... A particularly short-sighted closure was the line across east Lincolnshire from Peterborough to Grimsby and Cleethorpes. ... [It] offered the most direct route from London to Grimsby and Cleethorpes—158 miles as against 183 miles via Lincoln and Newark and 208 miles through Doncaster—and up to the date of closure there were two through trains in each direction taking 4 hours.”⁵

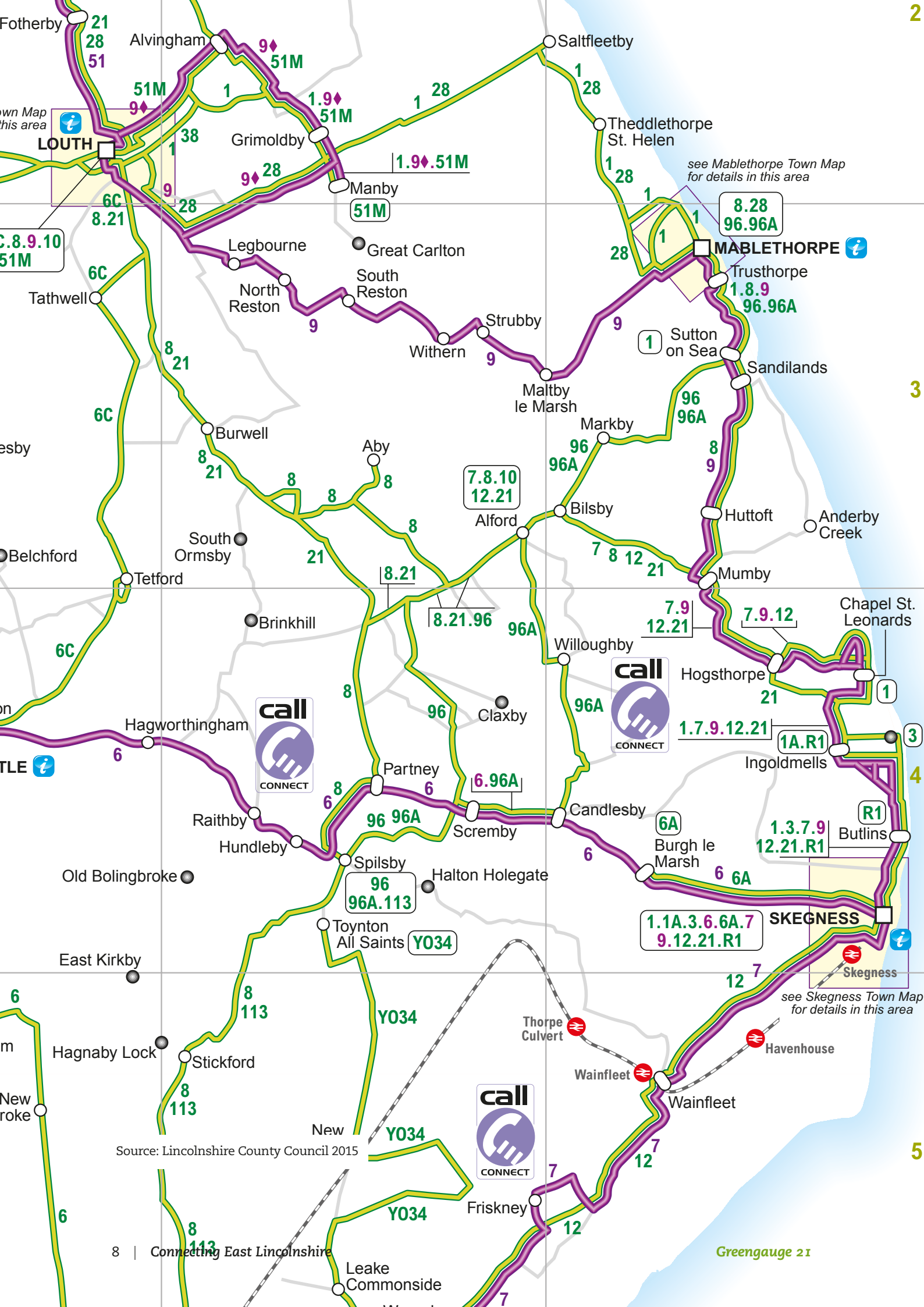
The survivor in this process of trashing Lincolnshire’s rail network was an east-west link, from Nottingham to the North Sea resort of Skegness, serving Boston en route. This line was once busy providing days out access to the sea for families living in the industrial East Midlands. Today its usage is no doubt more varied, and it connects with the East Coast Main Line (ECML) at Grantham.

Nevertheless, according to Trainline, the average rail journey time between Boston and London (a journey by road of 118 miles) is a staggering 3h55 (quicker if the connections at Grantham work well). Prior to closure of the East Lincolnshire line, Boston could be reached directly from London in 2h15 minutes. With today’s ECML timings between London and Peterborough, London-Boston using the East Coast Main Line and the East Lincolnshire railway had it survived, we estimate would be just 1h37.

3. Charles Loft, *Lost Trains: Dr Beeching and the death of rural England*, Biteback publishing, 2013 p256

4. Lincolnshire Transport Review, November/December 1970, pp 124/125

5. *Disconnected! Broken Links in Britain’s Rail Policy*, Chris Austin and Richard Faulkner, OPC, 2015



4.0

Lincolnshire's bus network

It might be thought that, upon the demise of the north-south railway connecting the towns along Lincolnshire's coastal plain, bus operators would have stepped into the breach, especially once deregulated in the mid-1980s. But the Lincolnshire County Council bus map (latest version 2015 – see map above) shows that the '**InterConnect**' high quality interurban bus routes (largely operated by Stagecoach) provide mainly radial routes from Lincoln and some coastal connections over unimproved roads (Boston–Skegness–Mablethorpe–Louth). Although these have good service frequencies (often hourly), these routes (shown in mauve in the map of East Lincolnshire above) rarely provide for quick end-to-end journeys. There is no direct route from Louth to Boston—the connection provided for 122 years by the railway, for instance.

InterConnect bus ridership has grown steadily with fleet and service improvements. It peaked at about 470,000 passengers/annum in 2012, before falling back to 416,000 in 2017. Free concessionary travel may have been an important component of growth after 2006, and such travel now forms about 40% of demand on the service. **InterConnect** operation is very largely commercial (i.e. free of subsidy), apart from some evening and Sunday journeys.

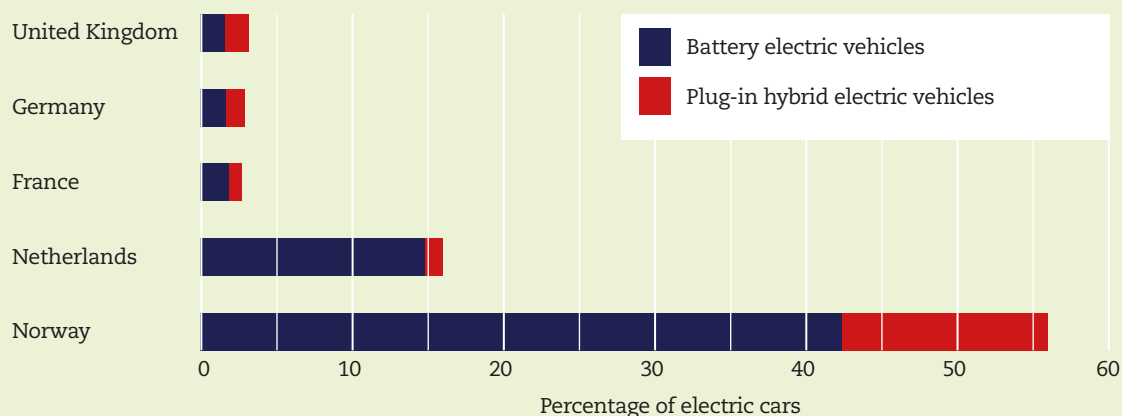
5.0

Seeking a sustainable way forward

Demand levels in east Lincolnshire are low because there are no major cities and, as is characteristic of a coastal area, there is little through traffic. The greatest levelling up challenge is centred on Grimsby, and train service changes ahead will deliver a connectivity boost here. To the south, the post-Brexit rural economy faces uncertainties and the resort towns have large numbers of resident retirees. Good job opportunities are scarce, and so there is little reason for aspiring youngsters to stay. Chris Witty, Chief Medical Officer for England, has recently highlighted the high burden of health challenges across coastal communities, mentioning Skegness as a prime example, and has called for a cross government strategy to improve their health and well-being incorporating key drivers—housing, environment, education, employment and transport⁶. The transport challenge for east Lincolnshire is to find an affordable way to improve (or at least retain) connectivity, connecting the coastal sub-region to higher education, to health facilities and to training and employment opportunities.

Travel distances are long in east Lincolnshire, and so achieving the necessary switch from petrol/diesel to electric road vehicles over the next 10–15 years will not be as easy as elsewhere. Rural areas are unlikely to be high on the list of rapid-charging points when the UK finally initiates a major roll out of the facilities needed.

6. Chief Medical Officer Annual Report 2021 <https://www.gov.uk/government/news/chief-medical-officer-annual-report-2021>



2019 newly registered electric cars by country (relative)

Source: <https://www.eea.europa.eu/data-and-maps/indicators/proportion-of-vehicle-fleet-meeting-5/assessment>

It is notable that, across the North Sea, in world-leading Norway, where electric vehicle take-up is the highest in the world (see chart above), most electric vehicles are registered in Oslo, the nation's only large city. Journeys in rural less densely populated areas tend to be longer and so more challenging for electric vehicles. Provision of usable charging points is also not as viable in low density areas, with fewer users in the immediate catchment.

And measures to encourage a switch to active travel (walk/cycle) don't look as viable as they do in urban areas either, given East Lincolnshire's demographics and trip lengths.

In the context of climate change and the urgent need to decarbonise transport, a way forward is needed for East Lincolnshire to achieve affordable, zero-carbon transport, and to sustain the longer distance parts of its overall travel needs which are of greater significance here in a largely rural, coastal, geography than they would be in urban areas. In a sense this is the whole nation's rural transport problem writ large.

The right approach here can't be reliance on more use of the County's highway network: Lincolnshire's roads are officially the most dangerous in England and Wales.⁷

So we need to explore the options available to East Lincolnshire for suitable transport services that can be provided over medium and longer distances dependent only upon renewable energy sources. At least here, access to wind-power-based electrical energy is on the door-step, with the Viking Link interconnector (see below) able to exchange electrical power between English North Sea and Danish windfarms.

7. <https://www.lincolnshirelive.co.uk/news/local-news/mercedes-audi-corsa-volvo-peugeot-4474320>

6.0

Recreating lost rail links

Restoration of a section of the former East Lincolnshire railway from Firsby to Louth would extend the existing Boston-Skegness line northward to Louth, and a funding application to examine just such an idea was submitted in March this year:

“We have submitted an application to the Department of Transport for a £50,000 feasibility study for the Restoring Your Railway Fund and included in that is for further consideration of the Willoughby to Mablethorpe loop.

The application....is supported by both Matt Warman MP (Boston and Skegness) and Victoria Atkins MP (Louth and Horncastle).

The proposal endeavours to make the case for considering the reinstatement of the East Lincolnshire Line as the optimal sustainable transport solution for encouraging further economic growth and opportunity in East Lindsey.

Based on 2011 Census information, the route would serve the settlements of Louth, Legbourne, Alford and Willoughby; a population of over 20,000”⁸

On the face of it, this would seem an unlikely candidate for a grant award from Government. While it wouldn't (on its own) re-create the through route that the East Lincolnshire railway once provided, it would connect Louth (and possibly Mablethorpe) to the main line network. If the viability of the new (or re-instated) rail service is a factor now for DfT (as it was for the BR Board when the line was closed 50 years ago), the evidence from the Beeching era when East Lincolnshire's were cut, was that branches inevitably attract lower ridership than through routes, and their economics with poor rolling stock utilisation is generally weaker too.

But to create a through route with better service economics requires not just a line from Louth southwards to Firsby, but also a line from Louth northwards to Grimsby and a reconnection between Boston and Spalding. These lines would need to be operated by electrically (or possibly hydrogen fuel cell) powered traction units.

8. <https://www.e-lindsey.gov.uk/article/16956/Funding-application-brings-hope-for-railway-restoration>

7.0 The Viking Link

Re-creating a though route Grimsby–Louth–Boston–Spalding–Peterborough brings a bigger planning and construction challenge (although it could be addressed in stages). Large-scale infrastructure investment in this ‘quiet corner’ of the country might be thought out of the question, but is it?

Interestingly, there is currently underway construction of a major piece of infrastructure in East Lincolnshire. This is the Viking Link, the world’s biggest international electrical grid connector, linking England with Denmark, on which construction started in July 2020. It is having a highly visible impact on the landscape though the construction period, although the cables will be buried when the project is complete.

“Viking Link is a 1400 MW high voltage direct current (DC) electricity link between the British and Danish transmission systems connecting at Bicker Fen substation in Lincolnshire and Revsing substation in southern Jutland, Denmark.

The project involves the construction of converter sites and installation of onshore and offshore cable in each country. These are then connected to the substations.

Viking Link will be approximately 765 km long and will allow electricity to be exchanged between Great Britain and Denmark.

The interconnector will enable the more effective use of renewable energy, access to sustainable electricity generation and improved security of electricity supplies. It will benefit the socio economy of both countries.”⁹

9. <https://viking-link.com/>



Source: <http://viking-link.com/media/1148/two-sections-of-purple-route-corridor-confirmed-with-map.pdf>

After making land-fall having crossed the North Sea, Its route across eastern Lincolnshire is shown above (coincidentally, a mauve line again).

Laying a high voltage cable such as this underground is not without controversy and its construction requires the creation of substantial temporary access roads. It runs parallel to and inland of the existing railway between Skegness and Boston. It crosses the Boston-Sleaford railway and ends close to the Spalding-Sleaford railway line where it connects into the existing national power grid.

The southern end of the Viking Link is where a short new rail link (Boston–Spalding) would be of great value.

In general, power cables in proximity with railway lines are to be avoided because of electrical interference issues. This just might be a relevant factor if an East Lincolnshire Railway line re-instatement is ever to be contemplated, because with the Boston–Spalding railway having been converted into part of the A16 road since closure, Boston–Spalding is—in rail terms—a missing link. A candidate replacement alignment would be to the west of the old alignment (now A16), where a new short rail link between two surviving lines (Spalding–Lincoln and Spalding–Boston) could be used to re-establish the broken connection.

Running roughly parallel with the South Fort Foot Drain between Swineshead Bridge and Donington, this revised alignment would be longer than the original alignment between Boston and Spalding but it might prompt re-creating a station to serve the small town of Donington, birth-place of explorer Matthew Flinders.

8.0

A rail re-connection into Grimsby?

If that's the southern section of a full route re-instatement (a 4-mile link across flat well-drained fenland with no properties affected and only the new Inter-Connector for company) the route at the other end of the line—from Grimsby to Louth—14-miles long and straight, is partly in use as a heritage line (the **Lincolnshire Wolds Line**). But its full re-instatement brings problems at either end.

The Grimsby problem is this: in 1998, a road was built exactly on the former rail alignment. It is called Peaks Parkway and was opened in 1998. It cuts through (as the railway did before it) a residential area, which needed a sound-proofing wall, made of brick along part of its route for about 1 mile, as shown in the photograph below.

Peaks Parkway is the kind of development that cannot readily be reversed. Tunnelling this section for a reinstated rail line would be an option, but no doubt expensive (with a cut and cover construction approach disruptive both to road users and residents).¹⁰ And reaching Grimsby station itself entails a further short section of route and this would likely need a comprehensive change of the surrounding area.

10. One faint possibility arises for a cost-effective solution. After completion of the road conversion scheme, land between the residential property boundaries and the noise reduction wall was given to the property owners on a 'peppercorn' lease to allow them to incorporate it within their property curtilage. It was anticipated in the design of the road that there would be no frontage access to the new road along the entire length between the New Waltham roundabout and Victoria Street. So, just possibly, a single track could be established in this narrow strip of land. New road level crossings would be needed—and the rail safety authorities would probably reject such an approach.

Photo: Ian S / Looking North West / CC BY-SA 2.0

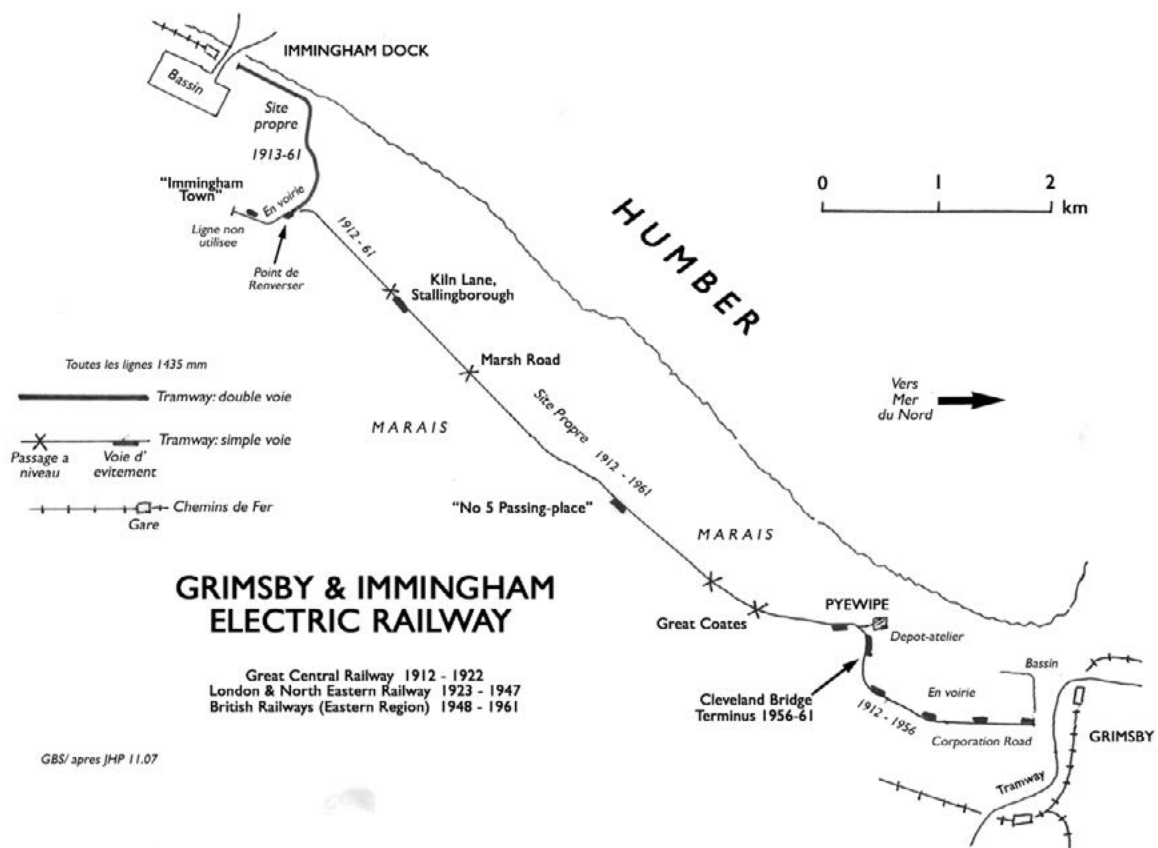


Light Rail Transit and Lincolnshire's interurban trolley line

In such situations, thoughts might turn as an alternative solution to light-rail technology which can be better fitted into a highway environment. If a traffic lane along Peaks Parkway could be allocated for buses/light rail that would solve the problem and would allow local stops to serve the residential areas of Weelsby and Wellow. Of course use of Light Rail Transit technology would make the idea of through services onto the East Coast Main Line impossible. But with Grimsby set to regain its London rail service via Lincoln, this ceases to be a valid objective.

North east Lincolnshire happens to be the site of a rare example of a light rail transit technology application which although uncommon in Britain, was (briefly) prevalent in the USA; the interurban. There was an electrified interurban line here, linking Grimsby and Immingham (see map below). It closed in 1961.

Light Rail, evidently usable in an inter-urban as well as a purely urban context, could be used here. It could link Grimsby and Louth and probably onwards to Mablethorpe. At Louth, it would be possible to access the original station site area or even operate on-street towards the town centre or bus station—options that, as we will see—don't exist with conventional railway technology. But in truth, there are many more deserving places much larger than Louth that merit consideration for LRT investment.



Lincolnshire's one-time Interurban LRT system

Source: Geoffrey Skelsey / Own work / CC BY-SA 4.0,

<https://commons.wikimedia.org/w/index.php?curid=36386571>

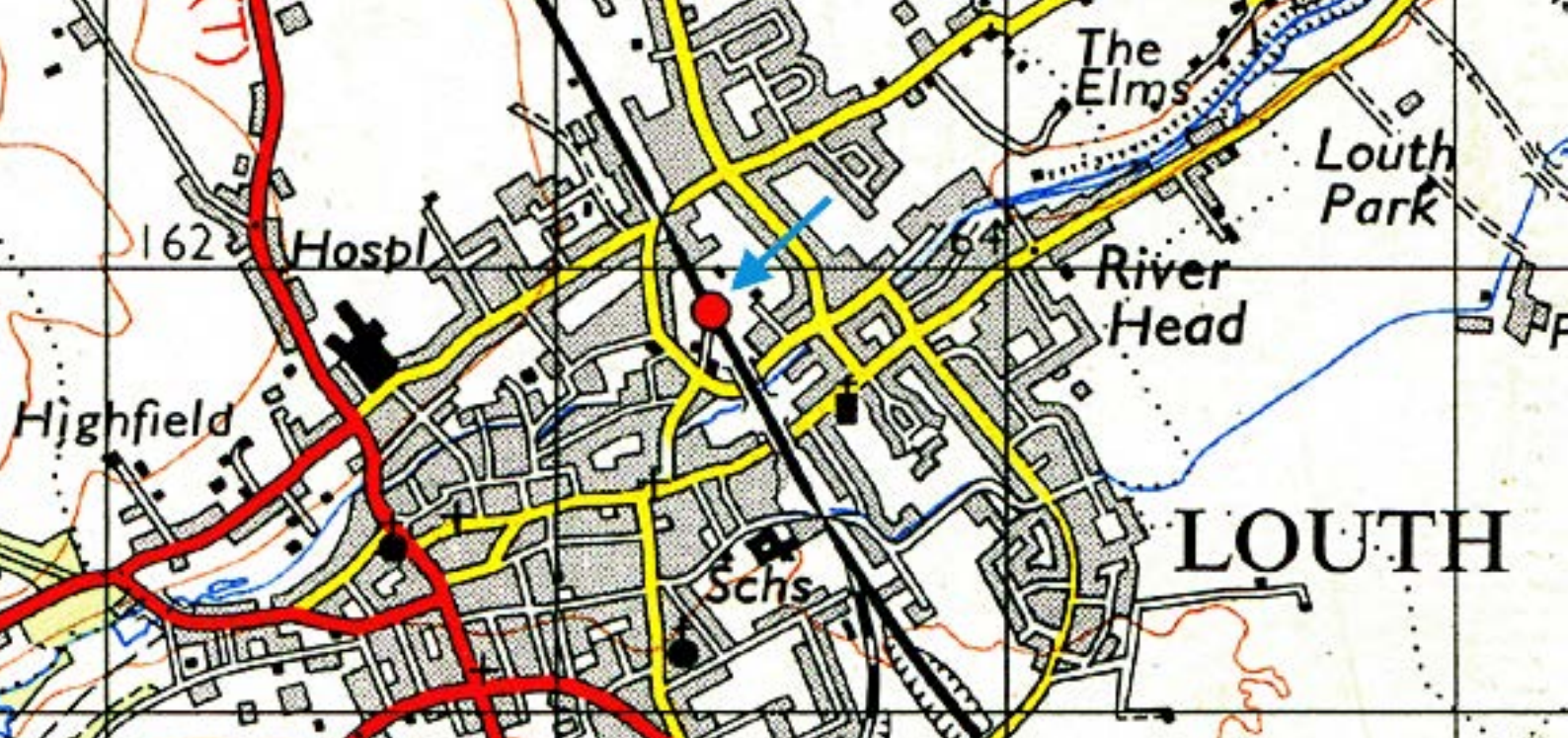
9.0 *South from Louth*

The central section of the possible re-instated East Lincolnshire Railway route that is missing is from Louth to Firsby, the subject of the appeal for funding from DfT. Here, it either:

- » has to be faced that a new Louth station would need to be located on the southern periphery of the town, making the opportunity to extend the line later across Louth to reach Grimsby problematic or
- » if a more central station site is preferred, this could only readily be linked to the railway track-bed available northward to or towards Grimsby.



Louth Station today
Nigel Thompson / Louth railway station (site), Lincolnshire / CC BY-SA 2.0



Source LouthBardney.blogspot.com

The extract from a pre-1970 OS map illustrates the problem. The station site is arrowed. Southwards, the railway line was elevated, crossing over the Louth canal and two urban roads. Since closure, there has been substantial residential development around the station, and the original building is now converted to various forms of residential apartment. Re-establishing this rail route to the south is not realistically possible.

To the north is a different matter. Across a low density light industrial area, is a level crossing (with the adjoining signal box (Louth North) extant and re-purposed) and beyond the line northwards extends unencumbered across open country. If this line was ever to be re-opened, a new Louth station could be built either north or south of the level crossing.

A line southwards from a northside Louth station to Firsby would need to arc around the east side of Louth to reach the old track-bed. Of course, a lower cost solution could be created, as noted, with a new station site somewhere on the southern edge of the town. This need not preclude ever extending northwards, and it defers contemplating the value and cost of a new route around the east side of Louth.

The line southwards would also serve Willoughby and Alford, possibly on slightly revised alignments. It would re-join the existing Skegness–Boston line to the south of Firsby, where a useful station could be provided to act as a railhead for the surrounding area, including the town of Spilsby.

Re-instatement costs may be higher than expected because of the presumption against creating new highway level crossings on today's rail network. East Lincolnshire, unsurprisingly perhaps, has a rail network with many level crossings (Lincolnshire's rail network as a whole has 80 of them).



Louth North Signal Box and rail right of way
Photo: Greengauge 21

10.0 Conclusions

NE Lincolnshire: Grimsby and Cleethorpes

East Lincolnshire has one major urban area—Grimsby-Cleethorpes. The greatest level of social immobility is to be found here in NE Lincolnshire, centred on Grimsby.

Fortunately, the wider connectivity challenge is soluble here. Fast longer distance express rail services west to Sheffield and Manchester¹¹ will soon be complemented by fast services direct to London (from 2022). And these service will be electrified (or operated by hybrid battery-electric trains) soon enough.

The virtues of a fully re-instated direct line from Grimsby to London via Louth and Boston is weaker in these circumstances. True such a route could provide many useful intermediate town to town connections. But these are unlikely to provide much of an economic stimulus to Grimsby and North East Lincolnshire given the longer distance services it is now intended to operate over other routes. An express bus service between Grimsby and Louth using the A16 (see conclusions below) is likely to represent a more cost effective approach.

True, for now Government is hanging on to its 'RIS2' major highway spending programme but it's facing some tough legal challenges. It is increasingly hard (we'd say impossible) to reconcile a highway spending programme based on accommodating ever increasing traffic levels with the need to reduce carbon emissions. It's not that capital spend on roads should be ended: it's that the road sector objectives and schemes need to be changed. The aims now must be to dramatically Improve safety levels and to provide segregated space for walk and cycle travel. Rural roads without cycle lanes and safe footpaths are unsafe unless restricted to very low traffic speeds.

11. Because of the changes that are being made to the timetable over the critical Castlefield corridor section of the national network in central Manchester, there is now a possibility that the Cleethorpes/Grimsby Trans Pennine Express (TPE) service will be extended to operate to/from Liverpool. True, local stakeholders may prefer to keep the original connection to Manchester Airport, but this has been dropped and an hourly direct connection to Liverpool, as well as Sheffield and Manchester is a bonus. But it's true that TPE services take 2hrs 30 min to cover about 110 miles.

Rural East Lincolnshire

(i) *Highways and private transport*

To access education and employment opportunities across a rural area like East Lincolnshire for many, probably most, residents today means using a car. Bus services are thin, taxis hard to come by, and Uber is largely absent. Rail, as we have seen, is also largely unavailable. Distances are generally too long for walk or cycle options. The net result for a lot of people is isolation and dependence on others.

Car/van ownership in East Lincolnshire is typical of a rural area (East Lindsey, the relevant local authority area covering Louth and Skegness) is ranked 130th out of 348 authorities with 0.57 cars/vans **per capita**).¹² Ownership rates are much lower in North East Lincolnshire which is ranked 276th with 0.44 cars/vans **per capita**.¹³ Vehicle ownership is relatively low in both urban NE and rural E Lincolnshire.

Ignoring the **distribution** question in transport policy—as has been common practice in transport appraisals over the years—means that questions of hardship and dependence can be overlooked. Highway scheme appraisals in effect ignore questions of people using modes other than private car. The resulting inequities are one reason why we believe that the connectivity challenge this report has set itself should not be focussed on highway investment in the way that such programmes have been formulated historically.

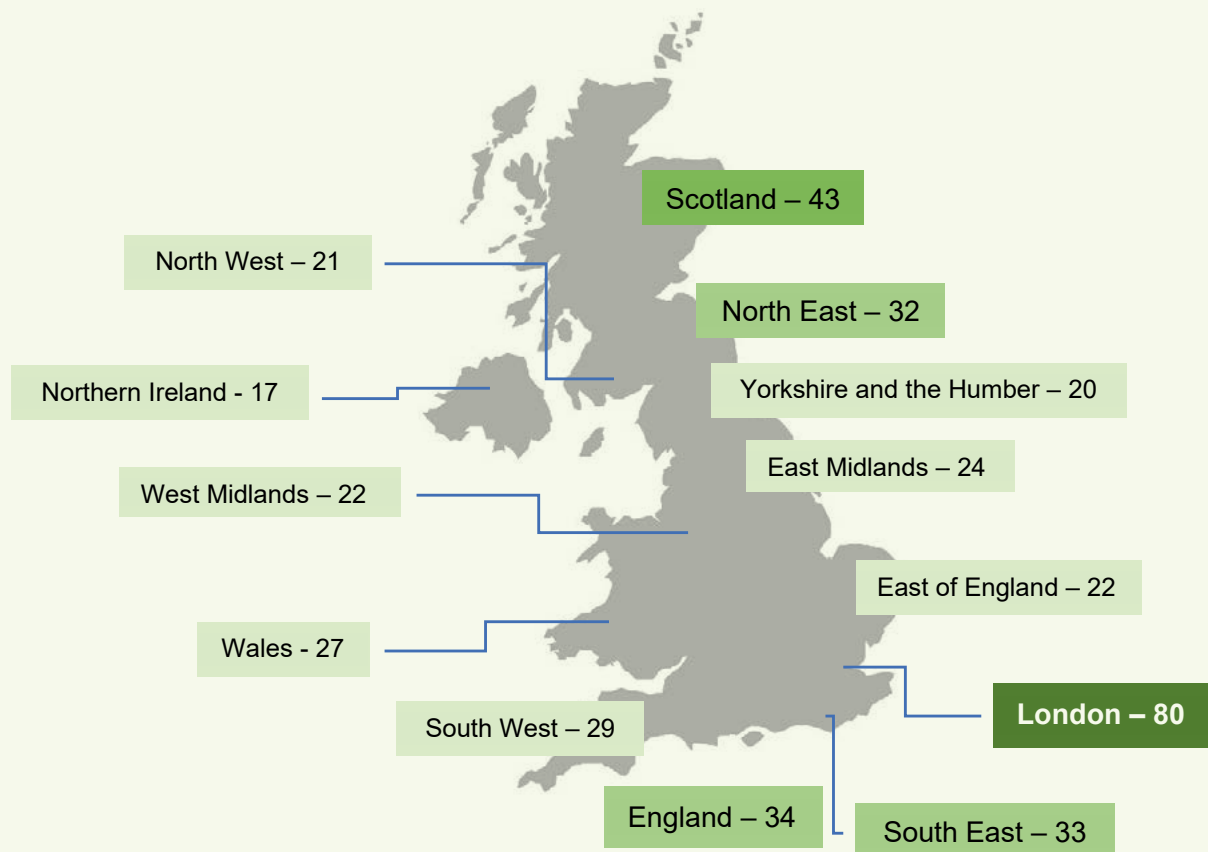
But this is only one reason. There are two more:

- » Lincolnshire's poor road accident statistics—which suggest that highway schemes that prioritise improving safety rather than speeding up traffic and adding capacity to improve connectivity should be prioritised
- » The challenge of de-carbonising transport in a car-dominated rural area.

On de-carbonisation, the Transport Select Committee and a recent Competition and Markets Authority report have both expressed some concerns. The uneven pattern of charge-point provision is illustrated below. Note that the English Midlands and North (aside from the North East) in general is under-provided.

¹². Car/van ownership rates taken from the 2021 census

¹³. Nearly all rural authorities are ranked in the top half of local authorities across England & Wales, with urban authorities, where other travel options are more likely to be available, are in the bottom half.



Chargepoints per 100,000

Source: CMA Report June 2021 Final Report on the *Electric Vehicle Charging Market*, Competition and Markets Authority 23rd July 2021

“Targeted interventions are necessary to kickstart more investment and unlock competition ... [Including in] ... remote areas, where the commercial case for investment is very weak, which means there’s a risk these will be left unserved.”¹⁴

Parliament has noticed the problem. Transport Select Committee Chair Hugh Merriman said that:

“Unless the National Grid gains more capacity, consumer behaviour will have to alter so that charging takes place when supply can meet the additional demand. The alternative will be blackouts in parts of the country. We ... cannot have a repeat of the broadband and mobile ‘not spot’ lottery which would mean those in remote parts cannot join the electric vehicle revolution.”

The Committee’s report questions whether the Government’s transport decarbonisation plans, are enough to deliver the public charging infrastructure needed across all regions of the UK. Drivers who live in rural or remote areas [...] are at risk of being left behind, according to their report.¹⁵

Relying on electric vehicle adoption for a sustainably better connected future represents a clear risk for places like East Lincolnshire.

14. <https://www.gov.uk/government/publications/electric-vehicle-charging-market-study-final-report/final-report>

15. Hugh Merriman, Chair, Transport Select Committee, July 2021—see Select Committee report, [Zero emission vehicles](#)

(ii) Rail

The case for the Louth–Firsby rail scheme rests on the wider (as well as local) benefits it could bring if it is combined with a new chord to re-instate a rail connection between Boston and Spalding.

Rail re-openings only make sense if a suitable operating pattern can be developed. In this case, the hub station at Peterborough can be used as a gateway not only to the whole of East Lincolnshire, but the economics of the existing Nottingham–Skegness line can be improved too.

A suitable rail service pattern could conveniently interface a new north-south Louth–Boston–Peterborough service with the existing east-west Skegness–Nottingham service, with trains from both routes sharing the existing railway between Firsby and Boston. Interchange between the two would be made at Boston—a new mini-hub in the national rail network.

The pair of services would be:

- » Skegness–Wainfleet–Boston–Sleaford–Grantham–Nottingham and
- » Louth–Wlloughby–Alford–Firsby–Boston–Donington–Spalding–Peterborough (and thence potentially, London KX).

Such a pair of services opens up travel opportunities through the rail hub at Boston, for such flows as Louth–Nottingham and Skegness–London.

The two new lines in Lincolnshire would then have a much wider inter-regional as well as local connectivity gain, offering access to higher education, employment opportunities and health facilities for much of Eastern Lincolnshire.

A problem to be faced is the need to shift rail away from using diesel traction. The suggested new service would use the existing Spalding–Peterborough line which, as a major north-south rail freight route must be a priority for electrification. How much of the remainder of the line should be electrified would remain to be seen. But intensifying the train service over the Firsby–Boston section of line can only help to further the case for electrification.

In practice, a solution that relies on train fleets that would be dual-equipped to operate under battery power and draw electrical power when available could be a good solution.

The inconvenient truth is that lengthy branch rail lines that cannot justify electrification at all (and Nottingham–Skegness is an 80-mile route, beyond the range of battery power on a there-and-back basis) have no long term future in a decarbonised world.

While we cannot see the case for attempting to re-instate the East Lincolnshire Line 50 years after it closed, we can see there is a case to create two lines that would transform connectivity for Louth, Skegness, Boston and their surrounding towns.

The new rail services would complement the InterConnect bus links that provide connections between, for example, Louth and Mablethorpe and Mablethorpe and Skegness. Ensuring good interchange and through ticketing between these bus services and trains at key centres such as Louth and Boston needs to be part of the thinking about rail service development. And these hubs in the network would also be a good location to locate charging points for electric cars.

(iii) *An express interurban bus alternative*

The rail-based option will need to be tested against lower cost alternatives. The express interurban bus element in the integrated solution outlined for rail could, after all, be expanded. Journey times and service reliability wouldn't be so good as with rail, but an equivalent approach which would entail no new railway line construction would comprise a Louth–Boston–Spalding express bus, interchanging with the east west Nottingham–Skegness trains with timed connections at a multi-modal hub at Boston and an improved hourly interval rail service onwards from Spalding southwards.

As noted the Spalding–Peterborough line should be a strong candidate for electrification because of its freight potential, and if so it could also accommodate an extension of Thameslink services from London and the South East to Spalding where interchange would be made with a Spalding–Boston–Louth–Grimsby express bus using the A16.

This option would again be reliant on the availability of integrated fares and needs to overcome decades of neglect of inert-modal public transport service integration. It also begs a question about the availability of suitable zero-carbon traction systems for longer-distance bus operation.

II.O

Recommendation

We recommend putting in hand the studies to compare and select the best of the two ways identified here to use electrified net zero carbon public transport to meet East Lincolnshire's future connectivity needs.

