

1. Introduction

- i. CPRE is the countryside charity that campaigns to promote, enhance and protect the countryside for everyone's benefit, wherever they live. CPRE champions a living countryside with thriving sustainable rural communities, and high quality sustainable transport connections are an essential part of this vision. We welcome the government's decision to consult on its 'Transport Decarbonisation Plan'.
- ii. To date the transport sector's record on decarbonisation has been little short of disastrous. The transport sector, including international aviation and shipping (IAS), has actually increased its carbon emissions since 1990, in contrast to every other sector. Total transport emissions accounted for 34% of the UK's greenhouse gas emissions in 2018ⁱ. The urgent need for rapid action to bring down transport greenhouse gas emissions could not be clearer.
- iii. Many of the policies we set out in our response to this consultation would deliver enormous co-benefits in improved health, reductions in air and water pollution, tackling loneliness, improving access to education, and would contribute to the levelling-up agenda by supporting thriving communities in every region of the country. Nevertheless, the action needed to decarbonise the transport sector will require political resolve, changes in values, and very significant public funding. Any transport decarbonisation plan that seeks to avoid making those necessary commitments will fail.

2. Summary of CPRE's proposals

- i. **A legally binding national transport carbon budget and reduction pathway.** It is essential that the Department for Transport sets a binding CCC compliant single national carbon budget and reduction pathway for the transport sector, back cast from 2045 with intermediate milestones
- ii. **A transport hierarchy that prioritises sustainable and active travel.** The government must implement a transport hierarchy approach to guide all future transport investment decisions towards traffic reduction.
- iii. **Constraining demand.** It is essential that the DfT's transport decarbonisation plan pursues radical reductions in the total demand for travel by reducing the need to travel.
- iv. **High quality public transport for all.** More and higher quality public transport options needs to be provided to encourage a modal shift away from private car travel.
- v. **Reducing car travel through road user charging.** As active travel and public transport opportunities are promoted as a comprehensive alternative to private car travel, the government should implement a new system of road user charging to reflect the true cost of traffic emissions.
- vi. **Low carbon transport planning.** There must be a shift to low carbon transport planning for all developments locking sustainable travel into our day-to-day lives.
- vii. **Tackling IAS emissions.** IAS emissions must be incorporated in the transport carbon budget adopted by the DfT and it is essential that they are targeted for progressive reduction.

- viii. **Decarbonising freight.** The government must promote as much freight as possible to change from road haulage to electrified rail services, and encourage shorter more resilient supply lines of all goods that can be produced domestically.

3. A binding carbon budget and reduction pathway

- i. The government's Transport Decarbonisation Plan (TDP) will only serve a functional purpose if it sets out a credible and binding carbon budget that the policies within the plan are intended to work towards. As has already been referenced, total transport carbon emissions are still greater than their 1990 level and are accounting for a growing proportion of the UK's overall emissions.ⁱⁱ Without greater action transport emissions will account for an entirely disproportionate amount of the carbon budget in a net-zero 2050 scenario. Aviation alone could potentially account for up to 57% of residual emissions with huge implications for other sectors of society.ⁱⁱⁱ Therefore, CPRE calls for the TDP to be based on a nationally binding carbon budget for transport emissions which not only gives a target that credibly contributes towards rapid action towards net-zero emissions, but also provides reasonable space for other sectors' residual emissions in the net-zero scenario. Furthermore, CPRE supports the CCC's recommendation that IAS emissions be formally included within the UK's net-zero target^{iv} and we call upon DfT to make the same decision when establishing a transport carbon budget to guide the TDP.
- ii. In 2018 the Committee on Climate Change (CCC) reported to Parliament that the transport sector was "now significantly off-track from the cost effective path of the committee's fifth carbon budget assessment", and it is clear that the necessary decarbonisation pathway for the transport sector will be steep.^v Since the climate emergency is driven by the cumulative impacts of greenhouse gas emissions, it is essential that total transport carbon emissions are brought down as rapidly as possible, especially over the coming decade. To measure the success of the TDP it is, therefore, essential that the DfT accompanies the final target carbon budget for the transport sector with a similarly binding national pathway setting clear milestones between 2020 and net-zero. As with the carbon budget the decarbonisation pathway must be measured against total transport emissions and include IAS. Once the transport decarbonisation pathway has been formally adopted, the DfT should incorporate it as an overriding factor within all future transport investment decisions. Where the net-carbon emissions of a transport policy does not match the direction of travel of the decarbonisation pathway, i.e. if a project is predicted to increase transport carbon emissions over its lifecycle, it should not be granted funding.
- iii. To maximise the value of a national carbon budget for total transport emissions and an associated decarbonisation pathway, the government should develop both in such a way that they can provide a framework to inform the decision making of sub national, sub-regional and local transport authorities. This can be straightforwardly achieved if the DfT measures the national carbon budget, decarbonisation pathway, and interim milestones, as a percentage of total transport emissions in 2020, as well an overall tonnage of carbon equivalent emissions. Local transport authorities and sub-national transport bodies can then move away from unsustainable 'predict and provide' past practice, and instead use the national pathway to set their own targets for transport decarbonisation bringing decision making at every level into line with the TDP.

4. A functional transport hierarchy that prioritises active travel

- i. The current allocation of funds to transport projects in this country is largely inversely related to their contribution to decarbonisation. For example, in 2020 the government has committed to spending £27.4 billion over 5 years^{vi} for a Road Investment Strategy that is estimated to negate 80% of potential carbon savings from electric vehicles on the Strategic Road Network^{vii}, while investing less than one-fifth of that amount in the far lower carbon modes of cycling and buses.^{viii} The TDP should reverse this situation by implementing a functional transport hierarchy to guide future transport investment decisions.

- ii. A transport hierarchy adopted by the TDP, should follow the framework set out by the Institute of Mechanical Engineers, with a focus on minimising demand and investing in modal shift.^{ix} The DfT should follow the transport hierarchy to divert funding away from high carbon modes of travel such as private cars and commercial vehicles, towards sustainable options, with an emphasis on active travel modes such as walking and cycling including e-bikes. Where necessary, car club vehicles, which operate on alternative fuels, should be supported as an alternative to private cars. Currently the majority of transport funding goes towards supporting the existing transport system, which is fundamentally incompatible with a credible TDP, based as it is on massive private car use. Under the strategic direction of such a hierarchy it would become possible to allocate money into a fundamentally different transport system. An immediate first step in following a sustainable transport hierarchy must be to cancel the £27.4 billion RIS2 programme and redirect this funding towards low carbon alternatives, such as promoting the widespread adoption of e-bikes which could replace many car journeys, especially in rural areas, cutting up to 30 million tonnes of CO2 per year.^x
- iii. As with the carbon budget and decarbonisation pathway mentioned above, the transport hierarchy should be made applicable at every level of transport decision making. For local transport authorities in rural areas, a mandate to follow a clear transport hierarchy would serve to guide the re-allocation of funding towards local Walking and Cycling Investment Plans, and prioritise space for bus lanes, segregated cycleways, Quiet Lanes and greenways, and safe and pleasant footpaths when planning new developments.
- iv. CPRE also agrees that the DfT's transport appraisal system must be urgently reviewed to amend the flawed carbon assessment of road schemes, which currently measures additional emissions from road building projects against total emissions from the whole economy to make them appear inaccurately insignificant.^{xi}

5. Constraining demand and reducing the need to travel

- i. It has now been well established that electrification alone will no longer be sufficient to achieve the scale of reductions in transport carbon emissions in the timeframe necessary to meet the obligations of the UN Paris Climate Agreement. Research by the Tyndall Centre suggests that even if all new vehicles are ULEVs by 2035 there will have to be a 58% reduction in car mileage from 2016 levels by that date in order to meet the 'well below 2°C pathway'.^{xii} Consequently, CPRE is calling on the DfT to include a clear strategy for dramatically reducing the demand for travel within the TDP. We believe that in order to constrain demand, the TDP should set out cross-departmental measures for reducing the need to travel by encouraging mixed use self-sustaining communities, walkable 15-minute neighbourhoods and more home working. This should be incorporated within the investment in infrastructure across the country as part of the government's wider levelling-up agenda.
- ii. Reducing the need to travel is particularly important in the context of decarbonising the rural transport sector. In order to take a strategic approach to this issue the government must commit within the TDP to reversing the long-term trend of centralisation of key services and facilities that has left rural residents with no choice but to travel many miles to larger conurbations on a day-to-day basis. For example, between 2000 and 2017 the number of rural Post Offices declined by 31 per cent, and only 65 per cent of rural residents lived within 4 km of a GP surgery.^{xiii} Half of the country's rural population now live in areas with the poorest access to services based on minimum travel times.^{xiv} In order to deliver substantial reductions in rural transport carbon emissions it is imperative that the TDP set out a clear cross-departmental plan for re-siting essential services such as schools, social care and medical facilities, as well as opportunities like libraries and community leisure facilities within rural communities so that residents can reach them by walking or cycling. In addition, the TDP should consider the role community hubs can play in rural areas by providing a public space for many activities that reduce transport demand. For instance, rural community hubs can include local office space for remote workers thereby reducing the need to commute, a drop-off point for deliveries allowing residents to replace 'last mile' van journeys with active travel, and a site of intermodal transport connections allowing cyclists to securely leave bikes and pick up a local bus route. Similarly, safe cycle parking should be required at all rail stations.

- iii. The TDP must also set out clear policies to reduce the need to travel by supporting the trend towards home working that has been fast-tracked by the covid-19 lockdown. This is another area where attention needs to be given to transport demand in rural communities. The latest ONS figures prior to the Coronavirus lockdown found that 26% of people were working part or all of the time from home, and the experience of the covid-19 lockdown has shown how significantly that figure could grow.^{xv} Reducing the need to commute would eliminate many unnecessary car journeys and reduce carbon emissions by millions of tonnes per year - but in order to realise the full potential of this change it is essential that the government invests in the necessary infrastructure for all communities. In 2018 nearly a quarter of premises in rural areas could not access a superfast broadband connection (30 Mbps).^{xvi} To achieve radical decarbonisation of the rural transport sector by supporting home working, the government must invest in ensuring that all premises have access to the necessary high quality broadband to participate in the digital economy.

6. High quality public transport for all

- i. Given that over half of carbon emissions from car travel are due to journeys under 25 miles in length, there is enormous potential to achieve transport decarbonisation through modal shift of local day-to-day trips.^{xvii} It is estimated that if drivers switched just one car journey a month to bus or coach instead, this would result in one billion fewer car journeys and a saving of 2 million tonnes of CO₂.^{xviii} Therefore, it is essential that the TDP commits to achieving modal shift by delivering high quality, reliable, convenient and affordable public transport connections for every community.
- ii. Many rural communities in England are extremely poorly served by public transport, and the TDP must commit to addressing this issue urgently in order to provide everyone with an alternative to regular private car travel. It has been estimated that less than half of the residents of smaller rural settlements have access to any regular bus service,^{xix} and CPRE has previously highlighted the growing phenomenon of rural 'transport deserts' where whole communities have been left with completely inadequate public transport options to support any alternative to private car use. In research published earlier this year, an investigation for CPRE found that more than half of small rural towns across the south west and north east (population below 30,000) were already functionally transport deserts or were at serious risk of becoming one.^{xx}
- iii. Since reliable bus routes within walking distance can service the widest range of journeys, including leisure and visitor travel to the countryside, whilst also providing the regular timetabling that ensures convenience, it is essential that the TDP contains a strong commitment to increasing the number of rural bus services. In order to deliver the quality of public transport connections necessary for a dramatic modal shift away from car travel, we will need greatly expanded services appropriate for low population density communities. In many rural areas this will require a similar standard of bus service to Zurich, where every surrounding community of more than 300 people is guaranteed an hourly bus service running seven days a week from 6am to midnight.^{xxi} In other areas, it may mean bespoke flexible services such as Lincolnshire Connect, which saw small vehicles servicing rural settlements and connecting with larger ones on strategic routes.
- iv. The DfT must accept that low density rural communities will never be able to support a commercially viable network of public transport on the scale necessary to provide a universal alternative to private car travel, and should commit to investing in a long-term ring-fenced rural transport fund to support high quality public transport connections for every rural community.
- v. To support modal shift to low carbon transport for longer distance journeys the TDP should also set out a vision for a significantly expanded rail network, including light rail, and tram-trains, building upon the government's commitment to reverse the Beeching cuts. Currently only 44% of the population lives within a twenty-minute walk of a railway station.^{xxii} The need for greater rail connectivity is particularly acute in rural areas, as was highlighted by CPRE's research on transport deserts, which found that two-thirds of small towns across the north east and south west of England have no train station connecting them to the national rail network.^{xxiii} To maximise the potential for modal shift on longer journeys the government should rapidly

roll-out a project of rail reopening's in rural communities, which at a conservative estimate could bring over half a million people within walking distance of a train station.^{xxiv}

- vi. Finally, since the policies necessary to deliver successful decarbonisation through modal shift will require very significant public funding, there should be a simultaneous commitment to greater integration of public transport options. Where public transport is funded by the government, the power to strategically plan services should also lie with the government. Local authorities will need greater powers of regulation and coordination, such as single bus franchising as benefits London. Since convenience is a vital element in ensuring that car drivers switch to public transport, public authorities should have the power to ensure that bus routes and train timetables are coordinated to allow seamless single ticket door-to-door journeys.

7. Reducing car travel through road user charging

- i. The TDP must deliver against traffic reduction targets in line with a credible decarbonisation pathway through disincentivising private car travel. As has already been set out, road building programmes such as RIS2, which are known to induce traffic, should be cancelled.^{xxv} However, the TDP must take positive action to reduce private car travel, and CPRE believes that the DfT should commit to disincentivising traffic through a comprehensive new system of road user charging.
- ii. There is clear evidence that eco-charges are an effective tool for influencing traffic levels as can be seen by the impact of the fuel duty freeze since 2011, which it has been estimated increased traffic by 4%, led to an additional 4.5 million tonnes of CO2 emissions, and contributed to 260 million fewer public transport journeys.^{xxvi} However, since the government has already committed to banning ICU vehicles, fuel duty will soon cease to be the correct method for disincentivising private car travel. Research has found that unless a new way to pay for road use is introduced to replace fuel duty, traffic on our roads will increase by an additional 30%.^{xxvii}
- iii. Following the expansion of public transport and active travel, road user charging should be developed to replace the revenue from fuel duty, and designed using the latest technology to reflect the true cost and impact of individual journeys. Under such a system, drivers should be charged on a per mile basis with the rate varying depending on distance travelled, the vehicle's emissions, local levels of congestion and the availability of local transport alternatives.^{xxviii}
- iv. Transport experts have estimated that road user charging in urban areas could raise approximately £8 billion a year across the country, with a further £5 billion every year from road user charging on the Strategic Road Network.^{xxix} Targeted charging would also help address persistent failures to achieve Air Quality standards on congested traffic corridors and AQMA's. When combined with the re-allocation of money for projects that are fundamentally incompatible with a TDP, such as RIS2, road user charging could deliver the funding necessary to cover the investment proposals within this submission.

8. Low carbon transport planning

- i. In order to deliver the comprehensive and rapid decarbonisation of transport in this country required by the government's legal and international obligations, it is essential that the TDP takes a holistic approach and presents solutions for all of the elements that have produced such high carbon travel to date. Therefore, CPRE calls on the TDP to set out a vision for low carbon transport planning for all developments, which locks low carbon sustainable travel into our day-to-day lives.
- ii. The current National Planning Policy Framework (NPPF) is not strong enough in this regard and needs urgent revision so that there are much better links between large new development locations and provision for public transport, walking and cycling. The effect is that a clear majority (75%) of large new housing

developments built in the past 10 years were rated 'mediocre' or 'poor' in a January 2020 joint study by CPRE and University College London.^{xxx} A further report issued in June 2020 by Transport for New Homes found that many proposed new garden communities supported by Government funding are likely to be oriented around new or expanded roads and so are likely to perpetuate this vicious cycle of poor quality, high carbon development.^{xxxi} In the future, car dependent housing developments that are remote from facilities and do not have public transport obligations in their S106/CIL payments should be rejected as unsustainable.

- iii. The TDP should set out a vision for planning regulations that promote new housing to be built at high density and with suitable space for home workers.^{xxxii} Furthermore, traffic free town centres must become the norm rather than the exception, and all new developments should be designed with the built in provision of wider, safer, segregated pedestrian and cycling routes, good public transport alternatives from day one, and mobility opportunities for the disabled. Rural lanes should be subject to enforced 40mph speed limits, with 20 mph limits through all villages and town centres. As far as possible, networks of quiet lanes and greenways should be planned to connect all settlements within the countryside.
- iv. The TDP should also call for planning regulations to be updated to discourage out-of-town facilities. In 2013 it was estimated that 76% of approved retail floor space was located out-of-town.^{xxxiii} To lock-in low carbon transport choices the TDP should call for facilities to be sited within active travel distance of the communities they are intended to serve.

9. Tackling IAS emissions

- i. In 2018 IAS greenhouse gas emissions accounted for 26% of total transport emissions and the TDP must target this sector for significant reductions in order to deliver on net-zero targets.^{xxxiv} As with car use, demand for air travel must be constrained and reduced.^{xxxv} Offsetting and technological innovation will not deliver IAS decarbonisation alone, the total number of international aviation and shipping journeys must fall.
- ii. As a first step towards constraining and reducing IAS demand there should be a moratorium on airport expansion across the country. In addition, internal flights should be phased out in line with the carbon reduction pathway.
- iii. In light of the evidence that a majority of flights abroad are taken by just 10% of English residents CPRE believes that the TDP should commit to reducing demand for IAS by implementing significantly higher rates of taxation charged on frequent fliers.^{xxxvi} In so far as the government wants to continue to promote overseas holidays as a regular part of our lifestyles this will have to be accommodated through changes to annual leave entitlements and holiday patterns which allow slower travel on low carbon public transport alternatives to international aviation.

10. Decarbonising Freight

- i. The TDP should set out a vision for reducing long distance goods transportation by promoting shorter more resilient supply lines. In particular, food miles should be dramatically reduced by replacing international commodities with domestically and, ideally, regionally and more locally produced foods. The forthcoming National Food Strategy is an important opportunity to promote, encourage and support this shift. Air freight of food carries a high carbon penalty: emissions of 1.596 kg CO₂-e per tonne km and 0.7272 kg CO₂-e per tonne km for short and long-haul international flights respectively compared to 0.015 down to 0.005 kg CO₂-e per tonne km for a general cargo ship and rail.^{xxxvii}
- ii. The TDP should also set ambitious targets for the use of coastal shipping, rivers and canals in the movement of freight. Research has shown that increasing coastal shipping as an alternative to HGVs on the road network would achieve significant reductions in emissions based on average emissions for road freight of 62gCO₂/tonne-km and for short sea shipping of 16gCO₂/tonne-km.^{xxxviii}

- iii. Additionally, the TDP should promote a “logistics-based” approach to distribution of freight in order to integrate the delivery of goods to their final destinations, for instance so that long distance freight carried by electrically powered rail or short sea shipping as appropriate is then integrated with local bulk delivery using smaller electric vehicles to local collection points. This approach has been shown to deliver significant carbon savings on freight transportation for Tesco who are set to save an estimated 26,000,000 lorry miles every year by switching to an intermodal delivery system.^{xxxix}

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11. Endnotes

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- ⁱ <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2018>
Tables 3 and 9 show that total UK greenhouse gas emissions including all international aviation and shipping bunkers was 496 MtCO₂e and total transport emissions were 169 MtCO₂e.
- ⁱⁱ <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2018>
- ⁱⁱⁱ <https://policy.friendsoftheearth.uk/insight/net-zero-carbon-budget-whole-transport-sector>
- ^{iv} <https://www.theccc.org.uk/publication/letter-international-aviation-and-shipping/>
- ^v <https://www.theccc.org.uk/wp-content/uploads/2018/06/CCC-2018-Progress-Report-to-Parliament.pdf>
- ^{vi} <https://www.gov.uk/government/publications/road-investment-strategy-2-ris2-2020-to-2025>
- ^{vii} <https://www.transportforqualityoflife.com/u/files/The%20carbon%20impact%20of%20the%20national%20roads%20programme%20FINAL.pdf>
- ^{viii} <https://www.gov.uk/government/news/major-boost-for-bus-services-as-pm-outlines-new-vision-for-local-transport>
- ^{ix} <https://www.imeche.org/docs/default-source/1-oscar/reports-policy-statements-and-documents/transport-hierarchy.pdf?sfvrsn=0>
- ^x https://www.creds.ac.uk/wp-content/pdfs/CREDS-e-bikes-briefing-May2020.pdf?utm_source=NSHAK&utm_campaign=78d0131170-EMAIL_CAMPAGN_2020_05_21_09_08&utm_medium=email&utm_term=0_751b271e70-78d0131170-398917775
- ^{xi} <https://www.transportxtra.com/publications/local-transport-today/comment/66363/road-appraisal-makes-carbon-dioxide-uniquely-insignificant--why-and-what-to-do-about-it->
- ^{xii} <https://www.transportforqualityoflife.com/u/files/1%20More%20than%20electric%20cars%20briefing.pdf>
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- ^{xiv} <https://bususers.org/wp-content/uploads/2019/07/Reversing-the-decline-in-rural-bus-services-2019.pdf.pagespeed.ce.XmsuPfkHJH.pdf>
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- ^{xvii} <https://www.transportforqualityoflife.com/u/files/1%20More%20than%20electric%20cars%20briefing.pdf>
- ^{xviii} https://www.urbantransportgroup.org/system/files/general-docs/A%20fair%20deal%20for%20bus%20users_2015.pdf
- ^{xix} <https://bettertransport.org.uk/read-future-bus>
- ^{xx} <https://www.cpre.org.uk/wp-content/uploads/2020/02/CfBT-Transport-Deserts-Feb-2020-web-spreads.pdf>
- ^{xxi} <https://policy.friendsoftheearth.uk/insight/radical-transport-response-climate-emergency>
- ^{xxii} <https://bettertransport.org.uk/read-future-rail>
- ^{xxiii} <https://www.cpre.org.uk/wp-content/uploads/2020/02/CfBT-Transport-Deserts-Feb-2020-web-spreads.pdf>
- ^{xxiv} <https://bettertransport.org.uk/sites/default/files/research-files/case-for-expanding-rail-network.pdf>
- ^{xxv} <https://www.cpre.org.uk/wp-content/uploads/2019/11/TheZendZofZtheZroad.pdf>
- ^{xxvi} <https://greenerjourneys.com/wp-content/uploads/2018/06/THE-UNINTENDED-CONSEQUENCES-OF-FREEZING-FUEL-DUTY-JUNE-2018.pdf>
- ^{xxvii} <https://greenerjourneys.com/wp-content/uploads/2018/06/THE-UNINTENDED-CONSEQUENCES-OF-FREEZING-FUEL-DUTY-JUNE-2018.pdf>
- ^{xxviii} <https://www.centreforlondon.org/publication/road-user-charging/>
- ^{xxix} <https://policy.friendsoftheearth.uk/insight/transforming-transport-funding-meet-our-climate-targets>
- ^{xxx} <https://indd.adobe.com/view/23366ae1-8f97-455d-896a-1a9934689cd8>
- ^{xxxi} <https://www.transportfornewhomes.org.uk/wp-content/uploads/2020/06/garden-village-visions.pdf>
- ^{xxxii} <https://policy.friendsoftheearth.uk/insight/planning-less-car-use>. Increasing the housing density from less than 10 dwellings per hectare (dph) to more than 40 dph has been found to cut the likelihood of driving by a factor of three.
- ^{xxxiii} <https://policy.friendsoftheearth.uk/insight/planning-less-car-use>
- ^{xxxiv} <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2018>
- ^{xxxv} <https://www.cpresussex.org.uk/wp-content/uploads/sites/16/2020/02/FlightZBlightZCPREZNAvgZFINAL.pdf>
- ^{xxxvi} <https://www.theguardian.com/environment/2019/sep/25/1-of-english-residents-take-one-fifth-of-overseas-flights-survey-shows>
- ^{xxxvii} <https://www.airportwatch.org.uk/air-freight/air-freight-whats-the-problem/>
- ^{xxxviii} <https://transportforthenorth.com/wp-content/uploads/Freight-and-Logistics-Enhanced-Analysis-Report.pdf>
- ^{xxxix} <https://www.directrailservices.com/intermodal---tesco.html>