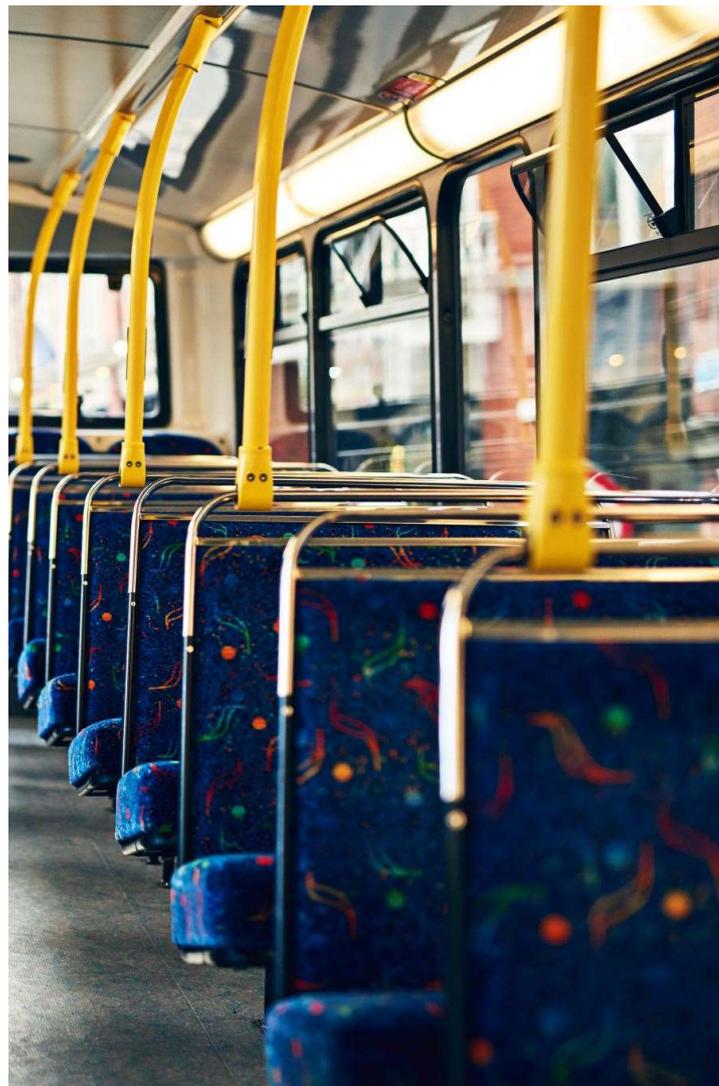


4. Travel Better

This is an extract from
Dorset 2030
Living in a zero-carbon county

Full text available at
www.Dorset2030.com



Authors: Mark Chivers & Neil Smith

4. Travel Better

Defining a Vision for 2030

Transport is responsible for around **1.2 million tonnes of carbon emissions** in Dorset every year, around 40% of the total, making it our biggest challenge in becoming a zero-carbon county. However, the notion that we can simply change every vehicle to an electric one ignores the wider impact our car-centric culture is having on environmental breakdown. Even if we can power the grid with 100% renewables, the damage caused through the extraction of materials and production processes for new electric ones is a major concern, not to mention the negative impact congestion has on human health, wellbeing and the local economy¹.

Tackling our transport issues also opens up exciting opportunities, as Paul Chatterton sets out in ‘**Unlocking Sustainable Cities**’², “*Debating how city dwellers undertake the mundane and taken for granted task of getting around opens up further conversations about how we see ourselves and our fellow citizens, where and how we work, shop and play, the health of our children, how safe we feel, what we can afford and our impact on air, climate and water systems*”.

In 2030...

Within our town centres moving around is cheap and easy using a combination of walking, cycling and free public transport. The nature of work and access to core services have reduced the need to travel, with high-quality broadband supplied to every home and most daily needs available within 15 minutes active travel. Good-quality shops and public services are available locally to all, reducing the need to get in the car for life’s essentials.

Through effective public transport provision, town centres are better connected to suburbs and each other. Specific provision has been made to ensure rural communities are well served. Rail services have been extended, joined up and enjoy clear, timely connections with other transport networks. Cycle lanes are fully separated and form a comprehensive network within and between towns and 90% of children walk to school. Cars are needed much less frequently and journeys for work and leisure, along with the transportation of goods and services, are made by vehicles powered by renewables. Streets are shared by all users and are safer and cleaner. Many enjoy completely car-free lives. Dorset has been freed from the domination of the car.

¹ <https://www.sustrans.org.uk/media/5501/final-reducing-car-use-report.pdf>

² Unlocking Sustainable Cities. Paul Chatterton. Pluto Press 2019. ISBN 978 0 7453 3701 2.

Assessment Framework

How are we performing currently?

The framework below sets out the criteria against which the current status can be assessed. Aspirational objectives are then set to encourage progress towards the vision.

Category	Assessment Criteria
1	Little evidence of plans or actions to reduce travel by car or improve walking and cycling provision. Public transport remains fragmented and relatively expensive.
2	Some evidence of small initiatives to reduce travel by car, either through walking and cycling provision or addressing public transport issues.
3	Strategic plans are in place that will reduce overall miles travelled and provide the infrastructure to make the switch. Changes are already clear across the county. Actions in place to dramatically increase the number of children walking to school.
4	Average transport mileage per person has fallen by at least 5% from 2020. Car journeys make up less than 75% of total miles. Public transport provision is on plan to double, to be accessible to all, and to be affordable. More than 75% of children walk to school.
5	Average transport mileage per person has fallen by around 13% from 2020. Car journeys make up less than 65% of total miles. Public transport provision is on plan to double, to be accessible to all, and to be affordable or free. 90% of children walk to school.

2021 Assessment

Where are we now and what else do we need to know?

Transport is Dorset’s biggest challenge, representing 38% of all carbon emissions. Despite significant improvements in the efficiency of vehicles, increased car ownership, larger cars (SUVs), more miles travelled and a decline in public transport provision have offset all the potential savings.

The rural nature of a county with relatively long commutes and poor bus services (largely restricted to built-up areas) means most have no option but to drive.

More than 4 billion miles were travelled across Dorset in 2019 (2,750 million – Dorset, 1,371 million BCP) and, as can be seen in Figure 3 for the Dorset Council area, this remained on an upward trajectory pre-pandemic.

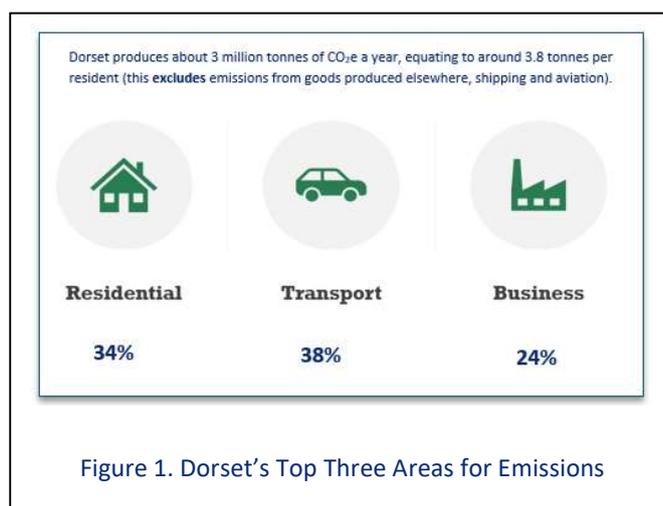


Figure 1. Dorset’s Top Three Areas for Emissions

In fact, car ownership in the Dorset Council area is already above the national average, reflecting the need to travel for daily activities and the weakness in our public transport infrastructure; clearly more than ‘initiatives’ will be required to address the problem. At the same time, Bournemouth is the third most congested place in the UK, and 56th most congested in the world³. Traffic is responsible for West Dorset village Chideock having the worst air quality in the UK⁴.

The ZCB model proposes a dramatic reduction in transport emissions through reducing miles travelled (moving goods and people), replacing vehicle travel with active travel and improving the mix of transport methods.

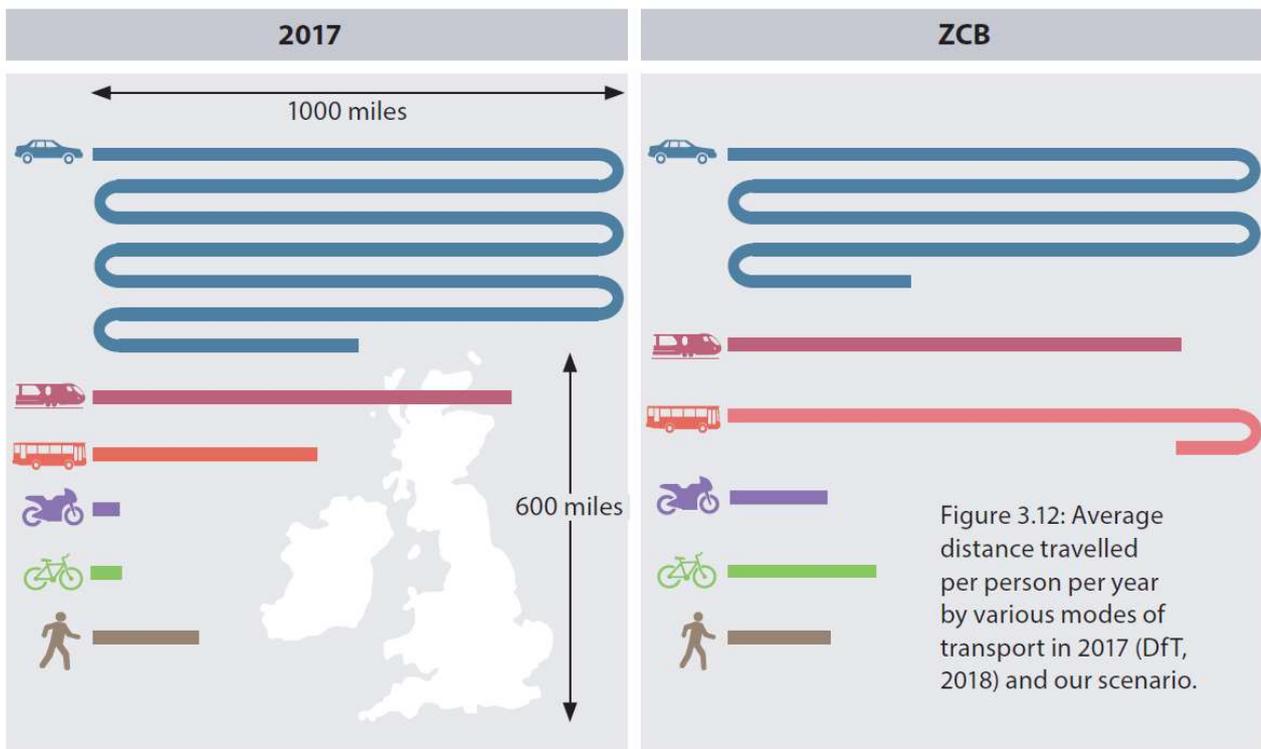


Figure 2. ZCD Travel Reductions Scenario

In this model car journeys reduce from 81% of total miles travelled to 62%; public transport doubles from 14% to 28%. Overall, the distance travelled by each person reduces by 13%, through practical changes such as home working and the local provision of shops and services, which have increasingly become centralised, often in out-of-town shopping centres. There are challenges with home working, which we address separately, but the pandemic has shown us the possibilities that can be opened up with this as an option as well as the additional benefits of less time in traffic, more time with friends and family and better chances to connect with our immediate localities.

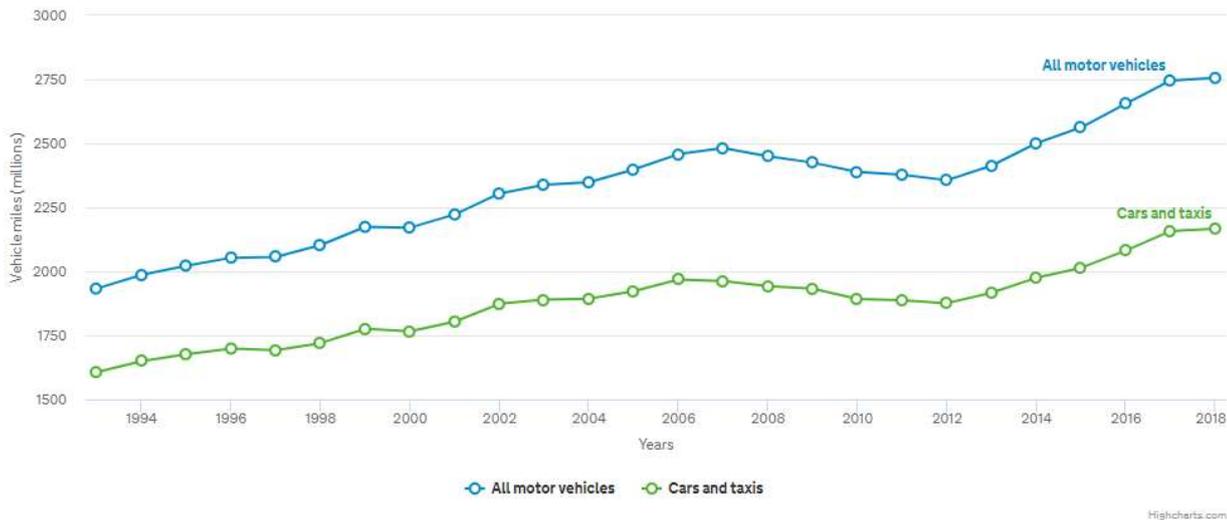
³ <https://www.bpcouncil.gov.uk/News/News-Features/Transforming-Travel/transforming-travel.aspx>

⁴ <https://www.dorsetecho.co.uk/news/18614552.chideock-found-worst-air-pollution-england/>

Cycling and walking increase. Domestic flights are restricted to emergencies and access to islands. International aviation falls by two thirds. Freight travel is reduced by reduced consumption and waste and 90% of all vehicle movements are via electric vehicles.

Annual traffic by vehicle type in Dorset

Traffic in Great Britain from 1993 to 2019 by vehicle type in vehicle miles (millions)



Traffic estimates for the period since 2010 have been revised to take into account the minor road benchmarking exercise. Further details available on GOV.UK: [Road traffic statistics: minor road benchmarking](https://www.gov.uk/road-traffic-statistics/minor-road-benchmarking)

Figure 3. Vehicle Miles in Dorset 1993 – 2018

Both Councils’ CEE plans recognise this challenge⁵, as does the Bournemouth, Poole and Dorset LTP3 2011 - 2026⁶ (which aims to tackle transport issues across the county and support the move to low-carbon modes of transport). Both include a range of proposals largely aligned to the Government’s longer-term objectives and are reliant on a large number of actions that ‘promote’ improvements. Given the scale of the challenge however, it seems overly optimistic that these will achieve the required changes. In fact, car ownership in the Dorset Council area is already above the national average, reflecting the need to travel for daily activities and the weakness in our public transport infrastructure.

Travel is clearly an area where Government intervention is required. This has been acknowledged in the **Transport Decarbonisation Plan**⁷. While this plan contains some positive policy indicators and proposed investment, it follows a familiar pattern of (in the words of the Government’s own Climate Change Committee) “too little, too late”. Where opportunities exist, both Councils should ensure they exploit them (as BCP and Dorset Council have with the Transforming Cities Fund), but they should not sit back and wait. They need to drive the changes required and to lobby Government for the resources to achieve

⁵ <https://www.dorsetcouncil.gov.uk/emergencies-severe-weather/climate-emergency/climate-ecological-emergency-strategy/climate-ecological-emergency-technical-papers/transport-technical-paper>

⁶ <https://www.dorsetcouncil.gov.uk/documents/35024/288596/LTP3+Bournemouth+Poole+Dorset+Strategy+Document+Final.pdf/2f76e80a-c504-9f57-2701-2930ec064a71>

⁷ <https://www.gov.uk/government/publications/transport-decarbonisation-plan>

the targets if not forthcoming. This is an area where public engagement is essential in agreeing how we get to the desired result, but this, together with the approach to Government funding, needs to be targeted at an end goal, an integrated, transformational plan of connected networks and infrastructure across the county that is overlaid against every planning consideration from homes, shops, schools, businesses and every relevant policy decision.

Travel in Dorset cannot be considered in isolation of tourism with more than 25m day visitors and 3.5m 'staying' visitors travelling to the county each year. Addressing how they arrive and move around while in the county has to be a part of the overall plan. As witnessed during the pandemic, the notion of the 'no-fly staycation' brings its own environmental challenges for those of us living in tourist hotspots.

It is also important to note that our current travel patterns create significant health issues. On 16 December 2020, Southwark Coroner's Court in London found that air pollution "made a material contribution" to the death of nine-year-old Ella Adoo-Kissi-Debrah, who lived near the South Circular Road in Lewisham, and died in 2013, following an asthma attack⁸. The impact of poor air quality on children's health whilst at school is also an issue, with analysis finding that more than a quarter of schools, from nurseries to sixth-form colleges, were in locations with high levels of small particle pollution. This means an estimated 3.4 million children are learning in an unhealthy environment, where air pollution is over the limit set by the **World Health Organisation**⁹.

Areas for Consideration

There are several local initiatives across the county that are worth examining. However, in common with earlier chapters, these appear both insufficient to address the issue within the timeframes required and lack a comprehensive vision of how we want to travel in the future. Such a comprehensive vision and plan must address each of the following areas.

Town Planning (developing a sense of place)

For much of the past century our towns have been developed with the assumption that the car is the primary mode of transport. This has had a profoundly negative effect, not just on how much land is used for roads and parking, but also on enhancing many of the negative aspects of modern life (low community cohesion in commuter belts, time taken up by commuting, poor air quality and other health effects¹⁰). Personal attachment to the car, however, remains a strong bond. Rather than a metal box which gets us from a to b, it has become an extension of our personalities, supported by a multi-million-pound marketing industry. Seeking to overcome this relationship will require more than appeals to zero-carbon living and will need to show how *"(Cars) replace lively, pleasant, walkable, human-scaled communities with low-density, sprawled out environments designed for getting elsewhere as fast as*

⁸ <https://www.bbc.co.uk/news/science-environment-55352247>

⁹ <https://www.theguardian.com/environment/2021/jun/17/quarter-of-uk-pupils-attend-schools-where-air-pollution-is-over-who-limit>

¹⁰ <https://www.theguardian.com/environment/2019/nov/25/living-near-busy-road-stunts-childrens-lung-growth-study-says>

possible. (Where our) daily destinations are placed increasingly out of reach of our feet. Space for social interaction and cultural exchange is diluted and dispersed, inhibiting the informal social contacts that bind societies together. Life is pushed indoors, separated, and compartmentalized.”¹¹

Our challenge will be to learn from those places where this is being undone and, through practical developments, and working with local communities, show how an alternative is both climate and people friendly. We need to focus less on ‘saving the High Street’ a (usually) concrete landscape that sucks the life out of smaller towns, villages and suburbs and relearn the essence of community centres and the ideas around reconnected cities being developed in places such as Copenhagen and Great City (Southwest China), along with specific initiatives like the Madrid Rio green space (created by the removal of a ring road), the Cheonggyecheon recreation area in Seoul (created by removing a highway) and Temporary Play Street Orders, initiated in Bristol in 2007 and now adopted in 100 streets across 30 cities¹². Locally, plans for **Bridport Renewal Area**¹³ in conjunction with **Velocity**¹⁴ (see *Further Information*) provide a vision of how we can “*enrich village life and a sense of place, while creating new homes and working environments in healthy and socially cohesive places. (Developing) a ‘polycentric’ cluster of new and ‘expanded’ villages, which are connected to one another by a fine-grained network of cycle routes and within cycling distance of new/existing rail stations. (...) a way to install a low-cost high-speed data network and introduce technology to foster a more sustainable environment and new employment opportunities with an emphasis on the retention and enhancement of the natural environment.*”



Figure 4. Cycle Parking at Bruge Railway Station

What is clear from a number of studies^{15 16} is that once the infrastructure is provided (from safer streets and segregated cycle lanes to affordable frequent public transport), the switch to better ways of travelling follows. Ideally, applying the concept of *commoning* mobility would provide a template that ensures that the transition to a new way of travel is not only just but is also ‘attentive to everyone’s

¹¹ World Carfree Network

¹² Sustainable Cities p35

¹³ <http://www.bridportrenewal.org.uk/>

¹⁴ <https://velocityplacemaking.co.uk/our-proposal/>

¹⁵ <https://www.sciencedirect.com/science/article/pii/S0749379715006224>

¹⁶ <https://www.sciencedirect.com/science/article/pii/S0965856416301495>

needs'¹⁷. Central to such development is the involvement of local communities¹⁸ and there is a move to Neighbourhood Plans and Climate Emergency Plans being developed to assist with sustainable transport solutions. We understand one such **Neighbourhood Plan**¹⁹ is being developed in Weymouth with a particular emphasis on sustainability, resilience and climate change.

Within all of these plans the focus needs to be on the **Sustainable Travel Hierarchy**, which sets out the most effective choices for health and the environment and is used by many organisations (Figure 5 is from Transport Scotland²⁰). The following sections follow this order.

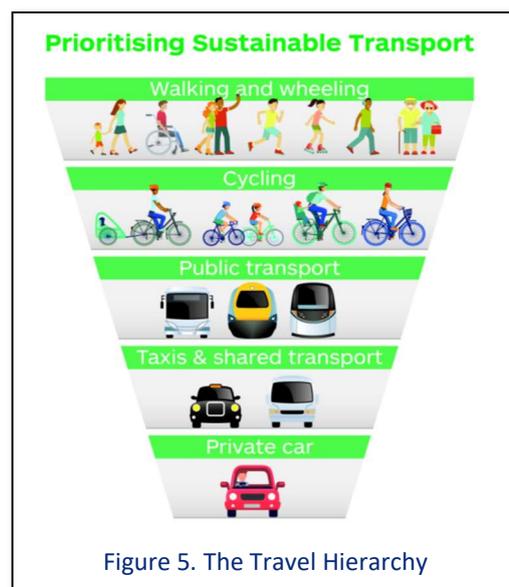


Figure 5. The Travel Hierarchy

The **Bournemouth, Poole and Dorset Local Transport Plan**²¹ references some of the issues but does not explicitly follow this principle. **The West Dorset, Weymouth & Local Plan (2015)**²² did explicitly reference the hierarchy but also noted that it only "should be used where appropriate".

Travel Less

The most obvious way to reduce emissions is to not travel in the first place. This is clearly not an option for many journeys; however, the pandemic has shown us just how many jobs can be performed effectively from home. This should be seen as part of a normal work routine for all roles where this is practical. Simplistically, if everyone worked from home for two days per week, emissions from commuting would fall by 40%. Recognising this is not possible for *all* roles, the 40% reduction is probably a fair objective for most organisations to set as some employees will be able to work for more than this amount; moving the increasingly popular 'working from home day' to a 'working in the office day' would be a positive switch in attitude. Likewise, we have seen how business meetings, conferences and the like can easily be moved on-line, which not only saves travel time but also, for many, reduces time away from home and family.

We also need to consider our holiday patterns. Would a 3- or 4-week break with slow travel (facilitated by multi-modal, joined-up sustainable travel options e.g. bike and train) be better for everyone than the current trend of multiple short breaks?

¹⁷ Planet on Fire p175

¹⁸ <https://www.sustrans.org.uk/for-professionals/infrastructure/an-introductory-guide-to-low-traffic-neighbourhood-design/>

¹⁹ <https://www.weymouthtowncouncil.gov.uk/neighbourhood-plan/>

²⁰ <https://www.transport.gov.scot/active-travel/developing-an-active-nation/sustainable-travel-and-the-national-transport-strategy/>

²¹ https://www.dorsetcouncil.gov.uk/w/local-transport-plan-3?p_l_back_url=%2Fsearch%3Fq%3DLocal%2BTransport%2BPlan

²² <https://www.dorsetcouncil.gov.uk/planning-buildings-land/planning-policy/adopted-local-plans/west-dorset-weymouth-and-portland-adopted-local-plan>

Active Travel

Walking

One of the barriers to increased walking is safety concerns, particularly for children. This helps to create a culture of car dependency from an early age. In fact, one of the greatest opportunities for addressing the cultural barriers to walking is switching the school run from a car-based activity to walking. **Walking Buses**²³ is one example of how to make this happen, as is **School Streets**, a **Sustrans** initiative²⁴: *‘a test programme which temporarily closes roads outside school gates at the start and end of each day. It aims to ease the congestion, poor air quality and road safety concerns experienced by many schools. The programme measures the impact of the quieter streets and shares findings with schools to encourage more regular street closures and inspire other schools to try this approach’.*

Discussions are taking place in a number of Dorset localities to pilot these schemes; however, making the necessary arrangements can often be subject to significant bureaucratic problems. As these schemes can not only help to address our core objectives here, but also improve the health and safety of our children (in a county which currently has one of the worst records for school-related accidents), we would hope the Councils could find ways to support and promote these initiatives.

We have to recognise however that, while some research has shown that exposure to pollution in vehicles can be as bad, if not worse than outside²⁵, most has indicated that for the school run the likely longer exposure time and proximity to direct fumes creates serious issues for those walking on busy roads. Research undertaken in London confirmed that *“exposures while walking are greatly in excess of those while driving, by a factor 4.7 for the coarse particle mass (PM10–PM2.5), 2.2 for the fine particle mass (PM2.5–PM1)”*²⁶. This is another area where fundamental changes will be required in our travel patterns and infrastructure to fully achieve the transition we need.

Cycling

Securing funding as part of the **Transforming Cities Fund**²⁷ has been BCP and Dorset Councils’ major success in addressing the issues discussed in this chapter. This central Government funding has only been provided to 12 regions across the UK. Construction of 78km of new cycle lanes, walking routes and bus improvements are planned as part of this, with work underway on a number of improvements already²⁸ as this report was being drafted.

²³ <https://www.edenprojectcommunities.com/stuff-to-do/organise-a-walking-bus>

²⁴ <https://ibike.sustrans.org.uk/resources/school-streets>

²⁵ <https://www.sciencedirect.com/science/article/abs/pii/S0048969701007586>

²⁶ <https://www.sciencedirect.com/science/article/pii/S0160412007001249>

²⁷ <https://www.gov.uk/government/publications/apply-for-the-transforming-cities-fund>

²⁸ <https://www.bcpCouncil.gov.uk/News/News-Features/Transforming-Travel/Blog/Blog-posts/TCF-Programme-Update-July-2021.aspx>

There is a clear recognition of the benefits of this approach, and as the latest update from Marc Griffin, the Transforming Cities Fund’s programme manager, acknowledges *“people need decent alternatives to the car – well connected, safer walking and cycling routes and reliable, prioritised bus services – before they’ll change their travel habits”* and goes on to explain that *“Bournemouth is sadly one of the worst places in the UK for cycling road casualties. Once cycle paths are built, based on evidence, people will use them. A report²⁹ earlier this year showed that where cycle infrastructure was added, cycling increased up to 48 per cent more than in cities that did not add cycle lanes.”*

This recognition and approach are exactly what is required across the county, and it would be interesting to understand whether the work undertaken in support of this scheme could be broadened to understand what a complete transformation would look like.

Nationally, £1.2bn has been made available over 5 years to improve cycling and walking through a **Cycling and Walking Investment Strategy³⁰**, including targets to double the amount of cycling by 2025. While the plan recognises the need for schemes of appropriate quality, cycle training and ‘behavioural change’ initiatives it remains to be seen whether the funding will be maintained and whether this is sufficient for the scale of change required. Equally, it is not clear whether any of the £27bn allocated to roads comes with any conditions aligned to the active travel ambition. A lack of joined up thinking has been the downfall of many well-intentioned environmentally focused schemes³¹ in the past.

In fact, **Cycling UK³²** are calling for £6 - £8bn investment over the same timescale focused on Local Cycling and Walking Infrastructure Plans and support the concept of the 15-minute neighbourhood (see *Case Studies*).

Public Transport

Buses and Coaches

The Department of Transport’s *National Bus Strategy* and *Bus Back Better* campaign recognise that *“(t)he pandemic caused a significant shift from public transport to the private car and to avoid the worst effects of a car-led recovery, buses must build back better – working at pace to deliver a fully integrated service, simple, multi-modal tickets, increases in bus priority measures, high-quality information for passengers and in larger places, turn-up-and-go frequencies that keep running into the evenings and at weekends.”³³* There is much in the proposal that is welcomed, in particular the acknowledgement that *“there can be no return to a situation where services are planned on a purely commercial basis with little or no engagement with, or support from LTAs.”* This is a major reversal of four decades of market-focused

²⁹ <https://www.nytimes.com/2021/04/01/climate/bikes-climate-change.html>

³⁰ <https://www.gov.uk/government/publications/cycling-and-walking-investment-strategy>

³¹ <https://www.building.co.uk/news/pm-warned-on-lack-of-joined-up-thinking-after-latest-climate-pledge/5109393.article>

³² <https://www.cyclinguk.org/cycle-campaigning>

³³ <https://www.gov.uk/government/publications/bus-back-better>

operations that nationally have seen the loss of around 3,000 routes, a 403% increase in fares since 1987, and, outside London, a reduction of 38% in passenger journeys between 1982 and 2016³⁴.

Several areas have acted ahead of this initiative, notably in the North-West, where the Greater Manchester Combined Authority (GMCA) is investing £135m and resuming control of the network: regulating fares, timetables and routes, and integrating ticketing across buses, trains and trams³⁵. There is also a growing campaign for free public transport³⁶. This could well be key to making the shift required and, in balance, may not be as unaffordable as it sounds. **Dorset Council Bus Back Better**³⁷ is looking at many of these points, and we await the outcomes of their research with interest.

The IPPR's Environmental Justice Commission³⁸ is one of the bodies proposing that public transport should be made free (in their case by 2030). Acknowledging that this may seem radical, they point out that *"it's already a reality in more than a hundred towns and cities worldwide, including more than 30 in the US and 20 in France, as well as in Poland, Sweden, Italy, Slovenia, Estonia, and Australia³⁹"*. This provision is, of course, already available to older people in the UK and younger people in Scotland.

Rail

Dorset was not spared Beeching's axe⁴⁰ reducing connectivity to two 'end of line' services that have effectively cut off many links, particularly to the South-West, or made connections ineffective (e.g. Poole – Bath / Bristol). While many of the old lines have become attractive routes for walking and cycling, their continuity is now often broken by new housing developments or road systems. This should not, however, prevent them from being explored as potential options for reconnecting as public transport expressways (bus, tram, light rail) dual running with their current usage. The Bridport Renewal Corridor is one such idea (see Case Studies), while Swanage Railway plans to reconnect to the mainline at Wareham and have received a cash boost from the Government⁴¹ to support this.

Commercial Use / Deliveries

Some of the increase in road use over recent years is the growth in deliveries as a result of on-line shopping, with most streets subject to numerous deliveries from numerous providers every day. There is a difficult commercial issue to address around the inefficiency and environmental damage caused by the current market model, but this is unlikely to be addressed in the short term. What can be addressed is the degree to which licensing, restrictions and support for transitioning to electrical vehicles can be

³⁴ <https://www.theguardian.com/commentisfree/2021/jul/26/bus-privatisation-public-service-strategy-british-private-market>

³⁵ <https://www.manchestereveningnews.co.uk/news/greater-manchester-news/live-andy-burnham-announces-decision-20254276>

³⁶ <https://tribunemag.co.uk/2021/07/local-public-transport-should-be-free/>

³⁷ <https://www.dorsetcouncil.gov.uk/roads-highways-maintenance/transport-planning/bus-service-improvement-plan>

³⁸ <https://www.ippr.org/research/publications/fairness-and-opportunity>

³⁹ <https://tribunemag.co.uk/2021/07/local-public-transport-should-be-free>

⁴⁰ <https://www.railwaysarchive.co.uk/docsummary.php?docID=35#>

⁴¹ <https://www.swanagerailway.co.uk/news/view/swanage-railway-wins-government-grant-for-updated-feasibility-study-into-wareham-train-service>

made. Equally, local initiatives for carbon-free distribution are taking place in different locations and should form part of wider plans (see *Case Studies*).

Opportunities also exist to adapt the last-mile delivery process to a zero-carbon / cargo bike option including those for e-cargo bikes promoted by **Sustrans**⁴². These are growing in popularity but need infrastructure support to create the strategic goods hubs that would enable them to be implemented more widely.

Shipping & Sea Travel

Shipping is responsible for similar levels of emissions to aviation and also contributes to wider environmental damage and pollution. Although the cruise industry often attracts much attention, it can be seen from the screen shots from Marine Traffic⁴³, (Figure 6) that passenger craft (blue) make up a far smaller proportion of global transport than cargo vessels (green) and tankers (red). While the latter should be greatly reduced as our reliance on fossil fuels reduces, the global supply of food and goods presents a wider issue (discussed elsewhere). Locally, however, there could be significant benefits for Dorset's ports and manufacturing with the 'greening' of shipping, the development of offshore wind facilities and local sea transportation.

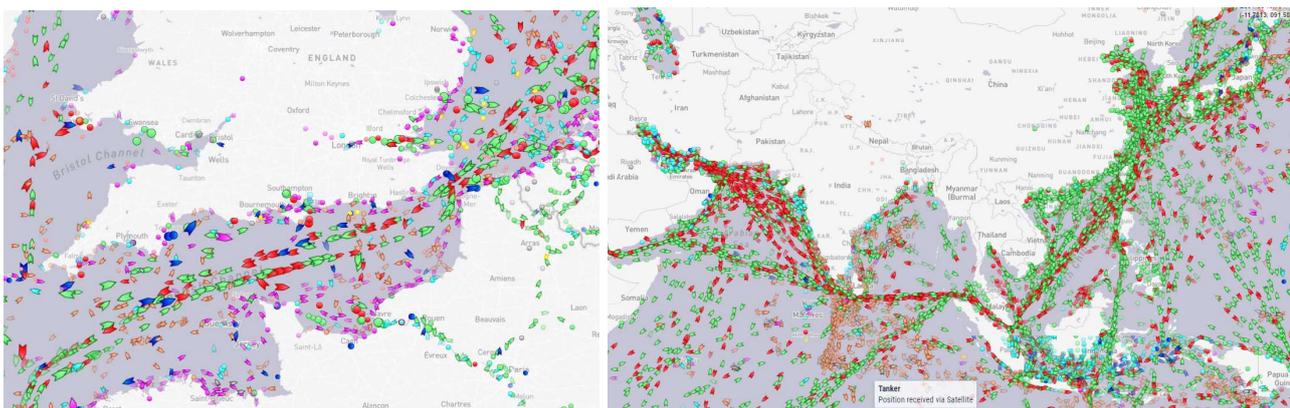


Figure 6. Screen shots from Marine Traffic 5th August 2020

Like many areas, the rapid shift away from fossil fuels in shipping is inhibited by a lack of Government finance, despite the usual proclamations about sustainability and green projects⁴⁴. The relative ease with which non-fossil fuel sea transport can be developed with smaller craft could provide huge opportunities for Portland / Weymouth and Poole in particular.

Car Use

Car journeys across Dorset account for around 80% of vehicle miles travelled with many likely to be essential for residents given inadequate public transport alternatives, insufficient local amenities and

⁴² www.sustrans.org.uk/policy/life-after-lockdown/2020/briefing-paper/reinventing-transport-planning-for-e-cargo-bikes/

⁴³ <https://www.marinetraffic.com/>

⁴⁴ <https://www.gov.uk/government/speeches/a-speech-by-the-defence-secretary-at-the-society-of-maritime-industries-annual-conference>

commuting requirements. However, while this report recognises the importance of moving all vehicles away from fossil fuels, as explained earlier, in solving the wider issues of environmental breakdown there is an equal need to move away from private motor vehicles as the primary mode of transportation. Nevertheless, during this decade of transition there will be an urgent need to provide the infrastructure required for switching to electric. Hopefully, alongside the Government's intentions to ban the sale of new petrol and diesel cars by 2030⁴⁵ actual support will be provided to support the transition.

Councils could also take the lead and work with local employers and businesses to make the appropriate provisions. Dorset Council has just completed phase 1 of e charging network: Phase 1 has seen the installation of 42 chargepoints (sockets) in 21 locations around the county and includes 5 replacement rapid chargers and one new rapid charger at the Langton Road Car Park in Blandford Forum. Use of the chargepoints has exceeded expectations⁴⁶ and saved 51,000 kg in CO2e emissions when compared with petrol or diesel vehicle use.

Car ownership, however, is highly inefficient, with these material-intensive, expensive machines spending most of their life inactive. Reports show⁴⁷ that 8,000 ha of Central London (10,600 football pitches!) are used for car parking. This is land that could be used for housing, growing food or other beneficial purposes. Proportionately, Dorset's towns probably fare little better. A recent briefing paper from Deloitte noted that *"The UK government estimates that congestion already accounts for almost 80% of the societal harm caused by driving one additional mile. In 2019 the delays, wasted time and welfare losses cost the UK the equivalent of 3.0% of GDP. **On current policies EVs will increase these costs. According to the Department for Transport, a move to zero-emission motoring could raise traffic levels by 50% by 2050.**"* This is clearly not desirable or sustainable. Furthermore much of the pollution associated with car transport is actually produced through other waste materials (e.g. from tyres, brakes and manufacturing)⁴⁸.

Most studies, such as those referenced above, show that addressing our reliance on cars and decreasing their use require both provision of affordable, reliable alternatives and (often dramatic) actions that encourage behaviour change (congestion zones, car-free areas). These suggest success, in a fair and just manner, will only be achieved if the infrastructure is provided first.

Small-scale, community-led, transformational initiatives include car clubs, which offer cost-effective access to a vehicle when required, reducing the need for car ownership, and therein the temptation to use for short journeys. These have been successful in many locations.

⁴⁵ <https://www.gov.uk/government/news/government-takes-historic-step-towards-net-zero-with-end-of-sale-of-new-petrol-and-diesel-cars-by-2030>

⁴⁶ <https://news.dorsetcouncil.gov.uk/2021/10/29/milestone-reached-in-ev-chargepoint-installation-programme/>

⁴⁷ <https://www.vox.com/a/new-economy-future/cars-cities-technologies>

⁴⁸ <https://www.greenpeace.org.uk/news/electric-cars-greener-petrol-cars/>

A number of organisations have also developed Travel Plans to help their staff get to work in the most sustainable way. Two local examples, which we feature as case studies below, are Lush and Bournemouth University.

Air Travel

Historically, national emissions data has excluded Shipping and Aviation, leaving a glaring omission in the data with respect to the respective environmental damage caused by both industries. Equally, there are concerns that, while aircraft produce a relatively small proportion of global emissions overall, the burning of fossil fuels in the atmosphere at typical flying altitudes causes almost twice the damage (through *effective radiative forcing*⁴⁹) than similar emissions made at ground level. As such the ZCB scenario reduces international travel dramatically.

However, regional airports will have an important role to play in our future scenario, reducing road traffic to larger hubs and maintaining international connections where required. A **frequent-flyer levy** (see *Policies*) would enact a *polluter pays*⁵⁰ principle and encourage better behaviours from those who currently fly the most.

Domestic and private flights should be phased out as soon as possible, while the overall number of flights from Bournemouth Airport could be fixed to emissions levels, targeting a reduction of 7.5 - 10% per year. Such a policy applied nationally would accelerate the transition to new fuels or decrease the environmental damage by removing services.

Eliminating Carbon from Transport Lifecycles

As noted in the *Car Use* subsection above, environmental damage from transport is not limited to the type of fuel used to create movement. Damage is caused through infrastructure development (roads, bridges, rail lines) and through manufacture and distribution of vehicles. The latter can be addressed through regulation of parts that can be repaired, rather than replaced, and requirements to recover or recycle materials from used and damaged components (covered more in the *Buy Better - Waste Nothing* chapter).

Transport Integration and Infrastructure

Pending the planning and conscious shifts in attitude noted above, we can start to look at how individual modes of transport can be improved, integrated, made affordable and sustainable. Discussions at the **Dorset CAN Transport Group** (see *Case Studies* below) have started to frame solutions around developing a matrix view of the issues and opportunities with each mode of transport and how these could be developed to meet our daily needs.

⁴⁹ <https://ourworldindata.org/co2-emissions-from-aviation>

⁵⁰ <https://www.lse.ac.uk/granthaminstitute/explainers/what-is-the-polluter-pays-principle/>

On a more formal level it is encouraging to note the work being developed by the **Connected Dorset Advisory Group**⁵¹, particularly around the importance of improving rail, coach and bus networks, along with integrated ticketing and other proposed improvements.

Current assessment

Having considered the current assessment documented above, the report contributors have assessed the county's current category as:

2 *Some evidence of small initiatives to reduce travel by car, either through walking and cycling provision or addressing public transport issues.*

While many of the current initiatives around active travel and improving cycle lanes are to be welcomed and encouraged (and in many respects are ahead of other areas in this report), there remains a lack of a comprehensive, integrated plan to address our transport issues, while significant funds are still being allocated for road improvements that may not even be required in 5 - 10 years.

2022 Objectives

1. Both Councils should review the recommendation for approaching this area in the **Friends of the Earth** report **“How do local authorities get people out of their cars?”**⁵² and develop an overarching vision for the area with local communities based on the 27 proposed actions, communicating this (including the reasons why, to all residents).

In the absence of this commitment, the following are key priorities for Dorset identified during the development of this report.

2. Councils, public sector bodies and businesses to enable, where possible, all staff to work from home for at least 2 days per week; aiming to reduce commuting miles across the county by at least 40%.
3. Dorset Council to deliver on its commitment to “Work with Dorset Business Travel Network & Digital Dorset to promote use of ICT to individuals and businesses to avoid travel & encourage working from home”⁵³.
4. Set a target of 70% of people commuting by public transport, cycling and walking by 2030. Produce a comprehensive, integrated plan that reflects this ambition and engage experts and the wider community to look at how this can be achieved in each area. Consider all options including disused

⁵¹ <https://www.dorsetlep.co.uk/connected-dorset-advisory-group>

⁵² https://www.transportforqualityoflife.com/u/files/201203_FoE_Activists_Briefing-Making_transport_fit_for_the_Climate_Emergency_FINAL2.pdf

⁵³ <https://www.dorsetcouncil.gov.uk/emergencies-severe-weather/climate-emergency/climate-ecological-emergency-strategy/climate-ecological-emergency-strategy-transport:>

rail lines, tramways and coastal travel. Ensure local employers are aligned by implementing policies that encourage home working, lift sharing, public transport or active travel.

5. Explore options to initiate Council-owned free public transport services where the market is incapable of delivering appropriately funded routes.
6. Commission a county-wide plan to develop a comprehensive segregated cycle lane network within and between towns. Involve residents and experts on developing cycle routes in the planning stage.
7. Develop the infrastructure required to support a 100% transition to electric vehicles.
8. Develop a *Dorset 2030 Plan for Tourism* that has sustainability at its core and includes plans for a significant, targeted reduction of car use through alternative provision.
9. Work with local communities to create 20 'Play Streets' across the county and identify opportunities for car-free days, ideally aligning major Dorset-wide events with the global car-free day held in September each year, while developing local once a week / month car-free street plans.
10. Establish licensing provision that supports the move to electric vehicles for taxi and delivery fleets and provide support for local zero-carbon distribution schemes; ensuring the costs of transition are not prohibitive for the self-employed and local businesses.

Case Studies

Across the county individuals and organisations are already taking the action that will propel us towards the vision outlined above. By sharing some of these here, the aim is to encourage their sustainability, replication and escalation.

Transforming Cities Fund

The **Transforming Travel** (TCF)⁵⁴ programme is south east Dorset's largest ever investment in sustainable transport infrastructure and part of the government's Industrial Strategy to 'improve productivity and prosperity through investment in public and sustainable transport'.

The TCF investment will fund 78 km of new cycling and walking routes and use smart technology to provide improved bus travel options and create green travel hubs in south east Dorset, all aimed at offering environmentally friendly, safer and quicker journeys to work, education and leisure. BCP Council and Dorset Council were jointly awarded £79m by the Department for Transport through its TCF scheme for a programme of investment across the south east Dorset city region. This grant, plus further money from the councils, local business groups and transport companies has given a total programme budget of £102m.

The three-year **TCF Programme**⁵⁵ will deliver:

- 78 km of new cycling and walking routes
- smart technology to provide improved bus travel options
- new bus stops and lighting
- ‘smart’ traffic and improved real-time information
- improved bus priority at key interchanges
- new local travel app and ‘smart ticketing’ across bus operators
- ‘trip end’ facilities for businesses, schools, colleges and universities
- improved pavement access for people with mobility need
- upgraded wayfinding
- introduction of e-bikes
- extension of the Beryl bike share scheme

The scheme also includes “*new infrastructure and routes around major intersections and roundabouts to improve traffic flow*”, while this may be welcome there is a question over this aspect as it appears as if money allocated for ‘sustainable transport’ could be used to encourage car use.

TCF & Bournemouth University

With 18,000 students and 1,800 staff, Bournemouth University’s population is equivalent to that of a small town. As such they have been focusing on how everyone has safe, accessible, and sustainable travel options to get to the university campus sites and have become partners in the South East Dorset Transforming Cities Fund (TCF) programme.

Lauren Duff is BU’s Travel and Transport Manager for Bournemouth University and noted in a recent blog⁵⁶ how “(t)he University has recently launched its *Climate and Ecological Crisis Action Plan, which outlines how we intend to achieve net zero emissions by 2030/31 across all of our activities (including transport). One of the key changes that our students, staff and visitors can adopt, to help the university achieve its net zero carbon target, is to swap journeys made by car to sustainable travel modes such as walking, cycling or using the regular public transport options available.*

Encouraging students and staff to change their travel behaviour away from private car journeys to sustainable travel is a challenge. Our Travel Plan⁵⁷ promotes a hierarchy of travel options (see below), with the most sustainable, zero emissions options at the top (i.e. avoiding unnecessary travel, walking, cycling, public transport) and private car journeys at the bottom of the list.”

⁵⁴ <https://www.bpcouncil.gov.uk/News/News-Features/Transforming-Travel/Transforming-Cities-Fund/transforming-cities-fund.aspx>

⁵⁵ <https://www.bpcouncil.gov.uk/News/News-Features/Transforming-Travel/sustainable-travel-network/sustainable-travel-network.aspx>

⁵⁶ <https://www.bpcouncil.gov.uk/News/News-Features/Transforming-Travel/Blog/Blog-posts/Why-Bournemouth-University-is-a-TCF-Partner.aspx>

⁵⁷ <https://www.bournemouth.ac.uk/sites/default/files/asset/document/travel-plan.pdf>



Figure 7. BU Travel Priorities

While they recognise that not everyone will be able to walk, cycle or use public transport due to personal circumstances they believe there are many who can change.

To support staff and students in changing their travel behaviours and remove perceived ‘barriers’, the University offers secure cycle storage and end-of-trip shower and changing facilities; free monthly bike servicing; access to the Cycle to Work scheme for staff; a student long term bike loan scheme; and discounts on the Beryl Bike hire scheme. As well as this, the university also works with local bus service providers to run 4 bus routes to/from campus sites.

However, despite these various initiatives, Lauren notes *“the feedback received from staff and students through our annual travel surveys is that a perceived safety risk is still the biggest barrier to active travel and this is linked to a lack of high quality and safe infrastructure.”* Their hope is the construction of new sustainable travel routes and safer active travel infrastructure, through the South East Dorset TCF programme, will be a huge benefit to the university population, and is why they are active partners in the scheme. Specifically, the Bournemouth to Ferndown TCF corridor will provide a direct link between the Bournemouth town centre and our BU Talbot Campus and Chapel Gate sports centre sites and will greatly improve the sustainable travel choices between these locations.

“The TCF Programme is laying the foundations and setting the standard for a strategic network of priority cycling and walking routes across the conurbation. The provision of infrastructure, which is greener, healthier, safer, continuous and better-connected will not only compliment the existing BU Travel Plan and our aspirations to be carbon net zero by 2030/31 but will benefit local residents and visitors across the SE Dorset area. We are excited to see this fantastic programme of works commence and develop in the future”.

Community Transport Action Groups

Dorset Climate Action Network⁵⁸ (Dorset CAN) has a number of working groups focused on developing solutions across the county. One of these is focused on Transport. Meetings are open to everyone, see their website for more information.

BH Active Travel has been campaigning for better cycling and walking infrastructure in the conurbation since the 1990's. It is a group of "unpaid professionals, many of whom have extensive experience in planning and infrastructure (with a) mission ... to supply opinion, ideas and evidence of user experience to the Council staff tasked with promoting cycling and walking. It is not funded by or affiliated by the council in any way." Their website⁵⁹ contains full details of their activities and the group runs an active Facebook group.

Recipients for TCF End of Trip Schools Grants

21 schools in the BCP Council region will be benefiting from a total of just over £214,000 worth of grants (up to £20,000 each) from the Council's Transforming Cities Fund (TCF) programme⁶⁰. The grants are being awarded to the schools to help them pay for the installation of new or improved 'end-of-trip' facilities, which encourage healthy and eco-friendly journeys to school.

The grants, supporting the council's Transforming Travel programme, are being awarded for projects to install end of journey facilities for students and staff, who cycle, walk or scoot to school. These include facilities such as lockable bike and scooter stores, showers, lockers, bike repair stands, clothes drying facilities and electric bike charging points.

Schools were given the opportunity to apply for the grants of between £500 and £20,000 to help cover the cost of installation or upgrade work. They will be match-funding at least 20% of the total cost of the project themselves through their own fundraising activities

How to make your travel green

Aimed at BCP residents, **How to make your travel green** is a useful guide⁶¹ on how to make your travel plans more sustainable.

Car Clubs & Car Share

The **Lyme Regis Car Club** will start a 6-month trial with a Co-Cars electric car as soon as the town council's electric charging points are installed. The car will be available for hire to car club members for as little as £4 an hour or £29 a day (+18p per mile) and will be based in the Woodmead car park in the centre of town. Research shows that most of us only use our cars 8% of the time so a car club membership is a great alternative for infrequent car users. During the trial, the long-term prospects for a permanent car

⁵⁸ <https://www.dorsetcan.org/>

⁵⁹ <https://www.bhactivetravel.uk/>

⁶⁰ <https://www.bpcouncil.gov.uk/News-Article.aspx?title=recipients-for-tcf-end-of-trip-schools-grants-announced>

⁶¹ <https://www.bpcouncil.gov.uk/News/News-Features/Transforming-Travel/Sustainable-Transport-Initiatives/Transforming-Travel-Sustainable-Transport-Initiatives.aspx>

club will be assessed as well as the opportunities to install electric bike rental hubs in Lyme, the neighbouring towns and villages, along the Jurassic Coast and inland to provide another flexible, environmentally friendly, active way to enjoy our beautiful countryside and visit other places. Please contact Belinda Bawden on belindabawden@gmail.com for further details

Co-wheels Car Club, Bournemouth & Poole⁶² aims to make driving is easy when for club members, covering everything, including insurance, cleaning, servicing and refuelling. Car club members can book cars on an online booking system or over the phone and use a smartcard to access them. Members can book a car for 30 mins to days at a time, only paying for the hire time, the distance driven and ensuring there is a minimum of a quarter tank remaining at the end of the booking.

Members pay an upfront £25 joining fee, a monthly membership subscription and additional charges per booking. There is an additional mileage fee for all non-electric vehicles. While not all vehicles are electric, this scheme helps reduce car ownership (and therein overall usage).

Anyone can join **Liftshare**⁶³ for free to reduce commuter traffic and save money. Participants enter their journey details in three simple steps, and Liftshare use their matching database to show everyone else going the same way. Once matches have been found participants introduce themselves by getting in touch and arrange details of how and when to meet. There are community hubs and over 4,000 people registered on the site.

Vehicle Charging

Already referenced in the *Power Up* chapter, **Blandford Hill Eco Hub**⁶⁴ is also worthy of mentioning here as a local example of how infrastructure can be developed to support the transition to a fully electric transport system. The proposal consists of an electric vehicle (EV) charging station, a 15MW ground-mounted solar farm and a 3MW battery storage facility on land south of the A354 at Blandford Hill, Winterborne Whitechurch near Blandford Forum.



Figure 8. Blandford Eco Hub

⁶² <https://www.co-wheels.org.uk/how-it-works>

⁶³ <https://liftshare.com/uk/community/dorset>

⁶⁴ <https://www.blandfordhillecohub.co.uk/>

By combining green electricity generation, storage and charging, the project is maximising the potential of renewable power with charging for up to 19 EVs at a time. Around 6 ultra-rapid (up to 350kW) and 6 rapid (43-100kW) charging points with additional fast chargers and Tesla “Superchargers” are proposed. These chargers would allow all types of EVs to charge at the eco hub.

After starting the public consultation process for the plans in February 2021, the planning application was submitted to Dorset Council in July 2021.

Dorset Council have supported the roll out of charging points across there area and provide helpful information on location and costs⁶⁵ on their website. Information isn’t quite so comprehensive on BCP’s site⁶⁶ and the roll out has been noted⁶⁷ as falling behind many other areas.

Lush Electric Bus



Lush Cosmetics introduced Electra, their electric bus service in 2020. Electra replaces the use of taxis between manufacturing sites in Poole, eliminating around 10-20 car journeys a day and saving the equivalent of 8 tonnes of carbon each year.

Electric Refuse Collection

In November 2021, BCP introduced the first electric refuse collection vehicle to their fleet as part of their plans to be carbon neutral in their own operations by 2030.

Bikeability

During 2021, BCP Council secured extra funding from the Bikeability Trust in order to run further cycling training courses at schools and training centres across the area. £80,500 has been allocated enabling the BCP Council Bikeability⁶⁸ team to provide a further 2,183 course places for children this financial year. The courses, which are described as “like cycling proficiency, but better”! cover the whole range of cycle

⁶⁵ <https://www.dorsetcouncil.gov.uk/parking/parking/electric-vehicle-charge-points>

⁶⁶ <https://www.bpcouncil.gov.uk/News/News-Features/Transforming-Travel/Sustainable-Transport-Initiatives/Electric-Vehicle-EV-Chargers.aspx>

⁶⁷ <https://www.bournemouthcho.co.uk/news/19114570.bcp-failing-keep-pace-rollout-electric-vehicle-charging-points/>

⁶⁸ <https://www.bournemouth.gov.uk/AttractionsLeisure/SportsandActivities/cycletrainingforchildren.aspx>

training from teaching children to ride for the first time, all the way up to the finer points of road cycling and dealing with junctions, roundabouts and traffic queues.

Dorset HealthCare University NHS Foundation Trust E-Bikes



Figure 9. E-bike adoption in the Purbecks

Following a visit to the Netherlands, community nurses have started using e-bikes to make their visits. Discover more in this video⁶⁹

Local Rail Improvements

Consideration is being given to an amenity / commuter train service using the Swanage Railway track and stations between Swanage and Worgret, and then Network Rail track and stations to Bournemouth. As part of the funding for this service, the feasibility of enhancing the railway bridge over the Rock Lea River between East Holton and Rockley to add a shared use cycling / pedestrian route alongside the railway track is to be investigated. Such an enhancement would shorten the cycle route between Wareham and Poole by approximately 1 mile but would avoid using the busy A351.

There is also a proposal for a light rail / tram service between Corfe Castle and Studland to connect with the train service at Corfe Castle and the regular bus service at Studland. The proposed route would share the track between Corfe Castle and Norden as far as a new junction at Norden, then use new track on the existing road to Wytch Farm and to proceed to Studland using new track on existing private roads / tracks or a new access road across the heathland to Studland. The route between Norden and Studland to be a dual running light rail / tram and cycling / pedestrian route.

The Business Travel Network

The Business Travel Network⁷⁰, is an initiative set up and supported by Bournemouth, Christchurch and Poole Council and Dorset Council. The BTN offers employers within Dorset FREE practical advice and

⁶⁹ <https://www.youtube.com/watch?v=5htqXjWpFOo>

⁷⁰ <http://www.businesstravelnetwork.org/p/home.html>

resources to help their staff access more sustainable travel choices. The BTN helps each business develop a travel action plan focused on the staff commute and also facilitates business-to-business good practice sharing and acts as a collective voice to feedback information to local authorities and public transport providers.

Brittany Ferries

Local ferry operators Brittany Ferries have already announced plans⁷¹ for two new hybrid (liquid natural gas / electric) ships which will operate out of Portsmouth from 2024/25 and are exploring options for a zero-emissions, all electric *seaglider*⁷² which could be operational by 2028.



Figure 10. Images of Brittany Ferries' proposed Seaglider from brittanyferriesnewsroom.com

Further exploration of ideas such as this, and other zero-carbon marine technologies, could provide local opportunities for both the marine transport, fishing and tourist sectors.

Beryl Bikes & e-Scooters in BCP

BCP has partnered with Beryl⁷³ for a five-year contract to deliver an innovative Bike Share scheme across Bournemouth, Christchurch and Poole. Beryl's distinctive green bikes are now a familiar sight across the conurbation and can be easily hired through the Beryl App. The App tracks the GPS location of the bike allowing users to access and unlock any Beryl bike simply using a smartphone.

Over 1,000 bikes are available with handlebars and seats are fully adjustable for a wide range of riders, from 4'11" to 6'5". The bikes are available for instant hire at over 300 parking locations, including rail and bus stations, town centre shopping areas, university campuses and tourist attractions. The Beryl app displays every location of 'Beryl Bays', the preferred parking locations to leave the bikes. The scheme allows users to safely park the bikes elsewhere in Bournemouth, Christchurch and Pool, by paying an additional convenience fee. The operator keeps track of all the bikes through GPS and redistributes them

⁷¹ <https://brittanyferriesnewsroom.com/two-new-hybrid-ships-for-brittany-ferries-uk-france-operations/>

⁷² <https://brittanyferriesnewsroom.com/brittany-ferries-eyes-zero-emission-sea-skimming-flying-ferries/>

⁷³ <https://www.bcpCouncil.gov.uk/Roads-and-transport/Cycling/Cycling.aspx>

as required to maximise availability. Riders have a payment choice of ‘pay-as-you-ride’ for a £1 unlock fee & minute bundles (e.g. 100 minutes of riding time costs just £5) or a 24-hour pass for £12.

The **Beryl e-scooter** share scheme (part of a government backed trial) provides emission-free transport option for both residents and visitors to the area. The initial trial will run until 31 March 2022 and help the government’s research into the use of e-scooters, ultimately informing national policy. The rental scooters can be ridden on roads in Bournemouth and Poole as well as on the expanding network of signed cycle lanes and cycle/shared-use facilities.

Further Information

Learning from Europe

Many towns, cities and regions have made significant improvements to their transport systems which we can learn from. **CIVITAS**⁷⁴ is one of the programmes helping the European Commission achieve its mobility and transport goals, and in turn those of the European Green Deal, by acting as a network of around 300 cities dedicated to sustainable urban mobility. They aim *“through peer exchange, networking and training”* to foster political commitment and boost collective expertise, *“equipping cities to put mobility at the centre of decarbonisation.”*



Their website is a rich source of research and project data on cycling, urban transformation, low carbon freight, and much more. One example is **Preston**, here in the UK where, working with CIVITAS, the city has developed many initiatives to deliver sustainable transport improvements including, *“personalized travel planning, which reduced single-occupancy car trips by over 13 percent; a car-pooling initiative; the introduction of clear zones in the city; improved parking at the railway station; and improvements to the availability and quality of passenger transport information”*⁷⁵.

There is also much we can learn from the **Netherlands**⁷⁶ where a quarter of all journeys are made by bike (increasing to 38% in Amsterdam and 59% in the University town Groningen) by comparison the UK rate is around 2%.

VeloCity

Part of the **Bridport Renewal Corridor** proposals, **VeloCity** is a *‘strategic approach to growth and placemaking, centred on a re-imagining of the village for the 21st century’*. As explained on their

⁷⁴ <https://civitas.eu/projects>

⁷⁵ <https://civitas.eu/cities/preston>

⁷⁶ <https://investinholland.com/news/the-netherlands-the-worlds-most-successful-cycling-nation/>

website⁷⁷ their vision ‘has been developed to enrich village life and a sense of place, while creating new homes and working environments in healthy and socially cohesive places. It comprises a ‘polycentric’ cluster of new and ‘expanded’ villages, which are connected to one another by a fine-grained network of cycle routes and within cycling distance of new/existing rail stations. It proposes a way to install a low-cost high-speed data network and introduce technology to foster a more sustainable environment and new employment opportunities with an emphasis on the retention and enhancement of the natural environment.



The village clusters are supported by the necessary social, environmental and economic infrastructure to enable them to operate in a sustainable manner within their environmental limits. Cycling as the mainstream form of movement will shape the way places are planned and the way people communicate and relate to one another, forming resilient, intergenerational communities and a strong identity for this progressive region.’

Birmingham 2031

The home of Spaghetti Junction, one of the UK’s most infamous examples of car focused infrastructure, Birmingham may be about to embark on an entirely different path. The council’s latest plan (**Birmingham Transport Plan 2031**⁷⁸) recognises the need to reduce carbon emissions and the negative effects of private cars and plans to address these by reallocating road space to public transport, extending the metro, improving bus services and expanding the cycle-lane network.

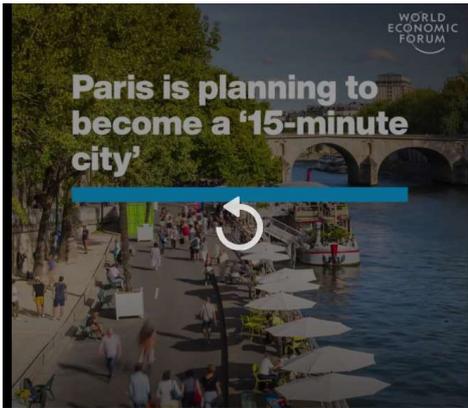
It also aims to prioritise walking and cycling and the use of public transport, building a ring road around the city centre within which private vehicles will not be able to travel while imposing a 20mph limit on all local roads and car-free zones around schools.

Perhaps even more controversially, it aims to reduce the number of parking spaces, increase fees for the remainder and fine companies for providing parking for employees. In an article in **The Conversation**⁷⁹, Joanne Leach, Research Fellow at the Department of Civil Engineering, University of Birmingham, notes the ambition of the plan and highlights some other areas they may need to consider if this plan is to be successful.

⁷⁷ <https://velocityplacemaking.co.uk/our-proposal/>

⁷⁸ https://www.birmingham.gov.uk/info/20013/roads_travel_and_parking/2032/birmingham_transport_plan

⁷⁹ <https://theconversation.com/birmingham-plans-to-become-a-supersized-low-traffic-neighbourhood-will-it-work-170131>



15 Minute City

This short video from the World Economic Forum explains what a number of cities are doing to promote this concept.

It is available to view at:

<https://www.weforum.org/videos/paris-is-planning-to-become-a-15-minute-city-897c12513b>

Green Shipping

Smart Green Shipping⁸⁰ is an award-winning systems design-house focused on the rapid reduction of fuel consumption and emissions from the shipping sector and has been working with the University of Southampton on green solutions for the shipping industry.

The Cartwright Moms



Hear how one a community in one of the most polluted areas in the USA took a stand against diesel school transport and secured funding for an electric bus and the associated infrastructure.

Read the story and see the video here:

<https://grist.org/article/in-maricopa-county-an-electric-school-bus-brings-power-to-the-people/>

Free Taxis and Buses

Kavalir: getting around the city centre by electric car



Not a utopian demand but actual schemes, up and running. In the Slovenian capital Ljubljana⁸¹. **Kavalirs** (Gentle Helpers) are a free city centre public transport option mainly intended for the transport of the elderly, mobility-impaired people, and visitors, that run around the pedestrianised city centre at a speed slow enough to allow you to hail them anywhere on the street.

⁸⁰ <https://smartgreenshipping.com/>

⁸¹ <https://www.visitljubljana.com/en/visitors/travel-information/getting-around/kavalir-getting-around-the-city-centre-by-electric-car/>

Closer to home, **Herefordshire Council** have made weekend travel on buses free (and unlimited) for anyone in the county. Additional Sunday services have been laid on in several locations⁸². Across Europe more than 50 towns and cities offer free public transport⁸³.

Improving Rail Case Studies

South Wales Metro are planning for electric and battery-powered with fast acceleration tram-trains to operate “turn up and go” services on railway lines and on-street tramways, providing access from rural areas to the city centre, reducing journey times to 50 minutes from over an hour, and significantly increasing the frequency.

Coventry Very Light Rail⁸⁴ is in the feasibility and development project stage. The aim is to create a reliable, frequent, environmentally friendly, battery-driven hop on hop off transport system that will work in small to medium-sized towns and cities at a fraction of the cost of a traditional tram.

There are a number of examples of battery and hydrogen powered trains that are in use across the world today, showing that alternative traction technologies can be a genuine alternative to diesel.

- Alstom⁸⁵ is the pioneer of hydrogen fuel cell trains with the Coradia iLint multiple unit being the first of its kind launched in Germany in 2016. The trains have now also been tested in the Netherlands and can run for 600 miles on a single tank of fuel (which is on par with the distances that diesel trains achieve).
- Eversholt Rail⁸⁶ and Alstom announced a plan in July 2020 to fast-track the UK hydrogen train industry by investing £1 million in British hydrogen trains, creating an entirely new class of train, the first-ever 600 series (Breeze trains).
- Porterbrook⁸⁷ have developed a “FLEX Family” to operate on electrified and non-electrified routes. The HydroFlex, in partnership with the University of Birmingham, was launched in 2019 and put into trial operations in the UK in September 2020. It involved retrofitting an electric train with a hydrogen powered fuel cell. The BatteryFlex, introduced in 2018, involves converting one of the Electrical Multiple Units (EMU) into a battery/electric bi-mode.
- Bombardier⁸⁸ introduced an emission-free and energy-efficient battery-operated train into public service in 2018. The Bombardier Talent 3 does not generate any exhaust and is 50% quieter than conventional modern diesel-powered trains.

⁸² <https://www.herefordshire.gov.uk/bus-it>

⁸³ https://en.wikipedia.org/wiki/Free_public_transport

⁸⁴ <https://www.coventry.gov.uk/verylightrail>

⁸⁵ <https://www.alstom.com>

⁸⁶ <https://eversholtrail.co.uk/news/alstom-and-eversholt-rail-unveil-new-hydrogen-train-design/>

⁸⁷ <https://www.porterbrook.co.uk/innovation/case-studies/the-flex-family>

⁸⁸ <https://rail.bombardier.com/en/solutions-and-technologies/urban/commuter.html>

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- Hitachi Rail and battery company Hyperdrive Innovation⁸⁹ have partnered to develop a battery pack suitable for powering trains, and a roadmap towards a manufacturing agreement which would cover any future orders.

⁸⁹ <https://hyperdriveinnovation.com/insights/news/hitachi-rail-and-hyperdrive-agreement-opens-way-for-battery-trains-across-britain/>