

## LTP4 Case Study – Oxford, UK (2<sup>nd</sup> DRAFT)

### 1. Context

#### 1.1 General Background

Oxford is the [county town](#) and only city of [Oxfordshire](#). The City covers an area of 17.6 sq. miles, and the County 1006 sq. miles. The County Council area includes four other District Councils areas besides the City of Oxford - Cherwell (north / north east of Oxford), South Oxfordshire (south east), Vale of White Horse (south west) and west Oxfordshire (north west). It is 56 miles (90 km) northwest of [London](#), 64 miles (103 km) southeast of [Birmingham](#), and 61 miles (98 km) northeast of [Bristol](#). Its population increased by 12% in the last decade, and in 2017, its population was estimated at 152,450. Oxford is one of the most diverse small cities in Britain with 22% of the population coming from [Black, Asian and minority ethnic](#) (BAME) groups.

Oxford's is a major and rapidly growing employment centre, providing a third of Oxfordshire's jobs. Its economy includes manufacturing (including the BMW Mini plant at Cowley), publishing and science-based industries as well as education (two universities and the John Radcliffe teaching hospital), research and tourism (9 million visitors pa). Between the 2001 and 2011 censii it gained 14k jobs, a 16% increase. The employment in the eastern arc of Oxford (43.6k) now exceeds the employment in the city centre (39.8k). Slightly more commuters come from outside the city (45.8k) than from within (42.4k).

It is a both an historic and more modern 19<sup>th</sup> – 21<sup>st</sup> century city with a Medieval core, dominated by the university of Oxford and its multiple colleges, along with a small pedestrian area and significant shopping centre, and a number of churches, museums and other buildings of interest. The rivers [Cherwell](#) and [Thames](#) run through Oxford and meet south of the city centre. These rivers and their flood plains constrain the size of the city centre. Manufacturing (including the BMW Mini plant), the science and innovation parks, Cowley District Centre, and much modern housing therefore lies to the south east of the historic city, away from the protected core and Thames flood plain.

#### 1.2 Governance

Oxford City Council was a self governing County Borough until 1974, and has since been is a shire district Council with responsibilities for Planning, Housing, Leisure and local environmental services. Since the May 2021 elections its composition is Labour 34 seats, Lib-Dem 9 seats, Green 3 seats and Independents 2 seats. Labour controls the Council.

The County Council is the Highways & Transport Authority. It has been under no overall control since 2013. Since the May 2021 elections its composition is Conservative 22, Lib-Dem 21 seats, Labour 17 seats, Green 3 seats and Others 2 seats. A Lib Dem Labour Green coalition is now taking control. There is an Oxford Strategic Partnership as well as the Oxfordshire Local Enterprise Partnership. Oxford and Oxfordshire sit within the South East Region of the UK in Governmental terms.

##### 1.2.1 Local Plan

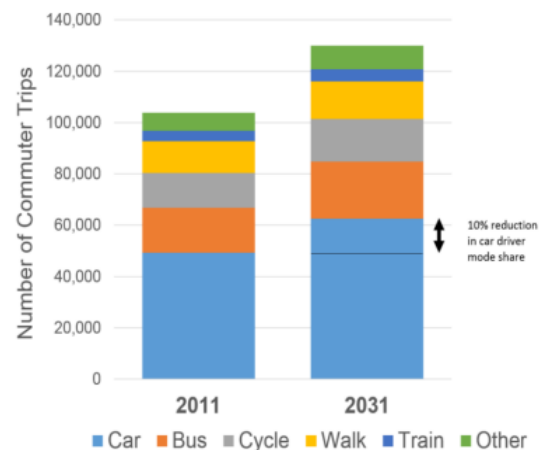
The Oxford Local Plan 2016 – 2036 was adopted in June 2020. See: [https://www.oxford.gov.uk/info/20067/planning\\_policy/1311/oxford\\_local\\_plan\\_2016-2036](https://www.oxford.gov.uk/info/20067/planning_policy/1311/oxford_local_plan_2016-2036)

The background to the plan is a growing economy on the one hand, with Oxfordshire and Oxford as one of the top three clusters in the world for a number of technologies with Oxford’s knowledge intensive economy, two universities and many associated research institutions, and an acute housing crisis on the other, with Oxford’s average house prices being more than 17 times average wage and it having the greatest affordability issue of any city in the UK. Oxfordshire Strategic Housing Market Assessment (SHMA) identifies housing need between 24,000 and 32,000, of which only 10,000 homes will be provided in Oxford itself, albeit at some considerable expense to playing fields and other green spaces, the rest being met by additional housing in surrounding districts, but not the full requirement. This displaced housing provision is due to the strict adherence to the extremely tight green belt round Oxford, and to some green spaces within it also being covered by the designation (e.g. much of the Thames and Cherwell river [flood-meadows](#). (Flags what York may be faced with in future once a Local Plan and Green belt is finally adopted!). Providing the majority of new housing remotely obviously has major commuter travel and mode share implications.

### 1.3 Current Transport Picture (incl. modal split info, PT situation, etc.)

Locally, the use of the car remains dominant - see figure showing past and projected business as usual modal splits:

The city has a complete, albeit heavily congested outer ring road part comprised of two A roads round it, and the local A4142 completing the circle through the south east of the city. The road network within the city is heavily constrained and overloaded, going back many decades. There are areas of poor air quality in the centre, district centres and near ring road junctions, attributable to road traffic. A bus based Low Emission Zone (LEZ) introduced for the city centre in 2014 led to improvements but levels of some pollutants were still above target levels, requiring further action.



Traffic levels in and on the major roads around the city have been broadly static since 2001, but within that overall picture traffic flows into Oxford city centre have reduced by 24% since 1993. This is attributed to a combination of measures, including city centre traffic restrictions (e.g. the five bus gates implemented in 1999 – which means that during peak hours, vehicles passing directly through the city centre only account for 15% to 20% of all trips entering the area); high public parking charges; planning policies that restrict parking supply in new developments; controlled parking zones to remove free on-street visitor and commuter parking; public transport, walking and cycling improvements, including Park & Ride expansion; and targeted road capacity improvements – largely on the ring road. From elsewhere in the document can be added the restricted public off street parking supply (1670 off-street car parking spaces in the City centre, compared to 3300 in Cambridge city centre, 5200 in the centre of Reading and around 5000 in York City centre). It’s also clear that this is linked to additional jobs and activity being in locations outside the city centre – notably the “eastern arc” through Headington, Cowley etc. – the price of city centre traffic restraint?

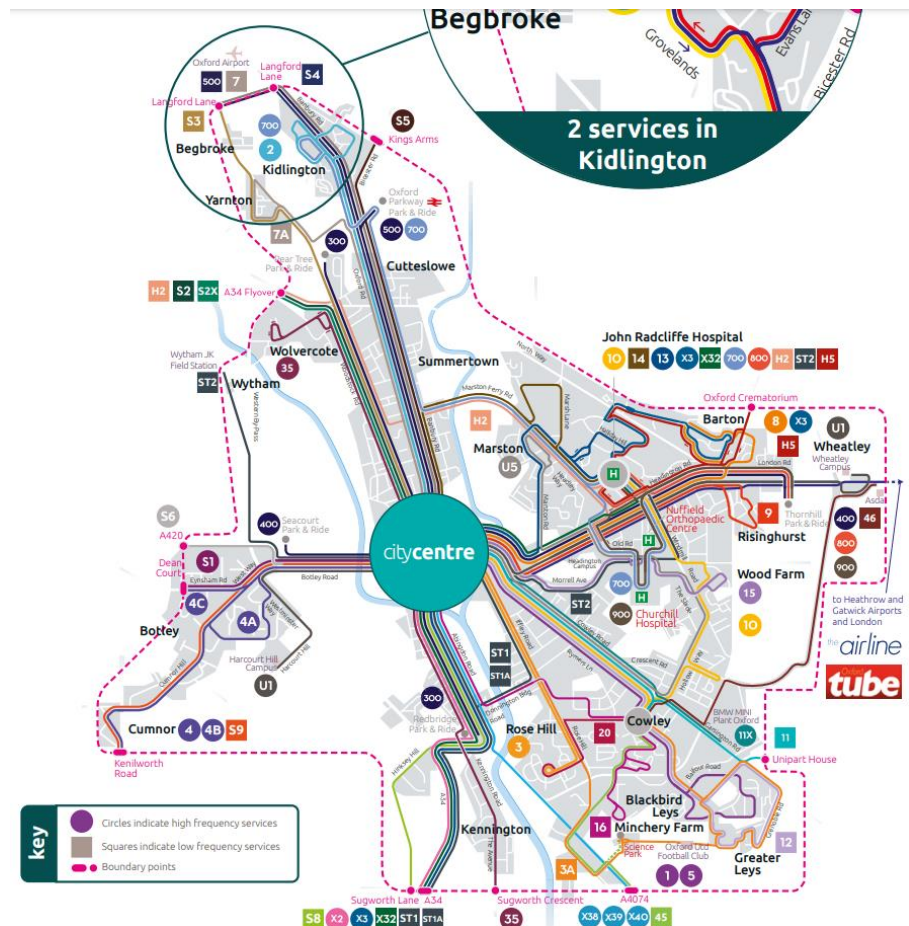
Oxford is well linked to further afield by road, rail and long distance coach.

**Rail.** Rail takes a 5% commuting mode share.

**Park and Ride.** There are six services, 3 run by the City Council and 3 run by the County Council (one longer distance one from Bicester). The five Oxford ones have 5,000 spaces, all located close to the ring road, and are a popular choice for longer-distance commuting movements. However, this is exacerbating congestion on parts of the ring road. This congestion delays all traffic, including buses coming into the city.

**Buses.** Bus usage is one of the highest for a shire City (36% for highest MSOA in 2011) but largely static. Bus routes have a predominantly city centre focus, but with one sub orbital route in the eastern arc (see map).

Services are provided locally by Stagecoach Oxfordshire, plus Oxford Bus Company and Thames Travel; longer distance (London, airports, etc.) Stagecoach, Oxford Bus Company, National Express, the Oxford Tube.



Traffic congestion is a serious issue affecting bus journey reliability and journey times of bus services from all parts of the city and county, particularly when approaching and crossing the ring road and on the radial routes into the city. Congestion also has a serious impact on public transport within the Eastern Arc, making journeys on the orbital routes longer and less reliable.

**Cycling.** Oxfordshire Cycling Network estimates that 3% of journeys in the County are made by cycle. However in Oxford itself cycling takes a 50% share of local commuting (having increased 30% between the 2001 and 2011censii) and it's also Oxford 30k full time students preferred mode.

For Oxford's cycle network see: <http://www.transportparadise.co.uk/cyclemap/>. The network looks similar to York with a mix of off road riverside, quiet back roads and busy roads with cycle lanes, with gaps in key locations. As in York, local cycling interests in Oxford highlighted the lack of high quality routes providing continuous facilities, conforming to a specific standard as the biggest barrier to increased cycling. The severance of walking and cycling routes at the edges of the city, particularly by the outer ring road is highlighted and the need to address it with further development planned

beyond it on the southwest. This will be equally pertinent to York given the current draft local plan out of city developments north of Clifton Moorgate and towards Elvington.

**Walking.** 25% of journeys to work for people who both live and work in Oxford are made on foot.

## 2 Transport Planning

### 2.1 Local Transport Plan

Oxfordshire County Council’s current Local Transport Plan, Connecting Oxfordshire, was adopted in September 2015, and updated in 2016 in order to strengthen the emphasis on improving air quality and making better provision for walking and cycling.

- [Connecting Oxfordshire volume 1 – policy and overall strategy \(pdf format, 10Mb\)](#)

The main document is supplemented by countywide mode specific strategies, two corridor strategies and two area strategy (the first covering Oxford):

- [Connecting Oxfordshire volume 2 - Bus Strategy \(pdf format, 1Mb\)](#)
- [Connecting Oxfordshire volume 3 - Rail Strategy \(pdf format, 3Mb\)](#)
- [Connecting Oxfordshire volume 4 - Active Healthy Travel Strategy \(pdf format, 763Kb\)](#)
- [Connecting Oxfordshire volume 5 - Freight Strategy \(pdf format, 1Mb\)](#)
- [Connecting Oxfordshire - local transport plan - A40 route strategy \(pdf format, 1Mb\)](#)
- [Connecting Oxfordshire - local transport plan - A420 route strategy \(pdf format, 800Kb\)](#)
- [Connecting Oxfordshire volume 8 part i - Oxford Transport Strategy \(pdf format, 3Mb\)](#)
- [Connecting Oxfordshire volume 8 part ii - Area Strategies \(pdf format, 2Mb\)](#)

The County are currently working to update it in the form of a “Local Transport and Connectivity Plan” (LTCP), to better reflect our strategy both for digital infrastructure and for connecting the whole county. They are developing and consulting on it in 2 stages. The first stage is the production of a [vision document](#), which went out to public consultation in February 2021. Consultation on the full LTCP document is anticipated in autumn 2021, before approval and adoption in winter 2021/22.

The Vol. 8i Oxford Transport Strategy (OTS) covers not just the City but also the radial approaches to it. It envisages a 25% growth in travel over the 20 year plan period – 26k extra journeys within Oxford.

An Alan Baxter 2017/8 Movement and Public Realm Strategy jointly was commissioned by the City & County and gives an excellent analysis of the issues for Oxford– see:

<https://www2.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/roadsandtransport/transportpoliciesandplans/areatransportstrategies/oxford/03001-FinalReport-RevC2.pdf>

### 2.2 Priority objectives of the Plan

LTP Goal	OTS Challenge	OTS objective
To support jobs and housing growth and economic vitality across Oxfordshire	Oxford’s economy is growing and changing	Support the growth of Oxford’s economy by providing access to appropriately skilled employees and key markets.
	Economic growth is happening in new locations and needs effective connectivity	Ensure business sectors are well connected to each other and are provided with effective and reliable access to strategic networks

	More people are travelling into Oxford and travel patterns are changing.	Provide effective travel choices for all movements into and within the city
To support the transition to a low carbon future	Oxford is experiencing rapid population growth and demographic change	Promote modes of travel and behaviours which minimise traffic and congestion
	Housing demand is not being met and we need high quality new neighbourhoods	Focus development in locations which minimise the need to travel and encourage trips by sustainable transport choices
To support social inclusion and equality of opportunity	Oxford is a tale of two cities	Provide a fully accessible transport network which meets the needs of all users
To protect and, where possible, enhance Oxfordshire's environment and improve quality of life	We need to better balance different needs in the city centre.	Provide an accessible city centre which offers a world class visitor experience
To improve public health, safety and individual wellbeing	There are major challenges with the urban environment, air quality and obesity in the population.	Tackle the causes of transport related noise and poor air quality and encourage active travel in the city.

### 2.3 Strategic approach adopted/proposed

The Oxford Transport Strategy (OTS) is an integrated strategy with three components: mass transit, walking and cycling and managing traffic and travel demand. It says that there is no single solution to tackle Oxford's long-term challenges: all three components are needed in combination to deliver the objectives of the OTS. A new mass transit network for Oxford will be critical in meeting future connectivity needs in the city. This will deliver a step-change in travel choices for diverse movements within and into the city. Mass transit and walking and cycling improvements will be enabled and supported by an ambitious agenda of road space reallocation, and a much stronger focus on reducing traffic demand in the city.

### 2.4 Principal policy measures adopted/proposed

**Mass Transit:** The aspiration for 2035 is that Oxford will provide its residents and visitors with a connected, modern mass transit network which provides a cheaper, faster, and more reliable travel option than the private car for the majority of journeys to and between destinations in the city:

- Rail; major Oxford station and service improvements (including a new transport interchange, with bus station, taxi area, car parking, twice as much cycle parking, and walking / cycling access improvements) - a 70% increase in patronage at Oxford Station was expected by 2026. Reopen the Cowley branch for passenger trains, creating stations at Oxford Business Park and Oxford Science Park served by an extension of the London Marylebone to Oxford East-West Rail Phase 1 service.

- **Bus Rapid Transit (BRT);** prioritised road-based travel over and above the standard bus services. Three BRT routes have been identified, on routes with significant resident and workplace populations (39-64k residents, 32-54k employees – may struggle to match these sorts of numbers in York). Two lines are centred on existing corridors of significant bus patronage, serving the city centre, key radial routes and three of the city’s Park & Ride sites. The third Line 3, separated into two branches to the north and south of the city, delivers an orbital service. They see this has the potential to transform attitudes to travel both within and to the Eastern Arc. This is likely to be the most challenging line to deliver since existing bus use on this orbital route is relatively low, traffic congestion is substantial, and there are few existing bus priority measures in place.
- **Buses and coaches.** Ongoing conventional improvements are posited, combined with possibly providing two cross centre bus tunnels – at around £1/2bn – to improve access to the pedestrian core and speed cross centre transit. However this seems to be more aspiration than likely to occur.

There is also a radical revamp of Park and Ride looking to relocate existing sites further away from the city to reduce congestion on the ring road and its approaches, including doubling the number of spaces provided.

**Cycling.** The OTS proposes a network based on a hierarchy of Cycle Super Routes (with a high level of continuity, complete or semi-segregation), Cycle Premium Routes and Connector Routes linking major origins and destinations, and particularly focused on the Eastern Arc, where 69% of journeys to work are 5km or less, but only 44% of within city trips are made by walking or cycling. Shades of Rawcliffe & Clifton Without, Acomb Park, Copmanthorpe and other similar areas round York!!

75% of all cycle casualties occurring within Oxford as a result of traffic collisions took place at or within 20m of a junction. A central concept of the Oxford Cycle Strategy is therefore to address key junctions with segregation, priority or safer treatments for cyclists. Pre-signals for cyclist, two-stage right-turns, or cycle bypass-tracks will be considered in improving safety at large signalised junctions.

Longer term, to address the city centre cycle parking shortage, underground or basement cycle hubs or conversion of an existing underground car park (with a dedicated cycle hub potentially commercially operated and providing bike hire and bike maintenance facilities) are suggested. The Oxford Station masterplan includes 1000 spaces within two such facilities.

**Walking.** The strategy on walking sees a clear opportunity for local walking networks to integrate with the city-wide cycling network and also link to public realm improvements (e.g. providing measures to improve access on foot and transit stops and interchange hubs as part of them). A vast improvement to the public realm for pedestrians to maximise the city centre’s value as a shopping and tourist destination is proposed.

**Managing traffic and travel demand:** The strategy proposes additional access restrictions in the city centre and Eastern Arc and reallocation of road space to other modes. This fundamental principle relies on the general presumption against travel by car within the urban area. The outer ring road will be promoted as the primary route for all short-distance car trips and increasingly for cross-city movements as traffic restrictions on some of the roads within the city are introduced and road space reallocated to enable mass transit, walking and cycling improvements. They see an ongoing policy of improving the key ring road interchanges, along with Intelligent Transport Systems (ITS) such as

Variable Message Signs and variable speed limits being applied along parts of it as being consistent with this.

They also propose, subject to further work and consultation, the introduction of a city-wide Workplace Parking Levy (WPL) for three reasons:

- Mode shift – Those staff that have parking charges passed down by their employer will be incentivised to seek alternative methods of getting to work.
- Nett WPL income Funds would be ring-fenced solely for reinvestment into the transport network to improve alternatives to the private car and further influencing mode choice; and
- A charge on spaces - regardless of whether they are used - will encourage employers to reduce their supply of private parking presenting the opportunity to redevelop land previously used for parking for employment or housing.

With minimal exceptions, the levy would apply to all employers with a provision of employee parking over a certain threshold. The city centre could be charged at a premium rate, and they would consider a pricing strategy depending on the levels of accessibility throughout the city. To avoid the risk that a WPL could, by reducing traffic into the city centre, release capacity which would be filled by through traffic, they are proposing to reduce thru traffic levels in the longer term by further restrictions.

Public parking policy is also covered with proposal for rationalisation and a shift to consolidated underground car parks in the city centre, and a pro public transport zonal charging system.

Road pricing is mentioned as a possibility but effectively dismissed on implementation and operational cost grounds.

**Financing requirement:** Detailed costing is to be determined through more in-depth studies. Initial estimates suggest that implementation will require a total capital investment (including funded schemes) of around £1.2 billion (of which about half is for the suggested city centre bus tunnels). When factored against the level of growth expected within the county in the next 20 years, this equates to an investment of approximately £14,000 per additional job and home. The city centre transit tunnels will require the most significant shift in the way Oxford's transport infrastructure is funded. The remaining c£600m of capital investment would represent an annual investment of £30 million per year over the next 20 years, roughly double Oxford's current annual spend.

It says their 2 and 5 year capital investment programmes will see us delivery of committed schemes utilising the £93 million City Deal and Oxfordshire Growth Deal investments; developer funds and Community Infrastructure Levy funding, and local authority funds. Future funding is vaguer – reference is made to the OTS providing a framework and context for future funding bids. Schemes such as zero emission BRT and the Workplace Parking Levy are in the feasibility stage, and optimum solutions and funding programmes are being worked up through collaborative working with public transport operators, major employers and other stakeholders (an illustrative table covers the possibilities).

## 2.5 Key Performance Measures

None indicated.

## 2.6 Provision for disabled travellers

To be researched. Basic information on Oxford's shopmobility scheme, radar key toilet facilities 5 No. Park and Ride and blue badge parking is available here: <https://oxfordcity.co.uk/about-oxford/disability-information/>

### **3 Particular relevance to York (objectives, strategy, measures, implementation)**

#### **3.1 Useful Pointers**

**Overall Strategy** The emphasis on all three components of Oxford's strategy being essential, the very strong emphasis on delivering a step change improvement in public transport via the BRT (and reallocating road space for that and active modes) linked to the general presumption against travel by car within the urban area (and use of a WPL to back that up) is probably the key takeaway.

**Bus Rapid Transit (BRT)** – This is obviously an absolutely key component of Oxford's strategy driven by the heavily constrained road network and the need to move to another level to shift more car use to public transport, and in that sense parallels York and its residents' desire for better public transport as an alternative to the car. The OTS describes typical features of BRT as including: a high level of road priority up to full segregation; larger, modern-looking, higher quality buses; off-board ticket purchasing systems; faster methods of passenger boarding and fare collection; high quality passenger waiting facilities; real-time information systems; the extensive use of 'Intelligent Transportation Systems' in the operating control system; and a unique and attractive public image and identity. They see BRT is a more cost effective and flexible alternative (i.e. some bus services may deviate off-route) to mass light rail transit systems, and one that delivers very similar benefits.

York is already doing or contemplating - as part of the emerging Bus Service Improvement Plan (judging from Julian Ridges presentation to last week's Bus Forum) – many of the things Oxford is proposing for buses generally. However does York have the volume of employment and residency that Oxford see as justifying and making the BRT concept viable on any particular corridors in York? We perhaps need to get more evidence for Oxford's numbers and number crunch potential corridors (city centre - Uni & science park – Elvington either separately or with Clifton Moor – York central – city centre, also Monks Cross – city centre – college). If the numbers don't work what do we do? Is further densification of employment and activity possible through Local Plan amendments? Do we also need an article 4 designation of remaining city centre, Clifton Moor & other major employment sites to stem the ongoing loss of workplaces there to residential use (York's office losses to residential previously reported as the highest of any UK city)?

The idea of bus tunnels through the city centre is also interesting – it could certainly allow buses to transit more easily and rapidly depending on where the tunnel entrances and exits were (Rougier St to Stonebow?, Clarence Street / Bootham to Piccadilly?). It would potentially also allow 'subway' stops in the heart of the pedestrian area increasing accessibility to the area compared to where stops are now. It could also be the precursor for a tram or light rail system. However how practical and affordable would they be in the York geological / archaeological context, and would this be the best use of the major sums of public money involved compared to other investment options?

**Managing traffic and travel demand:** In terms of dealing with city centre congestion, perhaps the most obvious pointer is Oxford's quoted existing figure of only 15-20 % through city centre traffic – linked to their use of five central bus gates . However other factors may be at play - there's only one



central bridge east over the Cherwell and two south and west over the Thames, and only a partial inner ring road to speak of. Also Oxford University dominates much of central Oxford and it prohibits students from having cars at college, so much of the central / near central local population have to walk, cycle or use public transport. The comparative through city centre traffic figure for York used to be about half (current figure needs checking). Does this point to a key potential option for reducing city centre traffic (though given the rejection of the Lendal bridge closure, would more a more flexible priced gating arrangement on the IRR work better in terms of public acceptability, plus full bus gating on the Rougier Street – Ouse Bridge – Coppergate – Pavement / Piccadilly corridor)?

Oxford's much lower city centre public parking supply is also interesting. Could we lose some of York's existing car parks (and convert some to more secure cycle parking with ancillary commercial uses to help fund, or to new purpose built employment sites for start ups, small businesses, etc., that want a city centre location, with appropriate planning gain towards transport provision)?

Oxford's future strategy also relies heavily on introducing Workplace Parking Levy (WPL) & road space reallocation, not Road User Charging (RUC) to help relieve congestion and allow road space reallocation to alternative modes – but York has a much lower level of city centre workplace parking in the first place so a central WPL doesn't look particularly worthwhile. However York has massive amounts of car parking in it's out of town employment, retail and leisure centres, albeit the alternative transport options to those out of town locations is generally poor. Would a WPL for these locations that was used to fund improved alternatives be publically acceptable and can we improve the alternatives sufficiently with the likely income to be acceptable? Would DRT (not mentioned in Oxford's strategy) have a role on the Public transport side, given the likely difficulty with providing / funding sufficient conventional bus routes? Such an approach would also help to counter the centripetal effect on development of high charges for the city centre versus free car parking elsewhere. If we were to pursue this, a local accessibility based WPL charging arrangement sounds appropriate and useful in terms of acceptability.

On cycling & safety Oxford's emphasis on address key junctions with segregation, priority or safer treatments for cyclists looks like something worth examining further.

### **3.2 Any aspects which make it less relevant to the York situation**

Oxford's booming economy, key national role academically and to the knowledge economy, plus its proximity to London and the M4 corridor, and the opportunities and challenges those bring are a different kettle of fish from York's struggling economic position, and much lower employment intensity and inward commuting. If a booming place like Oxford currently has only got an average £15m transport investment a year where does that leave York?

### **3.3 Any demonstrator new neighbourhoods built/planned**

No. The Local plan sites are nearly all infill, none of sufficient scale for a genuine new community.

### **3.4 Best practice examples of engagement and consultation**

To be researched.

### **3.5 Possible Contacts**

To be researched.

DMM – 6 June 2021