Health Impact Assessment of Camden's draft Transport Strategy 2019-2041

December 2018

Introduction

Transport systems can help connect communities, open up opportunities and create conditions for London's global economy to flourish (Mayors Transport Strategy, 2018). There are lots of opportunities for boroughs to integrate a strategy that is inclusive, addresses health inequalities and increases opportunities to improve the health and wellbeing of local people by connecting communities, decreasing accidents and dangerous road incidents, reducing air pollution and increasing opportunities for active travel.

The Mayors Transport Strategy for London outlines a vision to create a future London that is not only home to more people, but is a better place for all those people to live in. Fundamentally, this means reducing Londoners' dependency on cars in favour of walking, cycling and public transport use. The Mayor's Transport Strategy summarises the evidence base, particularly the positive health impacts gained with increased active travel. A commitment to providing streets and spaces which prioritise vulnerable road users (pedestrians and cyclists) and public transport modes before other forms of motorised vehicles is an essential approach to make this vision a reality. The Camden Transport Strategy describes how the Mayor's Transport Strategy will be implemented in Camden.

There are stark health inequalities in Camden. For the less affluent in our communities, these inequalities mean poorer physical and mental health, poorer quality of life and an earlier death.

The National Planning Policy Framework states that local planning authorities should ensure that health and wellbeing, and health infrastructure are considered in local and neighbourhood plans and in planning decision making.

This recognises that health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity (World Health Organisation). Whilst the transport planning system cannot impact on the predetermined factors that can affect health: age, gender, hereditary factors, etc., it can influence the wider determinants of health: individual lifestyles, social and community influences, living and working conditions, and socioeconomic, cultural and environmental influences.

It is important to bear in mind that poor health outcomes are often driven by multiple and cumulative determinants, lack of open space, fear of crime, and poor air quality can mutually reinforce against social cohesion and physical activity. It is therefore important to consider the individual and communities at the centre of the range of wider determinants.

Health Impact Assessment

This Health Impact Assessment of the draft Camden Transport Strategy (CTS) assesses the draft strategy in the context of those wider determinants, using a framework described in the London Healthy Urban Development Unit's "Rapid Health Impact Assessment Tool". The assessment tool takes an evidence-based approach to integrating health into urban planning and considers legislation and policy changes both nationally and in London that relate to health and spatial planning. In this Health Impact Assessment, the tool is applied to transport planning which is considered appropriate because of the close interdependencies between spatial and transport planning.

The Rapid Health Impact Assessment Tool identifies eleven broad determinants that can be influenced by spatial planning:

- Housing quality and design
- Access to healthcare services and other social infrastructure
- Access to open space and nature
- Air quality, noise and neighbourhood amenity
- Accessibility and active travel
- Crime reduction and community safety
- Access to healthy food
- Access to work and training
- Social cohesion and lifetime neighbourhoods
- Minimising the use of resources
- Climate change

All policies described in the draft Camden Transport Strategy were cross-analysed against these determinants, considering available evidence and best practice from elsewhere, to identify where policies could be strengthened, and the entire plan analysed against the determinants to ensure that the Transport Strategy addresses all of the determinants (gap analysis). The resulting analysis is outlined as below:

+	The policy addresses the determinants appropriate to that policy, and any changes are likely to be very minor
Neutral	The policy broadly addresses the determinants appropriate to that policy, but changes are likely to strengthen the policy
-	The policy does not fully address the appropriate determinants and changes are recommended to ensure that appropriate measures are considered by planners and developers.

Results of the Health Impact Assessment of Camden's draft Transport Strategy

2019-2041

Executive Summary and Chapter 1

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The ability to travel is an important determinant of health: it enables and facilitates getting to work or education, essential daily activities such as shopping for food and goods, attending appointments, and undertaking leisure activities. In addition to health impacts, transport contributes to important economic and social impacts down to individual level.

The draft Camden Transport Strategy (CTS) focuses on a vision to work alongside residents and partners in transforming transport and mobility in Camden, enabling and encouraging people to travel sustainably; nurturing healthier lifestyles; creating radically less polluted places; and upgrading the transport network to meets Camden's needs and those of London as a growing capital city. This vision has health and wellbeing at its core and health and wellbeing are addressed and highlighted through all 7 objectives in the draft plan.

The draft Transport Strategy considers and provides a range of options to improve health in the borough of Camden. The strategy's vision is to enable and encourage people to travel sustainably, nurturing healthy lifestyles and creating radically less polluted places, and upgrading the transport network to meet Camden's needs and those of London. The ability to travel is an important determinant of health: it enables and facilitates getting to work or education, essential daily activities such as shopping for food and goods, attending appointments, and undertaking leisure activities. In addition to health impacts, transport contributes to important economic and social impacts down to individual level.

Five action plans are explored to meet these objectives: a Walking and Accessibility Action Plan, a Cycling Action Plan, a Road Safety Action Plan, an Electric Vehicle Charge Point (EVCP) Action Plan, and an (emerging) Freight Action Plan.

Outcomes explored through the delivery of the CTS that will have an impact on health, wellbeing and mortality include:

- An increase in sustainable transport mode share by Camden residents from 85% (2017) to 93% (2041), including a quadrupling in cycle mode share by Camden residents, from 3.6% (2017) to 15% (2041), and half of all residents' trips to be made on foot by 2041
- A reduction in motor traffic volumes by 20-25% by 2041 compared to 2016 data
- Reductions in Nitrogen Oxide (NOx)and Particulate Matter (PM10) from road transport, of 95% and 61% respectively by 2041 (compared to 2013 data), that assist the Borough in meeting World Health Organisation targets for both
- Achieving zero Killed and Seriously Injured road collision casualties per annum by 2041, against a baseline of 100 (2010-2014 average).

Chapter 2: borough context, challenges and opportunities

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In Chapter 2, the diversity of the borough is highlighted (paragraph 2.5), and their modes of transport are considered within the context of the strategy, in addition to key challenges related to health.

Access to healthcare is also highlighted within Chapter 4 of the Camden Transport Strategy - the place and people section of the strategy, as well as access to schools, jobs, employment and work. Economic and social outcomes are well established important drivers to good health and wellbeing.

A road user hierarchy is utilised which prioritise the most efficient, sustainable and healthy modes of transport –walking, cycling and public transport.

Health challenges highlighted included: air quality, carbon emissions, road danger, congestion, noise and physical inactivity and mental health, accessibility and inclusion.

The environmental impacts of heavy vehicles across the borough has also been highlighted in the Executive Summary, in particular in reference to High Speed 2, as well as other development sites across the borough which will be a challenge that the borough have considered in terms of noise levels and pollution, as well as potential road safety concerns.

Chapter 3: vision, objectives, policies and measures

Key priorities in the CTS include:

Objective 1: To transform our streets and places to enable an increase in walking and cycling.

Objective 2: To reduce car ownership and use, and motor traffic levels in Camden Objective 3: To deliver a sustainable transport system and streets that are

accessible and inclusive for all

Objective 4: To substantially reduce all road casualties in Camden and progress towards zero Killed and Seriously Injured (KSI) casualties

Objective 5: To reduce and mitigate the impact of transport-based emissions and noise in Camden

Objective 6: To deliver an efficient, well-maintained highways network and kerb-side space that prioritises the sustainable movement of goods and people

Objective 7: To ensure economic growth and regeneration is supported by, and supports, a sustainable transport network

Access to services

Neutral

Poor access to services is a factor that compounds other types of deprivation that exist within an area. Consideration of those with disabilities and mobility issues is key to an equal approach to accessing services.

Camden is connected widely via bus and tube routes, however those who are in areas of deprivation may not be able to afford to access such transport measures. Transport fares are set by Transport for London (TfL), although boroughs contribute to concessionary fares for certain groups. The Mayor has frozen fares until 2020 and introduced the "hopper" fare enabling multiple journeys within one hour for one fare. Camden's role is to support the Mayor's Transport Strategy in improving access to public transport.

All of Camden's bus stops, except a small number on Kilburn High Road, are fully accessible – and those remaining ones will be completed as part of the Kilburn Area Based Scheme in 2019/20.

There are also plans highlighted in Chapter 4 to introduce a dedicated resource (in 2017/18 and into 2018/19) to identify and deliver bus priority improvements across the Borough. This will include highways improvement measures, amendments to bus stops to give buses priority, new bus lanes/bus gates where feasible, and consolidation of bus stops in appropriate locations to reduce unnecessary delays. This will be in addition to walking and cycling infrastructure updates across the borough.

Increasing capacity within the existing transport system is also highlighted as an area of work within the strategy which will address overcrowding and enable easier access to services.

The Walking and Accessibility Action Plan identifies further actions we will be delivering to improve access for all to transport networks in the Borough.

The provision of Area Based Schemes may also increase access to services through travel mode development.

There is an absence of step-free facilities at a large number of tube/rail stations in the Borough, Camden plan to carry out a study to identify priorities – based on local contexts, rather than operational/financial factors – to help inform future funding bids/potential developer contributions for step-free upgrades in the Borough. Step-free access to transport is important in reducing inequalities, ensuring a comprehensive spread of step-free stations to reduce excess journey time that disabled resident have to spend travelling.

Measuring travel times to key services within the borough may be a useful exercise (if not already completed) to ensure equal access to services across the borough, with consideration of LSOAs where deprivation is high, as well as consulting with those who

may have issues with accessing transport modes to ensure that their views are included in the development of this strategy.

Walking and Cycling

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Providing opportunities for walking and cycling can increase physical activity and help prevent chronic diseases. For the majority of people, the health benefits of walking and cycling outweigh the impacts of air pollution typically seen in Camden, however reducing air pollution remains an important factor in health improvement.

The Transport Strategy prioritises and encourages walking and cycling through a range of proposed actions and through the policies that will be implemented:

IP1a delivering Liveable Neighbourhood schemes at Kilburn High Road and hinterland area.

IP1b Reducing traffic dominance in Holborn gyratories which will enable active travel modes, such as walking and cycling.

IP1c addressing the gyratory in Camden Town and provide high quality cycle links.

IP1D: delivering a high-quality cycle network across the borough.

IP1e Assisting in the progression of the Camden High Line.

Polices which support and promote walking in Camden include: Policy 1a, which includes walking at the top of the road user hierarchy.

Policy 1b, which aims to remove barriers to walking, creating high quality environments that enable model shift and increase active travel.

Policy 1c aims to reallocate carriageway space to active travel modes, and improve road safety, and enhance the public realm which may also encourage more walking.

Policy 1d: Healthy Streets.

Policy 1e will ensure that walking is also included in other Council policies and plans, where relevant.

Policy 1f will ensure the delivery of evidence-based processes to prioritise existing funding for walking schemes.

Policy 1g includes gathering more intelligence of where people walk and may switch travel modes, which will benefit the prioritisation of locations for Area Based Scheme funding.

Policy 3i also promotes walking and cycling by encourage a shift from public transport use to walking and cycling where appropriate to reduce public transport overcrowding.

The Walking and Accessibility Action Plan includes new and safer crossings which will aim to increase walking, way finders and enhanced footways and support improvements to leisure routes and new spaces- it is hoped that these measures will also increase the number of people walking in Camden. Safer crossings with adequate crossing times are particularly important for older people and people with reduced mobility.

There is also a cycling Action Plan, which will aim to develop the cycle routes across the borough, in addition to improving parking, permeability and safety.

The Road Safety Action Plan is also included as part of the transport strategy, which aims to deliver a reduction in the number of people killed or seriously injured in the Borough as well as audit prior year's casualty and other casualty-related statistics (such as traffic speed data) to inform the future year's programmes.

Road closures that are timed and cycle/bus only streets are another introduction in the strategy which aims to increase the number of people cycling in the borough.

The Cycling Action Plan outlines measures to support cycle hire options in the Borough to increase availability and access to bikes for residents and visitors.

Area Based Schemes will also include public realm, changes that aim to increase active travel modes in the areas where funding is acquired. Improvements to public realm increase its use, and not only contribute to encouraging active travel, but help to reduce social isolation through a variety of mechanisms including improved safety and perception of safety, and providing spaces to stop, rest, and interact.

Camden Council also highlight the opportunities through Liveable Neighbourhood schemes that can provide improvements to prioritise active travel in these areas.

Camden Council already implement Healthy School Streets and Play Streets which can also enable active travel, as well as other forms of physical activity, which may also help in reducing childhood obesity.

All of the plans and actions above will be important in making Camden a safe and accessible place to walk and cycle, which is likely to improve health and reduce inequalities through increased active travel, better access to economic, educational and social opportunities, access to goods and services, and contribute to reduced social isolation.

Air quality and noise reduction

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Objective 2 aims to reduce car ownership and use, and motor traffic levels in Camden, which are expected to reduce air pollution and increase active travel.

Camden Council will work with partners to ensure that the impact of the construction work is minimised, particularly in critical central locations, and are coordinated with other projects in the area, including the WEP and Cycle Grid schemes.

There are plans to minimise construction impacts via:

Measure 4E which will use the Construction Logistics and Cycle Safety(CLOCS) accreditation scheme to reduce cycle fatalities amongst construction vehicles.

Measure 5B will aim to reduce impacts of dust and emissions during construction by working with partners to improve compliance with standards that are set for dust and emissions during construction.

Measure 5D will also use Construction Management Plans to ensure minimum environmental standards for contractor vehicles on site.

Policy 6C also ensures that alternative footways and cycle lanes are provided during road closures, including when construction is taking place which will also reduce exposure to dust and noise.

Air pollution

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Poor air quality is the largest environmental risk to public health in the UK, as long-term exposure to air pollution can cause chronic conditions such as cardiovascular and respiratory diseases as well as lung cancer, leading to reduced life expectancy. The most vulnerable groups like children, older people and those with heart and respiratory conditions are most affected. Poor air quality has been shown to reduce quality of life.

There are a number of positive measures outlined in the Transport Strategy that aim to minimise air pollution through a range of interventions and policies

IP5a aims to upgrade bus fleets in Camden to reduce emissions.

IP5b aims to implement a borough wide network of electric vehicle charging points which will support the switch to electric vehicles, Policy 5a supports this priority area, charge points will respond to different needs, such as freight, taxis, residential charging, and car clubs. There will be incentivised schemes through infrastructure and policy (Policy 5d).

IP5c aims to electrify current diesel trains running through and into mainline Camden stations.

There are also measures to continue anti-idling enforcement at hot spots across the Borough following an initial 12-month pilot started in March 2018 (Measure 5e).

Camden also aim to work towards the World Health Organisation (WHO) limits for Particulate Matter and Nitrogen Dioxide by 2030 through Policy 5b.

Air Quality indicators will be used to prioritise locations for Area Based Schemes (Policy 5c).

Camden Council will include their own high-quality environmental standards on council and provider fleets (Policy 5g), as well as monitor the impact of highways and streetscape schemes using air quality monitoring (Policy 5h), and review parking charges on a regular basis to increase uptake of lower emission vehicles (Policy 5i).

Additionally, there are plans to identify opportunities for urban greening within the strategy, such as parks, roofs, linear parks, trees, woodland and waterways, which may also offer an opportunity to mitigate the impacts of pollution and CO2.

The work in the strategy will also be complimented by the Clean Air Action Plan (2016-2018) will be updated on a regular cycle. The new Clean Air Action Plan is envisaged to be approved in 2019. The new Clean Air Action Plan supports Camden 2025, in which residents prioritised air quality. It will also support the Council's commitment to reduce air pollution levels to below World Health Organisation recommended levels, which are more stringent than statutory EU limits.

Camden Council will work with TfL on fleet improvements (Measure 5a).

Low Emissions Bus Zones will be implemented in Camden as part of the TfL scheme.

Camden will also support the Ultra-Low Emission Zones project, which is being delivered by TfL.

Noise

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Exposure to noise can have adverse effects on health, including sleep disturbance, annoyance, noise-induced hearing loss (NIHL), cardiovascular disease, endocrine effects, and increased incidence of diabetes^{i ii}. Consideration of the reduction of environmental noise pollution within planning and transport strategies is important to consider due to the health effects associated with noise.

The Transport Strategy includes a range of measures to minimise noise pollution in Camden. Objective 5 in the strategy aims to reduce and mitigate the impact of transport-based noise in Camden.

The Regent's Canal is highlighted as a traffic free route, as are the Borough's parks and open spaces, and potentially new walking routes such as the Camden High Line.

Measure 5m shows that Camden Council will support London Councils in enforcing the London Lorry Control Scheme with ANPR camera enforcement to mitigate the impacts of night time noise. Other policies (Measure 5f, 5g,5h) that aim to increase the usage of EV vehicles may also reduce noise levels in the borough. The provision of more green space and trees (Measure 5k) would also help with noise reduction.

Protecting and enhancing green space

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Providing secure, convenient and attractive open and green space can lead to more physical activity and reduce levels of health disease, strokes and other ill-health problems associated with sedentary lifestyles. Green space also promotes physical activity, psychological well-being, and the general public health of residents, these can include parks, reserves, greenways, conservation areas, forests, green roofs, streams, and community gardens. Green space may filter air, remove pollution, attenuate noise, cool temperatures, infiltrate storm water, and replenish groundwater; and in some instances, it can provide food.^{iii iv}

Camden's Transport Strategy's Measure 5K and 5I support the protection and enhancement of future green space through identification of opportunities to increase green cover in the borough, such as a green walls, and roofs, rain gardens and trees. In addition to this, there may be opportunities to convert carriageway space into green space through parklets, pocket parks and other measures.

Access to open space

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Public open space contributes to the liveability of a region, and the health and wellbeing of individual, and can encourage physical activity^v, and foster neighbourhood social cohesion. ^{vi vii} Camden has implemented attractive walking routes around the borough, including Brill Place / Phoenix Road, a parallel route to Euston Road which provides a quieter, safer and less polluted link between St Pancras and Euston Stations.

The Regent's Canal (and pedestrian/cycle links across it) provides an open space route, as do the Borough's parks and open spaces, and potentially new walking routes such as the Camden High Line. Measure 1A, also proposes support for the Camden High Line (a new linear park for Camden), which will support improvements the creation of a new spaces for active travel and open spaces in Camden and may maintain and increase existing high walking levels.

A priority area in Objective 1 (P1e) is playing a role to assist in implementing the Camden High Line.

Play spaces for children and young people

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Many schools suffer with parking, congestion and road danger issues immediately outside their school, making walking and cycling less attractive travel options for parents and children. This can have a negative impact on children's health. Healthy School Streets is one of Camden Council's initiatives to make the streets outside schools safer at the start and end of the school day and to discourage driving to school. Play streets aim to activate play on streets within the borough. Both schemes can encourage physical activity and decrease air pollution. Patterns of physical activity established in childhood are perceived to be a key determinant of adult behaviours, so building in more physical activity opportunities in childhood is beneficial. Camden Transport Strategy will look to continue to implement Healthy School Streets and Play Streets (Measure 1h) to enable active travel and play spaces for young people. Currently, there are two Healthy School Streets with a third Healthy School Street planned.

Accessibility

Streetscape accessibility, legibility and permeability

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Convenient access to a range of services and facilities minimise the need to travel and provides greater opportunities for social interaction. Buildings and spaces need to be easily accessible and encourage all population groups to access them.

The Transport Strategy has highlighted a number of measures and policies to increase streetscape accessibility, legibility and permeability through walking and accessibility action plan, Legible London, and a cycle permeability scheme.

There is planned work to action permanent/timed restrictions on residential streets where there are known problems of 'rat running' and through motor traffic while maintaining access for local people and cyclists.

Policy 3b and 3c will ensure that all relevant policies are updated to remove clutter and obstructions from the public highway which impede movement and permeability, and plan to improve accessibility and travel options for vulnerable groups to facilitate independent living. Providing active travel opportunities for hard to reach communities such as cycle loans and offers, and Community Cycling Programmes will also increase streetscape accessibility.

Proposed measures in the Area Based Schemes will include improving permeability for cyclists through the area, upgrading crossing points, and restricting through-traffic movements where feasible.

Objective 6 prioritises the delivery of a well-maintained highways network and kerbside space for parking/loading provision, and reallocating carriageway space to active, sustainable travel modes, if necessary, to enable and encourage people to walk and cycle.

Measure 3k: continue to review, and provide as appropriate, reasonable parking for essential uses, particularly for blue badge and green badge holders, and prioritise these over other motor vehicle parking spaces where competition on kerbside space is high.

This could also include using new and emerging digital technologies to ensure kerbside space is used in a smarter and more responsive way to demands at different times of the day. Other relevant policies include:

Policy 6a: undertake the effective management of carriageway and kerbside space to cater for all modes but prioritise space for the most efficient modes.

Policy 6c: alternative footways and cycle lanes should always be re-provided during temporary closures, including during construction of developments and highways works.

Measure 6a: review, at least every 2 years, the provision of, and where relevant the criteria for, disabled/business/car club and market trader bays, and reallocate redundant space in line with policy 2e.

Measure 6g: maintain the quality of the road and pavement network through the Council's maintenance programme, including undertaking assessments and condition surveys in order to prioritise locations.

Accessibility for people with mobility problems or disability impairment +

Buildings and spaces should be easily accessible for all population groups, including older people and those with a disability.

Objective 3 sets out the plan to enhance provision of step free access for stations in Camden with a short-term focus on Kentish Town and West Hampstead stations and future locations to be identified, as well as Step free access to all new major transport infrastructure, station upgrades.

Camden plan to work with local groups including those with a disability to understand and respond to the needs of the groups (Policy 3j) and use local intelligence to prioritise locations for investment of Area Based Schemes (Policy 3h).

Policy 3a, Policy 3b, Policy 3f, Policy 3k also support accessibility of transport, roads and streets for people with mobility problems or disability impairment, ensures the update of relevant policies to remove obstructions from the public highways, provision of step free access on underground, Overground and mainline stations within the borough.

Measure 3j: Continue to support services delivered by Camden's Accessible Transport Solutions (CATS), particularly for taxi card and Freedom Passes.

Well served by public transport

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Camden is well served by public transport, particularly in the south of the borough which has some of the highest Public Transport Accessibility Levels (PTAL) ratings in the country. Camden benefits from:

3 main rail stations at Euston, King's Cross, and St Pancras;

- 8 London Overground, 3 Thameslink and 18 Tube stations, with a further 4 Tube stations on shared borough boundaries;
- The Night Tube operating through Friday and Saturday nights on 4 Tube lines serving the Borough
- 63 bus routes: 20 of these are 24/7 which, together with an additional 23 night (N) routes, provide 43 night services in the borough. Many bus routes are categorised as 'high frequency' i.e. at least 5 buses an hour/every 12 minutes, with many having much higher frequencies at every 5-6 minutes; Crossrail (Elizabeth Line) at Tottenham Court Road (starting operation from 2019).

Future plans that are highlighted in the CTS that will also increase access to public transport reach and accessibility include:

- Upgrades of the Metropolitan, Circle, Hammersmith & City (and District) lines which will add 33% more capacity.
- New fleet of trains will be introduced on the Piccadilly Line from 2023, and on the Central Line, and other modernisation measures will lead to increases in capacity of 60% and 25% respectively on these two lines.

Transport is also accessible at night time- there are night bus services, night tube services at weekends, and the recent introduction of 24/7 weekend night services on several Underground and Overground lines provides support for people working in the night time economy.

The completion of Crossrail (the Elizabeth Line) will assist in easing some of Camden's transport pressures.

Minimisation of car travel

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Minimising the use of car travel can encourage active travel such as cycling and walking, help people achieve recommended daily physical activity levels, as well as reduce air pollution and traffic injuries through less cars on the roads.

The Transport Strategy highlights a number of ways that Camden are working on to reduce car travel, including car clubs, cycle routes, walking paths, night tube, buses, parking restrictions, ULEZ, reducing kerbside space, reduction in parking across the borough, access to green spaces and active travel opportunities, Camden introduced a new borough-wide car free policy are part of the transport plan.

Measures to assist people who are car dependent Neutral

Improving public transport and assisted transport services for older and disabled residents will enable more residents to become less car dependent.

Although there are a few measures in place to assist those who are car dependent, there are still limitations including a small number of EVs charging points provided in the borough. The measures outlined below outline plans to support those who are car dependent.

Measure 3k: Continue to review, and provide as appropriate, reasonable parking for essential uses, particularly for blue badge and green badge holders, and prioritise these over other motor vehicle parking spaces where competition on kerbside space is high.

Measure 3j: Continue to support services delivered by Camden's Accessible Transport Solutions (CATS), particularly for taxi card and Freedom Passes.

Traffic calming measures

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Traffic calming measures aim to slows vehicle down to speeds below the limit, and in this way the zone. Speed humps, chicanes, road narrowing, planting and other measures can be introduced to both physically and visually reinforce the nature of the road. These measures have been shown as promising interventions for reducing the number of road traffic injuries and deaths. Schemes to reduce traffic speeds may result in a significant change in the operational factors which influence vehicle emission rates.

There are traffic calming measures outlined in the strategy, such as Vision Zero approach, Road Safety Audit, 20mph, Fitzjohns scheme, junction protection programme.

Effective security and street surveillance

Neutral

When local pedestrian environments are intimidating, and inconvenient people are more likely to use cars more and go out less, thus impacting their health and wellbeing. Effective lighting, active use of streets and public spaces and creating spaces that are fruitful for community interaction should be considered when encouraging active travel.

This is explored in Measure 3h and Measure 4b, where there will be work with the Police and Community Safety team to help address crime and anti-social behaviour as well as identify measures that will improve public safety and design out crime. There is also work carried out in Vehicle Activated Signs and working with the police on community speed watch programmes.

Activity in buildings and public spaces

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As explored above there are a number of ways in which this strategy will increase the access to public spaces and buildings through active travel routes, Healthy Streets, and Play Streets.

Engagement with local communities

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Friendship and supportive networks can help increase wellbeing and reduce levels of illness.

Involving the community to consult on the Transport Strategy has started, officers have undertaken informal 'pre-consultation' engagement activities to inform the development of the draft CTS, and these include a public stakeholder engagement event on 4th July, Camden Air Quality Action Plan workshop on 10th July, which included local resident groups, a further Age Friendly London event on 19th September and further public consultation period at present to promote the draft CTS to local communities and residents.

Engagement with other vulnerable groups and groups that will be affected by transport decisions in Camden and may suffer social disadvantages such as those on low income, single parent families, refugee groups, people seeking asylum, BME ethnic groups, religious groups, people with physical or learning difficulties, travellers and those within LSOAs that have higher levels of deprivation should be considered in the consultation exercise.

Access to healthy food Neutral

Access to healthy food can improve diet and prevent chronic diseases related to obesity.

Access to healthy food is not widely considered in the document, but the borough is well served by public transport, access to local amenities and high streets across the borough, which may enable access to healthy food options.

Opportunities for local businesses Neutral

By the promotion of active travel and behaviour change to more physical activity for carrying out travel will encourage the use of local provision and assets.

The Transport Strategy ensures that the walking and cycling are at the top of the hierarchy of road users, and this could have potential opportunities for local businesses. Encouraging tourists to use active travel while in the borough may also increase opportunities for local businesses. There may also be opportunities to work with local businesses to ensure that active travel measures are promoted to staff.

Opportunities for social interaction Neutral

Planning can help to facilitate social cohesion by ensuring access to safe and permeable environments for residents.

This is considered in the strategy through schemes such as Healthy Streets, Play Streets, Community Cycling Clubs, School Travel Plans.

Policy 3c also aims to improve accessibility and travel options for vulnerable groups to facilitate independent living and reduce isolation.

Addressing local inequalities

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Improving public transport and assisted transport services for older and disabled people will help a wider range of people to become less car dependent, and improving streets to increase active travel levels, reduce road danger, improve air quality and reconnect communities will be vital in reducing unfair health inequalities, and is part of the Mayors Transport Strategy.

Although the CTS addresses local inequalities through a range of measures such as Healthy Streets initiative, aims to reduce air quality, noise, addressing sedentary lifestyles through increasing physical health for residents via schemes such as Community Cycling Clubs, and active travel opportunities. There may need to be further consideration of areas of deprivation in Camden for all transport-based schemes considered in this strategy, in addition to the Area Based Schemes.

In Policy 3h deprivation will be used as a criterion for area-based scheme prioritisation.

Avoidance of community severance

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Community cohesion can be affected by infrastructure such as roads, or other development projects that sever community links. Large development schemes can disrupt familiar walking routes or create barriers to movement, and hinder community cohesion.

Construction of new transport routes or increases in traffic flows through an existing community may lead to community severance, this can provide a physical and social barriers to accessing local amenities and disruption of local social networks. This could especially be an issue for older people and is important to consider when developing a transport strategy.

Point 3.31 highlights a need for work to be carried out to avoid community severance, in particular this highlights Euston Road as a key area where significant investment is required. This area experiences NO2 levels that are more than double the EU limit, accommodates around 60,000 motor traffic vehicles each day, and contains both junctions and link sections along the corridor that feature amongst the most problematic locations in the Borough in terms of road traffic collisions.

Objective 4, IP4b states an aim to reduce road danger (and associated severance), pollution and traffic on the Euston Road and enable active travel modes along and across this corridor as a priority area.

Resource minimisation

Making use of existing land Neutral

Redevelopment on brownfield sites or derelict urban land can ensure that land is effectively used, recycled and enhanced.

The impacts of Crossrail 2 on residents and businesses should be as limited as possible, with minimal land-take, incorporation of station facilities into existing rail stations (such as Euston and St. Pancras), minimisation of construction impacts on neighbours and integration of delivery with HS2 and Network Rail Euston station development.

Measure 5n: Investigate opportunities to transfer redundant parking bays on housing estates (and other Council owned land) to EVCPs.

The CTS also sites that the impacts of Crossrail 2 on residents and businesses should be as limited as possible, with minimal land-take, incorporation of station facilities into existing rail stations (such as Euston and St. Pancras), minimisation of construction impacts on neighbours and integration of delivery with HS2 and Network Rail Euston station development.

Encouraging recycling

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Encouraging recycling can contribute to a better environment.

Not explored in the strategy.

Waste management facilities

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Reducing or minimising waste including disposal and developing processes for construction can impact health.

Not explored in the strategy.

Environmental Health, Environment Agency or Health Protection Agency consultation with CTS

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Not explored in the strategy.

Climate ch ange

Renewable energy

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Planning can address sustainability and environmental considerations through the use of standards that will help reduce energy demands and increase the amount of renewable energy.

Not explored in this strategy.

Sustainable approach to transport

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Transport planning can help reduce carbon emissions, and in turn increase health of the borough's population.

The strategy includes increase of EV ports in the borough, switching buses and taxis to electric fleets, increase of walking and cycling for travel, car clubs, as well as an increase in public transport options to address overcrowding and capacity issues.

In addition, those with essential need for a car will be encouraged to change to low emissions vehicles.

Maintenance or enhancement of biodiversity Neutral

Planning that takes advantage of sunlight, tree planting and accessible green/brown roofs can have the potential to contribute towards the mental wellbeing of residents.

Policy 5f states that Camden will identify opportunities for increased planting and urban greening in all transport schemes to help mitigate the impacts of carbon emissions and climate change and provide shade and shelter.

Flood risk and sustainable drainage systems

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Urban environments need to be able to cope with uncertain rainfall, extreme weather events and their impact on flooding.

Measure 5j addresses flood risk in the CTS, through the implementation of Sustainable Urban Drainage (SUDs) schemes as part of streetscape and place upgrades, together with the use of appropriate materials to mitigate the risk of flooding.

Chapter 4: Delivery Plan

Chapter 4 sets out Camden's Delivery Plan for achieving the Vision and objectives of the CTS. These include:

- The links between schemes within the Delivery Plan and CTS objectives/Mayors Transport Strategy priorities
- A list of potential funding sources for the period 2019/20 to 2021/22
- Long-term interventions
- Three year indicative Programme of Investment for the period 2019/20 to
- 2021/22
- A detailed programme for 2019/20

The aim and nine key outcomes included in the Mayors Transport Strategy are also outlined in the Transport Strategy, such as:

London streets will be healthy and more Londoners will travel actively.

- London Streets will be safe and secure
- London streets will be used more efficiently with less traffic
- London streets will be Clean & Green
- Public transport will meet needs of a growing London
- Public transport to be safe, affordable and accessible
- Public transport trips will be safe, fast, reliable
- Sustainable Growth/ Unlocking Growth

This chapter provides a detailed plan of how local schemes will be delivered.

There are plans to include 7 Area Based Schemes outlined in the delivery plan, including:

- Cantelowes & Camley
- Gospel Oak
- Kilburn
- Farringdon
- Kentish Town
- Camden Town
- Holborn Liveable Neighbourhood

Other schemes included in the delivery plan:

- Cycling infrastructure schemes
- Walking infrastructure schemes
- Road Safety infrastructure schemes
- School travel infrastructure schemes
- Smarter travel and behaviour change initiatives

Planned projects:

- High Speed 2
- Crossrail 2
- Underground capacity upgrades

Conclusion and recommendations

This analysis has considered the evidence base and best practice in health issues in transport planning. Transport planning can have a profound effect on all levels of factors that influence health, and it is important to bear in mind that poor health outcomes are often driven by multiple and cumulative determinants, for example poor housing conditions and lack of (good) employment can be mutually reinforcing, and lack of open space, fear of crime, and poor air quality can mutually reinforce against social cohesion and physical activity. It is therefore important to consider the both individual and communities at the centre of the range of wider determinants.

The strength of the Camden Transport Strategy is that it build on the evidence underpinning the Mayor's Transport Strategy and aims to deliver outcomes within the Camden context.

Overall, the draft Transport Strategy contains much that will promote health and reduce health inequalities. Key themes emerging from the analysis are:

- 1. Ensure that key population groups are engaged in the consultation phase, such as those on a low income, and from geographical areas of lower deprivation.
- 2. Work with residents, businesses and other organisations to promote active travel modes.
- Consider access to services and healthy food within the Transport Strategy and Area Based Schemes, including travel times from areas of lower deprivation to main service points.
- 4. Consider the ageing population and measures that may need to be put in place to encourage active travel, and support community cohesion in Camden.

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