Keeping the City Moving

Network Management Action Plan

Where are the roadworks happening in Brighton and Hove?

Brighton & Hove City Council

January 2021

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1. Introduction

Brighton & Hove is a busy vibrant seaside city that continues to be an all year destination for visitors and employment for people. The city is surrounded is part of the greater city region that includes many of the surrounding urban conurbations that generate large movements of people travelling into the city. There are 2 universities that continue to expand and develop increasing the demands on the city's roads.

Traffic congestion is an increasing problem in most urban areas. Congestion threatens the economic well-being of many towns and cities, as well as affecting the quality of life of those who live and work there. The COVID 19 pandemic has had a major impact on the city and changes have been implemented to support social distancing and encourage active travel. These changes will bring about challenges and will need to considered in the Action Plan.

Brighton & Hove City Council is the local highway, traffic and street authority for the city. The council is responsible for managing the traffic using the road network. By effectively managing the transport system it is possible to provide more consistent, predictable and reliable journeys for the movement of people and goods. This helps to tackle congestion and environmental pollution and improves safety and accessibility for all road users. Managing the road network is vital to the future prosperity of Brighton & Hove. Given the impact of congestion on the economy a strategic approach is required, one which considers the causes of congestion, the impacts, the challenges and the possible solutions. The diagram below provides an indication of congestion levels in the city.

(%flows refer to the percentage difference from free flow)

The Network Management Action Plan (NMAP) is a key document in helping us to mitigate the impact of congestion. It sets out a strategic approach to managing and developing the highway network.

The NMAP will set out the council's priorities in meeting the Network Management Duty. It explores:

- The challenges faced in the city

- The needs of all stakeholders

- Causes of congestion

- Impacts of congestion

- How the network is managed

- What improvements could be implemented to mitigate the impacts of congestion

2. Future challenges

The road network is used by a wide range of people, including car and lorry drivers, bus passengers, pedestrians and cyclists. The network enables the efficient, effective and safe transport of people, goods and services, helping people get to and from such things as home, work, leisure and education.

The Government recognised the significant challenges facing the highway network in its 2013 paper Action for Roads: A Network for the 21st Century, which set out the importance of roads to the economy, reiterated the need for investment and set out detailed plans to improve management of the whole network. The transport system therefore not only needs to deal with existing pressures, it also needs to evolve so that it can deal with future challenges. These challenges include:

- Reduced funding
- Population growth
- Increases in traffic volumes and congestion
- Climate change – Brighton & Hove has committed to be a net carbon neutral city by 2030
- New forms of urban mobility e.g. e-bikes (including cargo), e-scooters
- The emergence of connected and autonomous vehicles

3. Legal Framework

A well-managed transport system must be flexible enough to deal with changes to the way that people travel. It must also be able to deal with future challenges so that it can continue to support the economy. The Government recognises the importance of a well-managed transport system to the economy. In 2004 the Traffic Management Act placed a Network Management Duty on all local traffic authorities to secure the expeditious movement of traffic on their road networks, and to assist adjacent traffic authorities to do the same. It also established the requirement for all traffic authorities to appoint a Traffic Manager.

There are three documents fundamental to the performance of the Duty:

- The Traffic Management Act (TMA) 2004
- Network Management Duty Guidance (NMDG)
- Traffic Management Guidance on Intervention Criteria

Other relevant legislation includes:

- Local Traffic Authority: Road Traffic Regulation Act 1984 Section 121A
- Local Highway Authority: Highways Act 1980 Section 1

- Street Authority: New Roads and Street Works Act 1991 Section 49

The Network Management Duty (the duty) is part of the Traffic Management Act 2004. It applies to all local traffic authorities. The duty came into force on 4 January 2005. The duty recognises:

- the importance of managing and operating the road network
- the importance of optimising benefits for all road users
- the needs of those who maintain the infrastructure (both of the network itself and of the services within it).

The arrangements for performing the Network Management Duty include:

- Taking any action that we consider will contribute to securing more efficient use of the road network
- Taking any action that we consider will avoid, eliminate or reduce road congestion or other disruption to the movement of traffic
- Establishing processes for identifying things which are (or could) cause road congestion or disruption
- Considering possible actions that could be taken to address congestion or disruption
- Ensuring that specific policies or objectives are determined for different roads or classes of roads
- Monitoring the effectiveness of the organisation and processes for tackling congestion and the implementation of decisions
- Regularly assessing the performance of the duty and keeping the effectiveness of arrangements that have been put in place under review.

The Department for Transport (DfT) issued guidance in November 2004, which outlines the traffic authority's obligations under the duty. This includes:

- the scope of the duty (main issues and considerations)
- advice on the broad principles of network management
- good practice advice

The TMA specifically states that the term "traffic" includes pedestrians and so the duty requires the LTA to consider the movement of all road users including pedestrians, as well as motorised vehicles. The DfT recognises that the network management duty is one element of an authority's transport activities and should complement other policies and actions. The local traffic authority should look to embed desired outcomes and appropriate policies and plans under the network management duty within Local Transport Plans to achieve a coherent approach.

4. The city's road network

The road hierarchy in any local authority is classified into groups according to the amount of traffic using the road.

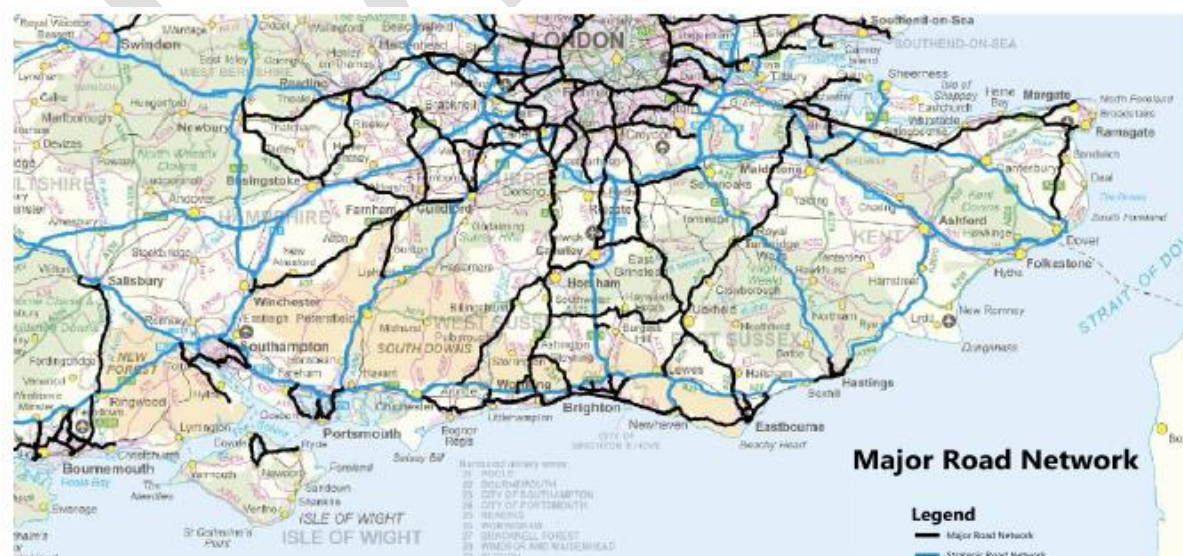| Category	Hierarchy		Road classification
1	Motorways		Motorway
2	Strategic Routes	More traffic	Trunk roads and Primary A roads
3a	Main Distributor		Non primary A roads and Heavily trafficked B roads
3b	Secondary Distributor		B roads and Heavily trafficked C roads
4a	Locally important road	Less traffic	Routes linking into the main/secondary distributor network (normally C class roads)
4b	All other metalled roads		All other C roads and The majority of the unclassified network.

Brighton as a coastal city has a defined road network that connects to the strategic road network (SRN) the A27 and A23. Both of these roads are managed by Highways England as they are considered to be nationally significant.

The government has also announced a new hierarchy category of Major Road Network (MRN). This new category will acknowledge the roads that play a key part in the economic vitality in the city by providing the connections to the SRN. The MRN in the city will be able access a new stream of funding to continue to improve these key corridors.

In creating this network, the Government has sought to meet five central policy objectives. These are:

● Reduce congestion – alleviating local and regional congestion, reducing traffic jams and bottlenecks.

● Support economic growth and rebalancing – supporting the delivery of the Industrial Strategy, contributing to a positive economic impact that is felt across the regions.

● Support housing delivery – unlocking land for new housing developments.

● Support all road users – recognising the needs of all users, including cyclists, pedestrians and disabled people.

● Support the Strategic Road Network (SRN) – complementing and supporting the existing SRN by creating a more resilient road network in England.

The city council were consulted on these proposals and did suggest an alternative network for the city. The diagram below shows the roads for the South East, the city's roads included are the A23, A270, A293 and A259.

Major Road Network

Legend
Major Road Network
Strategic Road Network

6

Alongside the MRN the city has a number of strategically important roads that either provide key links across the city or form part of the Public Transport network. The city's public transport corridors generally focus on delivery of people to the centre of the city and the majority of the network utilises the North Street / Western Road corridor.

5. Policy Framework

The city council has a Local Transport Plan (LTP 4) that sets out the priorities for investment and focus in the city. A new LTP (5) is being developed to meet the aspirations to reduce the environmental impact of transport continuing to promote alternative options for moving around the city.

The possible LTP5 strategic goals identified at the early stage are:

- A sustainable, strong and fair economy
- Safe, healthy and welcoming streets and neighbourhoods
- An accessible city with a transport network that everyone can use
- Improved air quality to safeguard the health of our communities
- Reduced carbon emissions to protect our environment
- A transport network that enhances our environment

This action plan is an operational plan that seeks to support the emerging strategy and meet the current legal obligations that the council faces in managing a busy city's road network.

A summary of the current national and local policies can be found in the following table.

National	UK Industrial Strategy (2017)
	Transport / Cycling and Walking Investment Strategy (2017)
	Inclusive Transport Strategy (2018)
	The Road to Zero (2018)
	Clean Air Strategy (2019)
	Future of Mobility: Urban Strategy (2019)
	Decarbonising Transport: Setting the Challenge (2020)
	Gear Change: a bold vision for cycling and walking (2020)
	The Ten Point Plan for a Green Industrial Revolution (2020)
Sub-national	Energy South2East Local Energy Strategy (2019)
	Transport for the South East Transport Strategy (2020)
Sub-regional	Coast to Capital LEP Strategic Economic Plan (2018)
	Greater Brighton 5 Year Strategic Priorities (2019)
	Greater Brighton Energy Plan (2020)
Local	2030 Vision: Sustainable Community Strategy (2014)
	City Plan Part 1 (2016) and Part 2 (proposed submission 2020)
	Rights of Way Improvement Plan (2017)
	Economic Strategy (2018)
	Joint Health and Wellbeing Strategy (2018)

	Visitor Economy Strategy (2018)
	South Downs Local Plan (2019)
	Corporate Plan 2020-2023 (2020)

6. Network Management in Brighton & Hove

Managing the city's network is a real challenge when trying to balance the competing demands placed on the city's roads, while also encouraging active travel. Buses, cyclists, pedestrians, HGVs and cars all vie to use the existing road space when moving around the city. Events also provide challenges for the authority as they often close large parts of the city.

To mitigate and cope with this demand a number of tools and initiatives are used to manage the road network in the city so that it operates as efficiently as possible. Technology plays an integral part and is used to provide information, control, and enable traffic movements to be managed across the city. Each of the mitigations are listed below detailing how the plan will be developed.

1. Movement within the city

- **Strategic Signing**

When moving around the city it is important that there is clear guidance to drivers to use the roads and routes that are classified to take the most traffic. While there is a move towards the use of Satellite Navigation equipment and connected vehicles, not all of them have this technology fitted. The use of signing also has to link with all other activities including events and developments.

The strategic direction signing in the city has not been reviewed for many years. Sample surveys of the road network have identified that there is a lack of consistency and a number of omissions. There has been a lot of work to reduce sign clutter, but this has been carried out on a scheme by scheme basis and without a strategic overview. Missing signs can lead to vehicles using less suitable routes affecting the city's residents.

Technology can help with providing information both on street and in vehicle for congestion, alternative route and car park guidance. The city has a number of failed Car Park/Variable Message Signs that are in need of replacement. New technology is available to provide better quality and more flexible messaging to drivers. They are also able to be used during the many events held in the city to provide information on all modes to help with managing the city's roads.

Action

Review the strategic signing in the city so that it reflects the city's road hierarchy. Continue to ensure that any new schemes reflect the use of the strategic route network in the city. The review will include what options are available for providing information both on street and in vehicle. Replace the obsolete car park guidance message signs with the flexible newer technology.

- **Red routes**

The city has a number of key strategic corridors that experience issues related to illegal parking and problems related to deliveries. These often impact Public Transport leading to poor bus reliability and congestion. While restrictions are in place to tackle some of these issues some routes still suffer from delays and variable journey times. It is clear that increased enforcement could bring about change and Red Routes could help with solving the problems being faced. Red Routes were first introduced into London and are now able to be used outside of London. Reading Borough Council have successfully implemented a trial that is proving successful in improving journey time reliability.

The priority for a Red Route is to keep the route safe and free flowing and reduce delays. It is not proposed as a scheme to raise revenue by fines, it is hoped that a scheme could provide significant benefits to the network.

What are the benefits of Red Routes?

- Improved safety for pedestrians, cyclists and general traffic

- Journey time reductions

- Improved journey time reliability

- Environmental benefits such as reduced traffic noise and fumes

- Providing a more pleasant environment for pedestrians and cyclists

- Positive effect on frontage businesses as it is easier for people to park legally

Red routes require a significant review of how streets operate and have to be fully justified before they should be considered.

The strategic corridors A23 and A270 have been identified as roads carrying significant volumes of traffic and are key corridors for buses, often linking bus priority measures where delays are frequently experienced affecting journey times for public transport. Many suffer from congestion related to poor parking and access for local businesses. To assess the priority in the city for establishing red routes the journey time reliability of the routes has been reviewed to identify which routes are a priority. Average journey times have been reviewed on the routes and the standard deviation has been taken to demonstrate those that are unreliable. The average journey time has been taken on the same period over a number of years to ensure that any anomalies are removed from the data. The table in appendix A shows the data for the key routes.

The area outside of Brighton Station suffers from a specific issue related to how taxis operate, and red routes may offer a solution to the problem. If after further investigation it is found that a red route could solve the issues then the area directly outside the station should be added to the initial programme.

Action

Implement two experimental red routes for the A23 from the Aquarium Roundabout to Preston Circus northbound and the A270 in both directions from the Aquarium Roundabout to the Vogue Gyratory (A23 Aquarium Roundabout to St Peters Place). The section between the Aquarium Roundabout to Church Street will be implemented within the Valley Gardens 3 scheme. Design and implement the correct signing and use an Experimental Traffic Order to test the impact of the scheme.

2. Supporting Public Transport

Public Transport will be vital in maximising movement in the city and central to this is to focus on the key strategic bus corridors for dynamically managing demand, incidents and events as they happen.

It is important that the authority continue the good work through the Quality Bus Partnership and ensure that management of the road network takes into the account the impact on the Public Transport network.

The existing Real Time Bus Information System has been in place for many years and now needs to be reviewed as new technology and initiatives related to open data have developed. A new system will enable more dynamic messaging and provide better data to manage how buses move in the city. It will provide a more informed and targeted approach to bus priority

Action

Develop a specification for new Real Time Bus Information System working with the bus operator and procure a replacement system.

3. Impact of roadworks

- **Managing Road Works**

Roadworks have a big impact on the city's roads and without coordination significantly disrupt movement and ultimately journey time reliability for all transport modes. To manage and ensure that the impact is mitigated Brighton and Hove City Council operates a permit scheme that requires anyone needing to carry out works on the highway to apply for a permit. The scheme enables better control of when works are carried out and improved liaison with public transport operators to reduce the impact on the network.

The Permit Scheme has reduced the duration of works and promoted collaborative working, the benefits are summarised in the annual reports for the first three years of the scheme on the council's web site.

The Department for Transport has launched a national register that records all roads works in England, called Street Manager. All Local Authorities are now required to use the system which shows all roadworks in England, including Local Authorities' own works, and enables the sharing of data.

While the permit scheme has been effective and has clear demonstrable benefits, it is often difficult to challenge utilities on schemes due to the technical nature of the works. Works are also carried out during the busiest period on the busiest roads and there is little incentive or pressure to either complete works quickly or apply more resources. On 5% of the city's busiest roads it is now possible to introduce a Lane Rental scheme where any works promoter will have to pay to occupy the road. The charge incentivises the promoter to carry out the works quickly and can often encourage use of different technologies to avoid the charge, minimising delays. The first trial schemes have been operating in London and Kent and the DfT are now looking for wider adoption.

Action

Procure a consultant to review and develop a business case for the viability of a Lane Rental scheme for the city and implement a scheme if the business case supports a scheme. Carryout an internal review of the traffic sensitive streets in the city.

4. Using Technology to manage the road network

Technology does play an important role in ensuring the road network is managed effectively. There are a number of tools available to manage the city's roads.

- The city has a control room that currently operates 24/7 and manages the city's car parks with some limited interventions on the road network. The control room use a UTMC Stratos system to monitor and manage the road network. The system is used sparingly as there are no strategic plans developed and the staff in the centre have little experience of using the system. The room also has access to the city's on street CCTV system that is managed by Sussex Police. The council own the street furniture including posts and cameras while the Police own the in-station.

- Variable message signs are valuable in providing information to drivers related to car park occupancy and when incidents occur to warn drivers. The city has 9 obsolete signs that no longer work. New modern interactive displays have been installed to replace some of these signs and provide a new approach to displaying messages. They can display messages related to events, network incidents, relay safety campaign messages, encourage active travel and Public Transport

- Many of the city's junctions are controlled using traffic signals optimised centrally by a computer system. The system uses a specific algorithm called Split Cycle Offset Optimisation Technique (SCOOT) that changes the timing of the signals automatically. The system seeks to minimise delays on the network and does include specific facilities for Bus Priority. It is used to coordinate junctions when they are close to each other so is generally used in the city centre. Siemens are working in collaboration with Transport for London on a new approach to optimising traffic and are seeking to develop new tools to improve how cities are managed.

- Junctions outside of the city centre use a different algorithm called Microprocessor Optimised Vehicle Actuation (MOVA) that seeks to minimise delays, but reacts much quicker to changes as they occur as it looks at individual or limited numbers of junctions.

- New approaches are emerging on how roads are managed, including the development of connected vehicles, the use of open data and future developments of autonomous vehicles.

Currently the use of technology is driven by a service and its specific needs. The Traffic Control Centre is recognised as a valuable resource that is currently focussed on managing the car parks and enforcement. A Traffic Control Centre Board has been established that seeks to:

- Provide staff based in the control room access to and sight of everything they need to do their jobs effectively.

- Establish a flexible space where relevant services can meet to manage priority issues.

- Provide an accessible space including modern equipment and tools that support excellent service delivery.

- Encourage good relationships between services and partners to support a fluid knowledge and intelligence sharing, and effective partnership working.

- Improve data collation and analysis providing high-quality intelligence that informs service decisions.

- Improve engagement with key stakeholders to avert / manage problems on the network.

- Improve messaging and communications with the public to inform and influence their travel choices.

- Extend the use of the CCTV asset to the benefit of the transport network.

The programme does include a workstream that specifically reviews the use of data and technology.

Action

Continue the Traffic Control Centre programme to maximise the valuable resource it provides and seek to establish what efficiencies could be achieved in other transport services. Review the use of Traffic Control strategies and identify any gaps in the provision to ensure that the city is kept moving with focus on supporting public transport. Monitor the new developments in optimising traffic and identify how this will help people travel in the city through the Transport Control Centre Board.

Assess the city's traffic signal junctions for where adaptive control will benefits in carbon reduction and congestion. Continue to develop a structured approach to where investment should be spent in the ITS assets including a future programme for understanding what investment will be needed over the life of the asset.

Appendix A

Red Route GPS Data
Comparison 2015 - 2(