



Buckinghamshire County Council **Transport, Economy and Environment**

Freight Strategy

2018 - 2036



Executive summary

This Freight Strategy provides more detailed policy to support the objectives set out in Buckinghamshire County Council's Strategic Plan 2017-2020 and Local Transport Plan 4 2016-2036. This is particularly important now because of the unprecedented scale of change forecast in Buckinghamshire, which will see freight movements continue to increase.

The transportation of goods by freight plays a key role in servicing Buckinghamshire's industry, communities and supporting our growth and economic development. Freight offers our residents choice as consumers and businesses: allowing them to grow, thrive and develop.

This Freight Strategy analyses the impact freight is having in Buckinghamshire and looks ahead to the impact it might have in 2036. It sets out what can be done to harness the benefits of freight and manage its impact.

The Freight Strategy is divided into four sections. These cover our objectives for freight in Buckinghamshire, the existing freight conditions locally, challenges and opportunities to manage freight and how we can deliver the Strategy.

To support the Freight Strategy we have developed 14 policies which demonstrate our commitments on how we intend to manage freight. These policies are found within Section 3 and sit under the objective we feel they best support. The policies cover appropriate use of our road network, our environment, partnership working and considering freight in decision making. Within each policy we have identified ways we can put what we are proposing into action.

We have considered the views of a range of stakeholders in developing this Freight Strategy. The feedback has been used to shape our policies and we hope the measures included herein will help address concerns raised in consultation feedback.

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Introduction

What is freight?

In the context of this Strategy, freight means goods that are moved via any mode of transport. This includes the Heavy Goods Vehicles (HGVs) and Light Goods Vehicles (LGVs) but could include barges, air and rail bourn freight. Elements of this Strategy will also apply to other large vehicles such as buses, coaches and caravans.

A Heavy Goods Vehicle is any truck with a gross combined weight of over 3,500 kilograms, under UK Vehicle Excise Duty (aka car tax) rules. They are also known as Large Goods Vehicles in European Union terminology.

Why do we need a Freight Strategy?

Freight plays a key role in Buckinghamshire: supporting local businesses, us as individual customers and delivering materials to construction and development sites.

Effective management of freight through and around Buckinghamshire is vital to the local economy and our residents' quality of life. Freight can help support Buckinghamshire's growing economy which keeps the county thriving and attractive. Our businesses depend on freight transport and as consumers we have become increasingly dependent on access to a range of goods via haulage. Equally, freight can have an adverse impact on residents and communities when not managed effectively.

The backdrop to this Strategy is a county that is facing unprecedented levels of growth and record high levels of employment. As the county grows, so has the volume of essential goods traffic. With a steady increase in HGVs forecast and the number of HGVs licensed in Buckinghamshire rising, now is the time to develop a Strategy which prepares for the future.

National Strategic Infrastructure Schemes proposed in and around Buckinghamshire will require a joined up approach to manage the freight movements associated with their construction. Schemes such as Crossrail, Western Rail Access to Heathrow, M4 Smart Motorway, HS2, East-West Rail and the Expansion of Heathrow will generate a varying amount of HGV trips during and after their development. It's important we have a Strategy to help manage this.

These unprecedented increases in growth, employment and exciting infrastructure all contribute to a growing demand for goods delivered by freight. Wider changes in consumer behaviour, increases in online retail and other new technology are also re-shaping the goods that need to be moved around the county.

A Strategy is needed to help develop partnerships with key stakeholders and pave the way for improvements to offset the impact of more freight. It has also been developed to address concerns raised by local communities who feel adversely affected by the impacts of freight. A Strategy will mitigate the impact of freight on our unique environment; making sure the industry works for everyone.

Who is this Freight Strategy for?

Nearly everyone living in Buckinghamshire is affected in some way by freight movements. The Strategy has been written with a range of stakeholders in mind, ensuring the needs of both ends of the freight 'supply chain' are represented. Local authorities, communities, businesses, developers, infrastructure scheme promoters and others have been considered. Decision making around freight management now and in the future will take a holistic approach.

How does this Freight Strategy work?

The Freight Strategy is divided into four sections. Section 1 will go on to set out the scope of the Strategy, its vision, aims and objectives. Section 2 will identify the context in which freight currently operates in Buckinghamshire and some important statistics. Section 3 considers existing and future freight challenges and what mitigation options are available. Finally, Section 4 will explain how the Strategy will be delivered.

Policies that support the Strategy can be found in each of the sections. The policies set out how the Strategy will be put into practice.



Trucks like this one are used to indicate policies.

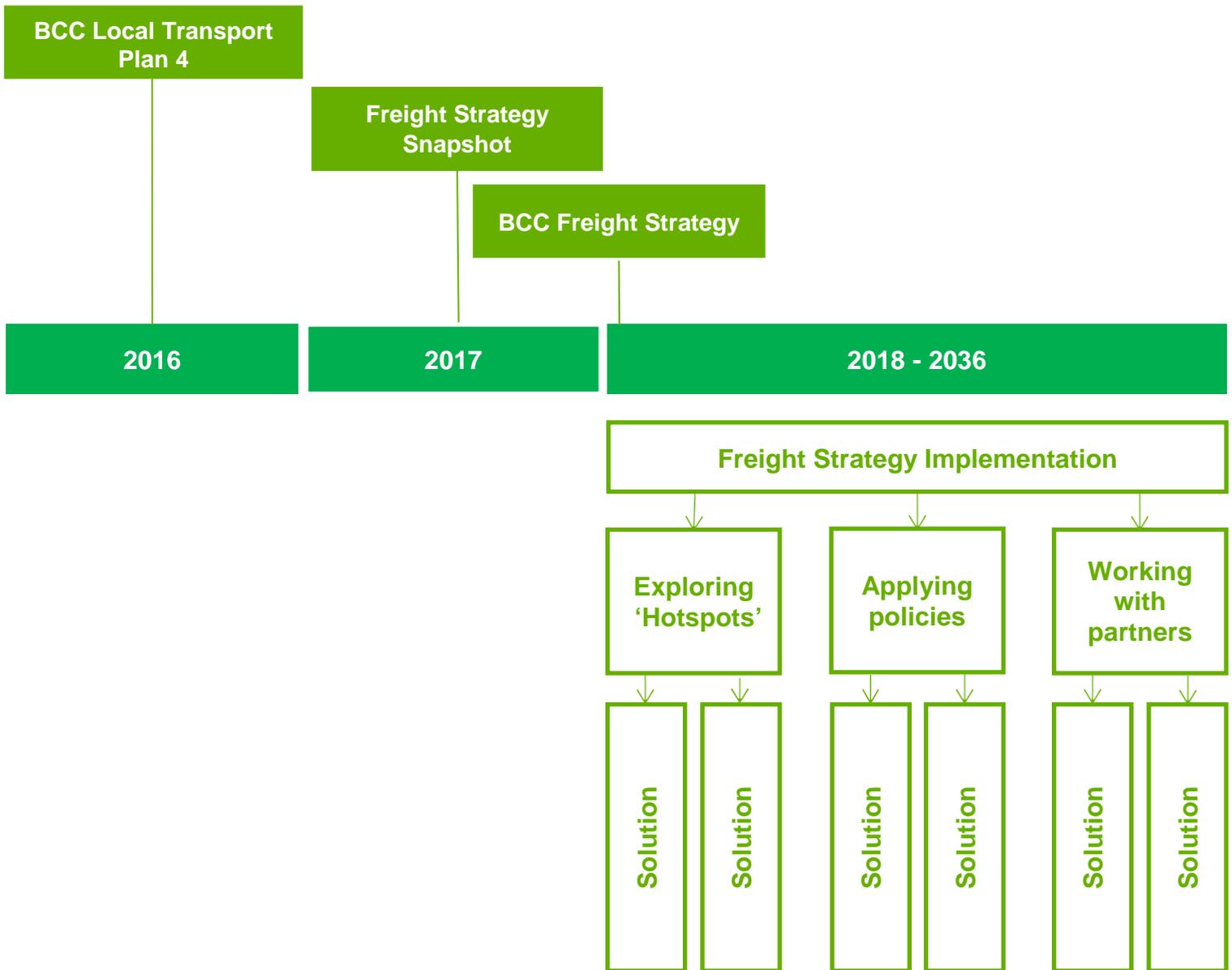
The policies will need to be agile to reflect changes to the funding mechanisms that will help deliver elements of the Strategy. The plan looks ahead to 2036. Over that period things will change and our knowledge will develop. Some policies may be updated and new versions published on our website.

Developing the best possible solutions

The management of freight is complex, requiring a mix of short term interventions and longer term commitments. Some of the policies can be applied countywide; others are suited to specific local communities. Some involve behaviour change based approaches, others more physical solutions. This Strategy builds a policy framework in which all of these different solutions can play a part. This means we can't set out in detail how each element of the Strategy will be put into practice at this stage. Some of this detail will have to be worked out at a later stage, for example what role businesses and communities might want to play. We have tried to balance putting as much as we can in the Strategy with the freedom to develop the best possible solutions for Buckinghamshire.

Figure 1 illustrates how we envisage this working, with a range of solutions being delivered in different ways over the Strategy's life.

Figure 1: How this Freight Strategy works



Section 1: Aims and Objectives

Local Transport Plan 4 context

Buckinghamshire’s Freight Strategy builds on and helps to deliver a number of broader council policies. Buckinghamshire County Council’s Strategic Plan 2017-2020 sets out the key aims and priorities for the next three years. It focuses on safeguarding our vulnerable, creating opportunities and building self-reliance. The Freight Strategy delivers these priorities through its aims and objectives.

Buckinghamshire’s Local Transport Plan 4 2016-2036 sets out, at a high level, what the Freight Strategy needs to do. Figure 2 shows how this Strategy builds on Local Transport Plan 4.

Figure 2 : How the Strategy meets the objectives of Local Transport Plan 4

Local Transport Plan 4: 2016-2036 objective	How the Freight Strategy will help achieve the objective
Objective 1: Connected Buckinghamshire	The Strategy will help freight move around the county efficiently, maximising the existing transport network.
Objective 2: Growing Buckinghamshire	The Strategy will identify opportunities to ensure freight is managed in the construction of new developments and major infrastructure schemes.
Objective 3: Healthy, Safe and Sustainable Bucks	The Strategy will explore how HGV road safety can be improved.
Objective 4: Empowered Buckinghamshire	The Strategy will highlight where communities, businesses, developers and the haulage industry can work together to make freight work for Buckinghamshire.

What are the aims and objectives of the Freight Strategy?

The Freight Strategy's objectives have been shaped by the aspirations set out in Buckinghamshire's Local Transport Plan 4 and feedback received during public consultation.

Aim: Freight transport should continue to help Buckinghamshire grow, thrive and develop. Freight should move around the county as efficiently as possible, without imposing inappropriate costs on business, consumers, residents or our unique environment.

To help realise this aim, and ensure the Strategy delivers what it needs to, the following four objectives have been developed:

Objective 1: Appropriate road use – encourage haulage operators to use the right routes, at the right times.

Objective 2: Protecting our environment – preserve the county's unique characteristics in both rural and urban areas, whilst minimising pollution.

Objective 3: Partnership working – support collaboration amongst key stakeholders to develop new solutions to freight issues.

Objective 4: Consider freight in decision making – Seek opportunities to work with partners to minimise the impact of freight and lobby for improvements.

The aims and objectives listed above have shaped the policies in this Strategy. The objectives are designed to tackle key themes put forward as part of consultation with the public and stakeholders. The aims and objectives should balance the need for efficient distribution of goods and services with the needs of the environment and society.

How do the aims and objectives work?

The aims and objectives need to be realistic, achievable and measurable. The Strategy accepts that the overwhelming majority of freight distribution in the county is made by road and that is likely to increase with time. The Strategy must consider a range of existing and future challenges.

Section 2: Existing Freight Conditions in Buckinghamshire

Using information to develop the Strategy

The Strategy has used a range of information to make sure it's fit for purpose. The information has been both qualitative and quantitative. This information has helped capture the existing impact of freight and informed the proposals to manage it.

The sources of information we have used are provided below. These are expanded on within relevant sections of the Strategy.

Figure 3: Sources of information used to inform the Strategy



The draft Freight Strategy consultation

Buckinghamshire County Council undertook public consultation to hear people's views of freight in the county. The public consultation ran between June 25th and July 6th 2017. A series of workshops and meetings were held to engage with known stakeholders.

The consultation was hugely successful, receiving 1092 responses in two weeks. The overwhelming majority also responded to optional free text questions which provided valuable qualitative data. The key findings were the need for HGVs to use appropriate routes, increasing driver awareness of those 'preferred' routes and road safety were highest priorities.

The consultation feedback also indicated that there were certain areas of the county that respondents felt were particularly adversely affected by HGVs.

National and local policy context:

National policy

The national government recognises that an efficient freight transportation system is essential for the UK economy. The national government continues to explore ways of working with the haulage industry to reduce costs and greenhouse gas emissions.

It has published a range of reports that address freight and acknowledge its wider significance nationally. These have been considered when developing the Strategy to ensure Buckinghamshire's aspirations contribute towards national priorities. The central (and other national agencies) publications that have been particularly important in writing this Strategy are listed below:

Transport Investment Strategy 2017: Sets out the government's priorities and approach for future transport investment decisions. One of the key points for this Strategy is that it estimates that under a high growth scenario, by 2040, congestion could cost the freight industry £3.7 billion.

National Infrastructure Delivery Plan 2016-2021: It reports that roads are the backbone of the transport system, used for almost 70% of freight. The National Infrastructure Commission has been commissioned to produce a report on the impact of Freight by 2019.

Industrial Strategy 2017: Values the role of UK ports which handle 95 percent of UK freight. These gateways attract inward investment and keep the UK competitive.

National Planning Policy Framework 2012: Paragraph 31 calls for local authorities to work with each other to develop strategies to support sustainable development such as rail freight interchanges. Paragraph 35 stipulates the need for new development to be located and designed, where practical, to accommodate the efficient delivery of goods and supplies.

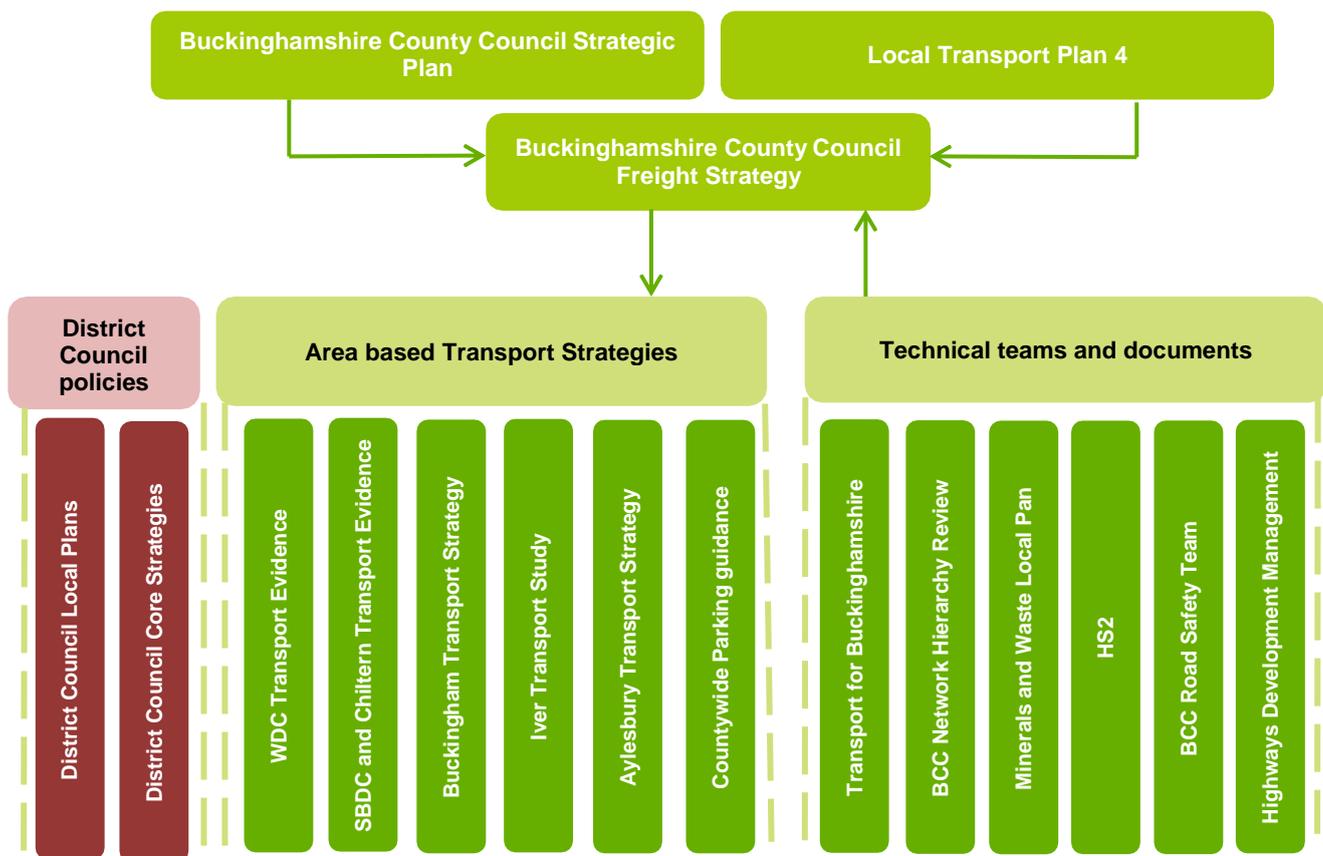
Rail Freight Strategy 2016: Examines the future potential of the rail freight industry and considers what new skills and technology is required to deliver the economic benefits associated with delivering more goods by rail.

Highways England The Road To Growth 2017: Recognises that freight and logistics are completely reliant on the strategic road network (carrying two thirds of freight traffic) and how delays in freight cost the UK. It commits to work with the DfT and the freight industry on trials for freight platooning (lorry convoys) that should reduce journey time and could bring other savings to the logistics sector.

Local policy

This Strategy sets out the council's position on freight which is grounded in its other, higher level, corporate policies. The Strategy has explored synergies with its aims and objectives and the aspirations of other plans. Where possible, the Strategy will be integrated with new ideas to help deliver mutual benefits for a suite of other plans; making sure freight plays its part. The commitment to do this will be set out in section 3.

Figure 4: The ways in which our local policies connect with the Freight Strategy:



The Freight Strategy has connected with the sources above to understand the impact of freight and help implement change where necessary. This will involve cooperation with a number of partners.

UK freight activity

To give us a better understanding of freight activity within the United Kingdom and in Buckinghamshire, we analysed a wide range of domestic UK freight activity statistics. Some of the key statistics are summarised below.

Understanding freight statistics

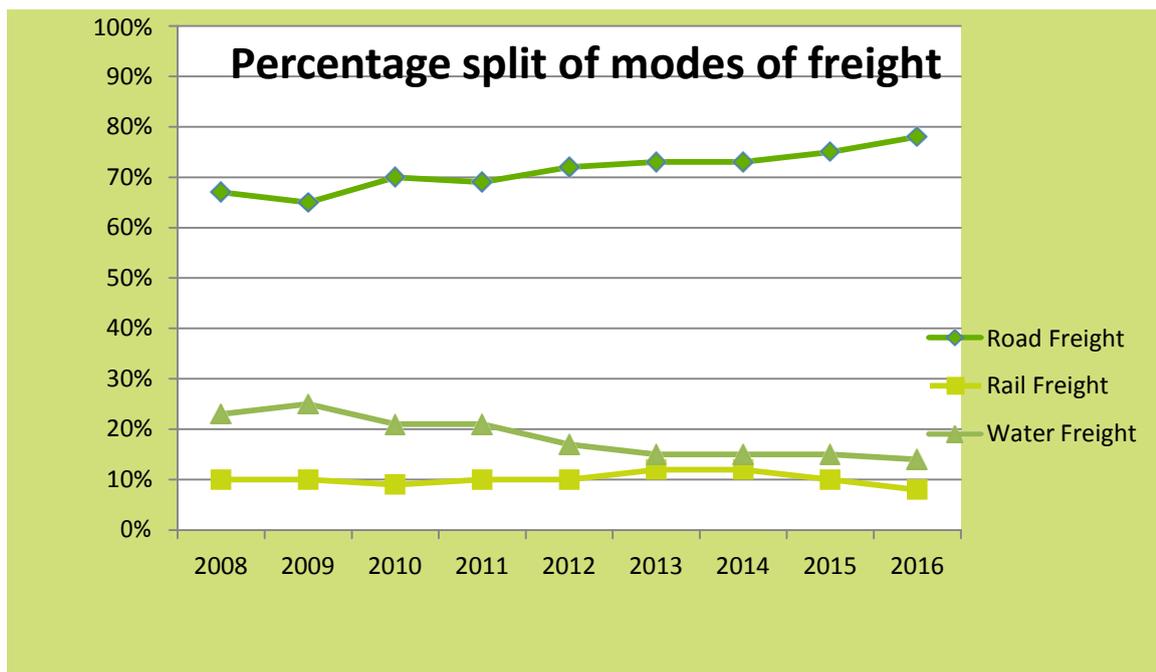
Freight activity is generally measured in terms of:



Modes of freight transport

Domestic freight nationally has been divided into road, rail and water. In 2016 alone, 217.5 million tonnes of freight was moved in the UK. Of these goods, 78% of goods moved were by road, 14% by water and 8% by rail.¹

Figure 5: The percentage of goods moved by different modes from 2008 to 2016¹



¹ Department for Transport, Domestic freight transport by mode 2008-2016 TSGB0403

Rail freight

In 2016/17, 17.1 billion tonne kilometres of freight were moved by rail domestically, down 3% from 2015/16. A recent decline in freight moved by rail has been as a result of a drop in coal freight moved.²

While 8.1 billion net tonne kilometres of coal were moved in 2013/14, only 1.4 billion net tonne kilometres of coal were moved in 2016/17, a decrease of 82%. This reflects reduced demand for coal at UK power stations, as well as the greater use of renewable energy sources.²

Water freight

In 2016, 30.4 billion tonne kilometres of waterborne freight were moved (up 16% from 2014). The amount of waterborne freight moved has been steadily decreasing since its peak in 2000.²

Road freight

Nationally, goods moved and goods lifted by HGVs in the UK has increased beyond the pre-recession peak (in the year ending March 2008), but the number of vehicle kilometres travelled to transport it has decreased (vehicle kilometres down by 12% since March 2008).³

Figure 6: The amount of goods moved by road freight in billion tonne kilometres³

In comparison to the pre-recession peak in the year ending March 2008, both goods lifted and goods moved increased by road freight increased by 7% and 11% respectively.



² Department for Transport, Transport Statistics Great Britain 2017 p.8

³ Department for Transport Statistics, Road Freight Statistics, RFS0101

The box below gives some key road freight statistics for 2017 compared to 2016:

Figure 7: Key road freight statistics – 2016 to 2017 comparison⁴



Online retailing

The use of online retailing has led to an increase in road freight. In 2016 online sales contributed 14% to UK retail spending; by 2020 this is projected to grow to 22%. Increasing competition in speed of delivery is placing a pressure on warehousing and delivery fleets⁵.

To fulfil orders, there is now an increased demand for warehouse space, particularly in urban areas and fringe locations that serve those urban areas, leading to an increase in Light Goods Vehicles (LGVs) van use. Network upgrades such as 5G and more mobile technology are expected to further increase the popularity of online retail.

It's likely this trend may have a direct correlation with the increased rate of LGVs now on the UK's roads.

⁴ Department for Transport, Statistical Release, Road Freight Statistics, p.1

⁵ <https://www.addleshawgoddard.com/globalassets/insights/general/logistics-report-exec-summary.pdf> p.10

Figure 8: The rate of LGV and HGV vehicle mileage 2000-2015⁶



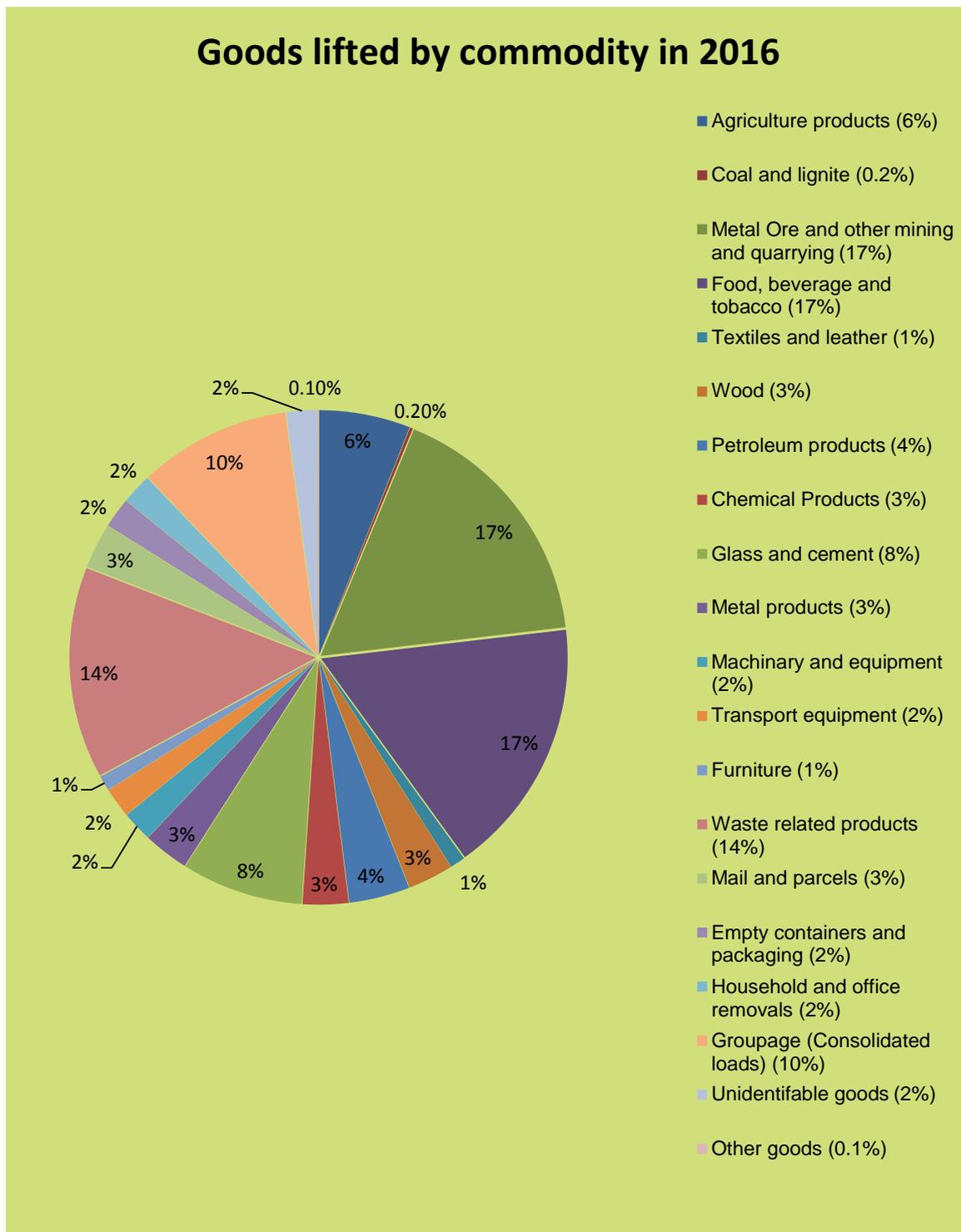
Commodities lifted by road

HGVs transport a range of important goods and materials. Consumption drives demand and we are all reliant on many of the goods transported.

Interestingly, food and beverages make up 17% of all goods moved. A pie chart below shows the types and proportions of goods moved by HGV vehicles.

⁶ Department for Transport, Understanding the Drivers of Road Travel: Current Trends in and Factors behind Road Use (January 2015) p.17.

Figure 9: The percentage of goods lifted by commodity⁷



⁷ Department for Transport Statistics, Road Freight Statistics, Table RFS0103

Local road freight

There are currently 345 freight companies in Buckinghamshire. Of which 320 employ up to 10 people each. There are 10 freight companies that employ from 10-49 people.⁸

Some of the largest freight companies in Buckinghamshire are listed below. These include dedicated freight companies (freight transportation by road) and companies that are classed as transportation by storage.

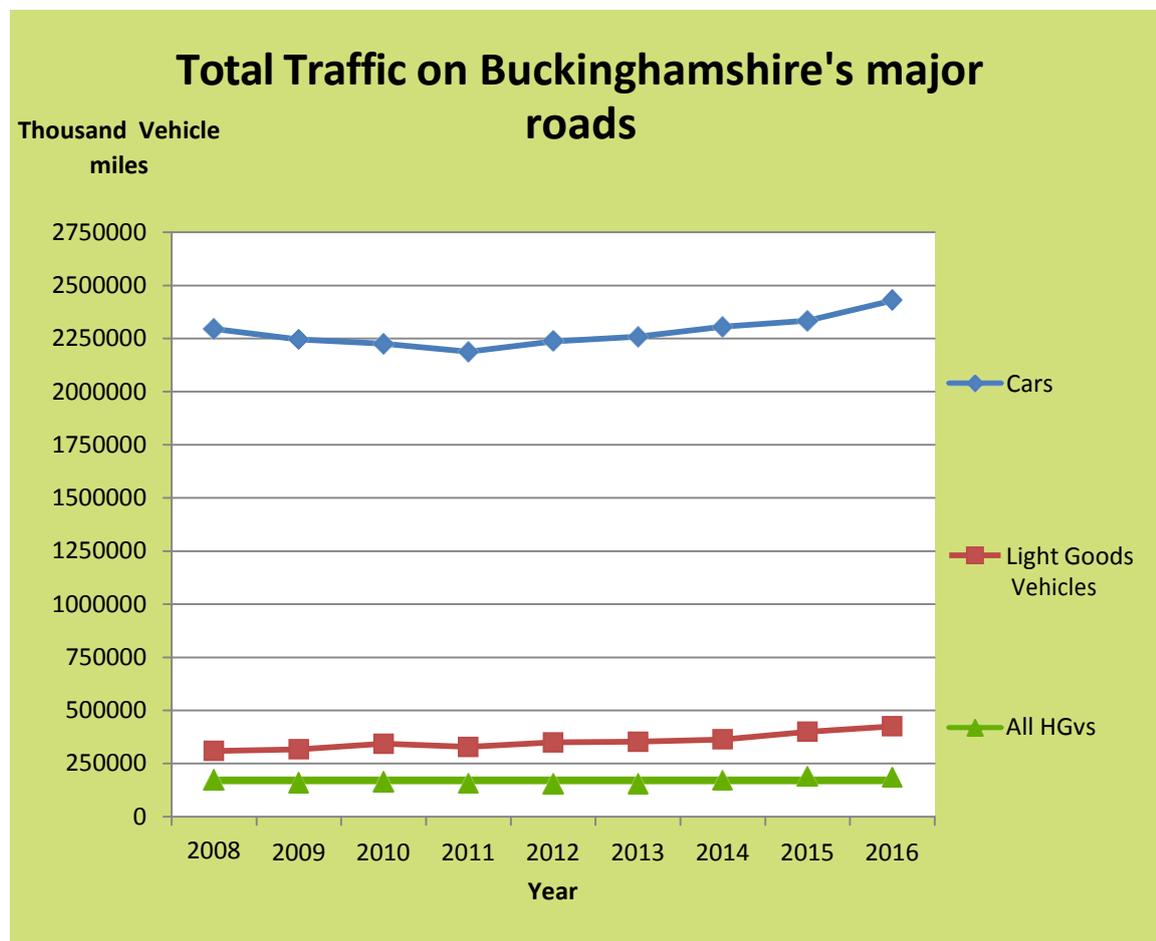
- Acumen
- Scarlet Group
- Geodis
- The Tomato Plant Company Ltd
- Immediate Transportation Company Ltd
- Whistl
- Geodis
- Arla

⁸ Office for National Statistics, NOMIS, UK Business Counts – enterprises by industry and employment size band (2018)

HGVs licensed in Buckinghamshire are increasing in line with national average. In the case of Buckinghamshire; the number has increased to prerecession levels.⁹

Traffic counts in Buckinghamshire illustrate the amount of HGVs and LGVs using our roads when compared with other modes of transport.

Figure 10: Total traffic on Buckinghamshire’s major roads ¹⁰



The number of miles undertaken by LGVs on Buckinghamshire’s major road network has increased by 46% since 2008. The increase in LGVs may (partly) reflect the demand created by Buckinghamshire’s thriving small business sector and will be strongly linked to growth in online shopping.

The number of miles driven by HGVs on Buckinghamshire’s major road network has increased marginally by 6% since 2008. It is important to recognise that nationally the number of vehicle kilometres by HGV since 2008 has decreased.

⁹ Department for Transport, Traffic Volume – Miles, Table TRA0101

¹⁰ <https://roadtraffic.dft.gov.uk/#/16/51.8137/-0.8095/basemap-countpoints>

Freight movements in Buckinghamshire

Buckinghamshire has a predominantly rural north and a more urban south. Over a third of the population live in the main centres of Aylesbury and High Wycombe. The rest of the county is a mixture of unique market towns, villages and more rural areas. Freight in Buckinghamshire is moved by road and rail only. This section explores ways in which both road and other modes of transport are being used for delivery of goods.

Rail freight

Businesses in Buckinghamshire on the rail network with potential to generate freight are limited. The waste transfer station at Calvert Landfill is rail linked and receives container trains each day from London, Bath and Bristol. The site is located on the Marylebone - Calvert Junction. The line, a single track of the former Great Central Main Line though remains open for freight trains and meets the line from Oxford to Cambridge north of Calvert. Waste has been carried by train from Hillingdon to Calvert in Buckinghamshire since the late 1970's.

Rail freight terminals

The establishment of more rail freight terminals and Rail Freight Interchanges is being promoted by central and local governments. Outside of Buckinghamshire (with the potential to impact Buckinghamshire), there are proposals for the following rail freight terminals:

Northampton Gateway Strategic Rail Freight Interchange: The proposed rail freight interchange site is located to the south-west of the motorway, contained to the west by the Northampton Loop railway and to the east by the A508.

St Albans Rail Freight Interchange: The proposed rail freight interchange is located near Park Street (St Albans) north of Radlett.

Air freight

Air freight plays a significant part in supporting the UK economy. UK airports handle around 2.5 million tonnes of air cargo each year with an estimated trade value of around £360 billion¹¹.

Heathrow and Luton are close to the County and freight traffic that is accessing these airports may use Buckinghamshire's road network as part of their journeys. As such, we need to be aware of how airport expansions may impact on Buckinghamshire.

Figure 11: Traffic at UK airports

Rank	Airport	Aircraft Movements	Freight (Metric Tonnes)
1	Heathrow	481	1,541
2	East Midlands	56	300
3	Stansted	164	223
4	Manchester	185	110
5	Gatwick	279	80
6	Luton	103	25
7	Birmingham	105	30

¹¹ https://www.gov.uk/government/statistical-data-sets/avi01-traffic-passenger-numbers-mode-of-travel-to-airport/Table_TSGB0202a&c

Heathrow Airport undertook a 10 week consultation on its options for airport expansion from January to March 2018.

Separately, Heathrow Airport published a 'Blueprint for Sustainable Freight' which is aimed at reducing the impact of freight vehicles around Heathrow. Buckinghamshire County Council responded to ensure the County's interests are protected and a holistic approach to freight movements is taken so Buckinghamshire is not disproportionately affected by HGVs accessing the airport.

Road access to Luton Airport has recently been improved by the creation of the M1/A5 link which makes access from the west easier. This may encourage additional freight traffic on the A418 which the county is monitoring.

Regional road freight

70% of freight movements in the South East start and finish within that area.¹²

Overall, freight movements in the south east have been decreasing.¹³

Buckinghamshire's freight industry continues to be active, and nationally light vans have seen the greatest rate of increase, predicted to double between 2010 and 2040.¹⁴

With Buckinghamshire proudly boasting the highest proportion of small companies, the county may see the rise in small vans continue to grow.

Key freight generators

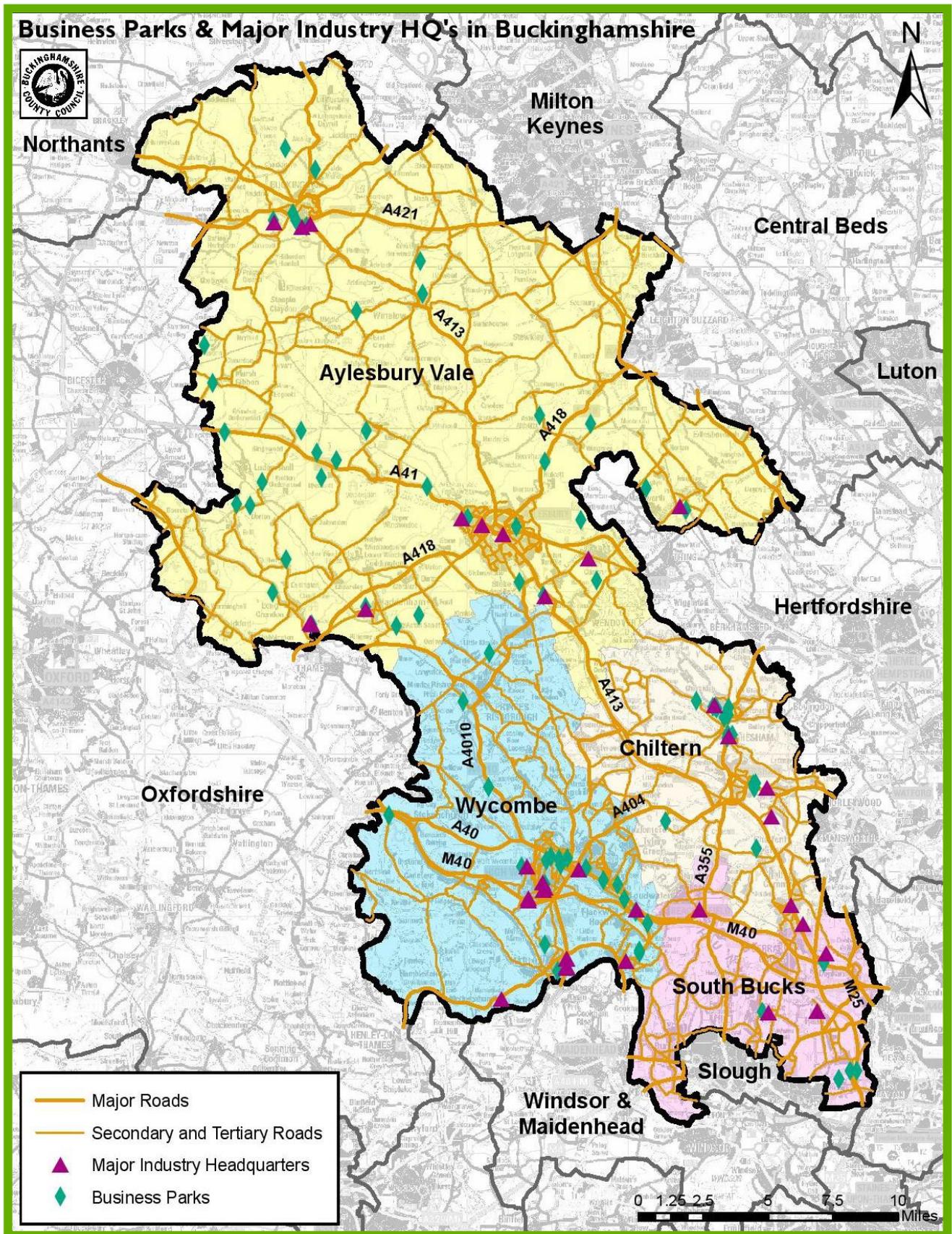
Buckinghamshire HGV movements are in part generated by key destinations. These have been identified using consultation feedback and local knowledge. To get a feel for the scale and location of key businesses, major industry and Business Park sites, these are shown on the map below.

¹² Department for Transport: domestic and international statistics RFS0138 (2017)

¹³ Department for Transport, Road freight: domestic and international statistics, RFS0138 (2017)

¹⁴ Department for Transport, Road Traffic Statistics, TRA0101 (2017)

Map 1: Location of key businesses, major industry and business park sites



Local freight movements

In developing the Strategy we have looked at data to understand the proportion of HGVs using Buckinghamshire's road network.

The findings show that in Buckinghamshire, the proportion of HGVs on the roads tends to be highest outside of the peak hours. On some roads, freight accounts for 20% of all road traffic¹⁵:

- In the north of the county, there are high proportions on roads entering Aylesbury (A41 both sides of the town and A418).
- In the south of the County, there are higher HGV proportions at the M40/M25 junction and on the A412.

The roads with the highest proportion of HGV traffic are Buckinghamshire's Strategic Routes and Main Distributor's; these are the two highest types of road classification in the county so is a fairly predictable finding.

The findings did also highlight areas of the county where there were relatively high HGV percentages on secondary distributors. Where appropriate these will be scrutinised further in the Strategy's 'hot spot' assessment section which maps out some of the feedback raised during the consultation.

The impact of decisions taken in neighbouring authorities

It is also important we consider how the decisions taken by adjoining authorities affect freight movements in Buckinghamshire. Cross border changes to junction design, new roads, Traffic Regulation Orders and road closures can directly impact on HGV routing in Buckinghamshire. Examples of this are listed below:

- There is a disproportionately high number of restrictions for HGVs in the neighbouring authorities of London Borough of Hillingdon, Slough Borough Council and the Royal Borough of Windsor and Maidenhead (when compared with Iver and the south of Buckinghamshire). Many of these restrictions indirectly force additional HGV movements through Iver Parish which would otherwise route through Langley or Hillingdon. Because of this we have/will continue to engage with major infrastructure providers (e.g Heathrow's airport expansion plans) to provide assurances that this will be taken into account when identifying appropriate freight locations and associated enforcement. Cross boundary partnership working with neighbouring authorities and scheme delivery partners will help ensure places like Iver are not unduly affected as a result of neighbouring restrictions.

¹⁵ Transport for Bucks, Automated Traffic Count (2017)

- In 2017 Central Bedfordshire Council completed its major M1/A5 link (Dunstable Northern Bypass). This dual carriageway connects the M1 at the new Junction 11a north of Luton, to the A5. This link has helped take HGV traffic away from Dunstable and Houghton Regis and provides an alternative to HGVs using the old A4146. In response to the scheme, Buckinghamshire downgraded what was the A4146 to the B400 to deter HGVs using that part of the road network and encourage HGVs to access the A505 via the new link from the M1. Central Bedfordshire Council chose to respond by imposing area wide weight limits across Bedfordshire, which are being delivered through three zones. The effects of these restrictions are not yet clear and we will continue to carefully monitor any impact they may have on our local network.
- Oxforde County Council and Oxford City Council are proposing a zero emission zone in certain parts of the city centre from 2020 to tackle high levels of toxic nitrogen dioxide. Petrol and diesel vehicles would be banned in phases and this will impact on light goods vehicles accessing the city that will need to invest in new types of technology to ensure they comply with regulations. A requirement for diesel vehicles to change to electric (or other technology) may see companies located in Buckinghamshire require new infrastructure such as vehicle charging points.

In addition to the proposals by neighbouring local authorities, it is important that we maintain close contact with plans to close Hollow Hill Lane in Iver to facilitate the construction of Western Rail Link to Heathrow. Hollow Hill Lane is an important north-south route between the 'Ivers' and Colnbrook/Heathrow Airport for all traffic. This follows its temporary trial closure in 2016. Whilst there was already a height restriction preventing HGVs greater than 3.8 metres from using the lane, the trial closure demonstrated a closure could potentially cause a significant traffic impact in residential areas in Langley, Iver High Street and Richings Park. Buckinghamshire County Council and South Bucks District Council are looking at a range of measures to reduce the impact on the 'Ivers' as result of this closure. These include relocation of HGV sites in the local plan, seeking additional road capacity and encouraging better co-ordination of HGV generating activities.

Map 2: Percentage of HGV vehicles using Buckinghamshire's roads



Economic benefits of freight

National benefits

Since 2016, the number of HGV vehicles has risen by 2.1%.¹⁶

In 2016 within the UK road freight sector there were 51,332 road freight businesses in the UK, employing 284,000 individuals and contributing £13.1 bn to the UK economy.¹⁷

These statistics demonstrate the significant direct financial contribution freight is making nationally. On top of this, it plays an important role in supporting many other industries. It is subsequently important that freight is given the right conditions to continue making a strong economic contribution, both locally and nationally.

Local economic conditions

In broad economic terms, Buckinghamshire is thriving. The total employment rose in 2016-17 to reach a record high of 278,300.

Currently the county has approximately 34,175 businesses and this number is still increasing. Buckinghamshire's employment rate of 81% is higher than the UK average (74%).¹⁸

Part time employment has grown and is higher than the UK average in Buckinghamshire. The county has the highest proportion of smaller companies employing fewer than five people in England. As well as a thriving small business sector, Buckinghamshire has several specialist business clusters including motorsport around Silverstone and media around Pinewood Studios.

A comparatively high proportion of Buckinghamshire's population is classified as economically active, at 81% of working age residents. The highest percentage of job type is in the wholesale and retail trade (including repair of vehicles and motorcycles) which is 19% of all jobs in Bucks.¹⁹ Buckinghamshire residents are among the highest paid in Great Britain with a median full-time earning of £32,656 per annum approximately 15% above the national average.²⁰ Buckinghamshire has a well-educated population: of all 38 Local Enterprise Partnerships (LEP) in England the county has the 3rd highest proportion of (44%) of working age residents holding degree level qualifications, only behind London (49%) and Oxford (46%).²¹

It is reasonable to suggest that Buckinghamshire's strong economic conditions and growing population has a direct correlation with the increase in LGV and HGV freight activity. An educated and economically active society has greater buying power; necessitating more freight deliveries.

Department for Transport, Statistical Release, Road Freight Statistics p.2

¹⁷ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/670527/major-road-network-consultation.pdf p.7

¹⁸ Office for National Statistics, Annual Population Survey (Jul 2016 – Jun 2017)

¹⁹ Office for National Statistics, Annual Population Survey (Jul 2016 – Jun 2017)

²⁰ Office for National Statistics, Annual Survey of Hours and Earnings - resident analysis (2017)

²¹ Office for National Statistics, Qualifications – Area Comparison, Annual Population Survey (Jan 2016-Dec 2016)

The economic impact of local freight

Freight is an important contributor to Buckinghamshire's economy and helps the county remain as one of the most prosperous local economies in the country. The freight industry in Buckinghamshire employs around 2000 people and generated roughly £67.5 million in Gross Value Added (GVA) in 2016.⁸

There are correlations between freight costs and trade. Estimates suggest that a 1% increase in freight costs reduces trade by 1.3% to 3.5%.²² This means it is imperative that Buckinghamshire supports the industry where appropriate so industry can keep prices competitive.

The freight industry surveyed perceptions of the role it plays amongst government and the public. Results indicate that many people undervalue the role of logistics in the economy.²³ In the case of Buckinghamshire, many of our working age residents have a vested interest in the management of effective freight, as many residents are employed in sectors that rely on it (either directly or indirectly).

Buckinghamshire has some of the least deprived areas in the country.²⁴ As such, many of Buckinghamshire's residents enjoy an above average quality of life, and unique environments. The unusually high response to the initial 'snapshot' consultation on this Freight Strategy supports the idea that because of this quality of life residents are keen to engage with things that concerns them, like freight issues.

As an affluent area, there is a high level of inward investment and greater consumer choice which may be associated with more freight movements.

The input made by freight to Buckinghamshire's economy should not be forgotten; part of the role of this Strategy is to maximise the contribution it makes to the local economy.

²² Economic Growth and the Strategic Road Network (2016) p.5

²³ Freight Transport Association, Logistics Industry Survey (2015/16), p.3

²⁴ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/465791/English_Indices_of_Deprivation_2015_-_Statistical_Release.pdf p.16

Freight in a growing Buckinghamshire

The population of Buckinghamshire is projected to increase to 588,918 by 2033. At 6.9 percent, Buckinghamshire's rate of growth will be above the national average. Growth of this scale brings with it opportunities, and freight transport is going to play a big part in the county's growth, directly and indirectly.

At the time of writing, Buckinghamshire's District Councils are in the process of preparing their local plans. The plans look at future growth options and include planning policies which support the delivery of sustainable development. Each of the three local plans being developed in Buckinghamshire set out proposed housing allocations and employment areas.

The **Vale of Aylesbury Local Plan** is at its proposed submission stage. It proposes 27,400 homes, 27 hectares of employment land and an Aylesbury enterprise zone (with sites at Aylesbury Arla, Westcott and Silverstone).

Wycombe's Local Plan is also at its proposed submission stage, allocating 10,925 homes (with an unmet need of 2,350 homes being delivered in Aylesbury Vale) and 21 hectares of employment land.

The **Chiltern and South Bucks** draft Joint Local Plan has not yet designated future growth sites. The Housing and Economic Development Needs Assessment states that Chiltern and South Bucks have a joint housing need of 14,700 (it has been agreed that Aylesbury Vale will take 5,750 of their unmet need) and an employment need of 22 hectares.

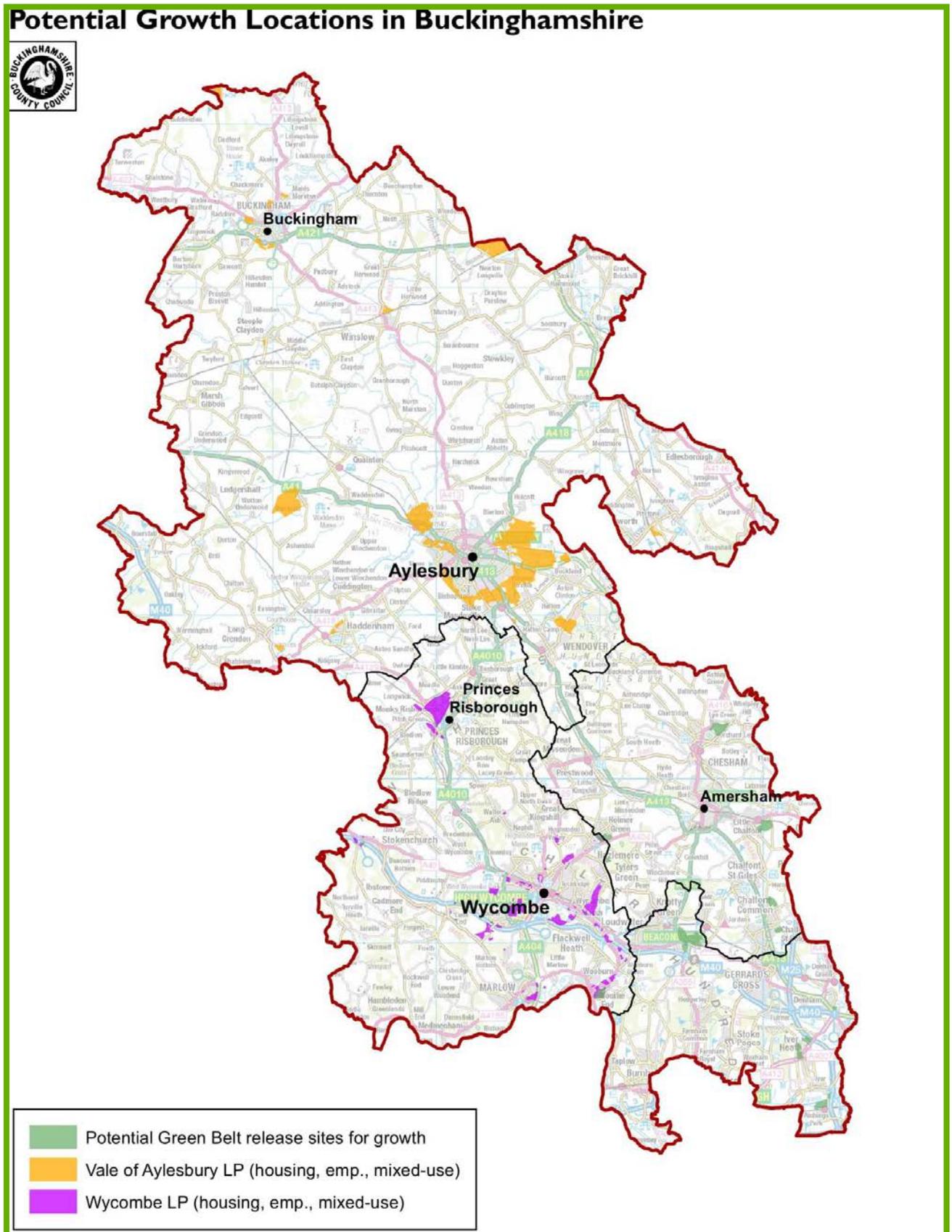
Sitting alongside the site allocations and planning policies within the local plans, are a large number of transport improvements proposed (or expected to be proposed) in their Infrastructure Delivery Plans. These plans support the delivery of the local plan proposals which could have an impact on future freight movements. As the majority of growth in Aylesbury Vale will be in Aylesbury, there is a specific transport strategy for the town. The strategy proposes new link roads to reduce the amount of traffic travelling through the town centre, which will include freight traffic. It should be noted that the series of link roads provided is a long term aspiration.

Buckingham has its own transport strategy which proposes a western link road and the downgrading of West Street. These two schemes are long term visions designed to reduce the flow of traffic through the town, specifically freight, as the existing infrastructure is not designed for these vehicles.

In the Wycombe District, most of the focus is on High Wycombe and Princes Risborough with a separate strategy for High Wycombe, the High Wycombe Town Centre Masterplan. A key component of the Masterplan is an Alternative Route around the town centre, linking A404 Marlow Hill to the A40 West Wycombe Road.

In the Chiltern and South Bucks District there is the Iver Traffic and Transport Study which examines existing traffic and transport conditions in and around Iver Parish and the impact of future major infrastructure project developments.

Map 3: Potential growth locations in Buckinghamshire



Infrastructure schemes proposed in Buckinghamshire

In addition to the growth set out above a range of major national infrastructure schemes will affect Buckinghamshire. As well as having local effects, many will significantly improve connectivity across the country.

All the schemes are at different stages and will generate a varying amount of HGV movement during their construction to provide the materials to build them. These schemes are being promoted by other organisations but are summarised below to help show the impact they will have on freight in Bucks:

Major infrastructure schemes

Western Rail Link to Heathrow: A proposed direct rail link by Network Rail between the West of England and London Heathrow airport. The proposed rail connection would speed up journeys to Britain's busiest international airport, by allowing passengers to travel to the airport from the South Coast, South West, South Wales and West Midlands without going into London Paddington. Discussions are well advanced so that the spoil from the tunnelling undertaken as part of the WRLTH project is either moved to a final location adjacent to the construction site, or alternatively removed from site through the use of the rail sidings on the site which would limit lorry movements. Closure of Hollow Hill lane will be monitored carefully.

M4 Smart Motorway: A Highways England Initiative to enable proactive management of the M4 carriageway, including slip roads and motorway to motorway intersections between junctions 3 and 12. The scheme will use the latest technology to improve journeys by monitoring traffic flow and setting speed limits accordingly. The construction involves converting the hard shoulder and installing new technology, this will generate additional HGV movements in the south of Buckinghamshire. There are also proposals for smart motorway improvements on the M25.

HS2: The planned high-speed railway intended to link London, Birmingham, the East Midlands, Leeds and Manchester. The scheme is to be built in two phases. Phase 1 is from London to the West Midlands and Phase 2 from the West Midlands to Leeds and Manchester. The impact of construction will be significant with the proposed route running approximately 60km through the county, from the Colne Valley in South Buckinghamshire to Turweston in the north.

East-West Rail: A major scheme to establish a strategic railway connecting East Anglia with Central, Southern and Western England. The scheme will re-establish a rail link between Cambridge and Oxford to improve connections and delivery will fall into a Western, Central and Eastern Section. The construction of new station at Winslow and new track bed will create HGV movements in the north of the county.

Expansion of Heathrow: The planned expansion of Heathrow by building a third runway. Any additional runway is likely to create more HGV journeys. Heathrow has consulted on its own freight strategy to manage the impact of construction and additional freight movements after its completion.

Oxford – Cambridge Expressway: Three alternative transport corridors are being considered between the cities of Oxford-Cambridge to improve east-west connectivity. All of these corridors include significant elements in Bucks. Subject to design proposals, construction generated by building new infrastructure will see an increase in HGV movements in Buckinghamshire.

Crossrail: Europe's biggest infrastructure project is now over 85% complete. When completed it will consist of a 73 mile railway line running through parts of London, Berkshire, Buckinghamshire and Essex. Once completed it will significantly change the accessibility of areas of Buckinghamshire, with local impacts on how those areas are used and resultantly on freight movements.

Local infrastructure schemes

In addition to the national infrastructure schemes, Buckinghamshire County Council is promoting and/or working with partners like developers on a number of other schemes. These schemes are designed to improve transport connectivity in Buckinghamshire:

Aylesbury link roads (orbital routes): a series of outer link roads proposed around Aylesbury. These are designed to take traffic away from the town centre and allow public transport improvements to take place on the main radial roads closer to the town centre, improving journey time reliability. Some of the link roads have been delivered, some are due for completion around 2021 and others are longer term objectives which we continue to work on. The delivered link roads will provide an alternative route for through traffic around Aylesbury town centre (including HGVs).

A355: The A355 provides the main north-south route through the South Bucks District, connecting Amersham and the A413 in the north to Beaconsfield and the M40, and on to Slough in the south. The A355 improvement project will be delivered in two sections with a new road will be built to relieve existing congestion east of Beaconsfield at junction with A40

High Wycombe Town Centre Masterplan: a partnership project between Buckinghamshire County Council, Wycombe District Council and Buckinghamshire Thames Valley Local Enterprise Partnership. The project will strengthen the role of the town centre as the focus for employment, shopping and leisure activities. A key component is an alternative route around the town centre linking the A404 Marlow Hill to the A40 West Wycombe Road.

Iver Relief Road: A new road to provide an alternative route for HGV traffic currently routing through Iver High Street. This is part of a wider local aspiration for comprehensive highways and transportation improvements to help relieve congestion promote sustainable travel and improve public realm. The area is also affected by high levels of HGV traffic, several planned national infrastructure projects and major development proposals. At the time of writing, the scheme is at the early stages of design and scheme assessment.

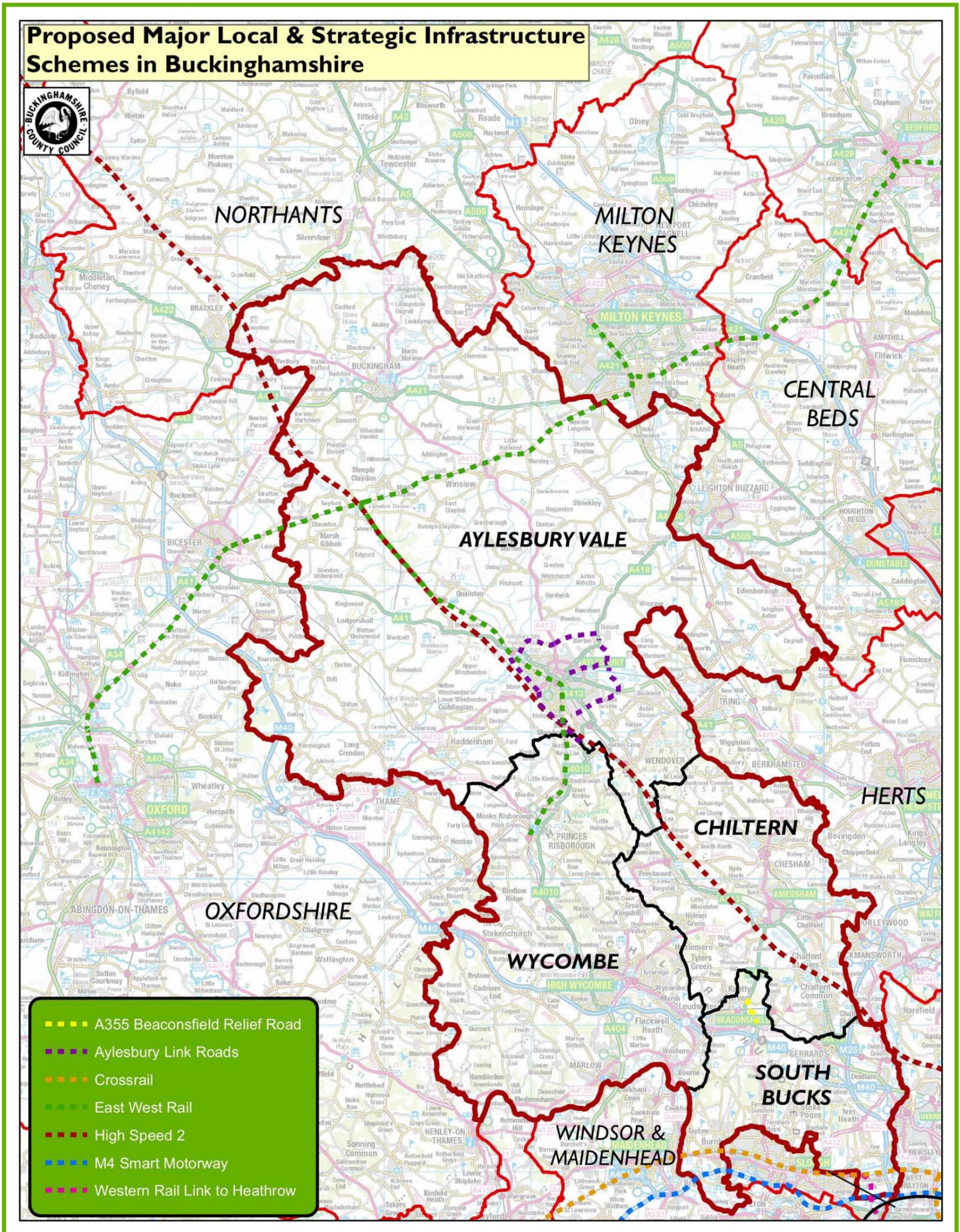
How do we manage the freight movements generated by these schemes?

Whilst many of the schemes referred to above will improve Buckinghamshire and benefit residents, it's important to consider how construction impacts can be mitigated.

The Council provides advice to District Councils when we are consulted on the transport impacts of planning applications as the highway authority. For larger schemes our involvement can be via Transport & Works Act Order or Development Consent Orders.

Highway Authority input can also include recommending that certain plans, procedures or mitigation measures are put in place. We are also developing a new Development Management Guidance to help developers to ensure their development plays its part in making Buckinghamshire thrive. Some of the techniques that can be used to manage freight movements generated by new developments are set out in specific policies in Section 3.

Map 4: Proposed Major Local and Strategic Infrastructure Schemes in Buckinghamshire



Freight and road safety

Improving LGV and HGV safety is a high priority. Road safety is important part of Buckinghamshire's wider transport work and was one of the main concerns that came through from the consultation.

Across the UK there were around 78 KSI (killed or seriously injured) collisions involving HGVs per billion vehicle miles in 2015. There were 40 KSI collisions involving LGVs per billion vehicle miles. This figure is significantly lower than the rate for all vehicles of 117 KSI per billion vehicle miles in 2015 and has been decreasing since 2004.²⁵

Case Study 1: GIST Child Road Safety Programme

A supply chain company GIST currently run a free programme to reduce and prevent the needless accidents and deaths of young people on the roads. Working in partnership with Brake, the UK's largest road safety charity, schools receive a pre-visit from a presenter which includes a safety and risk assessment.

The presentations include guidance on how children can stay safe on the roads and give children the opportunity to explore inside the cab of the vehicle, experiencing first-hand the view of the driver. Schools are supplied with high-visibility vests for the children, a classroom activity pack and a selection of bonus accessories.



²⁵ Department for Transport, Reported road casualties in Great Britain: 2016 Annual Report (2016)

Local freight road safety

Within Buckinghamshire, we have examined HGV road safety statistics for the last five years. These statistics include only collisions that have been reported to the police, for vehicles with gross weight of 3.5 tonnes and over. 'Damage only' incidents (where there is no injury) are not recorded.

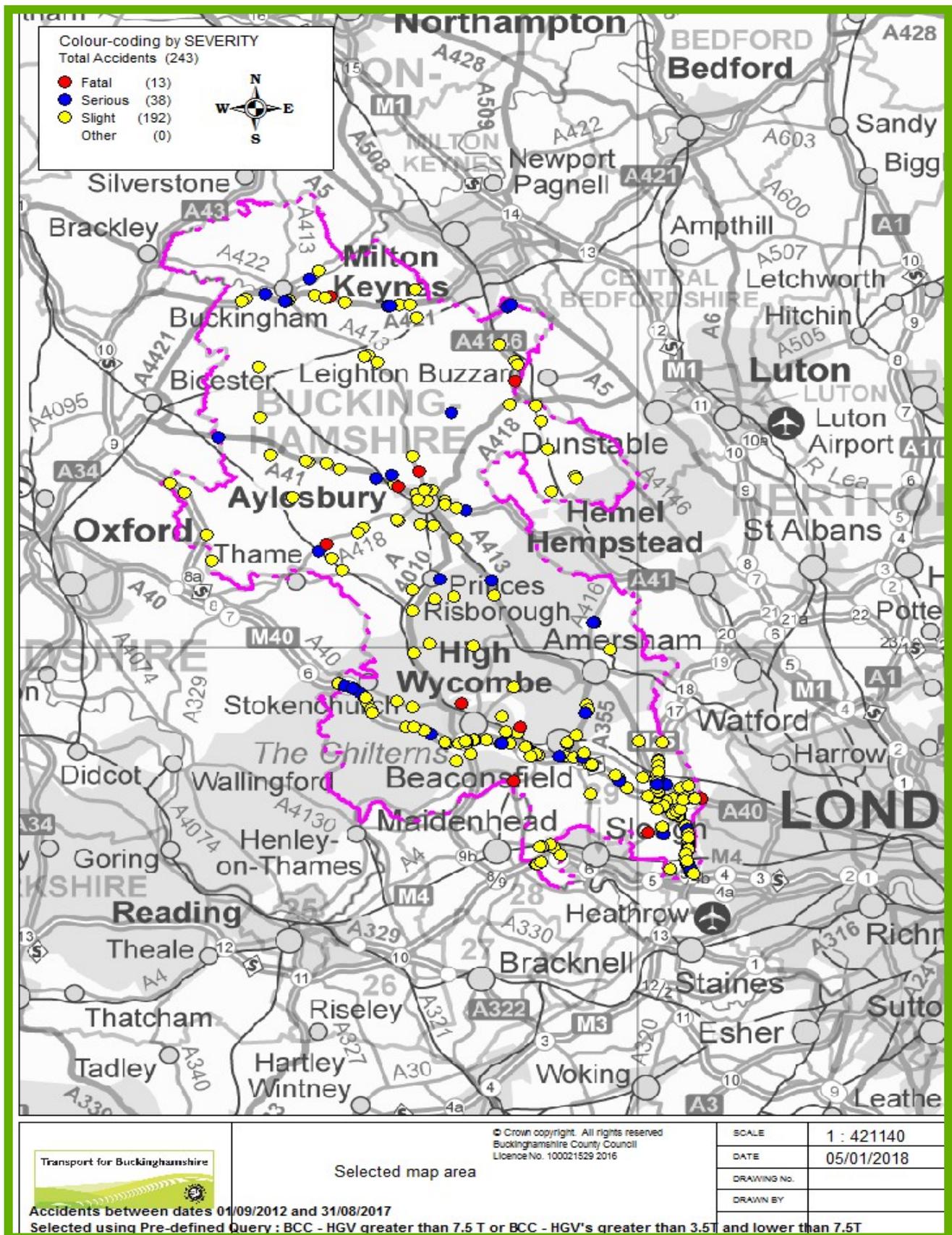
The table and map below shows that, in Buckinghamshire, collisions involving HGVs are primarily focused along the M40, M25 and M4 in the south of the county. Clusters also exist around our larger towns. Of all ninety six fatal collisions in the past five years, 13.5% of them have involved HGVs.

Section 3 of this Strategy will explore how improvements in LGV and HGV road safety will be considered.

Figure 12: Number and percentage of HGV collisions in Buckinghamshire (2012-2017)

	All types of vehicles	HGV over 3.5t (number)	HGV over 3.5t (percentage)
Fatal	96	13	13.5%
Serious	912	38	4.16%
Slight	4104	192	4.68%
Total	5112	243	4.75%

Map 5: Collisions involving HGVs in Buckinghamshire (2012-2017)



Freight, emissions and air quality

What is air quality?

Air Quality has a huge impact on public health and wellbeing, the natural environment and even Buckinghamshire's economy. Poor air quality causes 40,000 deaths a year and these are usually amongst the most vulnerable.²⁶ The types of emissions from transportation that affect air quality are:

- **NOx** – these are Nitrous Oxides and as a county we are most concerned with NO2.
- **PM2.5** – These are particles or solid matters that come from burning fossil fuels. They are mostly associated with health issues including lung cancer and cardiovascular diseases.
- **VOC** – Volatile organic compounds, which tend to come from industrial sources.

National context

- HGVs are currently estimated to account for around 17% of UK Greenhouse gas emissions²⁷
- In the UK logistics contribute 7% of all UK's carbon emissions.²⁸
- HGV's are responsible for 21% of UK nitrogen dioxide emissions while only accounting for 5 percent of vehicle miles²⁹

In order to combat poor air quality, the Government published its updated Draft Air Quality Strategy in December 2017. The Strategy sets out how the Government will tackle air quality issues, particularly NO2 emissions. The focus of the Strategy is mainly in dense urban areas, cities like London, Manchester and Birmingham. This is because these areas have the highest emissions. Therefore, there are fewer schemes proposed in more rural areas such as Buckinghamshire. The Strategy committed to modal shift of freight away from road. It also celebrated the awarding of £20 million through the Low Emission Freight and Logistics trial. The Strategy supports firms that look at innovative ways to deploy low and zero emission vehicles.

Case Study 2: London Ultra Low Emissions Zone

In a bid to further tackle harmful emissions in central London, The Mayor and TfL will introduce an Ultra-Low Emission Zone (ULEZ) from 7 September 2020. This builds on the existing Low Emission Zone (LEZ). Currently, the LEZ operates 24 hours a day, 365 days a year and has various compliance stages dependent on vehicle weight and Euro Standard.

The ULEZ plans to come into force in April 2019. HGVs that do not meet Euro-6 emissions standards will pay a £100 daily penalty for coming into the Zone.

²⁶ Committee On The Medical Effects of Air Pollutants, The Morality Effects of Long-Term Exposure to Particle Air Pollution in the United Kingdom', 2010

²⁷ Department for Transport, Freight Carbon Review (2017), p.7

²⁸ Emissions – <https://www.addleshawgoddard.com/globalassets/insights/general/logistics-report-exec-summary.pdf>

²⁹ Campaign for Better Transport, Rail Freight should be part of Air Pollution Solution (2017)

In the Autumn Budget, the Chancellor Philip Hammond announced that new diesel cars which don't meet the latest standards will attract extra vehicle tax, and go up by one emissions band in the first year. Diesel vans will be exempt from the rise and therefore this may not have a huge impact on freight. Hammond said the proceeds raised will go towards a new £220 million 'Clean Air Fund' to tackle pollution. He also froze the duty paid on petrol and diesel – the eighth year in a row there has been such a freeze.

Whilst many of these measures are positive, it's important to consider all the effects they may have on Buckinghamshire. With many of them focused on larger cities, there is danger that measures like low emissions zones could mean the least efficient vehicles are concentrated in areas like Buckinghamshire.

Local air quality conditions

Air Quality Management Areas (AQMAs) are designated by the District Councils (who monitor and report on progress) where national thresholds for certain pollutants are exceeded. They consider a wide range of pollutants, which can arise from industrial, transport and other sources. Transport related emissions contribute largely to Bucks' AQMAs. Unfortunately monitoring equipment currently doesn't allow us to identify what emissions might arise from freight.

AQMAs in Buckinghamshire are listed in the box below. Further information is available on <http://www.bucksairquality.co.uk>.

- **Aylesbury:** on the Friarage Road and Oxford Road junction; and on part of the Gyratory system (including sections of the Old Stoke Road, Wendover Road and Walton Street).
- **Wycombe is proposing** two further AQMAs in High Wycombe and Marlow.
- **M4, M25 & M40 corridors.**
- **Chiltern:** parts of Broad Street and Berkhamstead Road in Chesham.
- **South Bucks:** Investigation of proposed AQMA in Iver.

The work to assess the impact of Chiltern and South Bucks District Councils' developing new local plan has also identified potential effects on the Burnham Beeches Special Area of Conservation. Work is ongoing to understand this potential effect. This may include traffic assessment on nearby roads to quantify the impact of HGV traffic.

DEFRA's interactive online map shows the location of all AQMA's: <https://uk-air.defra.gov.uk/aqma/maps>. At the time of writing this has not been updated to account for the changes in the 2016 reports as it takes 12 months to make changes to AQMAs.

At the time of writing, Slough Borough Council is consulting on a Low Emission Strategy (2018 -2025) which is designed to tackle pollution in urban areas. It has designated four AQMAs located around the M4, Tuns Lane, Town Centre/A4 and Brands Hill.

Freight ‘hotspots’ in Buckinghamshire

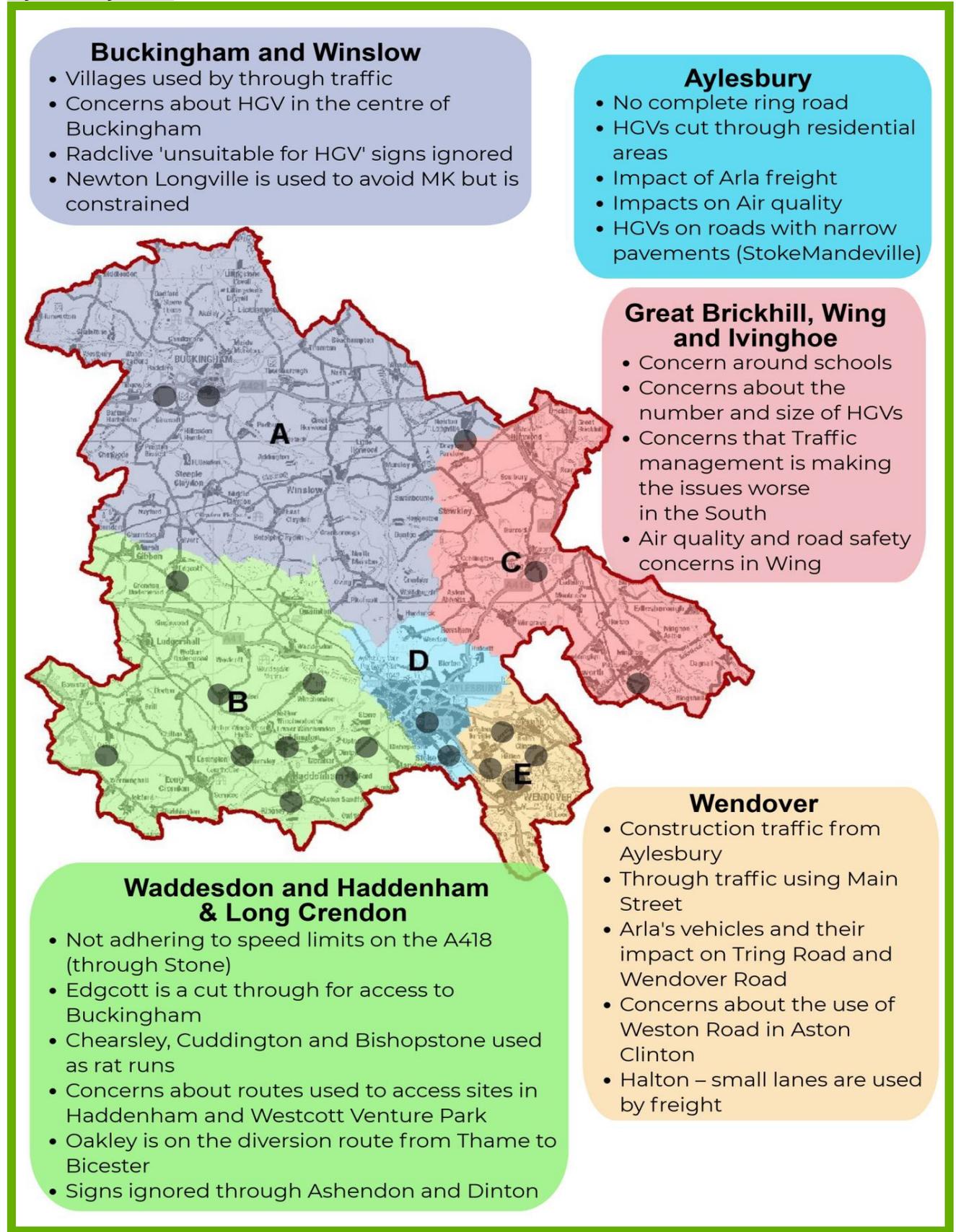
As a part of the initial ‘snapshot’ consultation in 2017, Buckinghamshire County Council asked the public to tell us about freight issues in their area. The findings are divided into districts and LAFs (local area forums). Local issues have been mapped to identify areas where freight is felt to have a particular impact; these are referred to as ‘hot spots’.

Maps 5, 6 and 7 identify these ‘hot spots’ and summarise respondents’ perceptions of freight in their area. They reflect key themes arising from the snapshot consultation, identified through an analysis of the large data set provided by the 1092 responses (more information on this analysis is set out in the Consultation Report).

We will continue to work with communities to investigate these and other ‘hotspots’ further, looking for appropriate solutions (relative to the scale of challenge). Our attention will be focused on the ‘hotspots’ set out below, although countywide measures and other interventions are expected to address issues in other areas. Aspirations set out in neighbourhood development plans may help to inform our solutions and help make sure they align with local priorities.

This information is subjective and does not necessarily reflect the views of Buckinghamshire County Council. However, it is derived from a thorough analysis of a large data set. It provides a rich picture of respondents’ freight experiences in Bucks, which adds to the picture of freight this section aims to provide. It should be read alongside the other (often more quantified) information set out in the preceding sections. As work continues beyond this Strategy we will develop our understanding of the challenges in these areas and others that are brought to the authority’s attention (see figure 1) and (Section 4).

Map 6: Examples of the impact of freight from consultation responses in Aylesbury Vale



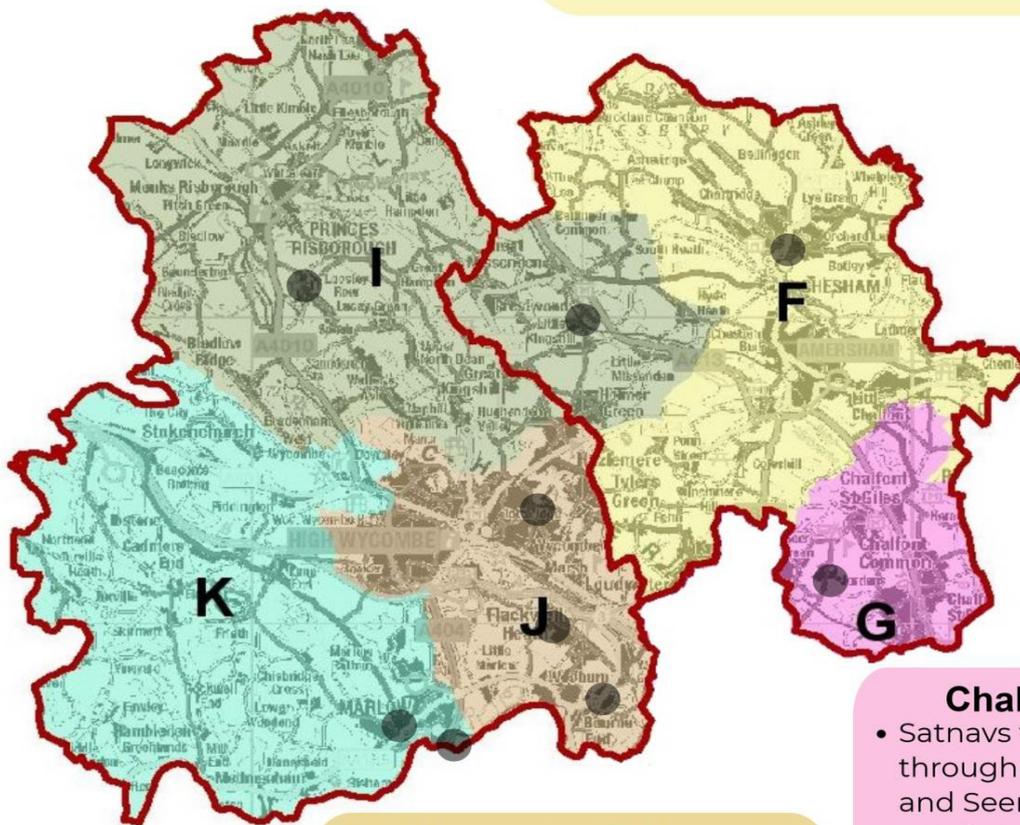
Map 7: Examples of the impact of freight from consultation responses in Chiltern and Wycombe Districts

North West Chilterns & Great Missenden

- Vehicles trying to turn out from Chiltern Hospital turning southbound on the A413, although this does not seem to be solely related to freight
- Loosely Row is being used as a short cut

Chesham and Amersham

- Germain Street is narrow, concerns about freight mounting pavements and damaging buildings.
- Global Infusion Court – parking outside causes light and noise pollution, blocking pavements and congestion
- Berkhamstead Road parking also causes congestion
- Impact of Sycamore Road and Raans Road industrial estates



South West Chilterns & Marlow

- Marlow Bridge
- Parking in centre of Marlow causes congestion
- Cookham Bridge – location of signs

High Wycombe & Chepping Valley

- High Wycombe industrial deliveries (Sands, Cressex and Daws Hill)
- Freight using Flackwell Heath and Bourne End / Cookham Bridge to avoid congestion at Handy Cross.
- Hazelmere Crossroads and Cock Lane / Hammersely Lane - congestion

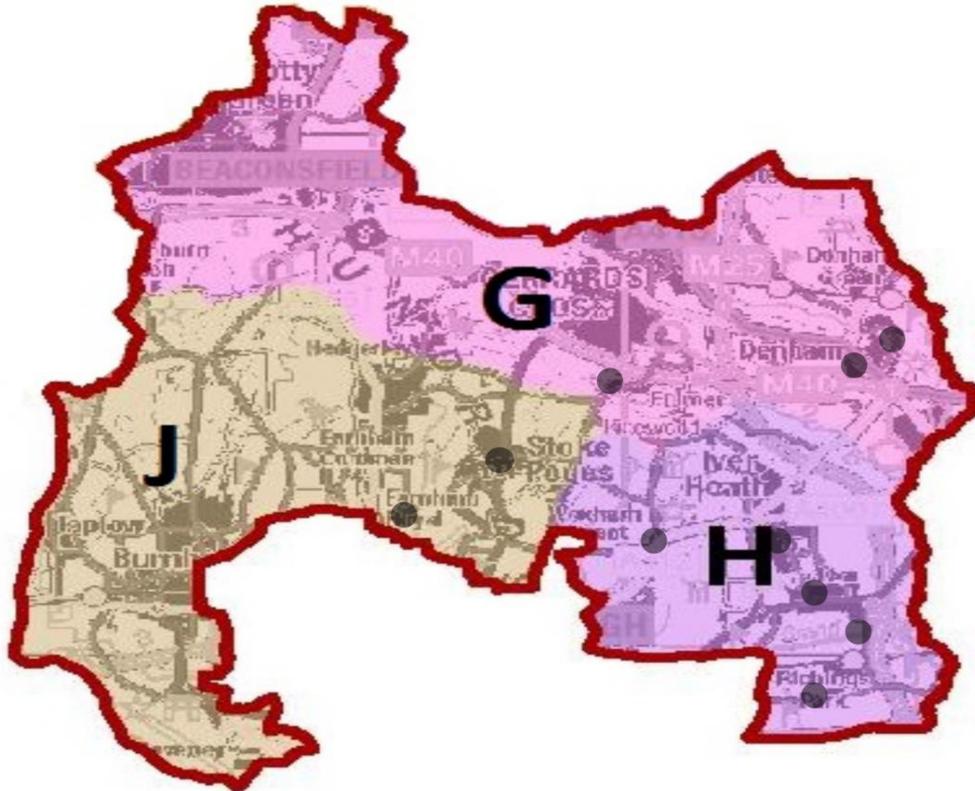
Chalfonts

- Satnavs take freight through Jordans and Seer Green as a cut through between A413 and A40

Map 8: Examples of the impact of freight from consultation responses in South Bucks District

Beaconsfield, Denham and Gerrards Cross

- Concerns about the impact of the filling station, used by HGVs, in Denham Green
- Concerns about the impact of the Martin Bakers factory Lower Road and Old Rectory Road
- Windmill Road as an alternative to the M25 to access M4 and Slough



Beeches

- HGVs use Farnham Lane and then onwards to Stoke Poges, despite the fact there are unsuitable for HGV signs

Wexham and Ivers

- Large freight generating sites nearby – Heathrow, HS2, WRATH etc.
- Stoke Poges has high levels due to access to Slough or the M4
- Safety of pedestrians
- Iver High Street not wide enough for 2 HGVs
- Speed of HGVs in Richings Park on North Park Road and Thorney Lane North
- Weight limits not enforced – Bangors Road
- A412 used as alternative to M25 and M4

Section 3: Challenges and Opportunities

Generating our options

To maximise the benefits of freight whilst minimising its impacts, we have identified a number of options.

To help select the best options for tackling freight, the Strategy has compared the options with the overarching aims and objectives (Section 1) and the existing impact of freight in Buckinghamshire (Section 2).

Options were generated using a range of methods. These included idea generation at internal workshops, external engagement and looking at other local authority approaches to managing freight. The Strategy adopted Buckinghamshire's County Councils innov8: B toolkit to encourage idea generation and concept development. Innov8: B toolkit is Buckinghamshire County Councils methodology that helps the organisation understand challenges and generate ideas to overcome this.

Ideas were appraised using a high level assessment of their benefit/cost ratio (BCR), scale of impact and how well they would meet the Strategy's aims and objectives. Further analysis is likely to be necessary to understand how these ideas are best tackled in greater detail when they are taken forward. This may result in the options selected being developed / re-shaped.

Figure 13: Some of the options considered for inclusion in the Strategy

Initial concepts:	BCR	Scale of impact	Meets aims and objectives
Issue a simple freight map with Appropriate Freight Routes and lorry stops	High	Medium	High
Develop a preferred lorry route network for navigation mapping applications	High	High	High
A webpage which shares local freight information	Medium	Medium	High
Monitor lorry movements and support communities manage freight issues	High	High	High
Initial study of the potential for using rail and water freight	Low	Low	Medium
Increased partnerships working with the freight industry's	High	High	High
Area wide HGV bans	Low	High	Low
Traffic Regulation Orders to prohibit larger vehicles from using unsuitable routes	Medium	High	High
Increased support for local areas to investigate issues	High	High	High
Celebrate good operators to encourage good practice in the industry	High	High	High
Consider advances in technology that can improve freight	High	High	High
Consider the management of freight in new development	Medium	Medium	High
Work with the freight industry and other partners to manage freight	Medium	Medium	High
Consider the effects of consumer behaviour has on HGV movements	High	Medium	High
Including freight in road safety work	High	High	High
Give communities the tools required to manage freight issues on their own	High	High	High
Raise awareness of the importance of freight	High	High	High

Preferred options to manage freight

The ideas that were considered to score either high or medium against the factors above have been taken forward as the Strategy's preferred approaches to manage freight. They are developed further in this section. It is intended that these options will help develop the type of Strategy that will best meet Buckinghamshire's needs, which is set out in Section 4.

Policies have been developed that will help us to deliver the Strategy's objectives. To illustrate how a policy meets an objective we have used ticks. A green box with a tick indicates the primary objective the policy supports and a box with only a tick (with no shading) reflect other objectives it may also address. They have been divided in this way to help people navigate their way through the Strategy.

Figure 14: How the policies in the Strategy support overarching objectives

	Objective 1: Appropriate Road Use	Objective 2: Protecting our Environment	Objective 3: Partnership Working	Objective 4: Consider Freight in Decision Making
Promoting appropriate routes	✓		✓	
Improving navigation information	✓		✓	
Appropriate parking facilities	✓		✓	✓
Improving road safety	✓	✓		
Celebrating responsible operators		✓	✓	
Our approach to managing inappropriate freight movements	✓	✓	✓	
Maximising Rail Freight Opportunities		✓	✓	✓
Empowering Communities			✓	
Working with the freight industry			✓	
Raising awareness			✓	✓
Consumer behaviour			✓	✓
Freight in new developments and major infrastructure schemes		✓		✓
Putting freight at the heart of our work				✓
Future of freight				✓

Objective 1: Appropriate road use

HGV vehicles using appropriate routes received the highest number of responses in our consultation. As a predominantly rural county, appropriate routes are limited and haulage vehicles need to plan their journeys carefully to minimise disruption.

Equally, some parts of the road network that HGVs are accessing are running at full capacity and delays are therefore inevitable. Data suggests that the challenge of HGV congestion is significant and set to increase. The cost of congestion for an HGV is calculated at £1 a minute, meaning that it is a costly factor in servicing urban areas. It also contributes to increasing harmful emissions from stationary vehicles³⁰. Therefore it is important that HGVs are using the right routes.

Understanding Buckinghamshire's road network

Buckinghamshire County Councils road network is regularly reviewed to reflect the changing nature of the network. This is referred to as the Network Maintenance Hierarchy and was last reviewed in July 2017. The review examined some of the County's 9000 roads where some issues have been raised. As a result some increased in hierarchy, some reduced and some nominations were rejected.

The review of the Network considers the following things:

- New / adopted roads / assets.
- Temporary changes to traffic flows.
- Applications for changes to categories from technicians and members.
- If a road is found to have heavy freight use, or an application is made from member/local area technician due to freight issues, this may implicate its category.

³⁰ Freight Transport Association, Logistics Report (2016) p.8

Figure 15: Five categories of route in Buckinghamshire’s County Council’s Highway Asset Management Strategy

Hierarchy Category	Hierarchy Name	General Description
2	Strategic Route	Most heavily trafficked A roads
3a	Main Distributor	Other heavily trafficked A roads
3b	Secondary Distributor	Lightly trafficked A roads, B roads, heavily trafficked C roads and traffic-sensitive bus routes
4a	Local Interconnecting Link Road	Other C roads and non-traffic sensitive bus routes
4b	Local Access Road	Roads providing local access

These categories should be viewed alongside the Council’s regularly updated list of streets, which identifies individual roads. This can be accessed from <https://www.buckscc.gov.uk/services/transport-and-roads/road-maintenance-and-repairs/list-of-streets-we-manage/>.

In addition, as part of the Transport Investment Strategy, the government committed to creating a Major Road Network (MRN). It is proposed that funding will be used from the National Roads Fund to improve the countries busiest and most economically important local authority ‘A’ roads.

Improvements to this road network could enable more certainty over freight deliveries and more capacity for the journeys. Buckinghamshire County Council have responded to the consultation to ensure the impact and proportion of freight on roads is factored in to eligibility criteria and appraisal methodology.

Appropriate Freight Routes

We have developed HGV routes to guide local freight operators and protect the environment. A freight map has been developed with colleagues from Transport for Buckinghamshire. They are responsible for overall network management of the county's roads and have provided guidance on what routes HGVs should take when travelling. In developing the Appropriate Freight Routes we have also considered the impacts of proposed growth on the transport network.

The map sets out the Council's Appropriate Freight Routes in green.

HGVs should use our Appropriate Freight Routes. These are the highest level in our road hierarchy and HGVs should only use lower categories when unavoidable to gain access.

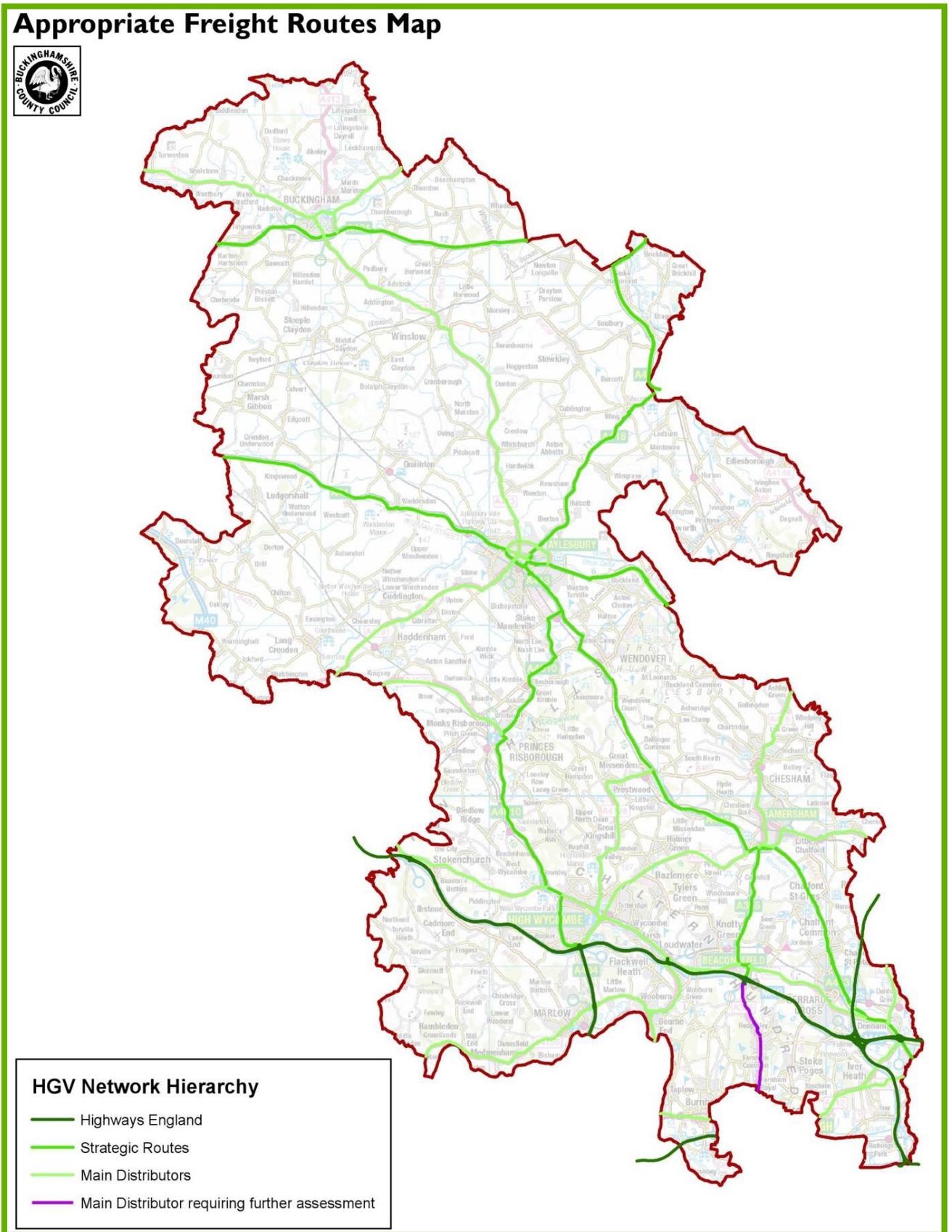
Natural England has raised concerns about possible impacts on the Burnham Beeches Special Area of Conservation following work undertaken with South Bucks District Council on their new local plan proposals. The A355 passes close to the site and forecast increase in traffic exceed Natural England's threshold for considering potential air quality impacts. We are working to help South Bucks District Council, which has commissioned specialist consultants to explore the issue. The A355 is identified as a Main Distributor in the Appropriate Freight Routes, as our understanding develops we will actively consider its place amongst Appropriate Freight Routes. This road has been identified with a purple line to reflect this uncertainty.



Promoting Appropriate Freight Routes:

Where movement of freight must be by road, HGVs should use Appropriate Freight Routes except where necessary for access.

Map 9: Appropriate Freight Routes map



Importance of GPS navigation software

The importance of up to date navigation information is crucial in supporting the Appropriate Freight Routes set out in Policy 1, but also in protecting the environment. Unsuitable routes can have a significant impact on infrastructure over time.

To spread awareness of the county's Appropriate Freight Routes, we have explored a range of opportunities to integrate our Appropriate Freight Route map with digital technology.

Global Positioning System (GPS) navigation software is becoming increasingly popular for motorists. A number of mobile apps and websites are available to help drivers get from A to B.

Navigation software has been criticised for sending unsuspecting drivers down unsuitable roads within the county. These include narrow lanes and roads with height or weight restrictions.

HGV specific GPS systems are available. These systems use the dimensions of specific vehicles to filter out minor and unsuitable routes. However, gaps in the data still exist and not all HGV drivers choose to purchase these systems.

As well as the Appropriate Freight Routes set out in Policy 1 above, the council holds data on a number of height, weight and width restrictions spread throughout the county.

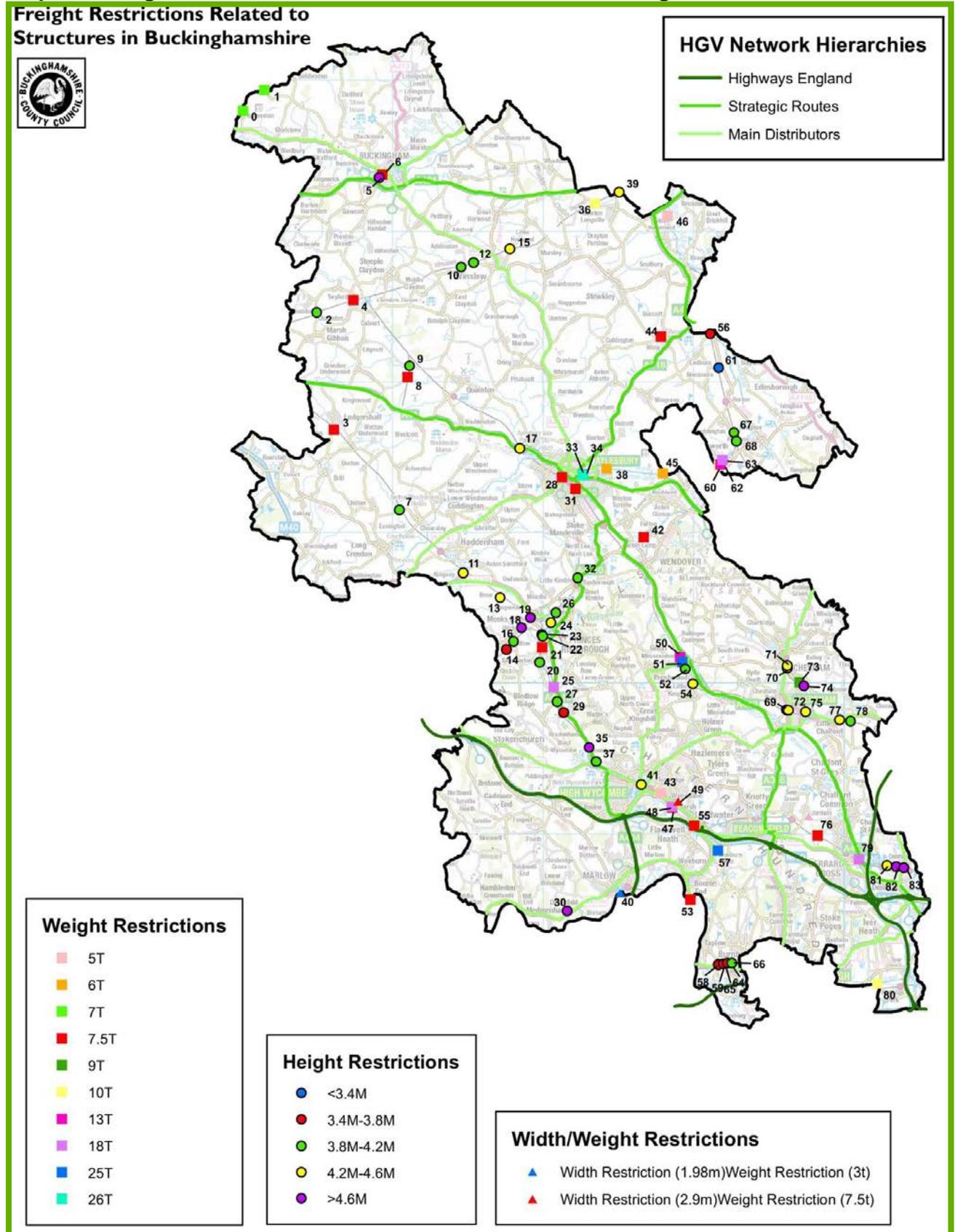


Policy 2

Improving navigation information:

We will work with people who provide digital transport information to make our preferred routes available in a range of apps and technologies. The aim is to create a live and dynamic picture of the county that takes into account the suitability of routes for freight. These may include width, height, weight restrictions and parking facilities.

Map 10: Freight restrictions related to structures in Buckingham 31



31 The map above shows restrictions related to structures (like bridges). We are working to collate data on environmental restrictions which have been identified as unsuitable for use by heavy goods vehicles. The bullet point below explains how we plan to expand this dataset.

We have identified a number of ways to put this policy into action

- The Local Government Association (LGA) wants legislation brought in to make sure HGV drivers in England and Wales use GPS systems that are suitable for HGVs. This relies on Local Authorities working with mapping companies to ensure that GPS systems are populated with data which takes into account unsuitable routes for HGVs. This includes narrow lanes, tracks and height and weight restrictions, this is something we are committed to supporting.
- Discussions are taking place between Buckinghamshire County Council and providers of transport platforms designed to bring together transport data and share it with users and operators. We are currently working on a complete restriction dataset that includes the structural restrictions shown above, environmental restrictions and other HGV signage. This could help to improve accuracy and timeliness of navigation information.
- Buckinghamshire County Council is working with Ordnance Survey on the replacement of its 'Integrated Transport Network Layer'. This is a mapping tool which gives a current and complete network view of roads, including road widths, height and weight restrictions. This forms the basis of many sources of navigation information but will be phased out in the near future. It will be replaced by a new highways layer, incorporating data from DfT, Highways England and Local Authorities. Engagement with Ordnance Survey will enable BCC to provide freight companies with the best possible data, allowing more appropriate routes to be taken through and across Buckinghamshire. Improving navigation information in this way will help us to get our information into the products used by international hauliers.

The importance of rest stops

Lorries that park inappropriately in residential areas can disrupt traffic, and represent a hazard to other road users and pedestrians. Appropriate parking facilities are also vital to support the freight movements we all rely on.

The provision of formal rest stops is also important in maximising highway safety and supporting European Union regulation (EC 561/2006). This legislation control the working hours and rest periods of drivers of HGVs, to help keep our roads safe. Such facilities should provide sufficient rest areas for HGV drivers and allow for the safe parking of their vehicles whilst minimising impacts on other road users.

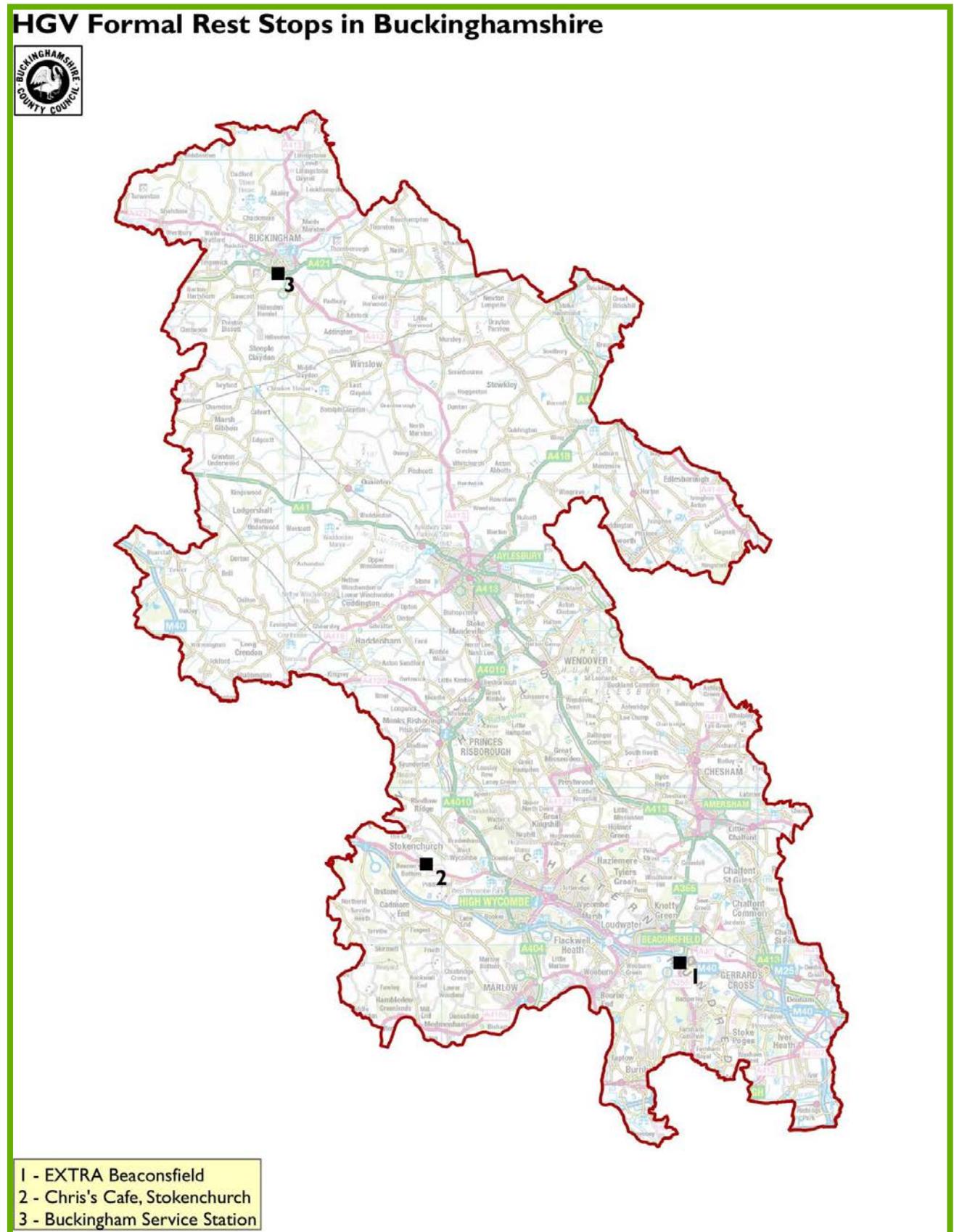
Buckinghamshire's HGV formal rest stops

Within Buckinghamshire there are a number of formal rest stops. These offer a range of facilities for freight drivers including restaurants, shops and showering facilities. Formal rest stops located within Buckinghamshire, identified during the development of this Strategy include:

- EXTRA Beaconsfield, at the M40/A355 junction.
- Chris's Café, near Studley Green off the A40.
- Buckingham Service Station, off the A421 near Buckingham.

There are informal stops located throughout the county, such as lay-bys available to HGVs in addition to other road users. These may offer temporary food vans. Lay-bys are not best suited for rest breaks due to their close proximity to fast-moving traffic and lack of toilet (and other) facilities. Formal stops along primary routes should be used when possible.

Map 11: Location of HGV formal rest stops in Buckinghamshire



The last comprehensive report on lorry parking was conducted in 2011 by the Department for Transport.³² It recognised that there weren't enough HGV parking spaces and because of the long distance nature of lorry movement's solutions need to be coordinated across local authority areas.

Research carried out by Transport Focus has shown that a number of road users are dissatisfied with roadside facilities. In response, Highways England supports the recommendations for a roadside facilities fund in RIS2 and suggests this could be used in partnership with motorway service area operators.³³



Policy 3 **Appropriate rest stops:**
We will promote the provision of safe, secure rest stops at strategic points across the county and work with neighbouring authorities.

We have identified a number of ways to put this policy into action:

- We will work with other stakeholders to consider the need for additional formal lorry parks. This may be as part of responding to the growth that Buckinghamshire is set to experience. BCC will work with other authorities on the establishment of formal lorry parking in neighbouring counties where appropriate. Developers should be encouraged to provide safe, secure lorry parking at appropriate points across the county.
- Providing relevant information to local companies and drivers will help signpost suitable parking facilities. This could be facilitated by physical signage or use of navigation systems that have up to date information on Buckinghamshire's parking locations. This is discussed further in the 'GPS Navigation Software' section.

³² Department for Transport, Lorry Parking Study, Demand Analysis (2011)

³³ https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/666965/shaping-the-future-of-englands-strategic-roads.pdf p.21

Objective 2 Protecting our environment

To preserve Buckinghamshire's unique character and ensure it remains safe and attractive, we need to support road safety campaigns that increase awareness of road safety and tackle its causes by targeted interventions.

Having considered the road safety data in Section 2 we will consider ways of reducing the number of collisions involving HGVs.

Case Study 3: Cycle Safety Shield

Following a successful trial, Ealing Council have developed an award winning lorry safety system which warns drivers when cyclists and pedestrians are likely to collide with the vehicle.

Ealing developed the technology with the system's manufacturers. Cycle Safety Shield is the first of its kind to use intelligent cameras to filter out inanimate objects, such as bus stops and fences, to monitor and detect only pedestrians, cyclists and motorbikes, and eliminate blind spots 360 degrees around the vehicle. An alarm will only sound to the driver if a cyclist or pedestrian becomes too close to the vehicle.



Using Transport for London funding, the council is currently installing the Cycle Safety Shield System on all of its large goods vehicles. Its highways recycling and waste contractors Murrill Construction and Amey are also rolling out the system on their vehicles.



Policy 4

Improving road safety:

We will explore ways we can reduce the number of HGV collisions. Applying best practice, national campaigns, targeted interventions and industry innovation will help us protect the safety of other road users and pedestrians.

We have identified a number of ways to put this policy into action

- Work closely with road safety colleagues to identifying where collisions are occurring on Buckinghamshire's local highway network (rather than Highways England's network) and continue to quantify the proportion of those collisions that involve HGVs.
- Supporting the Department for Transport's national road safety campaigns to promote best practice.
- Supporting external partners by providing information to develop new initiatives and interventions that specifically address the number of HGV collisions.
- Bringing together teams across the council. For example Buckinghamshire County Council's Strategic Flooding team is developing a road flooding map designed to help anticipate what roads may be unsafe or require closure due to heavy rainfall. Incorporating the outcomes of this work into future partnership and awareness raising work could help freight operators stay safe.

Celebrating other examples of good HGV practice

There are examples of how good HGV practice can help make freight work for Buckinghamshire throughout this Strategy: choosing appropriate routes, parking in appropriate places or driving considerately.

As well as managing the bad practice, we also need to encourage and promote best practice.

Case Study 4: The Fleet Operator Recognition Scheme (FORS)

This is a voluntary accreditation scheme that promotes best practice for commercial vehicle operators. With over 4,600 members, FORS is gaining recognition as the transport industry's go-to accreditation scheme. Progressive accreditation means members are either a bronze, silver or gold rating. It encompasses all aspects of safety, efficiency, and environmental protection by encouraging and training fleet operators to measure, monitor and improve performance. FORS provides accreditation pathways for operators of any type, and for those organisations that award contracts and specify transport requirements.



Celebrating responsible operators:

We will celebrate examples of good freight practice in Buckinghamshire. Helping to recognise local operators that have demonstrated good safety, efficiency and environmental practice.

We have identified a number of ways to put this policy into action

To do this we will explore how best to celebrate companies and drivers that have demonstrated good industry practice locally. We will work with local freight companies and other stakeholders to understand how we could incentivise good behaviour and publicise examples of excellence. This policy would include celebrating examples of local problem solving between operators and communities. Examples of good practice include:

- Voluntary routing agreements.
- Modal shift away from HGVs where practical.
- Quiet / considerate operating practices.
- New development design or delivery arrangements.
- New cab design that improves road safety.
- Better vehicle utilisation and consolidation.
- Carbon friendly vehicle technology.
- Public engagement and examples of problem solving with communities.
- The way we buy goods and services.

As a provider of services, we commission contract work to a range of different companies. How the Council commissions these services can effect freight movements. Where appropriate we will encourage the types of good practice described above.

Inappropriate freight movements

Our work has identified areas where there are concerns that HGV traffic is inappropriate. This can be for a range of reasons: the volume of HGVs, their speed or the particular nature of that local environment. This means there is no one size fits all solution to inappropriate freight movements.

To help deal with the adverse effects of HGVs in areas like this we have developed a 'tiered approach' to managing inappropriate freight movements. This is designed to help identify the best approach to the wide range of challenges Bucks faces.



Our approach to managing inappropriate freight movements:

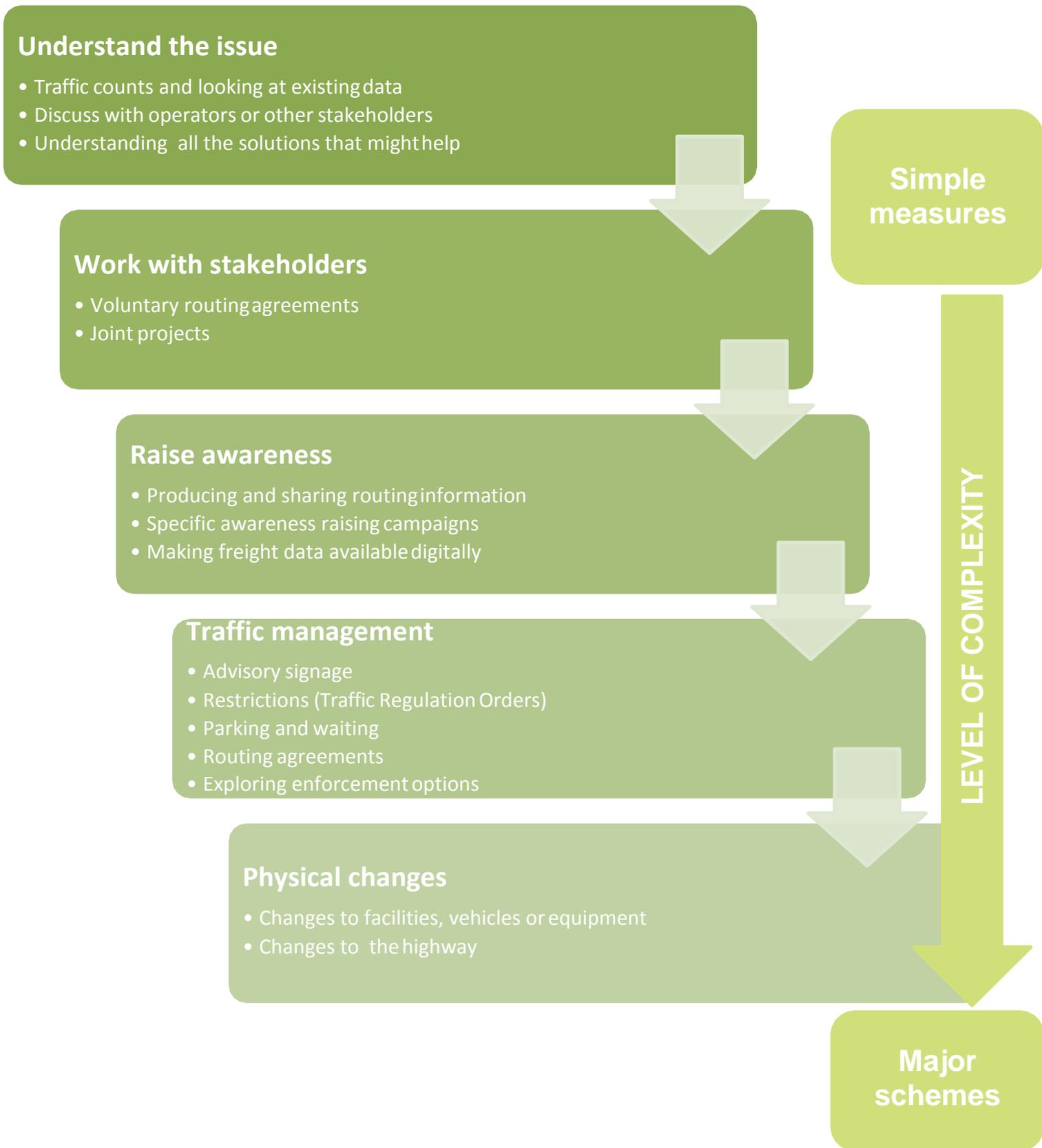
We will take a tiered approach to managing inappropriate freight movements. This will help us work through the options to get the best solution for a specific problem.

We have identified a number of ways to put this policy into action

The figure below sets out the tier of approaches that will be used to manage inappropriate freight movements. The approach begins with effective and easy to implement approaches, before moving to consider slower and more difficult to implement approaches. This will help to ensure we find the right solution and avoid jumping to wrong conclusions.

Section 4 explains how any measures identified through this approach would be put into practice. This is likely to include further assessment if funding has to be secured to deliver them.

Figure 16: The tier of approaches we will use to manage inappropriate freight movements



Examples of the type of measure which may result from this approach include, but are not limited to, the following:

- Promoting Appropriate freight routes.
- Improving navigation information.
- Appropriate parking facilities.
- Improving road safety.
- Celebrating responsible operators.
- Working with the freight industry.
- Raising awareness.
- Consumer behaviour.
- Exploring enforcement options (such as Automatic number plate recognition cameras or working with Thames Valley Police or Trading Standards).

Rail Freight

Opportunities for alternative forms of transport (i.e. not road based) should be considered where possible, in Buckinghamshire this is most likely to be rail freight. New developments that generate suitable freight demand should consider options for access by rail.



Maximising Rail Freight Opportunities:

We will encourage the use of rail freight, maximising opportunities to take more freight off our roads

Rail freight usually needs large flows of goods between fixed locations, located on sections of the rail network with capacity for freight traffic. Buckinghamshire's industry is generally dispersed and not reliant on large quantities of heavy materials (like, for example, quarrying). Its rail network is also well used and has limited capacity for freight. As a result proposals for major new rail freight terminals in Buckinghamshire are not currently anticipated, although we will monitor the development of multi-modal transfer hubs.

We have identified a number of ways to put this policy into action

- Once HS2 commences operation (Phase 1 planned 2026, Phase 2 2031) there will be released capacity on the West Coast Mainline. Some of this capacity could be used, in part, for rail freight. We will work with Network Rail and the West Coast Partnership to help determine how that released capacity from 2026 should be used.
- Considering through our minerals and waste planning whether future sites could be located to minimise road transport movements.
- Where possible supporting the use of rail aggregate depots facilities where it can be demonstrated that it complies with minerals and waste planning policy.
- Encourage infrastructure schemes to use non road based transport during construction where possible.
- To support the continued safeguarding of existing waste management sites associated with the storage, processing, handling and transportation of such materials (including rail sidings). Proposals for the disused rail sidings and the rail depot in Thorney are an example of ways freight in construction and regeneration projects can be moved at least in part by rail.

Objective 3 Partnership working

Empowering communities

Our work with communities whilst developing this Strategy has highlighted the huge energy and resourcefulness they have. We want to empower them to help address the freight challenges they face. This could allow more freight issues to be addressed than the Council could ever achieve with its resources. It also opens up a range of new solutions, driven by the local knowledge, creativity and unique position of our communities.

It is vital that interested individuals, communities, parish councils and other stakeholders know what their options are. Feedback from engagement with Local Area Forums and Parish Councils told us that there was sometimes confusion about who to contact and a lack of information on what their options were. There was an appetite from parishes to enable and support activism.

Case Study 5: Lorry Watch

Lorry watch is a scheme adopted by a number of local authorities across the country. Communities and local volunteers record details of HGVs that are suspected of using inappropriate freight routes as shortcuts.

Volunteers will send the local authority details of the vehicle; the local authority can validate the concern and advise them on the name of the company. Volunteers can then begin the process of writing to the company advising them to use appropriate HGV routes.

Where appropriate the local authority will contact the company and advise them to use appropriate HGV routes.



Policy 8

Empowering Communities:

We will help give communities affected by freight access to the information they need to get more involved in managing their own freight issues. Measures like community freight toolkits will help to show them what their options are.

We have identified a number of ways to put this policy into action

Part of this work will be to develop a Freight Community Toolkit which would help people to:

- Understand their issues (considering neighbourhood plan aspirations where appropriate);
- Consider a range of possible solutions; and
- Work with other stakeholder to put them into practice.

Some examples of information we expect a Toolkit might provide include:

- Information on our approach to managing inappropriate freight traffic (based on Policy 6).
- Advice on how to setup a lorry watch in their area.
- How to work with freight operators (based on Policy 9).
- Advice on Buckinghamshire's Appropriate Freight Routes (based on Policy 1).
- Their rights to make representation to Vehicle Operator License applications (based on Vehicle Operator Licenses section below).
- The role of planning conditions and major infrastructure providers.
- Other types of support depending on the specific scenario.

Working with the freight industry (and other bodies)

Partnerships with the freight industry will help ensure there is a collective approach to managing freight in Buckinghamshire.



Working with the freight industry:

We will build on our engagement with the freight industry, trade bodies and government to help find shared solutions. Working together can identify better, more innovative solutions that work for everyone.

In order to ensure that HGVs and LGVs are able to use our road network safely, efficiently and with less environmental impact it is essential we work in partnership with stakeholder groups on a number of levels.

We have identified a number of ways to put this policy into action

- With hauliers and their representative associations (such as the Freight Transport Association and Road Haulage Association) to ascertain needs for appropriate routing, lorry parking and rest stops referred to earlier in this section.
- With neighbouring authorities to promote the integration of our Appropriate Freight Routes, tackle cross boundary issues associated with appropriate routing and share best practice. This could include through our work as part of the England's Economic Heartland Strategic Alliance (a voluntary partnership of councils and local enterprise partnerships, which represents the key growth corridor from Oxfordshire through Milton Keynes and across to Cambridgeshire).
- Between individual businesses, business associations, residents and town centres to ensure that their servicing and delivery needs are met in the most appropriate way;
- With Thames Valley Police who enforce a range of freight related regulations.
- Exploring the potential for a Freight Quality Partnership to help put this policy into practice. This could include discussions with neighbouring authorities and key freight partners to establish the benefit of developing a new partnership or joining an existing one(s).

Discussions with the freight industry and Freight Transport Association (FTA) as part of the development of this Strategy suggested that there was an appetite to establish Freight Quality Partnerships (FQPs) in the south east. FQP's bring together freight companies, their representative bodies and local authorities to work on shared problems. They will act as a platform to promote best practice and disseminate relevant information relating to the industry. Case Study 6 below explains more about them.

Case Study 6: Freight Quality Partnerships

Freight Quality Partnerships (FQPs) are a means for local government, businesses, freight operators and other stakeholders to work together to address shared freight transport problems. They aim to develop an understanding of freight issues and to promote constructive solutions that reconcile the need for access to goods and services with local environmental and social concerns.

There is no 'standard' type of FQP; they can take different forms and address many different issues.

Awareness of freight

Making the right information available to those people that need it is a vital part of many of the policies set out in this Strategy. Effective awareness raising is vital to ensure the Freight Strategy makes a difference on the ground. For example, helping HGV drivers to choose better routes or changing consumer behaviour.

This Strategy is an important first step in that awareness raising. Awareness campaigns can also be delivered in a range of ways, including through websites, leaflets and social media.



Policy 10

Raising awareness:
Many of the other policies in this Strategy rely on greater awareness of freight issues. Being able to communicate these well is an important part of the Strategy. We will explore the best way to make this information available.

We have identified a number of ways to put this policy into action

- Supporting road safety national campaigns
- Supporting local road safety initiatives
- Supporting existing road safety campaigns in schools that focus on goods vehicle safety such as GIST Child Road Safety Programme - <http://www.gistworld.com/about-gist/corporate-social-responsibility/gist-child-road-safety-programme>
- Working and supporting Thames Valley Police educational schemes
- Improve drivers awareness of vulnerable users
- Help increase drivers awareness of the risks of HGV related crime
- Support compulsory driver awareness training for drivers identified as breaking the speed limits
- Support broader safety and sustainable transport related education in schools and colleges
- Increase public awareness of their powers in responding to vehicle operator license applications

Objective 4 Consider freight in decision making

Consumer behaviour

Freight is only moved because somebody wants it, giving all residents a big influence on the freight moving around the county. The things we buy, the buildings we live and work in, and what we throw away were all moved by freight.

Sometimes this influence is quite immediate:

- What we eat (17% of HGV movements are food, beverages and tobacco).
- What we throw away (14% of HGV movements are waste).
- What we post or have delivered to us (3% of HGV movements are mail and parcels); and
- Moving house (2% of all HGV movements are removals).

In other cases our influence is more removed and harder to see, for example the movement of raw materials. However, these too are – ultimately – driven by our consumption (individually, or collectively as local authorities and governments).

We have set out other policies in this Strategy to manage the impact of freight movements. Reducing the need for freight is the most effective way of reducing the impacts. Our own consumer behaviour is one of the few ways we can all directly influence the number and nature of freight movements at the start of the process.



Policy 11

Consumer behaviour:

The things we all buy and use determine what freight needs to be moved. It's important that we understand the ways in which our decisions, behaviour and consumption could affect HGV movements.

We have identified a number of ways to put this policy into action

There are a number of ways what we buy (or how we buy it) influences freight. For example:

How much you consume:

- Thinking about whether you need everything you buy, reducing the need for new items to be carried by freight.
- Repairing items instead of buying replacements can reduce the need for freight.
- Throwing less away. If we can reduce or re-use waste, it will require less freight. Much of this can save individuals money & reduce environmental impacts. The Buckinghamshire Waste Partnership works on reducing waste across the county.

Where you consume:

- Where you shop affects freight movements.
- Where our homes and businesses are located defines where freight is delivered to/from.

How you consume:

- Buying online can be very efficient but can also lead to a lot of small deliveries – shopping local is often better. It's important to think about what you order, how it's delivered and whether you can consolidate your orders into one delivery.
- If you have local freight issues it can be helpful to give companies delivering to you instructions when you order (and ask neighbours / businesses to do so too)

As well as encouraging individuals and businesses to use their 'consumer power' to influence freight movements we will encourage better consumer behaviour through the other policies set out in this Strategy (such as Policies 7, 8 and 9).

Freight in new development and major infrastructure schemes

As mentioned in Section 2, significant housing development and major infrastructure schemes are proposed in Buckinghamshire. The use of Heavy Goods Vehicles is generally a feature of the construction of new developments and infrastructure schemes. Developers and scheme promoters must ensure the impact of HGVs is minimised to avoid unacceptable highway safety, environmental and road capacity impacts.

The impact of large scale housing and non-residential development can be obvious. However, minor developments (for example, fewer than 10 dwellings) can still have surprisingly significant impacts as they lack the economies of scale that large developments can offer. It is important that where possible, freight generators are located on or near to our Appropriate HGV routes and measures are put in place to manage the impact of deliveries to the site.

To achieve this, developers and scheme promoters should refer to the separate **Development Management Guidance** being developed by the Council and consider:

- Designing developments and infrastructure schemes to manage HGV traffic effectively. This can include suitable access, signage, parking and manoeuvring arrangements. Construction management plans will be encouraged where necessary.
- Putting in place appropriate working practices and facilities. This could include hours of operation, loading and unloading practices and facilities for drivers and / or consolidation centres.
- Producing routing agreements and other mitigation measures, including proposals to effectively communicate relevant information to drivers, staff and local stakeholders. Appropriate signage and enforcement proposals should also be included.
- Delivery times appropriate to the location and the network's peak hours.



Policy 12

Freight in new developments and major infrastructure schemes:

We will work with partners to mitigate the impact of freight movements in new development and major infrastructure schemes. Where possible, we will influence freight movements through planning and licensing processes so future sites can be supplied as sustainably as possible.

We have identified a number of ways to put this policy into action

- Developments and infrastructure schemes should be designed to cater for the additional needs of the vehicles that may use them. This includes providing adequate space for goods, emergency and waste collection vehicles to manoeuvre easily. Appropriate road construction depths and materials should also be used
- Developments and infrastructure schemes should provide routeing details and if required a routeing agreement (where they generate significant HGV movements or do not access the network from Appropriate HGV routes).
- Major developments, as defined in Buckinghamshire County Council's Development Management Guidance, must provide a Construction Management Plan. Smaller developments may also require a plan and this will be agreed on a case by case basis between the developer and the Highways Development Management team.
- Working with District Councils to explore ways in which the policy framework in this strategy (e.g. Appropriate HGV Routes) can be promoted in district planning guidance and emerging Infrastructure Delivery Plans.
- Working with District Councils to consider how conditions can be applied to planning permissions to require HGVs to use specific routes to be used.

Buckinghamshire County Council must agree this plan before work can begin and it should include details on:

- Temporary Construction access.
- Haul Roads.
- Hoarding.
- Route management.
- Delivery and site management. Minimising peak hour traffic, minimising impacts on the road network and the management of site access.
- Road condition surveys.
- Managing the safety of people.
- Wheel cleaning facilities.
- Types of vehicles to be used.
- Traffic Regulation Orders.
- Operating hours and practices.
- Parking and turning facilities for all construction vehicles within the development site.
- Site traffic marshals (banksmen) and crane oversail licences where appropriate.
- Phasing of the development and Construction Management Plan.

HS2 Construction and Controls (as at April 2018)

Main works for the project are currently programmed to commence in March 2019, although some early works are already underway. Many Undertakings and Assurances were secured by Buckinghamshire County Council during the Parliamentary process, which HS2 Ltd and their contractors must comply with. There are a number of control documents which must be adhered to including:

- Code of Construction Practice (CoCP)
- Route-wide Traffic Management Plan
- Local Traffic Management Plans to be developed (LTMPs)
- Route Management, Improvement and Safety Plan (RoMIS) to be developed
- Lorry Route Approvals currently programmed for submission in September 2018
- Road condition surveys currently being undertaken
- Workforce Travel Plans and monitoring

HS2 Ltd will employ a Compliance and Monitoring Team to ensure the approved Lorry Routes are followed, to collect vehicle flow data by contractors, to ensure driver and vehicle safety standards, compliance with traffic management arrangements and compliance with road cleaning requirements. Any failures will be recorded in HS2's Safety and Incident Management System and action will be required by the Principal Contractor.

Other specific controls include:

- Vehicle tracking and flow management
- Vehicle booking onto construction compounds
- Automatic Number Plate Recognition (ANPR) mobile cameras
- Use of the railway trace as haul route where possible
- Vehicle identification notices in front window
- Direction signage to construction compounds
- Fleet Operator Recognition Scheme accreditation (FORS)
- Construction Logistics and Community Safety (CLOCS)

In addition to the above, the contractors are exploring a number of initiatives that are aimed at managing and coordinating the movement of all vehicles to and from the construction sites and compounds and these will be included in the LTMPs as part of their Lorry Route submissions.

Vehicle Operator Licenses

We will be exploring the impact responding to operator license applications has as a way of managing freight operating centres locally.

HGV Vehicle Operator Licenses (O Licenses) and operating centres are governed by the Traffic Commissioner; with enforcement carried out by DVSA officers or the police. Traffic Commissioners are responsible for the licensing and regulation of those who operate heavy goods vehicles, buses and coaches, and the registration of local bus services.

Licenses ensure the safe and proper use of vehicles and protect the surrounding environment. Applications are decided based on factors including: character repute, financial standing and competency. Consideration will also be given to satisfactory vehicle storage, number of trailers, maintenance and general suitability of an operating centre.

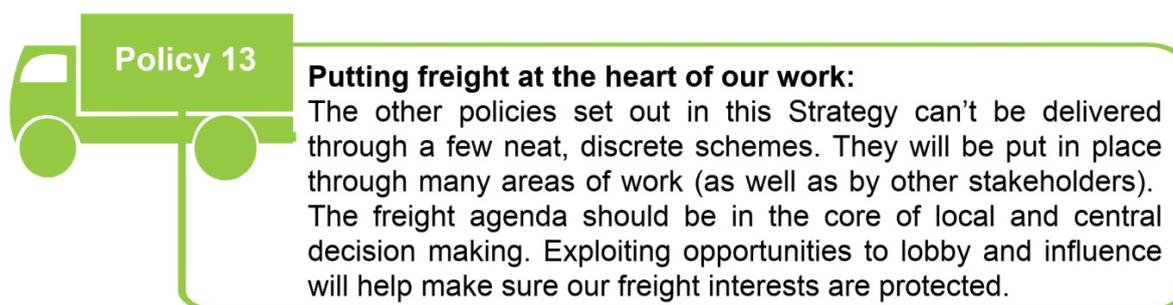
The Council is trialling the effectiveness of responding to applications where appropriate. This is expected to inform proposals for a longer term response. Work undertaken in developing this Strategy has also suggested that it would be helpful to support communities to make representations where possible.

Putting freight at the heart of our work

Buckinghamshire County Council regularly make (or feed into) decisions that relate to freight.

These range from once in a life time opportunities to make a significant step change and influence decisions being made centrally, locally and on the edge of our county, to smaller or more local issues. There will be a range of different types of decision both in Buckinghamshire and cross border that will enable us to make sure freight movements continue to be managed appropriately.

Where possible, we will use these opportunities to shape and deliver decisions being made regarding freight that may affect Buckinghamshire.

A graphic for Policy 13. It features a stylized green truck icon on the left. To its right is a green rounded rectangular box containing the text for Policy 13. The text is in black and white. The truck icon is a simple silhouette with a white cab and a green body. The box has a thin green border and a white background.

Policy 13

Putting freight at the heart of our work:
The other policies set out in this Strategy can't be delivered through a few neat, discrete schemes. They will be put in place through many areas of work (as well as by other stakeholders). The freight agenda should be in the core of local and central decision making. Exploiting opportunities to lobby and influence will help make sure our freight interests are protected.

Capitalising on these opportunities, working with partners and making formal representations will help to ensure Buckinghamshire's Freight Strategy is put into practice.

Future changes to freight

Industry supply chains are constantly evolving in response to customer demands, the opportunities of new technologies, and greater efficiencies; we need to keep up to date with those changes.

The nature of freight may well change in future, likely through developments in technology that allows for improved efficiency. Buckinghamshire County Council will commit to working with innovative industries to ensure new technologies are deployed in a manner that gives industry benefit, reduces the impact on local communities and supports our thriving economy.

Some of the ways in which we can keep up to date with technology change – but some of the anticipated new breakthroughs are set out below.



Policy 14

Future of freight:

There are huge opportunities on the horizon for freight. We will need to consider and assess future changes to the freight industry that may necessitate a different approach. These will make sure the Strategy stays fit for purpose.

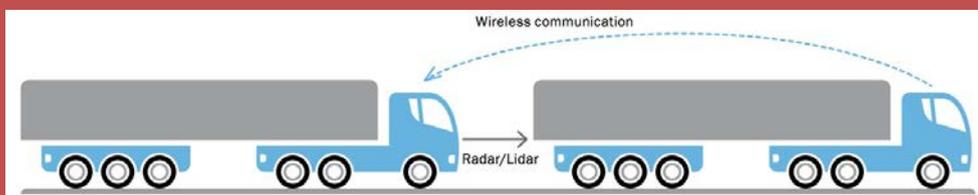
Electric and Autonomous Vehicles

The development of electric cars has accelerated in recent years, and electric HGVs are now beginning to come to market. Electric vehicle manufacturers are accelerating the development of electric trucks, with trials taking place globally, reflecting a wider trend of electrifying the vehicle fleet. The potential benefits of electric freight vehicles are numerous, including zero emissions, noise reduction, and cost savings. Similarly, the freight industry is already conducting research in autonomous freight technology, which has a multitude of potential benefits not just around environmental performance, but safety, efficiency and significantly reduced congestion.

Buckinghamshire, along with its neighbours Northamptonshire and Oxfordshire, has a strong tradition of motoring innovation, notably Silverstone Park and the Silverstone circuit being a globally-recognised centre of business development and motor racing. Research and development is taking place in clusters around our county such as Oxfordshire, Milton Keynes, Greenwich and the West Midlands. We commit to making available the data collected by our automatic traffic counts and ticketing systems to companies involved in the research and manufacturing of electric and automated vehicles.

Case Study 6: Lorry Platooning

Lorry Platooning comprises a number of HGVs equipped with state-of-the-art driving support systems, one closely following the other. This forms a 'platoon' with the HGVs driven by smart technology, and mutually communicating. With the following HGVs braking immediately, with zero reaction time, platooning can improve traffic safety, make cost savings and reduce CO2 emissions. Lastly, platooning efficiently improves traffic flows and therefore reduces congestion, meanwhile the short distance between vehicles means less space is taken up on the road.



In 2014, the DfT ran a feasibility study on lorry platooning in the UK, and found that platooning is technically feasible on UK roads today in certain conditions e.g motorways. Convoying with vehicle to vehicle communication has been demonstrated and the fundamental technologies which form the basis of the regulation of following distance and lane keeping are fitted to current vehicles. The study found that platooning could be implemented in the next 3-5 years.

GPS navigation software

As discussed in Policy 2, BCC is in discussions with a data aggregation and communications platform with the aim of providing journey planning that takes into account the suitability of routes for freight. This would allow local haulage companies to use suitable routes that have had input from the Council and therefore considers up to date road conditions. The use of mapping and GPS data is key for the future of freight as it can boost vehicle efficiency and reduce the number of incidents involving HGVs using unsuitable routes such as with narrow roads, height or weight restrictions.

Consolidation allocation

Consolidation allocation is an example of business processes, agreements, and software solutions that combine group operational information to make more efficient use of logistics networks. This technology can be extremely important for the freight industry looking to the future, especially as government statistics estimate that 29% of HGVs are driving around empty, with 47% of vehicles less than full¹. Consolidation can, for example, group orders for the same delivery vehicle together or ensure collections and deliveries are on the same vehicle. Also by reducing repeat visits to the same location, mileage can be reduced, therefore decreasing costs and emissions. Companies such as DHL have sought ways to work with local authorities through measures like freight consolidation. BCC supports local haulage companies consolidating their loads to maximise operation while minimising impact.

3D printing

The development of 3D printing technology may have a significant impact on the freight industry. As more parts and products are manufactured in finished form and manufacturing sites are located closer to the end destination, the need to procure parts from multiple sources around the country is reduced, decreasing the need for transportation. Buckinghamshire County Council is supportive of the development of 3D printing technology, and will continue to support local entrepreneurs that are behind the growth of the industry.

Tracking of deliveries

Road freight is notably vulnerable to misplaced or stolen goods, and inefficient routing. Delivery tracking allows for better visibility and therefore understanding into the logistics of freight, enabling efficiencies to be made. As discussed in some of the other technologies, this reduction in mileage decreases costs, emissions and congestion on the roads. We are in ongoing discussions with logistics companies, providing data that can be used to enhance tracking software to be used throughout the county.

Shop Hop deliveries

Amazon is tripling its research and development team in Cambridge to support new innovations such as delivery drones. Amazon's 'Prime Air' successfully made its first trial delivery by drone to the garden of a customer in Cambridge. Deliveries by drone may need to be launched via LGV/HGV but could significantly reduce vehicle kilometres made by road freight.

Section 4: Putting the Strategy into action

Delivering the Strategy

Freight transport is a complex subject: with a wide range of issues, opportunities and solutions. As Policy 13 suggests, the Strategy can't be delivered through a few neat, discrete, schemes. We need to plan for a wide range of activities, with a wide range of partners, over the life of the plan, which looks ahead to 2036. Some of this involves existing areas of work and others are new ideas. Some are things the Council can do itself others depend on partners (either working with us or deciding to get involved alongside us).

This section pulls together this wide range of delivery options to give a clear picture of how the Freight Strategy could be put into practice. It is divided into sub-sections which consider 'What needs to be done' and 'Where it needs doing'.

At this stage we envisage that this will take the form of an 'Action Plan'. To be written with support from stakeholders and communities. To include carefully selected measures supported by cost benefit analysis and taken through all due diligence and approval procedures.

This section gives an indication of what will guide the preparation of the Action Plan.

What needs to be done?

The uncertainty created by incorporating such a wide range of activities, partners and timescales involved mean the Action Plan will continue to evolve and will be updated as we learn. The policies and the delivery of them will grow and develop. Refreshing the Action Plan and this Strategy (where necessary) will help make sure they stay fit for purpose.

To keep track of the various possible actions and ways of delivering the policies we have developed a table (figure 17). Our actions will be guided by (but not limited to) this list.

Figure 17: How we might deliver the objectives

What		How	When	Where
Objective 1: Appropriate road use	Promoting Appropriate HGV Routes	Raise awareness	Short term	Countywide and externally
Objective 1: Appropriate road use	Sharing navigation data	With partners	Short term	Countywide and externally
Objective 1: Appropriate road use	Promote appropriate parking facilities	Raise awareness	Short term	Countywide and externally
Objective 2: Protecting our environment	Improving road safety	With partners	Long term	Countywide
Objective 2: Protecting our environment	Celebrating examples of good HGV practice	With partners	Medium term	Countywide
Objective 2: Protecting our environment	Tiered approach to intervention	Interventions	Medium term	Countywide
Objective 2: Protecting our environment	Prioritise and assess possible investments	Interventions	Medium term	Countywide
Objective 2: Protecting our environment	Maximising rail freight opportunities	With partners	Long term	Countywide
Objective 3: Partnership working	Freight Community Toolkits	Interventions	Short term	Countywide
Objective 3: Partnership working	Working with the freight industry	With partners	Medium term	Countywide
Objective 3: Partnership working	Raising awareness	With partners	Short term	Countywide
Objective 4: Consider freight in decision making	Consumer behaviour	Raise awareness	Long term	Countywide
Objective 4: Consider freight in decision making	Freight in new development and infrastructure	With partners	Short term	Countywide
Objective 4: Consider freight in decision making	Opportunities to shape future decisions	Interventions	Long term	Countywide
Objective 4: Consider freight in decision making	Future changes to freight	Raise awareness	Long term	Countywide

Where does it need doing?

As the Policies and the 'What needs to be done?' section above suggest, some of the things that need to be done to put the Strategy into practice apply countywide (like improving navigation information, for example). However, our work developing this Strategy has identified a number of areas where freight is felt to have a particular impact, including (but not limited to) the 'hot spots' referred to earlier. As work continues beyond this Strategy we will develop our understanding of the challenges in these areas and others that are brought to the authority's attention (see figure 1). These 'hot spots' are expected to form the focus of our work. They will be considered in developing and prioritising the delivery of the Freight Strategy.

Figure 18: Where the feedback has told us to focus

Hot Spots (Generally based on Local Area Forum areas)
Great Brickhill, Wing and Ivinghoe
Wexham and Ivers
Waddeson and Haddenham & Long Crendon
Buckingham and Winslow
Aylesbury
Beaconsfield, Denham and Gerrard's Cross
High Wycombe, Chepping Wye Valley and Beeches
Wendover
Chesham and Amersham
South West Chilterns and Marlow
North West Chilterns and Great Missenden
Chalfonts

How do we intend to deliver it?

We have increasing constraints on our staff resources, the Council's ability to do more than it is statutorily obliged to is increasingly limited. At the time of writing, we are looking to appoint an officer whose responsibility will be to liaise with communities that feel unduly affected by freight issues. Further investigatory work referred to in figure 1 and page 41 will be carried out and the accompanying Action Plan will be included on Buckinghamshire's freight webpage.

As figure 1 suggests, the implementation of the Freight Strategy will require detailed investigatory work with communities and business to identify areas that will require intervention proportionate to the scale of local issue faced. Gathering this evidence will help us prioritise and assess possible investment where necessary and apply the tiered approach to inappropriate freight movements (described in Policy 6).

The policies in this Plan need to be implemented by Buckinghamshire County Council in partnership with central Government, with District Councils, with communities and with businesses in an innovative way, broadly maintaining accessibility with lower funding. Therefore, we will look to fund any investments required through such channels as shown in figure 19.

Figure 19: What funding opportunities will be investigated

Funding Opportunities
Local Enterprise Funding bids
Bids for Department for Transport funding for specific measures
Bids for grant funding offered by the European Union
S106 Agreement contribution from developers
Community Infrastructure Levy
Internal funding
Bids for funding for innovation in transport
Opportunities from strategic funding
Combining our projects with other initiatives
Future sources of grant funding from public bodies

Some of the policies will require further investigation and engagement to identify the most effective way of delivering them. Refining the approaches will help make sure the interventions applied are the most suitable and provide best value for money.

The plan is forward thinking and looks ahead to 2036. In that time things may change and we will augment our understanding of new changes to the freight industry.

Contact details

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