# Integrated Public Transport Prospectus

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# A world class public transport system for the West Midlands, to support long term growth and regeneration

# Contents

# 1. Context

**1.1** The West Midlands Regional Economic Strategy has a vision for the West Midlands Region "*to be a global centre where people and business choose to connect*". Its headline target is to reduce the annual £15 billion regional output gap (GVA) compared to the UK average, through improved productivity and by increasing the numbers of people in work: economic inclusion.

**1.2** These are particularly critical issues in the current economic climate where efforts are essential to minimise the effects of the downturn and help put the Region in a stronger position when economic conditions improve.

**1.3** The West Midlands Region also has a role to play in cutting national greenhouse gas emissions, in line with the UK targets of at least an 80% reduction in greenhouse gas emissions on 1990 levels by 2050, and 34% reduction by 2020.

**1.4** The West Midlands Regional Spatial Strategy has an approach to urban renaissance which sets out how future housing needs will be met more effectively. This will be achieved by accommodating an additional net increase of between 365,000 and 398,000 new homes in the Region by 2026, of which at least 164,500 will be in the Metropolitan Area.

**1.5 In order for the Region to succeed in all three areas, the West Midlands Metropolitan Area has to "punch its weight". This sets the scene for the Long Term Regeneration and Growth Agenda of the Metropolitan Area.**

**1.6 In turn, this regeneration and growth agenda sets the scene for the vision outlined in this prospectus for the Metropolitan Areas' public transport system – a key building block of an effective, wider transport system which will be defined in the new West Midlands Local Transport Plan.**

**1.7** The West Midlands Metropolitan Area Regeneration and Growth Agenda is firmly based on the following themes:

- Increasing the numbers of jobs in long term growth sectors

- increasing the educational attainment of school leavers entering the workforce

- encouraging increased investment in skills training amongst West Midlands businesses

- improving graduate retention and demand for graduate skills

- widening travel horizons of local labour markets

- providing a more attractive environment in which to live and work

- providing a range of homes which meet future housing needs

- promoting sustainable, low carbon growth

**1.8** These themes provide the over-arching context within which objectives for the transport system can be set. These need to particularly relate to the series of geographical areas which are targeted for improvements. These are "Regeneration Zones", "High Technology Corridors", "Growth Points", and "Pathfinder Areas". In addition, priority is being given to the Region's 20 "Impact Investment Locations".

**1.9** The surrounding wider journey to work area also contains many of the Regions ten "Settlements of Significant Development".

**1.10** An explanation of these areas is given in the box below: Shown overleaf

# Regional Geographical Areas targeted for improvements

## Regeneration Zones

These are broad areas with concentrations of deprivation and disadvantage. They are the focus of public sector interventions, detailed in Zone Implementation Plans (ZIPs). The regeneration zones are:

• Coventry and Nuneaton
• East Birmingham and North Solihull
• North Black Country and South Staffordshire (Future Foundations)
• South Black Country and North Birmingham (The Arc of Opportunity)
• North Staffordshire
• Rural

## High Technology Corridors

These are areas where the existence of a strong local knowledge base is used to help establish and grow technology-led businesses. These corridors are:

• The Central Technology Belt
• The Coventry, Solihull and Warwickshire Technology Corridor
• The Wolverhampton to Telford Technology Corridor

## Growth Points

The Growth Points initiative is designed to provide central Government support to areas with large scale and sustainable growth, including new housing. Growth Points are:

• Birmingham and Solihull
• Coventry
• Telford
• East Staffordshire - Burton-upon-Trent
• Hereford
• Shrewsbury and Atcham
• Worcester
• Black Country/Sandwell
• Stafford

## Pathfinder Areas

These are areas with weak housing markets where housing market renewal projects are co-ordinated.

• Birmingham and Sandwell Pathfinder (Urban Living)
• North Staffordshire

## Impact Investment Locations

"Impact Investment Locations", are twenty areas across the Region, where investment in transport, housing and economic development is seen to provide significant short and longer term positive impacts.

- Ansty
- BIA Runway extension/A45 relocation
- Bilston Urban Village
- Growth Point Development programme: Burton; Shrewsbury; Stafford; Worcester
- Camp Hill regeneration, Nuneaton and Bedworth
- Coventry City Centre
- Dudley Town Centre/Brierley Hill
- Eastside, Birmingham
- Edgar Street grid, Hereford
- i54.
- Icknield Port Loop/Birmingham Sandwell Western Corridor
- Longbridge/ South West Birmingham Corridor
- New Street Station
- North Solihull regeneration
- Rural Affordable Housing
- Stoke City
- Telford Town Centre
- Walsall Waterfront /Housing regeneration
- West Bromwich Town Centre
- Wolverhampton City Centre - Wolverhampton Interchange

## Settlements of Significant Development

These are ten areas outside the Metropolitan Area and the North Staffordshire conurbation, where strategic housing development is concentrated.

- Burton upon Trent
- Hereford
- Nuneaton /Bedworth
- Redditch
- Rugby
- Shrewsbury
- Stafford
- Telford
- Warwick /Leamington
- Worcester

**1.11** The main strategic documents which provide further details of the Regeneration and Growth Agenda are referred to in Appendix 1. These include the Regional Economic Strategy and the Regional Spatial Strategy. Current transport policy in the West Midlands is also described.

## Transport's contribution to sustainable regional growth and regeneration

**1.12** The Regional Economic Strategy states that "improving access to employment and ensuring good connections between businesses and their customers is essential to supporting sustainable growth across the West Midlands economy".

**1.13** Work by consultants CEBR ("Regional Transport Priorities – understanding the wider economic benefits of Centro's Transport Vision", 2008) highlighted that long term growth sectors of the West Midlands economy, based on higher added value service sector activities, require a wide pool of high quality labour. Improved

connectivity helps provide this wide pool for employers, and so helps economic activity. This is through:

### - a volume effect
if there are more people who can potentially work in a given area, then more job vacancies can be filled.

### - a price effect
with more people within the labour market of a particular area that labour market will become more competitive, reducing costs beyond what they otherwise would be and boosting productivity.

### - efficient labour market matching
A larger labour market means that employers are more likely to find a person with an appropriate set of skills to fill a particular vacancy.

**1.14** Creating a high quality labour market also requires excellent access to education and training opportunities: improving access to education is a high level accessibility objective of the current 2006 West Midlands Local Transport Plan accessibility strategy statement.

**11.5** These labour market efficiency issues are a major part of the Government's wider five goals for transport, set out in "Delivering a Sustainable Transport System" (DaSTS). The West Midlands is currently performing studies in line with DaSTs, assessing problems and opportunities relating to the five goals:

## Department for Transport Five National Goals for Transport

• Maximising the overall competitiveness and productivity of the national economy, so as to achieve a sustained high level of GDP growth

• Reducing transport's emissions of CO2 and other greenhouse gases, with the desired outcome of avoiding dangerous climate change

• Contributing to better health and longer life-expectancy through reducing the risk of death, injury or illness arising from transport, and promoting travel modes that are beneficial to health

• Improving quality of life for transport users and non-transport users, including through a healthy natural environment, with the desired outcome of improved well-being for all

• Promoting greater equality of transport opportunity for all citizens, with the desired outcome of achieving a fairer society

**1.16** The West Midlands Regional Climate Change Action Plan fleshes out measures for the Region to reduce greenhouse gas emissions. This is in line with the national target of at least an 80% reduction in UK greenhouse gas emissions on 1990 levels by 2050, and an interim target of a 34% reduction by 2020..

**1.17** The transport sector has an important role to play in this strategy.

**1.18** Air quality is also an issue in the West Midlands, with Air Quality Management Areas (AQMAs) declared in six of the seven Metropolitan Area Districts. These have all been declared as a result of exceeding Nitrogen Dioxide standards, with Birmingham, also

declaring the AQMA for particulate matter. AQMAs also exist in the wider journey to work area, such as the A5 corridor between Churchbridge and Longford Island.

**1.19** Congestion and stop-start motoring contribute to these emissions in the West Midlands, particularly in localised hotspots.

**1.20** Closely related to economic exclusion is the need for social inclusion of all sections of the population. Some elderly people, people with a disability, and young people face access barriers to jobs, health provision, services and enhanced quality of life opportunities. Public transport provision has a very important role to play in tackling these barriers.

## Historical Trends

**1.21** Trends over the last twenty years show the following main themes:

- the population of the West Midlands Metropolitan Area is in a process of long term change, from a manual labour-based economy, to a "white collar" one.

- A large long term increase in car and light van ownership

- More journeys being made as prosperity has increased

- There are more longer journeys being made

- An overall increase in traffic levels across the Metropolitan Area

**1.22** These trends are shown in Table 1 overleaf

# Table 1: Long Term Trends

A. Population socio-economic profile

|     | 1981 | 2001 |
|-----|------|------|
| AB  | 18%  | 22%  |
| C1  | 8%   | 30%  |
| C2  | 31%  | 15%  |
| DE  | 44%  | 33%  |

B. Cars and light vans per 1000 population:

|      | Cars and light vans per 1000 populations |
|------|------------------------------------------|
| 1986 | 321 |
| 1991 | 399 |
| 1997 | 412 |
| 2000 | 433 |
| 2004 | 495 |

Source: Centro Annual Statistics reports

E. Estimated traffic flows for all motor vehicles, West Midlands Metropolitan Area: 1993 – 2008

|      | Million vehicle km | Indices |
|------|--------------------|---------|
| 1993 | 14,834 | 100 |
| 1994 | 15,047 | 101 |
| 1995 | 15,296 | 103 |
| 1996 | 15,465 | 104 |
| 1997 | 15,654 | 106 |
| 1998 | 15,921 | 107 |
| 1999 | 16,132 | 109 |
| 2000 | 16,088 | 108 |
| 2001 | 16,197 | 109 |
| 2002 | 16,707 | 113 |
| 2003 | 16,791 | 113 |
| 2004 | 16,912 | 114 |
| 2005 | 16,958 | 114 |
| 2006 | 16,936 | 114 |
| 2007 | 17,213 | 116 |

Source: Department for Transport

C. Journey characteristics by income group

|                                          | UK Lowest real household Income quintile | Highest real household Income quintile |
|------------------------------------------|------------------------------------------|----------------------------------------|
| Average number of trips per person per year | 874 | 1136 |
| Average distance travelled per year      | 4086 miles | 11,460 miles |

Source: from National Travel Survey

D. Percentage of West Midlands residents in employment working outside their District of residence (eg, live in Birmingham , work in Walsall):

| 1981 | 25% |
|------|-----|
| 1991 | 29% |
| 2001 | 33% |

Source: from Census data

F. Average UK length of trip:

| 1985 | 2005 |
|------|------|
| 5.2 miles | 6.9 miles |

Source: from National Travel Survey

**1.23** These trends have impacted on public transport use, as shown in Table 2 below. Bus use has, until recently, declined significantly, whilst rail use has increased strongly, reflecting changes in travel demands, as well as quality and perception issues.

**1.24** These trends have made congestion a challenge in the West Midlands. The scale of existing congestion is shown in Figure 1 below:

## Future Trends

**1.25** If there is increased economic activity in the West Midlands over the next twenty years, then the trend of more journeys, and longer journeys, is forecast, in the long term, to continue.

**1.26** This is based on the following evidence:

**1.27** The Eddington Transport Study 2006 examined a range of national future scenarios for travel demand. Eddington concluded that:

"Travel demand is forecast to grow strongly across all modes under a range of plausible scenarios. Existing pressures will widen in their geographical input and their intensity, concentrated on urban areas, and international gateways and on some sections of the interurban networks. Rising incomes and population, and falling transport costs are some of the most significant drivers of this growth.

"Scenarios which include higher transport costs, eg because of carbon prices and higher fuel costs see lower growth, but transport demand continues to be strong.

"Action is needed to prevent rising transport demands dampening the UK's long term productivity and competitiveness".

**1.28** National Department for Transport forecasts for the West Midlands for car ownership see significant rises. Car ownership in the region is forecast by 2026 to reach levels similar to that currently found in the south east region (531 cars per 1000 population by 2026, south east existing level is 545 cars per 1000 population).

The forecast is a 24% increase from 2006 levels and is similar to present day car ownership statistics for many high density European cities such as Munich.

**1.29** The Department for Transport also forecast significant traffic growth for the West Midlands. Traffic vehicle kms are forecast to increase by 28% from 2003 levels by 2025 in large urban areas outside London.

**1.30** The RAC Foundation "Roads and Reality" report states that car trips will grow in the West Midlands Region between 2005 and 2041 by 20.7% with a 31.8% increase in vehicle km.

**1.31** Transport modelling work performed for the West Midlands metropolitan area authorities as part of the TIF research predicted a 23% increase in car trips by 2021 compared to 2001 with a 33% increase in car km.

## Figure 1: Existing AM Peak Congestion



## Table 2: West Midlands Public Transport Use Trends

|  | **1986** | **2004** | **2007** |
|---|---|---|---|
| Annual Bus Journeys | 454.0m | 308.5m | 325.4m |
| Annual Rail Journeys | 24.8m | 29.3m | 35.5m |
| Annual Light Rail Journeys | = | 5.0m | 5.0m |

(Source: Centro Annual Statistics Reports)

**1.32** There is a consistent theme across all these different forecasts, that long term traffic vehicle kilometres in the West Midlands will significantly increase.

**1.33** The trend towards an older population is forecast to continue in the West Midlands, with the number of people aged over 60 forecast to grow at a much greater rate than the rest of the population. This also has implications for future travel demands.

**1.34** Long term trends lead to the following challenges for transport:

- A large increase in congestion, upto103% more than current levels

- Overcrowding on rail services

- Increased travel costs for existing businesses

- Increased travel times to jobs for labour markets, thus decreasing the size of labour pools for employers For example , the number of workers able to reach main centres within a 30 minute car journey in 2017 declines by 18% to Coventry, 33% to Solihull and 20% to Wolverhampton.

- Reduced attractiveness of the West Midlands as a place for businesses and wealth-creating people to locate and invest

- Increased greenhouse gas emissions

- Increased emissions of air pollutants

- A deterioration in the quality of life of residents

## What do our customers want?

**1.35** To increase use of public transport, it is absolutely essential that customer needs, of existing and future markets, are soundly understood. Centro and operators have a wealth of market research material on customer needs in the West Midlands, and will continue to undertake research through surveys and work with user and community groups.

**1.36** Customer satisfaction is continually tracked and

current 2007/8 overall ratings are cited as:

Bus:    65% users satisfied with the service overall
Metro: 83% users satisfied with the service overall
Rail:    76% users satisfied with the service overall

(Centro Bus, Metro and Rail Customer Satisfaction Reports, Jan - Dec 2007)

**1.37** Public transport has to consistently fulfil basic requirements of network coverage, accessible design, frequency, journey time, reliability, information provision, affordability, personal security and cleanliness. It then also needs to address issues of attractiveness, and perception.

**1.38** The motor car industry works on a similar basis: meeting target market desires and aspirations, having fulfilled basic needs in car design, engineering and performance.

**1.39** The following characteristics are of particular importance for attracting car users onto public transport for some journeys at congested times:

• High frequency

• Competitive journey times

• Cleanliness

• Perceived personal security

• Reliability/dependability of services

• Availability and ease of use of information

• Value for money ticketing

• Simple, direct services, relevant to travel needs

• A critical mass of "peer presence"

• A customer service culture

**1.40** The Zurich public transport operator, VBZ, had a successful marketing campaign slogan stating "Where we go, the city is alive!". It is this type of positive,

emotional position that public transport in the West Midlands will foster in its long term development. This will be based on the extensive market intelligence Centro and operators possess, and continue to accumulate, on evolving customer needs and desires.

## Public Transport and Wider Transport/ Spatial Planning Objectives

**1.41** This background, both past and future, presents a challenging environment in which to set the objectives for public transport.

**1.42 The Long Term Growth and Regeneration Agenda requires improved skills, more jobs, more homes, better air quality and reduced greenhouse gas emissions.**

**1.43 The transport challenges faced in a do-minimum scenario, work against these aims. Public transport objectives must therefore seek to address these, in conjunction with objectives for other transport and spatial planning measures. These objectives are:**

**• Make better use of existing transport assets, be they highways or rail networks, through measures such as "Smarter Routes"**

**• Transfer some car use onto public transport, for some journeys at congested times**

**• Increase use of public transport to access job opportunities, skills and services, for people without access to a car**

**• Increase capacity of public transport**

**• Increase environmentally benign walking and cycling**

**• Locate new development sensibly, so that intense uses are placed where they can be well-served by public transport**

**• Reduce some targeted demand for travel through such measures as multi-purpose**

**journeys, car sharing and home working.**

**• Create a public transport network which is accessible to all sections of the West Midlands population, through such measures as accessible information provision, infrastructure design, comprehensive local network coverage and supporting services such as Ring and Ride and Community Transport.**

**• Ensure proper access to public transport by walking and cycling.**

## 2. Principles underlying the development of the prospectus

**2.1** The Do Minimum scenario described in the previous chapter is not one which we seek to pursue for the West Midlands. Objectives have been set which instead, seek to improve on forecast congestion projections, alongside aims for wider environmental and social benefits.

**2.2** An alternative response is to seek to accommodate the projected growth in demand for travel by a large, urban new road building programme. An examination of TIF research ("Tackling Congestion, Delivering Growth", 2008) shows the scale of such a response:

**2.3** In Birmingham alone, by 2017 extra demand for travel will be 180,000 journeys a day. Forecast do minimum public transport capacity increases could absorb 60,000 of these, leaving 130,000 extra passenger journeys a day having to be catered for. This is equivalent to three new dual carriageway trunk roads in Birmingham, each carrying 43,000 passenger trips a day.

**2.4** This scale of new urban road building is not acceptable or affordable. It would lead to many homes destroyed and increased community severance. The effects of induced traffic from large increases in extra urban highway capacity would result in the congestion problem failing to be effectively tackled.

**2.5** Instead, we come back to a preferred approach based on objectives which:

• Make better use of existing transport assets, be they highways or rail networks, through measures such as "Smarter Routes"

• Transfer some car use onto public transport, for some journeys at congested times

• Increase use of public transport to access job opportunities, skills and services, for people without access to a car

• Increase capacity of public transport

• Increase environmentally benign walking and cycling

• Locate new development sensibly, so that intense uses are placed where they can be well-served by public transport

• Reduce some targeted demand for travel through such measures as multi-purpose journeys, car sharing and home working.

• Create a public transport network which is accessible to all sections of the West Midlands population, through such measures as accessible information provision, infrastructure design, comprehensive local network coverage and supporting services such as Ring and Ride and Community Transport.

• Ensure proper access to public transport by walking and cycling,

## World Class Public Transport – Key Principles of Success

**2.6** Significantly increased use of public transport, reflecting future travel demands in the West Midlands with more, longer journeys, requires an effective high quality public transport system. Centro has examined evidence of the successful criteria which underpin world class public transport, as researched by Professor Cervero, of UCLA, California.

**2.7** Professor Cervero is an acclaimed expert on integrated land use/transport planning. He has identified key principles of success for world class public transport, which we have considered carefully. These principles are:

• effective governance

• strong links with spatial planning

• clear plans, sustained commitment to their delivery

• clear roles for the public, private and voluntary sectors

• integrated, hierarchical public transport provision, for example :

- National/Regional Rail – for "national/regional connectivity"

- Suburban Rail/ Metro /Light Rail/Tram-Train – for "City Region connectivity"

- Tramway, and is some cities: "Metrobus" – for "urban district connectivity"

- Local bus – for "local connectivity"

- Taxibus/Dial-a-Ride – for "low demand area local connectivity" and enhanced mobility options for people with disabilities

**2.8** These principles have been used to inform our vision for public transport serving the West Midlands. This vision is set out in Chapter 3.

# 3. The Prospectus

**3.1** Our overarching aim is simple: a prosperous, healthy, inclusive and sustainable West Midlands, served by a world class public transport system, which people of the West Midlands are proud of.

**3.2** Based on customer focused improvements, the public transport system offers excellent local connectivity and easy access across the West Midlands, so that people can reach jobs, skills and the range of services and leisure opportunities they demand for a high quality of life.

**3.3** Delivery of this prospectus requires work from partners:

• effective governance – the review of transport governance for the West Midlands

• strong links with spatial planning – work is commencing on the new Single Integrated Regional Strategy and ongoing work on Local Development Frameworks

• clear plans, sustained commitment to their delivery

• clear and well defined roles for the public and private sectors such as working with commercial operators in implementing 'Transforming Bus Travel', the West Midlands strategy for bus services

**3.4** Expanding on what the vision for public transport entails, there needs to be more high capacity, fast, rapid transit links serving the existing network of centres and major employment zones together with the main growth centres and regeneration areas, complemented by an effective and efficient local bus network designed to meet the needs of all passengers.

**3.5** This major principle of this vision can be seen in other large conurbations, as detailed in the box opposite

**3.6** The West Midlands vision of world class public transport is to have an integrated system of four tiers:

• Rail and Rapid Transit Network

• Principal Bus Corridors

• Local Bus Networks

• Complementary Travel Services

**3.7** These four tiers are underpinned by integration measures, including ticketing, information and promotion.

**3.8** The outline summary table below shows the broad technical characteristics of different modes which form the Rail and Rapid Transit Network, alongside information for Quality Bus Corridors for reference. The approach taken in determining the type of public transport for main routes in this prospectus is based on the need to provide the right type of capacity for differing demand flows.

## Rail and Rapid Transit Network

**3.9** This is based on bringing together the West Midlands rail connections with rapid transit lines for high volume corridors. The result is to have a "backbone" of rapid, high capacity public transport, which links the metropolitan area with its hinterland; main centres; and key corridors underpinning regeneration. This network is comprised of the local rail network with national, regional and suburban services, tram-train, light rail/tramway, Bus Rapid Transit and park and ride (strategic and local). Figure 2 depicts the vision for the Rail and Rapid Transit Network. Figure 2a illustrates the new suburban rail and rapid transit services of the vision.

**3.10** The main features of this element of the integrated public transport network are:

**- speed:** forms of public transport which are faster than local bus services, to enable longer journeys to be made within acceptable times, often taken as 45 minutes journey time. For example in the am peak Coventry to Birmingham takes 20 – 30 minutes by rail and one and a half hours by bus and West Bromwich to Wolverhampton takes 20 minutes by Metro and 50 minutes by bus.

**-capacity:** forms of public transport which have a higher capacity than local bus services for key flows of movement, typically for corridors of over 12,000 public transport passengers per day

**- permanence:** fixed permanent links, to shape land use plans and provide security on which to invest in sustainable developments

**- integration:** to enable journeys to be made easily through use of more than one mode or service, with convenient availability of local bus services to make the initial or final connections on a journey

**- accessibility:** the provision of accessible infrastructure, information and services, supported by staff with disability awareness training

## Examples of rail and rapid transit connectivity as part of an integrated system: Greater London and Tyne and Wear

### Greater London

Although on a different scale to the West Midlands, Greater London has been able to thrive economically, in part, because of the "reach" – the accessibility - of its resident workforce and the access provided from its wider journey to work area. This "reach" is made possible by the London Underground and suburban rail system, alongside a comprehensive local bus network.

### Tyne and Wear

Following the same principle, the Tyne and Wear Metro has provided an effective rapid transit "backbone" for Tyne and Wear for nearly thirty years. The value of this to the North East business community is stated in the views of the Chief Executive of the North East Chamber of Commerce:

"The creation of Metro ranks as one of the most important and influential developments in the modern history of Tyne and Wear. Its role has never been more important than in the present day when our thoughts are dominated by transport and connectivity. Metro connects both communities and conurbations and is a key driver of the regional economy. "The future of the North East and its economic growth is dependent on our ability to create a joined up, practical, region-wide comprehensive public transport system, at the heart of which will undoubtedly be Metro."
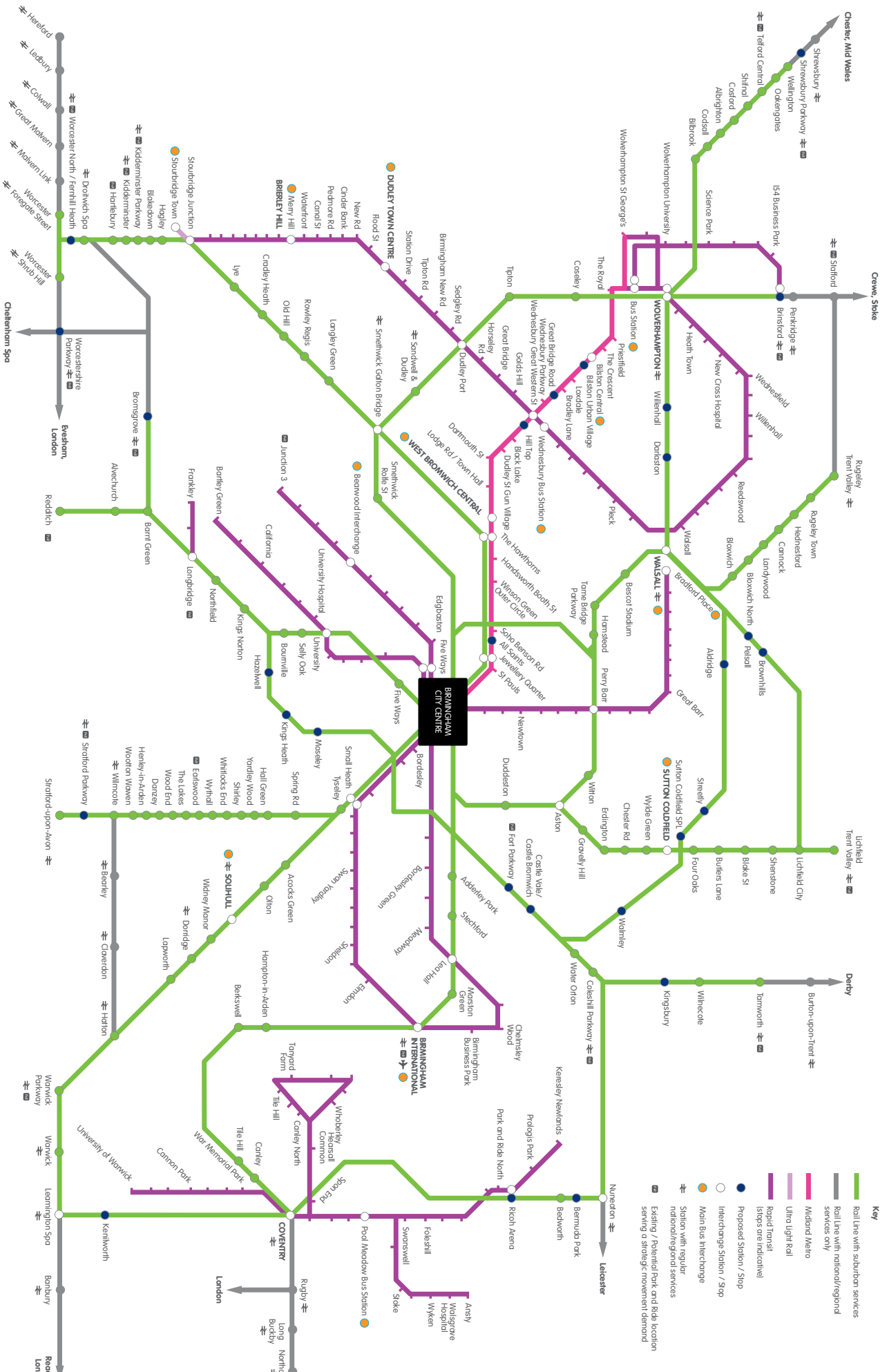
**Figure 2: Rail and Rapid Transit Network**
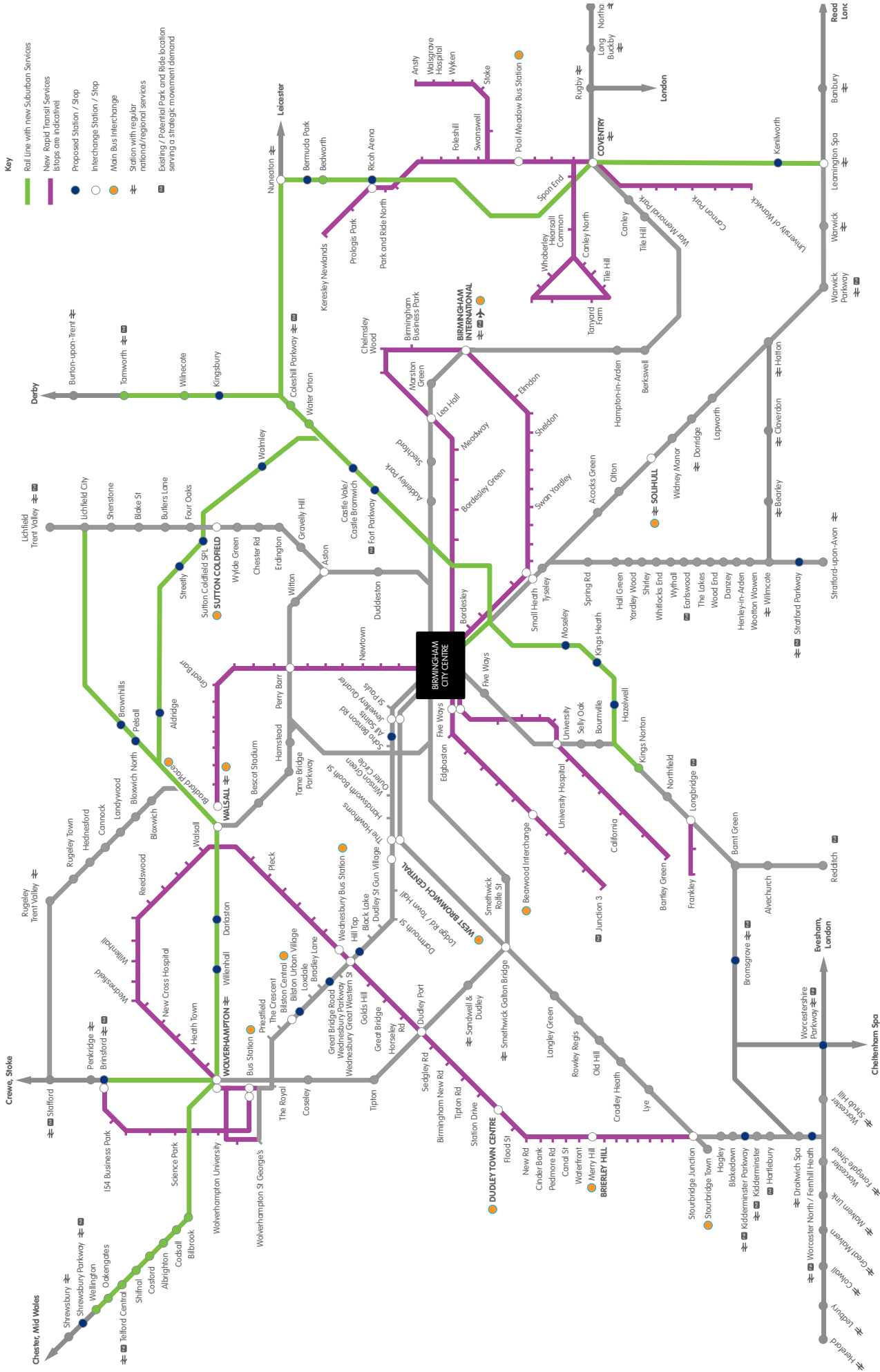
Figure 2A: Rail and Rapid Transit Network, New Suburban Rail and Rapid Transit Services

**Key**

- Rail Line with new Suburban Services
- New Rapid Transit Services (stops are indicative)
- ● Proposed Station / Stop
- ○ Interchange Station / Stop
- ⊙ Main Bus Interchange
- Station with regular national/regional services
- Existing / Potential Park and Ride location serving a strategic movement demand

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## Table 3 – Broad Characteristics of Public Transport Modes

|  | Quality Bus Corridor | BRT | Light Rail / Tramway | Suburban Rail |
|---|---|---|---|---|
| Typical daily patronage (two way) | 2 - 12,000 | 4 - 25,000 | 10 - 80,000 | 20 - 120,000 |
| Maximum theoretical capacity (passengers per hour, per direction) | 2,500 - 4,000 | 4,000 - 6,000* | 12,000 - 18,000 | 10,000 - 30,000 |
| Typical distance between stops | 300 - 400m | 600m - 1.6 km | 400m - 600m (tramway) 600m - 1.2km (light rail) | 2 - 10km |
| Typical service speed km/hr | 18 - 20 | 20 - 30 | 20 - 35 | 40 - 60 |
| Typical capital cost per km to construct | £1 - 2M | £2 - 10M | £10 - 25M | n/a |

Reference sources:  derived from  "Comparative Performance Data from French Tramway Systems", PTEG, 2003;  GOBRT database,  Centro analysis of 11 Suburban rail networks, 2002; Centro data; MVA presentation for "What Future for Light Rail?" conference, 2006;"Which technology for urban public transport? A review of system performance, costs and impacts", ICE, 2003, West Midlands RUS 2005,  Go-Ahead group, 2004 and West Midlands Integrated Transport Strategy TIF Phase 2 Bus Rapid Transit reports, 2007.

* Based on evidence of South American systems high capacity bi-articulated vehicles and busway capacity

**3.11** These attributes are supported by operational aspects to deliver quality through:

**- frequency:** turn up and go frequencies of  at least every 8 to 10 minutes which, market research shows, remove the constraint of  organising personal time around the timetables of public transport services. Where this intense service provision is not feasible, such as with suburban rail services linking small settlements in the journey to work area with main centres, then regular service is critical, ideally at regular 15 to 30 minute intervals.

**- reliability:**  reliability, through effective operational management and significant segregation from general traffic flow,  lends itself to people having confidence in, and so selecting, public transport as a mode of choice

**- operating hours:** as employment and leisure patterns change, so an 18 hour operating day should be a minimum standard for the rail and rapid transit network. This is alongside an aspiration for 24 hour service where demand warrants it.

**- image:** quality features and strong positive image help rail and rapid transit modes in their impressive performance for modal shift in the corridors where they operate.

**3.12** The current status (2010) of preferred modes for High Volume Corridors which help make up the Rail and Rapid Transit Network, are shown in Table 4. The identification of High Volume Corridors, and their appropriate rapid transit mode was based on the solid technical evidence of:

a. the High Volume Corridors Study (2007)
b. West Midlands Transport Innovation Fund research (2006-8) (available at http://www.westmidlandsltp.gov.uk/associated-groups/tif )

**3.13** The High Volume Corridors Study examined potential corridors, based on existing public transport flows greater than 1000 passengers in the am peak (0700 – 09-00). Assessments of these corridors led to recommendations to take forward rapid transit and rail improvements in appropriate high volume corridors across the West Midlands.

**3.14** It is good practice to assess preferred modes for high volume corridors against alternatives at appropriate points, particularly for less well-developed, longer term schemes. This is in line with the evolution of Government advice on appraisal. Government advice is currently being re-written, following publication of "Delivering a Sustainable Transport System" (2008).This means that the current status of preferred modes for the Rail and Rapid Transit network could potentially change over time, particularly for longer term schemes.

**3.15** Current "Delivering a Sustainable Transport System" (DaSTS) studies are examining transport problems in the West Midlands against national transport goals. These studies will inform further development of the rail and rapid transit network.

**3.16** Schemes which form key elements of the Rail and Rapid Transit Network, feature strongly within the nine West Midlands Regional Transport Priorities. These include rapid transit development within the Black Country ("Black Country Spine") and central Birmingham, and increased central Birmingham rail capacity through the Camp Hill Chords. The Regional Transport Priorities Action Plan sets out the strategic direction to deliver these transport priorities. (available at http://www.advantagewm.co.uk/working-with-us/transport_challenge.aspx.)

## Coach Services

**3.17** Coach services have a supporting role to the Rail and Rapid Transit Network for regional and national connectivity. They are also have an important role for the tourism industry, enabling sustainable mobility of organised groups and parties.

**3.18** The vision for coaches is to:

• provide designated coach route access into and out of West Midlands cities, towns and attractions

• provide appropriate setting down and picking up points

• provide adequate long stay coach parking

• provide high quality coach access to Birmingham International Airport/NEC

• Ensure high quality coach terminals environments such as the new Digbeth coach station

• Consider coach travel implications of significant proposed developments

• Hasten implementation of coach vehicles which allow carriage of wheelchairs

## Table 4: Preferred mode for High Volume Corridors suitable for new rail or rapid transit intervention, 2010

| High Volume Corridor | Preferred Mode* | Current Status |
|---|---|---|
| Wolverhampton - Stafford Road Corridor - 154 - Brinsford | Bus Rapid Transit | Proposal in TIF work |
| Wolverhampton - Wednesfield - Walsall | Metro | Phase 2 Metro route |
| Walsall - Wednesbury | Metro | Phase 2 Metro route |
| Walsall - Sutton Coldfield - Castle Bromwich - Birmingham | Suburban Rail | No Formal Status |
| Walsall - Lichfield | Suburban Rail | No Formal Status |
| Wednesbury - Brierley Hill | Metro | Transport and Works Act powers granted |
| Brierley Hill - Stourbridge | Metro | No Formal Status |
| Birmingham - Great Barr - Walsall | Metro / Bus Rapid Transit | Phase 2 Metro Route Birmingham - Great Barr |
| Birmingham - Tamworth | Suburban Rail | Camp Hill lines chords in Network Rail SBP Route Plan April 2008 proposed strategy |
| Birmingham - Chelmsley Wood - BIA | Bus Rapid Transit | Proposal in TIF work |
| Birmingham - Sheldon - BIA | Metro | Phase 2 Metro Route |
| Birmingham - Kings Heath - Kings Norton | Suburban Rail | Camp Hill Lines chords in Network Rail SBP Route Plan April 2008 proposed strategy |
| Birmingham - Bartley Green | Bus Rapid Transit | Proposal in TIF work |
| Birmingham - Quinton | Metro | Phase 2 Metro Route |
| Coventry - Nuneaton | Suburban Rail / Tram-train | Proposal in TIF work |
| University of Warwick - Coventry - Keresley | Bus Rapid Transit | RFA scheme |
| Tanyard Farm - Coventry - Ansty | Bus Rapid Transit | Proposal in TIF work |
| Coventry - Kenilworth - Leamington Spa | Suburban Rail | Proposal in TIF work |

* Metro includes potential use of tram-train technology

## International, National and Regional Rail

**3.19** It is essential that the West Midlands is connected to the European High Speed Rail Network.  An international link to the hubs of Birmingham International and Birmingham city centre will improve economic performance by increasing connectivity and providing additional longer term national rail capacity.

**3.20** As well as the huge benefits for international and national connectivity, the introduction of High Speed Rail to central Birmingham will need to deliver local rail benefits. The required reconfiguration of the local rail network will consider innovative new approaches to the provision of suburban rail capacity, including the potential use of tram-train technology.

**3.21** The relationship between national, regional and suburban rail provision in the prospectus is shown in Figure 3 .

**3.22** National and regional rail services have two functions for the West Midlands public transport system:

1) Provision of fast connectivity to major centres to support the economic competitiveness of the West Midlands. In this respect, future  additional high speed national capacity for international connections is critical.

2) Provision of rail capacity which supports suburban rail provision for heavy demand flows within the metropolitan area, eg Coventry – Birmingham  and Birmingham – Wolverhampton. Ideally, there should be segregation of all suburban rail from these national services. However, for the foreseeable future there will continue to be dual use by national and local services on sections of the West Midlands rail network. Emphasis must be placed on optimising existing capacity,  alongside promotion of a new high speed rail link serving the West Midlands.

## Central Birmingham Rail Capacity

**3.23** As with all national centres, rail demand in central Birmingham is growing strongly. Beyond the twenty year timescale of this document, there will be significant rail capacity challenges.
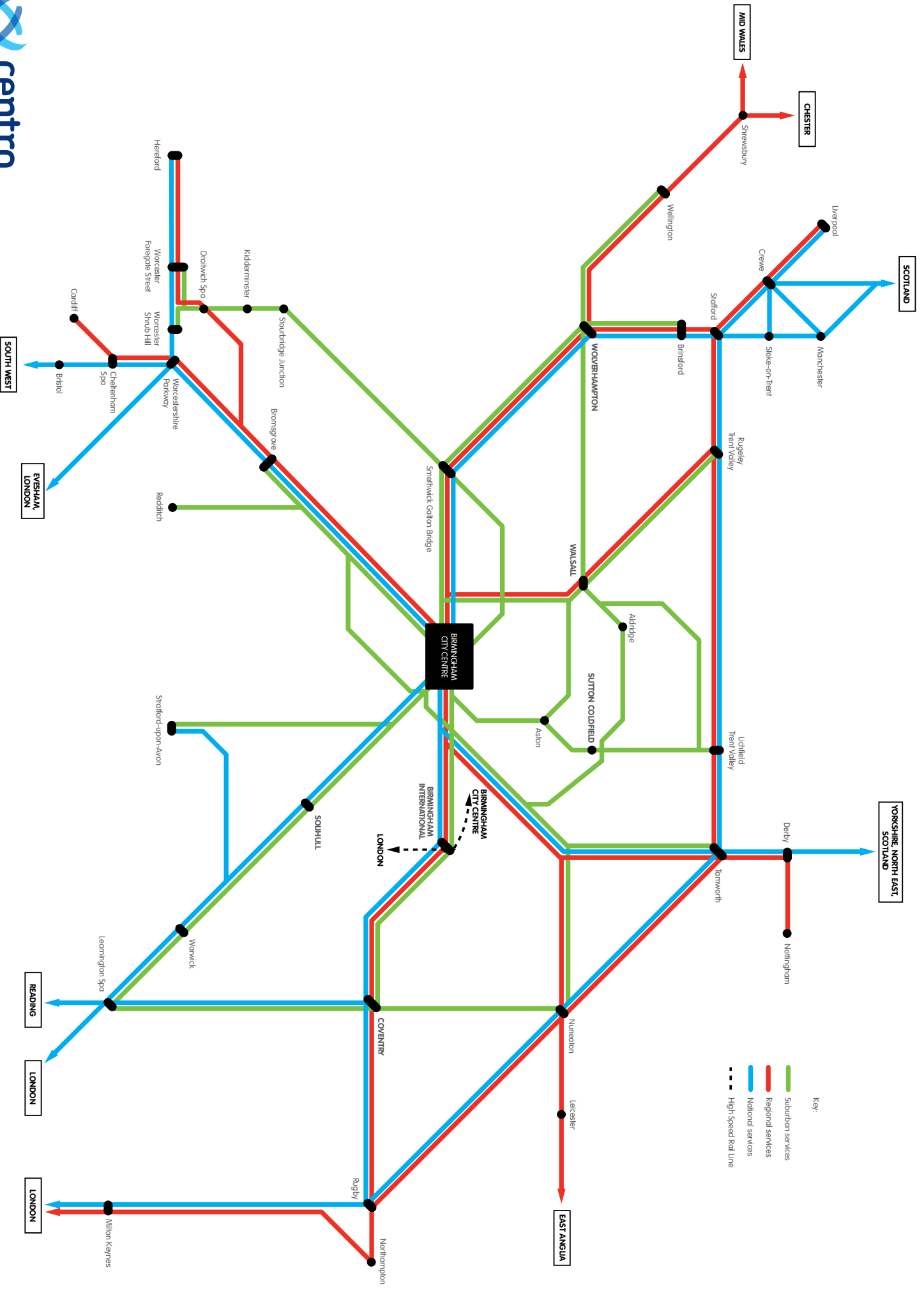
Figure 3: West Midlands Rail Network – Relationship between National, Regional and Suburban Services

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Key:
Suburban services
Regional services
National services
High Speed Rail Line

**3.24** The strategic approach to meeting increasing demand is through partners combining investment to make the best use of assets. An outline sequence of interventions is based on the deployment of:

• New Street Gateway Scheme

• Track and signalling improvements

• Camp Hill chords, allowing greater use of Moor Street capacity

• Optimised capacity by having regional, outer suburban and inner suburban  services, each with different forms of stopping patterns

• Stourbridge – Lichfield line opened for freight services

• New High Speed Line capacity

• The vision is also based on longer trains stopping at stations with longer platforms and increased passenger handling capacity in central Birmingham at the hub of the local rail network. The vision embraces the exciting potential of tram-train technology to allow increased frequencies on the rail network and allow central Birmingham to cope with long term increases in demand together with the introduction of a new high speed line. This could potentially be achieved through diversion of some services on-street with tram-train provision, as seen in many European cities.

## Suburban Rail (heavy rail/tram-train)

**3.25** The vision for suburban rail is to provide much of the Rail and Rapid Transit  Network, with services meeting the following criteria:

• Service speed of 40 – 60 km/hr

• High levels of reliability

• Daytime frequencies of every 10 to 30 minutes

• Adequate seating capacity for customer needs in the West Midlands
• Attractive, accessible stations and services

• Staffed stations

**3.26** These strong technical features will enable increased numbers of longer passenger journeys across the West Midlands.

**3.27** Alongside increased capacity, improvements to the quality of stations, customer care and rolling stock are also planned. This is in accord with a comprehensive customer-facing plan which is being developed.

**3.28** The vision sees rail network coverage extended with new stations associated with strategic park and ride facilities and enhanced or new passenger service provision for Coventry – Nuneaton,  Coventry - Leamington Spa/ Kenilworth, Walsall – Wolverhampton, the Tamworth Line, Sutton Park Line, and the Camp Hill line in South Birmingham.

**3.29** Development schemes will ensure that any environmental impacts are mitigated in accordance with industry standards.

**3.30** An electrification programme is also part of the vision, allowing improved performance and greater flexibility of rolling stock deployment. Lines which are part of this programme include Walsall – Rugeley and Barnt Green to Bromsgrove.

## Rail Network Development Plan

**3.31** More details of development in the short and medium term are set out in the Rail Network Development Plan  (available at www.centro.org.uk/corporateinformation/publications.asp )

## Metro (light rail / tram-train)

**3.32** The vision for Metro is to provide key targeted corridors, within the Rail and Rapid Transit Network, with a high capacity, rapid form of public Transport, demonstrating good value for money. As the House of Commons Transport Select Committee state " Light rail will not meet every transport need. It is best suited to heavily used urban corridors, where flows are over 2,000 people per hour, or are expected to reach that level in the near future"(House of Commons Transport Committee, Tenth report of session 2004/5, 20005)

**3.33** The vision for light rail and tram-train in the West Midlands is to provide services in appropriate High Volume Corridors with the following characteristics:

• Service speed of 25 – 35 km/hr (light rail) , 25 – 50 km/hr (tram-train)

• High levels of reliability through high levels of segregation from general traffic

• Attractive and accessible stops and services

• Daytime frequencies of 5 – 10 minutes (light rail) , 5 – 30 minutes (tram-train)

• Penetration of town and city centre with permanent, visible and acceptable infrastructure

• Integration with local bus services

**3.34** Metro development, using light rail or tram-train technology, is critical to  underpin the whole Black Country sub-regional development strategy of  growth in four main centres and their connecting strategic transport corridors. It will also make important connections in central Birmingham and have a key role serving demand in some of Birminghams main arterial corridors.

**3.35**  We will consider tram-train technology for its potential application to Metro development. This is in order to maximise win-win situations with  rail freight and minimize the need for new infrastructure. The Walsall - Stourbridge and Walsall – Sutton Coldfield corridors are examples of where tram-train could be applied.

**3.36** The provision of bus services in Metro corridors will be complementary to Metro, to best meet the variety of public transport journey needs in individual corridors.

## SPRINT – Bus Rapid Transit

**3.37** "Bus Rapid Transit" is a wide-ranging term covering a variety of forms of enhanced bus provision. Recent schemes in Swansea, Kent, Nantes and Nimes give an idea of the potential of this mode to transform perceptions, and use, of bus-based public transport.

**3.38** The West Midlands has considered what an appropriate local definition of "Bus Rapid Transit" (BRT) is and considers that "SPRINT" BRT is a high quality service displaying the following characteristics:

• Service Speed of 25 – 30 km/hr, (typically at least 25% faster than existing Showcase bus quality corridors in the(West Midlands)

• High specification vehicles, typically distinctive, articulated vehicles

• The route of the BRT system should be designed to create as much public transport priority as is possible. It should be sufficient to deliver fast and reliable journey times. Priority measures include busways, nearside and median bus lanes, bus-gates and traffic signal priorities

• All stops and services accessible and designed to a high standard

• The service would have a limited stopping pattern in comparison to conventional bus services thus enabling them to be faster than normal bus services and potentially competitive with car. This means stops will be typically 600m – 1.6 km apart, rather than local bus provision with stops every 300 – 400m

• The provision of bus services in Bus Rapid Transit corridors will be complementary to BRT, to best meet the variety of public transport journey needs in individual corridors

• High frequency –  a daytime turn up and go service, at least every 8 – 10 minutes

• Off-board ticketing encouraged

• Consistent SPRINT branding of BRT across the West Midlands, as part of the wider Network West Midlands brand.

• Power source can be one of several possibilities eg, clean diesel -  at least Euro IV standard, sustainable bio-fuel or electricity.

**3.39** Bus Rapid Transit in the US and Europe is often seen as an intermediate level of investment to meet passenger demand flows, which although strong, are lower than those classically served by light rail (ie less than 20,000 passengers per weekday) This can be seen in Table 5:

**3.40** Our vision  is that SPRINT Bus Rapid Transit has an appropriate role for some High Volume Corridors in the West Midlands, particularly related to serving demand from new economic development areas.

## Ultra Light Rail

**3.41** The Parrys People Mover is recognised as a suitable mode to shuttle passengers the short distance between Stourbridge Town and Stourbridge Junction rail station. This is an example of appropriate technology for particular local circumstances.

## Table 5  BRT Patronage Examples

- Las Vegas, MAX, 12km, 9,800 passengers per weekday

- Boston Silverlink, 5.4 km, 14,900 passengers per weekday

- Rouen TEOR, 37.6km 3 line system 20,800 passengers per weekday

- Fastway, Gatwick Airport, 24km 8,300 passengers per weekday

- Fastrack, Kent, 15km,  5,700 passengers per weekday

- Eugene, Oregon, EmX Green Line, 6.4 km, 5,400 passengers per weekday

Source: US FTA, TCAR, Sussex County Council, Fastrack

## Broadening Access to the Rail and Rapid Transit Network

**3.42** A station access strategy will set out how the catchment areas of stations can be expanded through enhanced walking, cycling and bus access, alongside intelligent park and ride development.

**3.43** This will build on the evaluation of the current Kings Norton pilot station travel plan initiative.

**3.44** In line with Centro's new Environmental Strategy, this will also consider the potential opportunities for "green infrastructure" as part of station improvements.

**3.45** Park and ride development will take into account:

• Congestion benefits

• Frequency, capacity, and quality of the public transport offer

• Environmental, design and traffic impact

• Potential for interchange with other public transport services

• Implications for the wider public transport network

**3.46** Figure 2 identifies existing and potential park and ride locations serving a strategic movement demand. Potential locations include:

• Brinsford, north of Wolverhampton

• Worcester Parkway

• Bromsgrove

• Vicinity of M42, junction 3

• East of Shrewsbury

• Longbridge

• Vicinity of M5 junction 3

• North of Stratford-upon-Avon
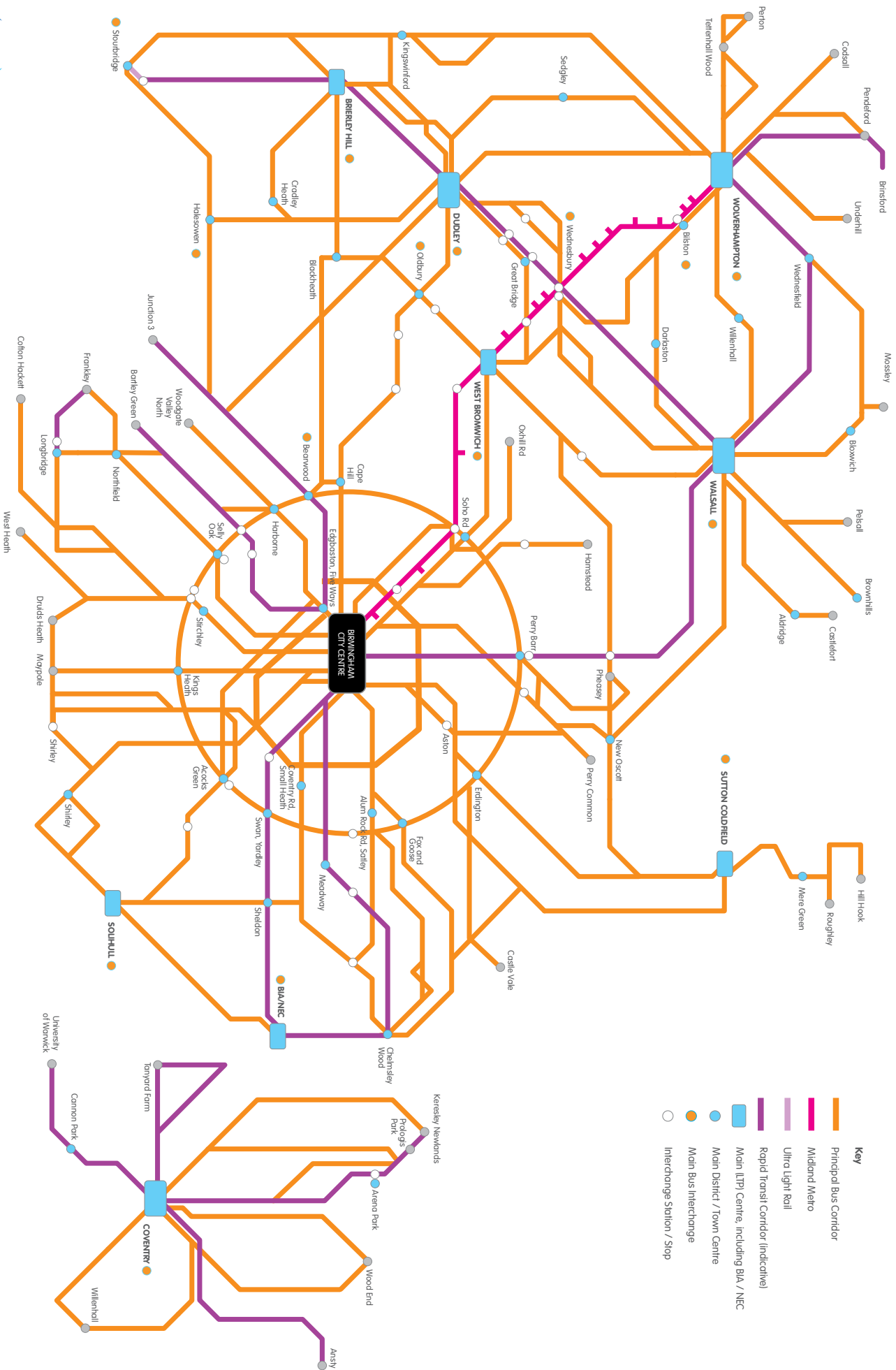
**Figure 4: Rapid Transit Network and Principal Bus Corridors**

**Key**

- Principal Bus Corridor
- Midland Metro
- Ultra Light Rail
- Rapid Transit Corridor (Indicative)
- Main (LTP) Centre, including BIA / NEC
- Main District / Town Centre
- Main Bus Interchange
- Interchange Station / Stop

• Telford

• Vicinity of Lichfield Trent Valley

• Vicinity of Kidderminster

• North Redditch
• Tamworth

• Castle Bromwich

**3.47** Local park and ride also has a role to play for short movements to local rail stations, Metro/BRT stops and potentially some principal bus corridors. Incremental expansion of local park and ride facilities will continue, as part of a wider station access strategy, where demand exists and expansion is feasible.

## Main Bus interchanges with rail and rapid transit

**3.48** Access to the rail and rapid transit network is enhanced by bus interchange. Key interchanges between rapid transit and main bus routes have been identified, of which many currently exist as bus stations. Main bus interchanges are shown in Figure 2.  Further measures to promote seamless travel between rail, rapid transit and local bus services at quality interchanges will be programmed with rapid transit development.

## Cycle interchange

**3.49** Cycle parking stands and lockers for "cycle and ride" will be provided, at all rail stations and rapid transit stops where practical. Policies on the carriage of bicycles on trains, trams and BRT vehicles will be

reviewed at regular intervals, taking into account international experience and operational and safety considerations. Currently cycles are allowed on local rail services without restriction, but not on Metro trams.

## Principal Bus Corridors

**3.50** Main passenger demand flows for local journeys are largely catered for by high quality principal bus corridors.

**3.51** These are direct, high frequency bus services which mostly use main "A" and "B" roads, many of which are an important part of the "Smarter Routes" approach.

**3.52** A map of the Principal Bus Corridors is shown in Figure 4.

**3.53** Principal Bus Corridors will display the following characteristics, which must be embodied in wider corridor strategies, such as "Smarter Routes":

• Service speed 18 – 20 km/hr

• High levels of reliability, through efficient operational management and traffic management measures, giving "dependability" increased customer confidence benefits

• At least every 8 – 10 minutes daytime frequency

• 300 – 400 metre distance between stops

• Stops with easy access kerbs and high quality shelters

• High quality, easy access vehicles, with at least Euro IV standard engines, including early introductions of state of the art designs and technologies

• High standards of maintenance and cleanliness

• Effective marketing and promotion

• Small, on-street interchanges at important intersections of services

• Personal security measures such as targeted Safer Travel Police Team operations and CCTV cameras

## Principal Bus Corridors, the Strategic Highway Network and "Smarter Routes"

**3.54** Not surprisingly, there is a close relationship between these principal bus corridors and the Strategic Highway Network (taken as the Principal Route and Primary Route Networks). Principal bus corridors are shown in Figure 4 and are listed in Appendix 2. A map of the overall Strategic Highway Network is shown in Figure 5.

**3.55** Further principal bus corridors will emerge over time as new developments influence future travel demands.

**Figure 5 : West Midlands Metropolitan Area Strategic Highway Network**
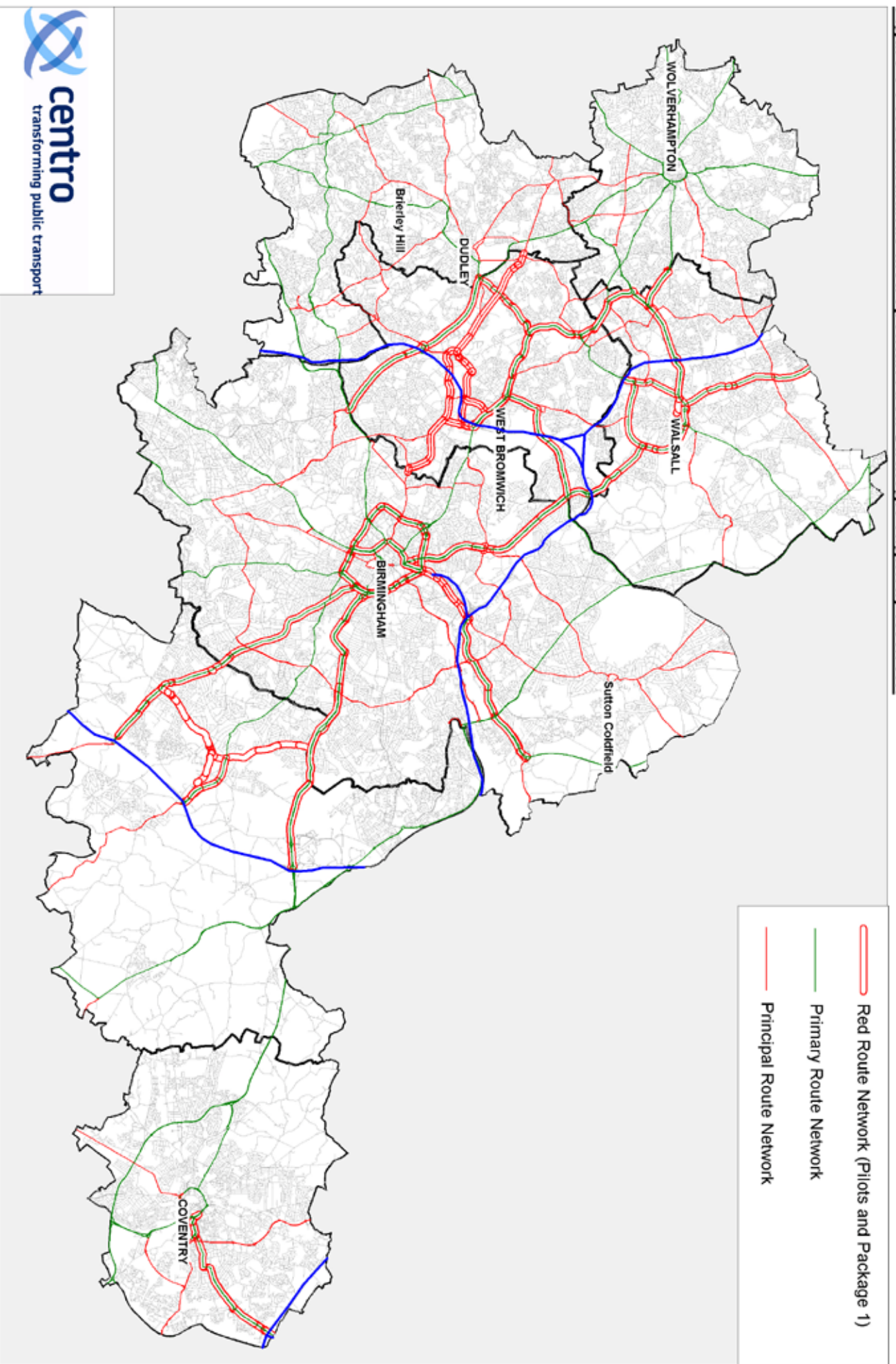
Legend:
- Red Route Network (Pilots and Package 1)
- Primary Route Network
- Principal Route Network

Map labels: WOLVERHAMPTON, Brierley Hill, DUDLEY, WEST BROMWICH, WALSALL, BIRMINGHAM, Sutton Coldfield, COVENTRY

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**3.56** The Strategic Highway Network needs to allow the easy movement of goods and people, accommodating elements of the Rail and Rapid Transit Network and many principal bus corridors. For this to happen there needs to be a balance struck between competing demands for highway capacity.

**3.57** This is considered in more detail in the "Supporting Transport and Spatial Development Strategy" section, but an important element of the overall approach is to implement "Smarter Routes" on key corridors across the West Midlands.

**3.58** "Smarter Routes" corridor strategies aim to improve journey reliability for all road users by identifying traffic issues and developing solutions for corridors in a comprehensive manner. Measures used on Smarter Routes will encompass schemes such as Red Routes, Quality Bus Corridors (building on the "Showcase" concept), "Quick Wins" traffic management measures, Urban Traffic Control and Congestion Target Delivery Plan measures.

**3.59** For the significant amount of principal bus corridors which are not on the Strategic Highway Network, traffic management measures and service quality improvements will be tied together, including use of "Punctuality Improvement Partnerships".

## Relationship of the Bus and Rail and Rapid Transit Networks

**3.60** Some principal bus corridors are particularly important because they serve areas which will not have any rail or rapid transit provision. Many of these have had Showcase quality bus corridor investment over the last ten years. This is shown in Figure 6. Further principal bus corridors of this nature are highlighted against a crude proxy of the catchment area of the rail and rapid transit links in Figure 7.

**3.61** In rapid transit corridors, local bus provision will be adapted to complement the Metro or SPRINT BRT service, in partnership with operators. Depending on local conditions in individual corridors, this means either a reconfiguration of bus services to rapid transit interchanges, less frequent bus services, or a similar level of service with rapid transit seen as an additional layer of provision.

**3.62** Different approaches are seen in practice in Metro Rapid corridors in Los Angeles (additional layer) and MAX in Las Vegas (less frequent local bus service).

## Local Bus Networks

**3.63** Comprehensive local bus networks ensure local communities have good access to jobs, shops and services.

**3.64** We will bring about significant quality improvements to local bus services to address the needs and expectations of current and future passengers. Building on existing high levels of use for local journeys, the vision is to achieve a local and international reputation for innovative, forward looking provision, which is popular with customers. This will mean that bus industry advances in vehicles, planning, operation and customer service will have a natural home in the West Midlands.

**3.65** Long term trends in work shift patterns and service sector activities will be reflected in bus service provision. This includes an aspiration for 24 hour service where demand warrants it.

**3.66** A revised, accessible and modernised bus network will be implemented in close partnership with operators and councils, to provide more readily understandable provision which reflects changing journey patterns.

**3.67** This will build on the achievements of the first local network review implemented in Dudley borough. This is shown in Figure 8 and has increased bus user satisfaction for 22 attributes of bus provision and has led to a 4% increase in bus use across the borough.

**3.68** The details of local bus network improvements are set out in "Transforming Bus Travel", (available at www.centro.org.uk/corporateinformation/publications.asp ). Key features of provision are:

• Revised networks, reflecting changing journey patterns of local communities

• Comprehensive local bus coverage, provided by:

- commercial routes with lower passenger flows than principal bus corridors,

- Centro-subsidised local estate bus routes

- Centro-subsidised early morning, Sunday and evening bus services for routes provided commercially at other times.

• Dependable, regular service frequencies

• High quality, easy access vehicles

• High standards of maintenance and cleanliness

• High quality shelters at busy stops

**3.69** A comprehensive review has led to the proposed reorganisation of West Midlands local bus services to the following 6 groups. Principal bus corridors are predominantly Birmingham centred, inter-urban and urban services.

- Birmingham centred
- Inter-urban
- Orbital
- Urban
- Local
- Customised low frequency

The role of these groups is discussed below.

## Birmingham centred

**3.70** These are generally high frequency routes running throughout the day and week.

## Inter-urban

**3.71** These are also high frequency routes running throughout the day and week. They link towns and communities with regular stops every 300 – 400 metres, such as the 451 service linking West Bromwich, Great Barr, Kingstanding and Sutton Coldfield.

**3.72** Regular links between Coventry and Birmingham/ Solihull also provide connectivity between adjacent urban areas and settlements in the Meriden Gap, such as Meriden and Balsall Common.

# Figure 6 : Rail and Rapid Transit Network, Bus Showcase and Main Centres



Legend:
- Existing Bus Showcase / Rapid Transit
- Existing Bus Showcase
- Rail and Rapid Transit
- Main (LTP) Centre, including BIA/NEC
- Main District / Town Centre
- 800 metres of a Rapid Transit Line
- 800 metres of a Rail Station

NB Rapid Transit corridors and proposed rail station locations are indicative

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Figure 7 : Principal Bus Corridors Serving Areas Without Rail and Rapid Transit

Legend:
- Existing Bus Showcase / Rapid Transit
- Existing Bus Showcase
- Rail and Rapid Transit
- Main (LTP) Centre, including BIA/NEC
- Main District / Town Centre
- Principal Bus Corridor Serving Areas Without Rail and Rapid Transit
- 800 metres of a Rapid Transit Line
- 800 metres of a Rail Station
- NB Rapid Transit corridors and proposed rail station locations are indicative
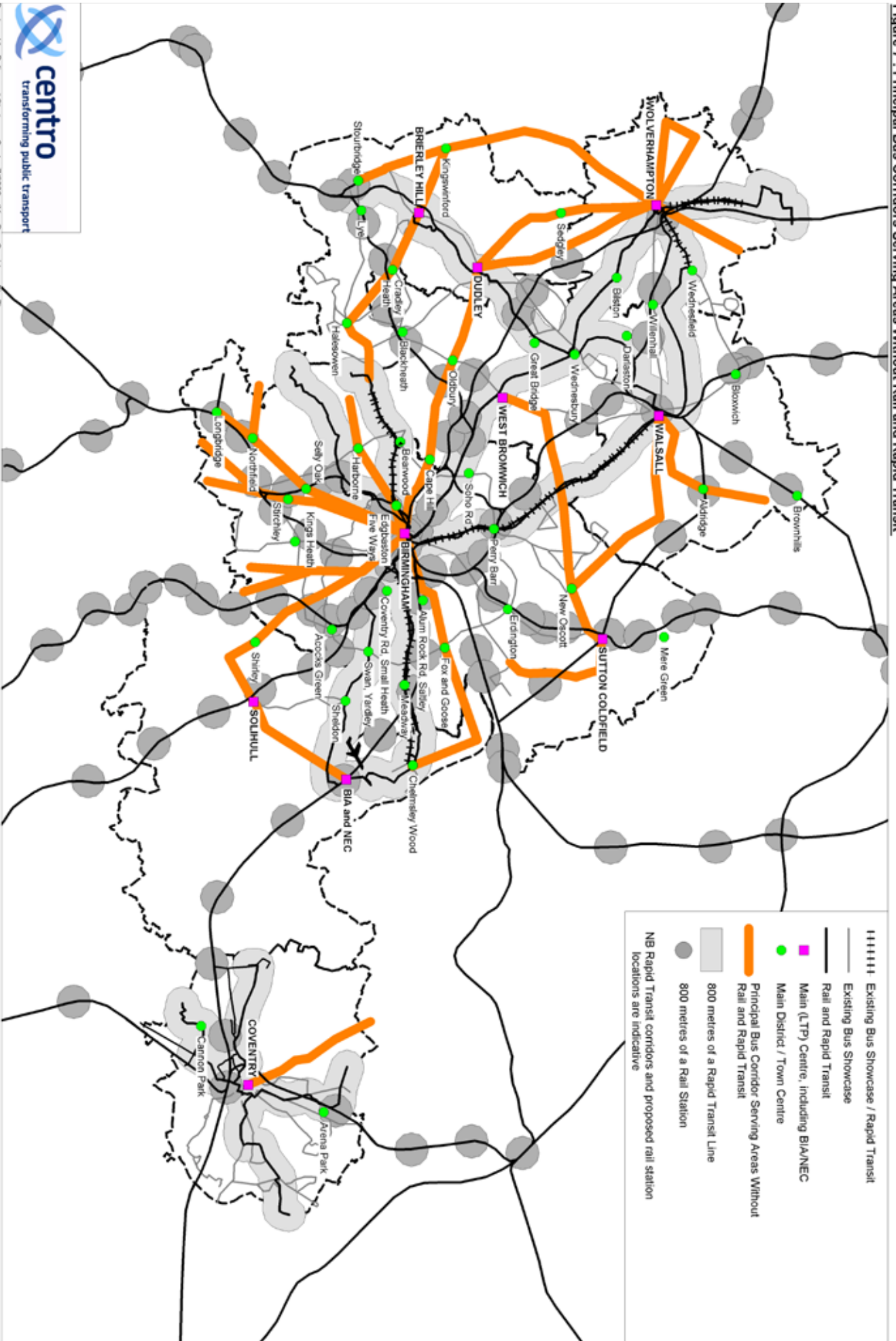
Produced by Policy and Strategy - Centro 7/2009. (Key Bus Corridors_Fig 7)
Maps are based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationery Office © Crown copyright.

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Figure 8: Direct Bus Services Serving Dudley Centre following the Dudley Network Review
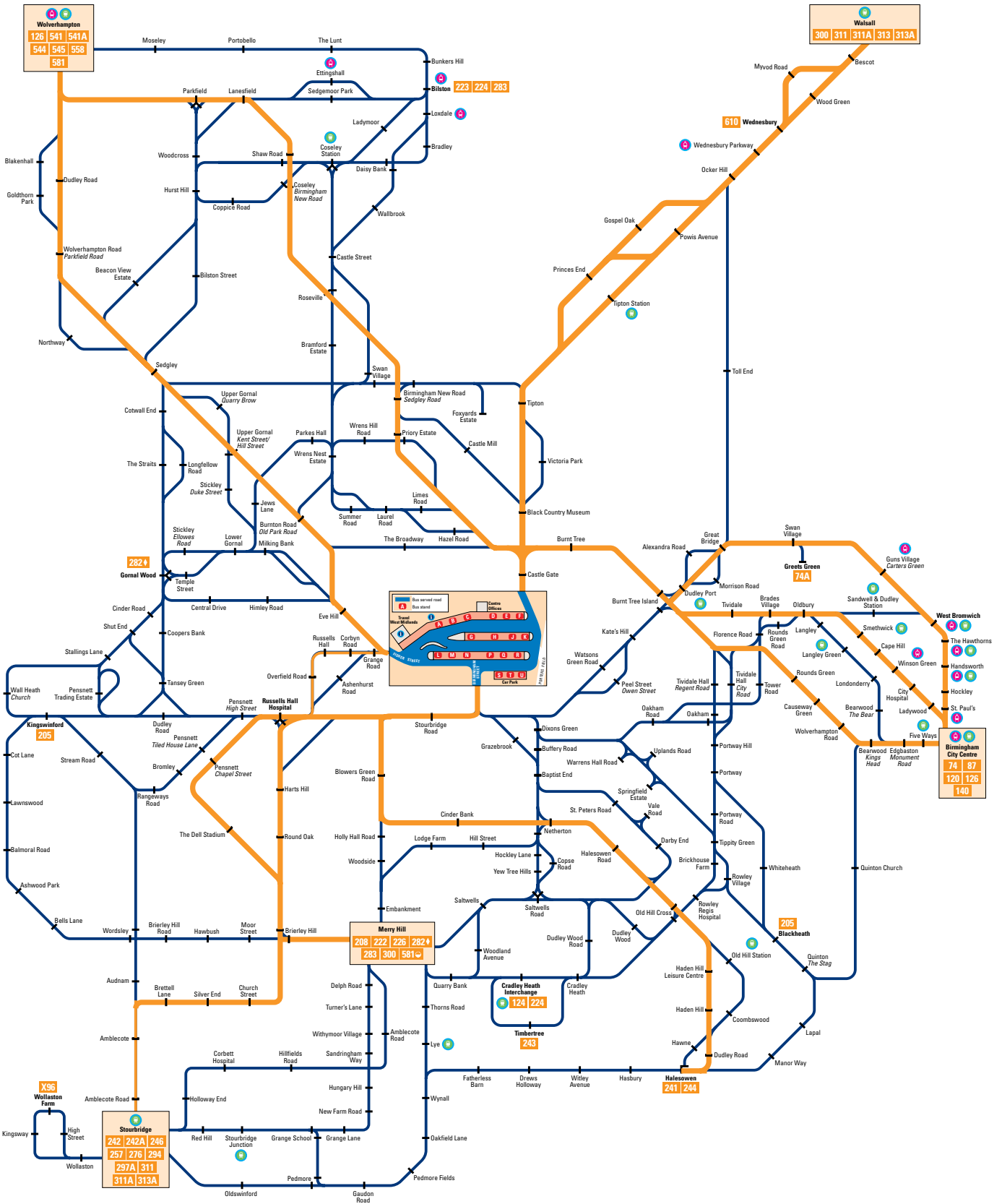
### Orbital

**3.73** These services are moderate to high frequency. They link suburban local centres with estates off the radial route. Good interchange with radial and local services is particularly important.

### Urban

**3.74** These generally high frequency routes link the main towns and cities (particularly Walsall, West Bromwich, Wolverhampton and Coventry) with their nearby housing estates. (In many cases Birmingham centres and Inter-urban provide the urban function).

### Local

**3.75** Local routes provide the links not met by groups 1 to 4 and relate generally to smaller towns and secondary attractors. Frequencies are generally every 15 or 30 minutes. Such local estate routes frequently have a Centro financial involvement, particularly if there are evening and Sunday journeys.

### Customised low frequency

**3.76** These routes are limited in number and provide links not covered by the groups above. Relative to passengers carried, they are highly dependent on significant public funding.

### Comprehensive Local Bus Network Coverage

**3.77** The West Midlands has extensive commercial local bus network coverage. This is provided through principal bus corridors and lower passenger flow commercial routes.

**3.78** Comprehensive network coverage is ensured through Centro tendering services in accordance with access standards. These standards consider geographical coverage, passenger demand, and value for money criteria and are met through:

• Non-commercial local estate bus routes

**Figure 9: Examples of Complementary Travel Services**

• Early morning, Sunday and evening bus services for routes provided commercially at other times

## Journey to Work Area Bus Services

**3.79** In addition to the 6 groups of services within the metropolitan area, there are also significant local and medium distance bus links to surrounding urban areas "hugging" the metropolitan area. These include links from Walsall to the South Staffordshire/Cannock Area and Coventry to North Warwickshire links. Important sub-regional corridors in this category include:

- Birmingham - Redditch
- Birmingham - Tamworth
- Birmingham - Stratford Upon Avon
- Birmingham – Kidderminster
- Birmingham International Airport/NEC  local bus network
- Coventry- Nuneaton
- Coventry - Leamington Spa
- Coventry - Rugby
- Coventry - Leicester
- Walsall - Rugeley

- Walsall - Lichfield
- Wolverhampton- Bridgnorth
- Wolverhampton - Cannock
- Wolverhampton- Telford
- Wolverhampton- Stafford

**3.80** Particular issues for these corridors are the need to ensure common customer information and ticketing provision across administrative boundaries.

**3.81**    The proposed new networks will reflect modern travel demands, arising from such issues as changes to hospital provision and employment locations.  They will not only enhance existing core routes by better serving the vast majority of current travel needs, but also attract a wide range of new users. This is by creating networks which are:

- More frequent
- More efficient
- Of a higher quality (with focused investment in modern facilities)
- Simpler to understand
- Easier to promote

- More customer-care oriented

**3.82** Bus networks will be increasingly accessible through deployment of improved signage, information, staff with disability awareness training and improved infrastructure and vehicles.

## Environmental Sustainability

**3.83** The long term vision for local bus services is to have a bus fleet with very low carbon emissions. Centro will work with commercial operators to evolve current bus vehicle fleets so that hybrid technology and sustainably produced bio-fuels are phased in, in a manner which is financially viable for commercial operators.

**3.84** The environmental performance of bus infrastructure will also be improved in line with Centro's Environmental Strategy.

## Complementary Travel Services

**3.85** Most customer journey needs will be met by rail, metro , SPRINT or local bus services. However, for people with mobility difficulties and low demand from some areas, particularly low density and rural areas, a comprehensive public transport system will be ensured through demand responsive Ring and Ride and community transport. This will give "local connectivity" with strong positive impacts for local social inclusion and accessibility planning.

**3.86** Ring and Ride will continue to play an important role for people who have a mobility problem which makes it difficult to use conventional public transport. Ring and Ride gives travel opportunities which have wider cross-sector benefits. Currently Ring and Ride provides £28m of wider cross sector benefits to social service and health providers. The provision of the service improves personal mobility and allows authorities to reduce expenditure on domiciliary care council transport and taxi hire and health treatment.

**3.87** A current study into the future role of community transport and a solid, three year business plan for Ring and Ride will lay the foundations for a longer term approach to demand responsive transport in the West Midlands. Clarity on this longer term approach will be

facilitated by Centro setting up a new Community Transport Forum for the West Midlands.

**3.88** Closer links with the commissioners of community group transport, social services and the NHS will be sought to improve the effectiveness of demand responsive and community transport services in general. For example, Patient Transport Services for hospital appointments and provision by social services for access to Day Care, offer door-to-door transport for their respective client groups. Because their service characteristics and scheduling systems are so similar, in some areas progress has been made in integrating two or three of these functions into a single system, through one of various models for Transport Co-ordination Service (TCS).

**3.89** Travel training and associated travel buddy schemes will be promoted to assist learning disabled people to undertake independent public transport journeys: opening up opportunities for people.

**3.90** Sustainable school travel will be provided by means identified through school travel plans, including "brokered" schools contract services.

**3.91** Details of complementary travel measures are described in "Transforming Bus Travel", (available at www.centro.org.uk/corporateinformation/publications. asp ). The main features are:

• Ring and Ride, door to door services for people who have a mobility problem which makes it difficult to use conventional public transport.

• Demand responsive services for specialised travel demand patterns from socially excluded groups, provided by community transport

• Sustainable school travel through measures including "brokered" schools contract services.

• Travel training and associated travel buddy schemes to assist learning disabled people to undertake independent public transport journeys

Examples of services used to provide complementary travel are shown in Figure 9.



## Integration Measures

**3.92** An integrated public transport system is more than a collection of different services. It also requires integrated, affordable ticketing, using smartcard technology, high quality interchanges, integrated branding, promotion and awareness. Customer feedback and representation is also required to develop a high quality integrated system.

## Integrated Branding/Network Identity

**3.93** The successful implementation of the "Network West Midlands" brand by Centro and operators in 2006/7 has created a recognisable brand for the whole public transport system of the West Midlands. This achievement will be built upon in future, so that marketing of an ever-improving "Network West Midlands" develops a relationship with the population of the West Midlands akin to that which world cities residents have with their public transport systems. It will also play a role in a wider "Smarter Travel Choices" strategy, described in Chapter 6.

**3.94** Infrastructure which forms part of Network West Midlands in the wider journey to work area will become branded, so that the cohesive network truly reflects customer travel patterns.

## Information

**3.95** Integrated information provision has improved dramatically in the West Midlands through implementation of the "Network West Midlands" brand.

**3.96** The next phase of West Midlands passenger information strategy is currently being prepared, fully taking into account the exciting possibilities which advances in electronic information and mobile phone technology bring. These include the potential to improve information provision for all, helping overcome existing barriers for people with disabilities.

**3.97** Areas for improvement include next-stop information on-board buses and greater use of real time information.

## Integrated, affordable ticketing

**3.98** The cost of travel is a highly important factor in maintaining and growing public transport use. Competitive, value for money fares are a pre-requisite for sustained growth of the public transport market across the West Midlands, including the journey to work area.

**3.99** Centro will work with local commercial operators, seeking to ensure that fares represent value for money to customers. Centro will also manage local concessionary travel for elderly and disabled people and promote "Workwise" where jobseekers can obtain travel advice and free public transport passes for job interviews and up to the first three months of employment.

**3.100** Smartcard technology brings huge potential benefits to integrated ticketing and is currently being introduced to the West Midlands, initially with concessionary passes, followed by roll out to fare paying passengers. The vision is for occasional and regular public transport customers to be able to easily interchange between different modes and services, without being unduly financially penalised for having to

use more than one service to meet their patterns of travel demand.

**3.101** The Department for Transport is currently consulting on developing a strategy for smart and integrated ticketing and national developments will help realise the West Midlands vision for occasional and regular public transport customers.

## High Quality Interchanges

**3.102** Interchanges between the rail and rapid transit and bus networks are described above in the "Broadening Access to the Rail and Rapid Transit Network" section. A series of small, on –street interchanges is also required to allow easy transfer between bus services at key intersections, often in suburban district centres.

## Taxis

**3.103** Accessible taxis have a valuable integration role to play, for first and last links in some journeys, particularly related to longer distance rail stations where suitable taxi ranks are a basic facility requirement

## Personal Security

**3.104** An integrated public transport system requires high levels of personal security across all modes, through high levels of passenger use giving "natural surveillance", design of infrastructure, staffing of facilities, use of CCTV and targeted policing presence.

**3.105** Centro will continue to work in partnership with West Midlands Police and local councils in the "Safer Travel Team". This has reduced bus crime by 41% in 2 years through targeted police operations and awareness raising with school children on personal safety and the effects of anti-social behaviour and crime.

**Figure 10 : Relationship Between Main Regeneration and Growth Areas and the Rail and Rapid Transit Network.**



Legend:
- Rapid Transit (corridors are indicative)
- Metro
- Rail Line with Suburban Services
- Rail Line with National / Regional Services Only
- Strategic Centre
- Main Passenger / Freight Airport
- Impact Investment Location
- Regional Investment Site
- Major Investment Site
- Regional Logistics Site
- Motorway
- Primary Route Network
- High Technology Corridor
- Growth / Regeneration Area
- West Midlands Metropolitan Area
- Green Belt

Place labels: Burton-Upon-Trent, Rugby, Tamworth, Coventry Airport, Coventry, Nuneaton, Leamington, Lichfield, Sutton Coldfield, Stratford, Birmingham Airport/NEC, Solihull, BIRMINGHAM, Redditch, Walsall, West Bromwich, Brierley Hill, Stafford, Wolverhampton, Kidderminster, Worcester, Telford

centro
transforming public transport

Figure 11a: Existing Public Transport Accessibility to Employment Sites within 45 minutes

Number of jobs accessible
by public transport within 45 minutes

- 1,200,000 to 2,000,000
- 1,000,000 to 1,200,000
- 800,000 to 1,000,000
- 600,000 to 800,000
- 400,000 to 600,000
- 200,000 to 400,000
- 0 to 200,000

**Number of jobs accessible by public transport within 45 minutes**

- 1,200,000 to 2,000,000
- 1,000,000 to 1,200,000
- 800,000 to 1,000,000
- 600,000 to 800,000
- 400,000 to 600,000
- 200,000 to 400,000
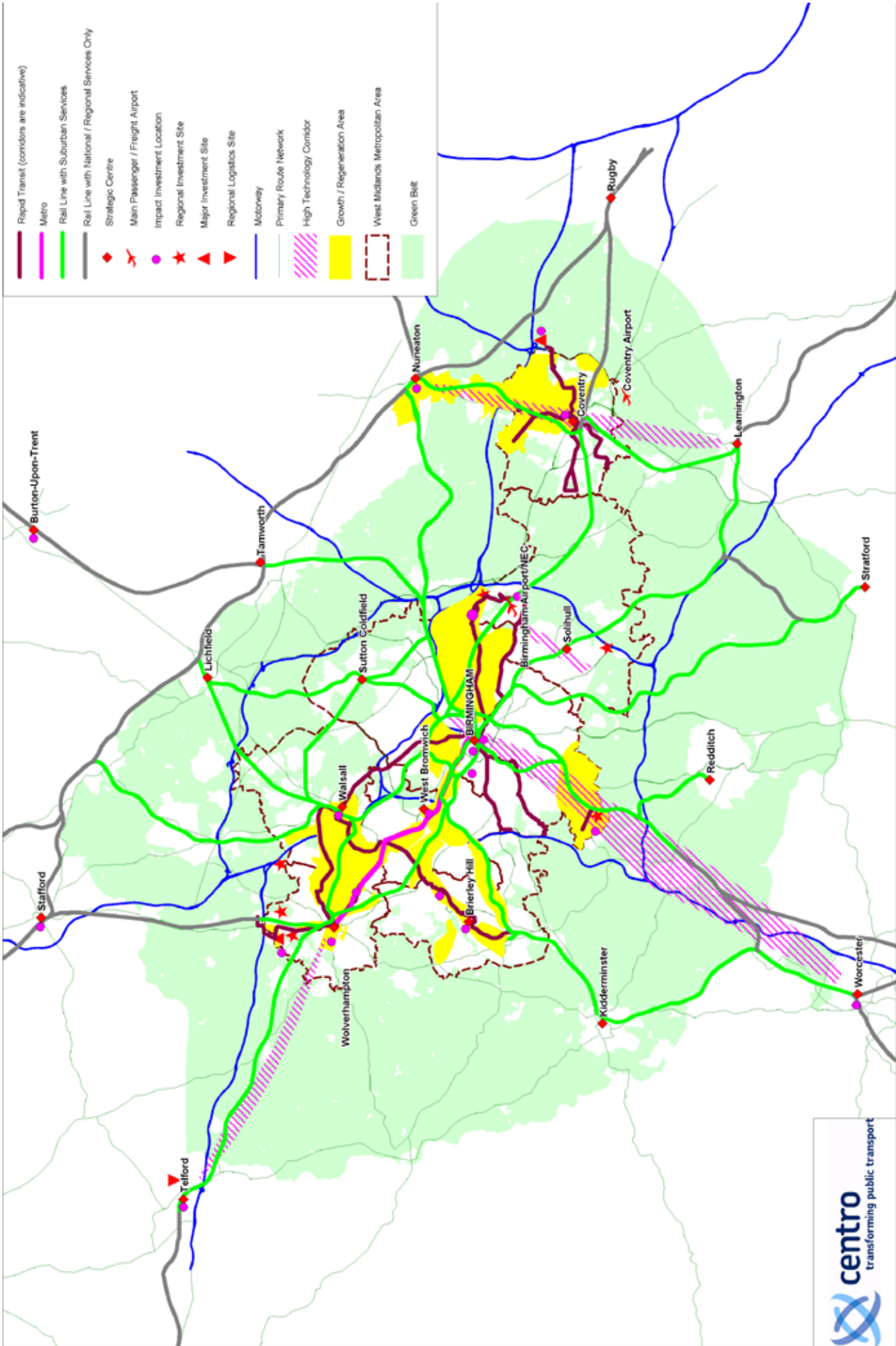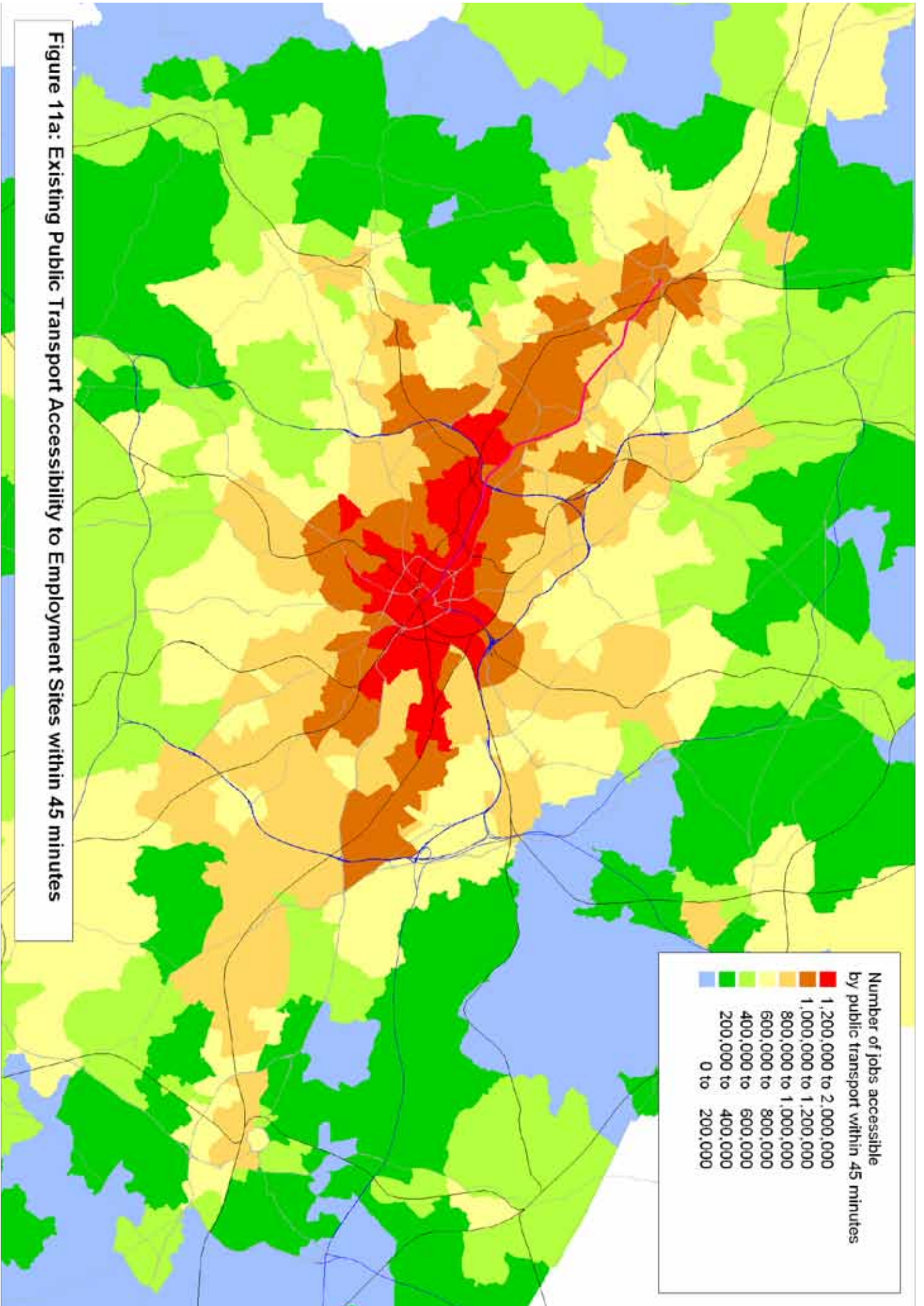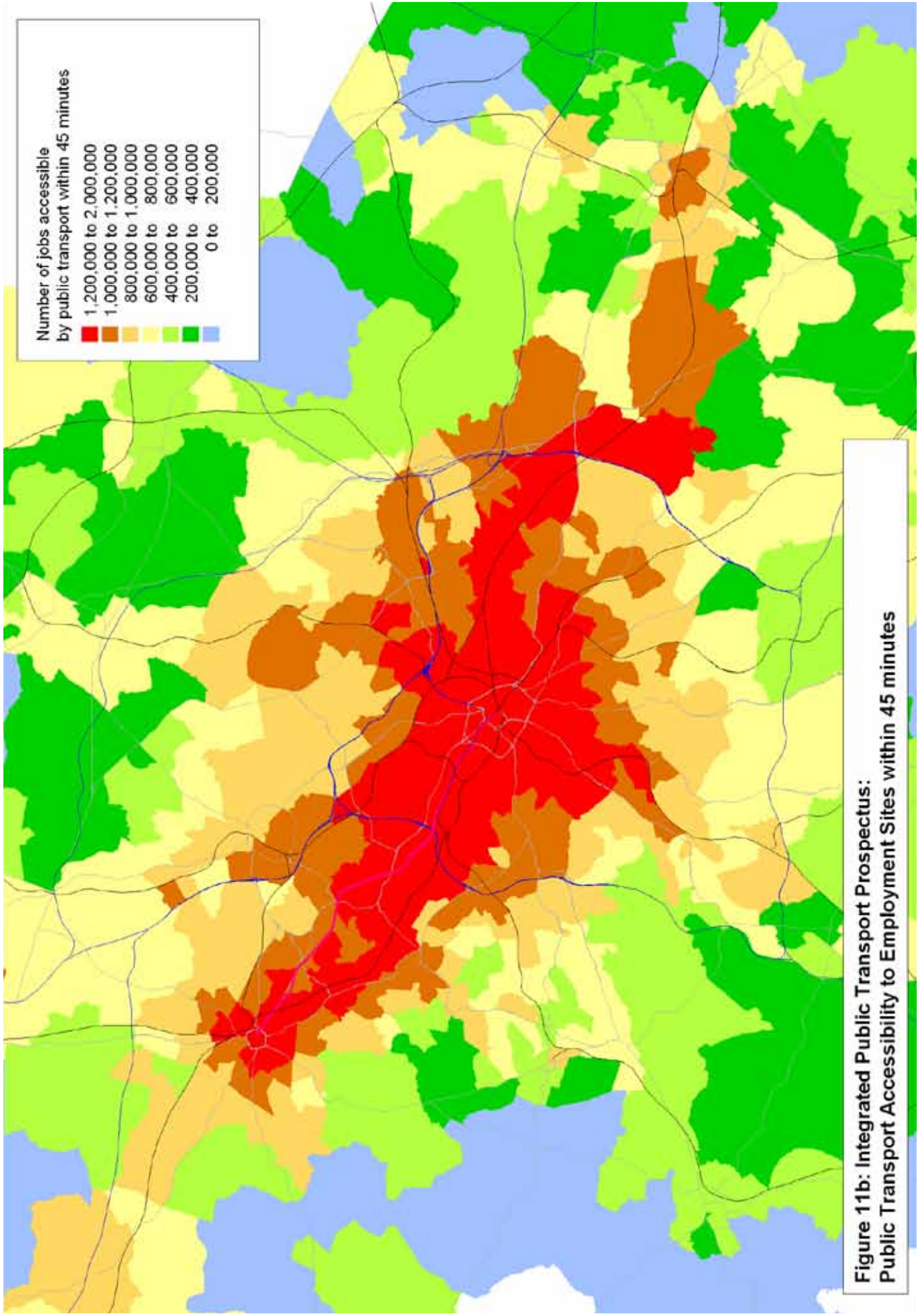- 0 to 200,000

**Figure 11b: Integrated Public Transport Prospectus:**
**Public Transport Accessibility to Employment Sites within 45 minutes**

# 4. Benefits of the Integrated Public Transport Network

**4.1** Delivery of a world class public transport network will help the West Midlands global economic competitiveness and environmental sustainability. It will do this through:

• A major contribution to the reduction of the £15 billion GVA productivity gap of the West Midlands Region compared to the UK average. This is through £1 billion of improved GVA and wider economic benefits*, from delivery of key Regional Transport Priority public transport schemes. Other public transport improvements will improve GVA further.

• High quality rail and rapid transit connectivity (see Figure 10) for:
- sixteen Impact Investment Locations
- nine metropolitan area major regeneration and growth areas
- all the metropolitan areas main centres
- five Settlements of Significant Development in the wider journey to work area through suburban rail, alongside regional/national rail links to the other five Settlements of Significant Development.

• Improved access to labour markets, through 1.3 million residents being able to reach one million or more jobs by public transport within 45 minutes travel time: double the existing number of residents (see Figure 11a and b ) **

• Future increases in demand for travel accommodated more effectively, with over 100 million extra public transport journeys per year, of which at least 13 million are transferred from car. Many of these extra journeys will be made by rapid transit services in high volume corridors. This provides a solid platform for a wider transport/land use strategy to tackle congestion more effectively.

• Greenhouse gas emissions reduced by 34 million kilos per year, as a result of at least 13 million car journeys transferred to public transport.***

**4.2** Themes for wider transport/spatial development strategy which support the public transport vision are set



* Wider economic benefits are productivity benefits, multiplier benefits and new employment

**The maps show the number of jobs residents living in the different areas can get to within 45 minutes public transport travel time, eg a higher number of jobs are within reach of residents of Central Birmingham compared to residents of rural Warwickshire

*** assuming average car journey length of 13.7 km and 180 g $CO_2$ emitted per car km.

## Number of Public Transport Trips

|  | 2006 | Prospectus* |
|---|---|---|
| **Rail** | 33m | 49m |
| **Rapid Transit** | 5m | 67m |
| **Bus** | 310m | 338m |
| **Total** | **348m** | **454m** |

* Demand calculated from TIF technical work 2007: rail and bus 2021 investment scenario without road pricing PRISM run, adjusted to reflect rapid transit appraisal–Metro phase 2 appraisal, TIF appraisal of SPRINT, North Solihull, I54, Bartley Green, Coventry East –West

# 5. Key Performance Indicators

**5.1** Centro has a comprehensive monitoring process in place with performance indicators at the strategic and operational levels. Local Transport Plan targets will be informed by this performance monitoring set. Centro's performance management covers indicators for patronage, customer views and technical characteristics of the West Midlands public transport system for the following fifteen critical success factors:

**Opportunity**
- Network access
- Integration
- Accessible design
- Affordability

**Quality**
- Frequency
- Reliability
- Journey Times
- Personal security
- Attractiveness and comfort
- Customer care
- Direct services

**Communication**
- Information
- Promotion
- Awareness
- Responsiveness

**5.2** From this comprehensive set, the following key indicators will be used to monitor performance, and inform implementation and development of strategy:

## Strategic

• Public transport use, by mode and per capita, for benchmarking with other urban areas

• Public transport modal share for the West Midlands as a whole and for the nine main centres, including AM peak modal share

• Customer satisfaction surveys, for existing users by mode and corridors with improvements such as bus "partnership routes"

• Customer satisfaction surveys of non-users to gauge opinions of markets not currently regularly using public transport

• Socio-economic profile of public transport customers compared to the West Midlands population as a whole, to gauge how well public transport performs as a truly universal system used by all sections of the population.

• Timetabled frequencies

• Network coverage

## Operational

• Reliability by mode

• Punctuality by mode

**5.3** These will support indicators and targets for wider transport outcomes in the West Midlands Local Transport Plan.

# 6. Delivery and Funding

**6.1** The West Midlands is already making solid progress in delivering the Prospectus's vision. Nearly £700m of capital funding is approved and currently being spent on delivering the following projects:

• New Street Gateway

• Wolverhampton Interchange

• Stourbridge Interchange

• ANITA BIA/NEC access improvements

• Smartcard

• Smarter Routes (Red Routes, UTC and Quality Bus Corridor packages)

• Local park and ride expansion

• New eco-fuel hybrid buses

**6.2** Major schemes upto 2014 are also programmed, fleshing out further the delivery of the vision. These schemes focus on Impact Investment Locations where benefits are increased by coordination of regeneration, housing and transport interventions. They include:

• Metro Line 1 improvements and Birmingham city centre extension

• Metro Wolverhampton city centre loop

• Nuneaton – Coventry Rail Scheme

• Further "Smarter Routes" packages

• Bromsgrove station

• Stratford Parkway station

• Small scale rail station and infrastructure improvements, including platform lengthening at suburban stations to increase rail capacity



**6.3** Local Transport Plan 3 will deliver further improvements, in addition to these major schemes. It will contain programmes and packages for Smarter Routes, interchanges, access to stations and other elements of the 4 tier network.

**6.4** Revenue plans will maintain and enhance provision, including implementation of a review of subsidised bus access standards and expansion of Ring and Ride capacity in line with a new three year business plan. Smartcard will also be rolled out across the West Midlands.

**6.5** Additional funding is also actively being pursued from European Union and other sources to help public transport minimise the impact of the economic downturn and assist recovery out of recession.

**6.6** The pace of further delivery of the Prospectus beyond 2014 will be determined by the longer term funding packages available over the next 20 years. These will include new rounds of Regional Funding Allocations, West Midlands Local Transport Plan implementation programmes, and Network Rail Control Period expenditure.

**6.7** The levels of funding available to the West Midlands need to be seen in the context of the relatively high levels of investment in transport which our global competitors have, and continue to receive.

**6.8** Potential new avenues need to be explored to help increase funding towards levels found internationally. These relate to how local government is able to raise capital for infrastructure projects in the future. This includes current work in the metropolitan area exploring the potential of "ADZs" – Accelerated Development Zones.

**6.9** It is difficult to define what locally and nationally agreed priorities will be beyond 2014, but any medium term programme will need to consider the following "direction of travel" to help achieve the Prospectus:

## Rail and Rapid Transit Network

1. Increase central Birmingham rail capacity through construction of the Camp Hill chords.

2. Introduce new suburban rail services for Camp Hill and Tamworth lines and extension of services to Aldridge

3. "Black Country Access" rapid transit scheme linking Wednesbury – Brierley Hill - Stourbridge

4. Utilise released capacity arising from rail freight line/rapid transit opening in the Walsall – Stourbridge corridor

5. Continue improvements to the quality of stations with minor works programmes

6. Implementation of station access projects, including additional park and ride capacity

7. Rail electrification programme

8. Track/signalling improvements to increase capacity

9. Long term implementation strategy for Metro: incremental network expansion, based on small, affordable, logical extensions to the Metro network

10. Implement tram-train conversion of selected suburban heavy rail services, where identified as a key element of optimum corridor approaches and is compatible with central Birmingham rail capacity plans.

11. Implement SPRINT BRT lines

## Principal Bus Corridors

1. Implement "Smarter Routes" Corridor Strategy improvements to the Strategic Highway Network, covering principal bus corridors, Red Routes, "quick wins" traffic management measures, Urban Traffic Control and Congestion Target Delivery Plan measures.

2. Implement quality improvements and traffic management measures on principal bus corridors not on the Strategic Highway Network.

## Local Bus Networks

1. Complete local area bus network revisions

2. Implement quality improvements and traffic management measures on local bus corridors not on the Strategic Highway Network.

3. Programme of large bus interchange improvements.

4. Programme of improvements to smaller, on-street bus interchanges, focused on main district centres.

5. Procure subsidised local bus services in line with reviewed access standards

## Complementary Travel Services

1. Expand Ring an Ride capacity, in line the 3 year business plan

2. Procure demand responsive services in the West Midlands in accord with a clear role arising from the Community Transport Study

3. Promote Sustainable school travel through measures including "brokered" schools contract services.

4 Promote travel training and associated travel buddy schemes to assist learning disabled people to undertake independent public transport journeys

## Integration Measures

1. Implement "Smarter Travel Choices "measures, including walking and cycling provision

2. Co-ordinate new development with public transport through LDFs and local area action plans.

**6.10** Longer term, realisation of the Prospectus will depend, in part, on the ability of the West Midlands to raise capital for infrastructure projects.

**6.11** There is no doubt that an acceleration of funding will be required to achieve the vision for public transport to support long term regeneration and growth. This must be seen in a wider context where the UKs global competitors are benefiting from 40% more investment in transport as a proportion of GDP for the last 40 years.

**6.12** The vision set out in this Prospectus is by no means exceptional in this wider global competitiveness context.

**6.13** Furthermore, as shown in the Box opposite, European conurbations competing with the West Midlands in the global economy continue to invest heavily in urban public transport.

## European Examples of Continued Investment in Public Transport

### The Ruhr
The Rhein-Ruhr Express project is currently being implemented. This is a 1.4 billion euro 120 km regional rail scheme connecting main centres of the Ruhr conurbation: Dortmund, Essen, Duisburg and Dusseldorf, with Cologne. This develops the Ruhrs extensive rail network further.

### Rotterdam/The Hague
The Randstad light rail system opened in 2007, connecting Rotterdam, The Hague and Zoetermeer ( a new town between the two cities) at a cost of 1.3 billion euros. This new system connects the extensive tram and metro networks of the two cities.

### Porto
Porto's (metropolitan area 1.6 m) metro system is a 5 line 70 km light rail system. The system was constructed in 4 years (2002 – 2006) at a cost of 1.3 billion euros.

# 7. Supporting Transport and Spatial Development Strategy

**7.1** As a successful element of a wider, overall transport system, the integrated public transport network needs to be supported by better use of highway capacity, improved conditions for walking and cycling and spatial planning. Longer term, new demand management measures need to be considered to supplement the improved alternatives being provided to some car journeys. Following from this, a long term strategy for the overall transport system of the West Midlands needs to be developed with Districts as a fundamental element of the next West Midlands Local Transport Plan. Development of this strategy will need to take into account the following principles:

## Highway Capacity

**7.2** The Metropolitan Area's Strategic Highway Network, (taken as the Principal and Primary Route Networks) needs to allow the easy movement of goods and people, accommodating elements of the rail and rapid transit and bus networks. For this to happen, there

needs to be a balance struck between competing demands for highway capacity.

**7.3** Providing the "rapid" part of rapid transit is critical, and an effective modernised bus network requires that bus efficiency and reliability is ensured.

**7.4** The strategic approach to this challenge is to:

• transfer some car use off the highway at busy times onto public transport, cycling or walking. This is achieved by offering a genuine choice of mode for car users. Demand management measures will also play a part in transferring further car use through measures such as parking policy.

• reduce some demand to travel. This can be achieved by measures such as teleworking and by combining journey purposes for one trip.

• promote Smarter Routes to ensure the smooth flow operation of the Strategic Highway Network for all road users through the implementation of schemes such as Red Routes, an urban traffic control system for traffic lights

and by a series of "quick win" traffic management measures ( smaller scale treatments, particularly at junctions).In addition, highway capacity needs to be increased in a small number of selected circumstances, where performance criteria for a large metropolitan areas' Strategic Highway Network are not met and increased highway capacity is an appropriate transport solution. This is particularly applicable to some pinch-point junctions on the Principal and Primary Route Networks.

• Emergency responding vehicles will need to benefit from all traffic management measures on the Strategic Highway Network to ensure minimised response times to incidents.

**7.5** Measures to improve the attractiveness of centres, and road safety on main roads and minor residential streets, also needs to be considered in any wider overall transport strategy, alongside consideration of the needs of disabled people including blue badge holders parking spaces.

## Freight

**7.6** Freight movement is an essential element for the national, regional and local economies.  Centro fully appreciates the economic benefits to the area and the need for highway and planning authorities to work closely with businesses and industry representatives in addressing the issues of freight distribution.

**7.7** The approach to improving freight transport, compatible with the development of a world class public transport system is set in the context of the West Midlands Regional Assembly 2007 Regional Freight Strategy. The key issues this highlights are considered in the box below.

**7.8**  The approach for improving freight transport consists of:

• Joint working through the West Midlands Freight Quality Partnership

• Enhancing delivery areas

• Tackling congestion on a broad front

• Consideration of freight consolidation areas

• Promotion of rail freight

### West Midlands Regional Assembly 2007 Regional Freight Strategy: Key Issues

• Particular local bottlenecks on road transport links to, from, and through the region to improve greater efficiency and reliability

• Improved journey times and reliability

• The use of inappropriate roads by HGVs, sometimes the result of bridge or weight conditions

• Poor signage between trunk routes and freight generating locations

• Need for better traffic management to make the best use of existing capacity

• Parking of HGVs in appropriate locations

• Lack of parking for HGVs and driver amenities

• Shortage of appropriately qualified drivers and the need to recruit/retain more qualified drivers

• High costs to individuals of HGV training and the reluctance of industry to pay for training schemes

• Young people being lost to the industry due to the 21 years old qualifying age

• Willingness of employers/ haulers to pay the M6 toll fee

• HGV crime

• Encouraging local sourcing to address the trend of increasing trip length

**7.9** The West Midlands Freight Quality Partnership is currently being reinvigorated to progress its aims to:

• Agree and keep under review, a strategic transport network for the region, for distribution purposes

• Identify and work towards addressing key capacity constraints on the network to improve reliability for freight distribution

• Agree a route signing and information strategy, and to progress a programme of agreed priorities

• Promote sustainable distribution in the West Midlands, including exploring opportunities for greater use of environmentally friendly modes, other than road based

• Pursue traffic management techniques, to provide for efficient delivery and servicing of commercial and other relevant areas, taking into account of environmental issues eg loading /unloading bays, no car lanes and route restrictions

• Promote industry best practice initiatives

• Share information and encourage research on the movement of freight for the region

• Increase the availability of appropriate, safe lorry parks with driver amenities

**7.10** Rail freight will be encouraged in line with the national Rail Freight Route Utilisation Strategy (RUS) This is especially positive where joint investment benefits both rail freight and rail and rapid transit development.

**7.11** Rail freight on the Walsall – Stourbridge line will be encouraged, in conjunction with rapid transit development in this corridor. Rail freight use of the Walsall – Lichfield corridor will also be supported. Such a rail freight line could also create an opportunity for tram-train or other passenger rail services in this corridor.

**7.12** Local authorities will seek to protect key rail connected or connectable sites and to advocate the enhancement of key routes into and through the West Midlands to W10 gauge or better for containers (i.e. can carry 9ft 6in high, 2.5 metre wide, standard containers).

## Smarter Travel Choices

**7.13** Smarter Travel Choices consist of a range of initiatives to change individuals' travel behaviour in favour of the more sustainable modes - public transport, walking and cycling, but also seeks to question the need to travel in the first place. Smarter Travel Choice measures can play an important part, within the wider transport strategy, in reducing congestion and reducing the impact of transport on the environment.

**7.14** There is a range of Smarter Travel Choice initiatives that can be used to promote the use of sustainable travel modes. These include:

- Public Awareness of Travel Choices
- Workplace Travel Plans
- School Travel Plans
- Community Travel Plans
- Residential Travel Plans
- Rail Station Travel Plans
- Promotion of Walking and Cycling
- Personalised Travel Plans
- Car Sharing
- Car Clubs
- Smarter TravelWorking (Teleworking/Home Working/ Flexible Working)

**7.15** The evidence base of Smarter Travel Choices has been growing in recent years, and this shows that Smarter Travel Choices can deliver the following important benefits:

- Reduce modal share of car, increase the modal share of public transport, walking, cycling and car sharing

- Playing a role in addressing the 'School Run' and improved health and safety benefits

- Reduction in the overall number of car trips

- Change in the timing of travel, in particular a reduction in car travel during periods of peak traffic volumes.

**7.16** Impressive increases in public transport use, walking and cycling, have been particularly witnessed where resources are concentrated on targeted areas, such as the Government's recent Sustainable Travel Demonstration Towns project.

**7.17** The approach to Smarter Travel Choices in the West Midlands is to develop major travel plan pilot schemes in targeted , congested corridors . These pilot schemes will help us develop a more comprehensive programme for the whole Metropolitan Area. A bid for national "Sustainable Travel Cities" funding, if successful, will be a major plank of Smarter Travel Choices strategy in the West Midlands.

## Walking

**7.18** Walking is the first and final link of most public transport journeys, and the link between services where interchange is required. As such it is important in the provision of an integrated system.

**7.19** Walking has many environmental benefits and is good for peoples' health. It is therefore encouraged as a practical option for local journeys, particularly under 2 kms. Measures to encourage walking are based on safety and environmental improvements in residential areas (eg improved lighting) and the reduction of the dominance of the private car in central areas through eg, pedestrianisation and traffic calming schemes. The quality and maintenance of pavements, squares and public places is crucial to providing a first class walking environment.

people without access to a car. It is also a valuable tool in public health policy.

**7.21** Cycle use currently has a low base in the West Midlands. However, cycle strategy in the West Midlands is building on the growing volume of cycling for local journeys and there are opportunities for increased use, particularly in targeted areas which currently have relatively higher levels of cycling. Provision is based on appropriate measures for different conditions encountered on cycling demand desire lines, eg segregated facilities for heavily trafficked, high speed roads and shared use of low speed, lightly trafficked roads.

**7.22** Interchange with public transport promotes more journeys to be made by the greener modes and will continue to be encouraged. It must be recognised, however, that there are also potential conflicts between cycling and bus operations and that these need to be resolved at the design stage.

**7.23** International experience of carriage of bikes on buses and rail and rapid transit vehicles will be monitored to see if there are potential applications in the West Midlands.



## Spatial Planning: Development Locations

**7.24** One of the overall objectives is to influence development location. Future development location helps shape future travel demand and vice versa. Centro will work with regional partners to ensure that the future Single Integrated Regional Strategy and Local Development Frameworks (LDFs) reflect the vision and help shape broad development patterns in the Metropolitan Area and its wider journey to work area accordingly. At the more local level, LDFs will protect future rapid transit alignments and high intensity developments, such as offices, will be steered to places well-served by public transport, particularly in the strategic centres. This will help promote more sustainable travel patterns.

**7.25** Centro will work with planning partners from the outset when strategies and plans are being developed to
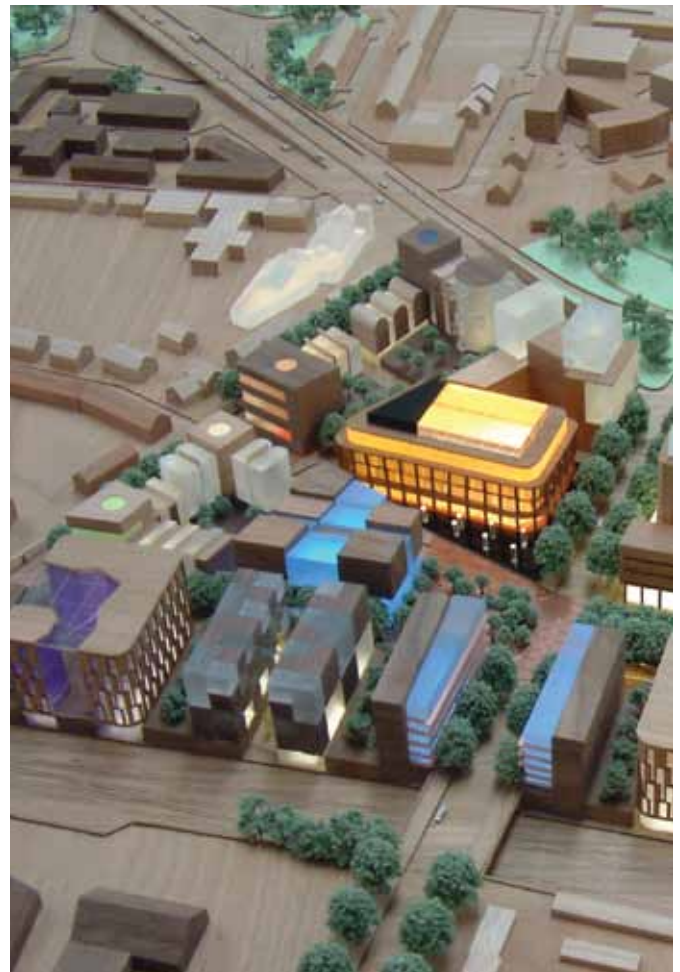
foster together, joined up transport and land use planning.

**7.26** Long term masterplans are being developed for many of the strategic centres and will need to show the relationship between developments and transport networks in order to protect alignments, make provision for stops and stations and ensure that sufficient capacity is provided for efficient and effective operation of the bus network.

**7.27** The central Birmingham "Big City Plan" element of Birmingham's core strategy has particular importance as the regional centre. The plan will need to accommodate future rail capacity and rapid transit needs, as well as effective bus interchange and bus hub arrangements.

# 8. Governance

**8.1** It is recognised that existing arrangements are not the optimum for developing and delivering this vision. Responsibility for different modes is fragmented and inhibits the capacity to develop a co-ordinated and integrated transport network.

**8.2** The West Midlands Metropolitan Area is currently reviewing its transport governance arrangements. The Review aims to secure better strategic decision making under the reforms enabled under the Local Transport Act, and respond to the Sub-National Review of Economic Development and Regeneration

**8.3** The West Midlands is therefore developing its governance proposals based on the following key principles:

**• Functions and Powers**

- Putting in place governance structures that will achieve an integrated transport strategy for the West Midlands

- Enabling delivery mechanisms which are more effective than current

- Strengthening accountability

- Considering the role of a West Midlands Integrated Transport Authority (ITA)

**• Structure and Governance**

- Effective democratic involvement without losing local focus and accountability

- Enabling links between key players i.e. DfT, strategic local authorities, the regional development agency, regional assembly (including local government, business and other stakeholders), the Highways Agency, Network Rail and the City Region.

**• Funding**

- Explore possible changes to funding sources, levels and flexibility

- Reducing cost and increasing value for money

**• Timing**

- Consideration of the phasing of reforms over time and the requirement for transitional arrangements

**8.4** The review will provide recommendations for the Metropolitan Area in 2010.

## 9. Concluding Remarks

**9.1** This Integrated Public Transport Prospectus sets out a direction of travel for the development of a world class public transport system serving the West Midlands. This system is a means to end : it is a major tool in assisting the sustainable economic development of the West Midlands.

**9.2** Realisation of the prospectus's vision will be the culmination of many decisions made nationally and across the West Midlands, over the next twenty years. Local consensus and political commitment are therefore fundamental to the success of this Integrated Public Transport Prospectus.

**9.3** The West Midlands is at a time of change in relation to the Local Transport Act and future potential forms of transport governance.  Whatever form of governance evolves, the key messages of this Prospectus need to be embraced and taken forward by all partners, to help the West Midlands grow and prosper over the next twenty years.

## 10. Glossary

### Bus Rapid Transit (BRT)

Bus Rapid Transit is an approach to bus provision based on emulating the characteristics of successful urban rail services: higher service speeds, extensive priority measures, high frequency, less frequent stopping, stops more like tram stops, off-board ticketing and new-look vehicles.

### Car Club

A car club provides its members with quick and easy access to a car for short term hire. Members can make use of car club vehicles as and when they need them. They operate on the principle of:

• Book - for as little as half an hour at a time, using telephone or internet

• Unlock - cars are located at designated parking bays in the local area and accessed using a membership card

• Drive – Once inside the driver enters a pin and drives away, returning the car at the end of the journey

• Pay - Pay-as-you-go charges include fuel and maintenance costs. A subscription charge is paid monthly or annually

There are a range of car clubs operating in the UK - from small, community based enterprises through to large commercial operations

### Demand Responsive Transport (DRT) Services

DRT services do not follow a fixed route like conventional bus services. Instead services have tailor- made schedules each day, based on booking requests to pick people up and drop them off, at pre-determined locations. Flexible-routed bus services might follow a core route and deviate if passengers require them to.

### Disability Discrimination Act (DDA)

This Act was passed by Parliament on 8 November 1995 and is designed to make it unlawful to discriminate against disabled persons regarding employment, access to goods or services, or buying or renting land or property. The Act was amended in 2005 to include the definition of disability and the introduction of the Disability Equality Duty for public authorities.

### Gross Value Added (GVA)

Gross Value Added (GVA) is a measure of the value of the goods and services produced in the economy. It is primarily used to monitor the performance of the national economy and is now the measure preferred by the Office for National Statistics (ONS) to measure the overall economic well-being of an area.

### Growth Agenda

Economic growth and prosperity is a key focus for the West Midlands Metropolitan Districts which have ambitious plans for improving regional competitiveness and quality of life through regeneration and housing growth. The West Midlands aims to be a world class region in which to live, do business and to invest. The population continues to expand, and is predicted to increase by 5 per cent by 2021, whilst employment will also grow in the longer term. In keeping with this expansion, there are plans for significant numbers of new homes across the metropolitan area.

### Growth Points

Growth Point status is an agreement between central government and a local authority wishing to pursue large scale and sustainable growth, including new housing. It is built on four principles:

• early delivery of housing as part of the growth plans

• supporting local partners to achieve sustainable growth

• working with local partners to ensure that infrastructure and service provision keep pace with growth

• ensuring effective delivery

## Local Transport Act

The Local Transport Act aims to strengthen the powers and strategic role of existing locally accountable Passenger Transport Authorities (re-named Integrated Transport Authorities (ITAs)). It also allows for boundary extensions to existing ITAs, and the creation of new ITAs in areas not currently served. The Act also reforms the bus sector, with a new process for the introduction of the franchising of networks of bus services, and new measures designed to make effective voluntary and statutory partnerships easier to introduce and maintain. Finally, the Act gives local authorities the powers to introduce road user charging pilots.

## Metrobus

"Metrobus"is a clearly branded core bus network of high frequency, direct routes with long operating hours. The aim is to emulate successful characteristics of metro systems . Metrobus networks are found in Berlin, Hamburg and Munich.

## Network West Midlands

Network West Midlands is the name that connects all public transport in the West Midlands metropolitan area. This includes Birmingham, Coventry, Dudley, Sandwell, Solihull, Walsall and Wolverhampton.

It clearly identifies the complete network of bus, rail and Metro services that are easily accessible to most people in the West Midlands.

## Rail Franchise

Private companies operate rail services in the UK through franchises awarded by the Department for Transport. The West Midlands' London Midland franchise began on 11 November 2007 and combines services between London Euston , Northampton, Bedford, Bletchley, Watford Junction and St. Albans Abbey with  the West Midlands local and regional service groups of the previous Central Trains franchise. The franchise will run until September 2015. Virgin Trains, Chiltern Trains, Arriva Trains Wales and Arriva Cross Country also hold franchises which operate trains within the West Midlands.

Alongside rail franchises in the UK are a limited number of "open-access" operators. The Wrexham, Shropshire and Marylebone Railway is an open-access operator with services in the West Midlands.

## Rapid Transit

Rapid transit is a high capacity, high frequency mode of public transport. It can operate underground, with or separate from the main highway traffic. Examples include the London Underground, Randstad Rail in Holland or the Las Vegas MAX.

## Regeneration Zones and the Regional Development Agency

Advantage West Midlands is the Regional Development Agency for the West Midlands. Around £300 million is invested each year into activity that will help transform the West Midlands' economy. To ensure that disadvantaged groups and communities benefit from wider economic activity there is a particular focus where deprivation is most acute (Regeneration Zones). Six Regeneration Zones have been identified in the West Midlands to help target funding to areas of greatest need.

The Government created Regional Development Agencies in 1999 to help create prosperity across England. To do this, they seek to strengthen and grow regional economies, guided by the principles of sustainability to ensure a healthy long term future. There are nine RDAs across England including Advantage West Midlands for the West Midlands region.

## Ring and Ride

This is a dial-a-ride, door-to-door transport service for those unable to use conventional public transport.  This service covers the whole West Midlands metropolitan area.  It is almost wholly funded by Centro.

## Smartcard Ticketing

A smart card is any pocket-sized card with an embedded chip which can process data. A smartcard pay-as-you-go card system is being introduced on public transport in the West Midlands. The scheme's first phase

will see "smartcard" being rolled out on all buses. Smartcard will then be in use on trains. It is expected to take two years to install the necessary equipment onto every bus and train. The card, which must be kept topped up with credit, is similar to the Oyster Card already used in London.

The technology will deliver a number of benefits to Centro, transport operators and customers in the West Midlands, including faster and more efficient payments, reduced fraud and a quicker and more pleasant journey experience for the customer.

## Social Exclusion

The Government's Social Exclusion Unit defines social exclusion as a 'short-hand term for what can happen when people or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, poor housing, high crime, bad health and family breakdown'. These problems tend to have a cumulative and reinforcing effect on each other, preventing people from fully participating in society.

## Smarter Routes

The umbrella term used to describe the approach to assessing issues and developing solution to an entire key corridor. Currently schemes are implementing on an individual basis which means benefits are targeted to one road user or to one location. The intention of Smarter Routes is to ensure improved journey reliability for all road users. Additional benefits would include efficiency savings through joint development and delivery of schemes

## Strategic Park and Ride

Strategic Park and Ride sites are park and ride sites readily accessible from the Strategic Highway Network, larger than local park and ride sites (often seen as typically having 300 spaces or more) and served by a frequent, rapid, rail or possibly bus service, to a major centre.

## Sub-National Review of Economic Development and Regeneration

The Sub-National Review of Economic Development and Regeneration (SNR) published by the Government in July 2007 sets out some major challenges for the way regional development agencies (RDAs) such as Advantage West Midlands work at a regional and local level.

Specifically, it sets out the parameters for managing policy at the right regional levels, ensuring clarity of roles and enabling places to reach their potential.

SNR sets out proposals for all regions to develop a Single Integrated Regional Strategy, additional responsibilities for local government, a new and more strategic role for RDAs and changes to the regional architecture.

Reforms will take place around four key areas:
• Reform of central Government's relations with regions and localities

• Strengthening the regional level through responsibilities transferred to RDAs from Regional Assemblies

• Supporting local authorities to work at the sub-regional scale

• Empowerment of local authorities to promote economic development and neighbourhood renewal

## Technology Corridor

Advantage West Midlands has identified three geographical areas in the West Midlands where the mix of business activity, academic expertise, research capability, infrastructure and development opportunities exist to encourage the growth of high technology businesses.

## Transport Innovation Fund (TIF)

In 2004 the government announced the creation of the Transport Innovation Fund (TIF). The Fund aims were defined as to support:

• the costs of innovative local transport packages that combine demand management measures, such as road pricing, with measures to encourage modal shift, and better bus services

• local mechanisms which raise new funding for transport schemes

• regional, inter-regional and local schemes that are beneficial to national productivity

## Tram-Train

Tram-train is a light-rail public transport system where trams also run on main-line train tracks for greater flexibility and convenience.

The first UK trial of tram-train is currently underway in South Yorkshire. The two-year trial of these innovative lightweight vehicles is looking at the environmental benefits, operating costs and technical suitability of the tram-trains as well as testing how popular the vehicles are with passengers on the route.

## Travel Plan

A travel plan is a package of measures aimed at promoting sustainable travel within an organisation, with an emphasis on reducing reliance on single occupancy car travel.

## West Midlands Regional Assembly

The West Midlands Regional Assembly is responsible for developing and co-ordinating a strategic vision for improving the quality of life in the region. It comprises of 100 (full) members, with 68 members representing the local authorities, 16 representing the business sector and 16 representing other economic and social partners.

The Assembly is responsible for setting priorities and delivering regional strategies, including the regional strategies for each of these areas, and to ensure they are tailored to meet the needs of the West Midlands. From 2010 new regional ways of working will replace Regional Assemblies in England.

# 11. Appendices

**1. Strategic Documents Relating to the Regeneration and Growth Agenda**

**2. List of Principal Bus Corridors**

## Appendix 1: Strategic Documents Relating to the Regeneration and Growth Agenda

## Economic Development

**1.1**. The Regional Economic Strategy "Connecting to Success – the WM Regional Economic Strategy", and its recently published Delivery Plan sets out a vision for the West Midlands Region. This is to be a global centre where people and businesses choose to connect. It has been hailed as the UK's first low carbon Regional Economic Strategy. Its focus is to close the output gap of £15bn to match the UK average whilst ensuring that growth contributes to
improvements in the quality of life and respect for environmental limits.

**1.2**. As well as highlighting the Region's successes, "Connecting to Success" also acknowledges its main weaknesses, one of which is transport infrastructure. It highlights the problems of congestion and it's adverse effects on air quality and the environment. The need for clear leadership is spelt out.

**1.3**. The public transport response to this is to achieve greater market share of travel demand, to help reduce congestion and link people with jobs and skills more effectively.

## Spatial Planning/Housing

**1.4** The Regional Spatial Strategy (RSS) for the West Midlands was published in 2004 and is the subject of a review in 3 phases

## Phase 1– The Black Country

**1.5** Following the pioneering work of the Black Country

Study and an Examination in Public (EiP), the Phase 1 Review was adopted in January 2008 and sets the strategic framework for the Joint Core Strategy for the Black Country, currently being undertaken by the 4 authorities - Dudley, Sandwell, Walsall and Wolverhampton. Urban renaissance will be achieved by focusing growth and
regeneration in the four strategic centres and strategic corridors served by rapid transit.

## Phase 2 – Housing growth, employment land, centres, waste and elements of transport

**1.6** This review provides future housing requirement allocations, an employment land strategy, and a long term framework for the development of main centres in the
Region. New housing will be steered to the Major Urban Areas and ten Settlements of Significant Development (SSDs). These include New Growth Points to accelerate development.

- Worcester

- Telford

- Shrewsbury

- Hereford

- Rugby

- Burton upon Trent

- Stafford

- Nuneaton/Bedworth

- Warwick

- Leamington Spa

- Redditch

## Phase 3 – Rural Services, recreation provision and regionally significant environmental issues.

**1.7** This review will provide a steer on rural areas spatial development.

## Sustainable Community Strategies

**1.8** All seven Local Strategic Partnerships in the metropolitan area have produced, or are in the process of producing, a Sustainable Community Strategy for their District. These set out the overall long term vision for the District which informs Local Development Framework (LDF) development and the setting of priorities for work with central Government to secure local area agreements (LAAs).

**1.9** A summary of the 7 Sustainable Community Strategies headline visions in the West Midlands Metropolitan Area is shown below. From these, it can be seen that there are common themes across the 7 Sustainable Community Strategies which aim for improved employment prospects; safer, more attractive places to live, healthier communities, greater ease of movement and an improved environment. Development of world class public transport is an important means to help achieve these aims.

## Summary of West Midlands Sustainable Community Strategy Headline Visions

### Birmingham
The document sets out a vision for Birmingham for 2026 where: "Birmingham is the first sustainable global city in modern Britain. It is a great place to live, learn, work and visit: a global city with a local heart."

### Coventry
The Coventry Sustainable Community Strategy sets out the approach to achieve:

"Our vision for Coventry to be a growing, accessible city where people choose to live, work and be educated and where businesses choose to invest".

### Dudley
The Dudley Community Partnership is currently reviewing its Community Strategy, to evolve into a Sustainable Community Strategy. The overall vision of the existing strategy is " the promotion of stronger communities throughout the Borough".

### Sandwell
The Sandwell Sustainable Community Strategy ("The Sandwell Plan") has a vision of:

" Sandwell: Great People, Great Place, Great Prospects"

### Solihull
The vision contained in the Solihull Sustainable Community Strategy is :

"Solihull in 2018:  where everyone has an equal chance to be healthier, happier, safer, and more prosperous"

### Walsall
The Walsall Sustainable Community Strategy vision is: "A Vision For  2021

Walsall will be a great place to live, work and invest"

### Wolverhampton
The Wolverhampton Partnership is currently developing its draft Sustainable Community Strategy with an overall vision of:

"By 2026, Wolverhampton's economy is transformed and the gap in health, wealth and prosperity between the poorer and better off communities and neighbourhoods is substantially narrowed."

## Carbon Emissions

**1.10** The West Midlands Regional Economic Strategy is lauded as a low carbon economic strategy. Its headline indicator for carbon emissions is to reduce regional missions by 4.72 million tonnes.

**1.11** Public transport has an important role to play in a low carbon economic vision as increased use of public transport lowers carbon emissions from the transport sector. This is  where there is modal switch from the car, increased use of green-energy sourced electric rail

services, and enhanced environmental performance of buses.

**1.12** The Table below shows emissions per passenger km of car and public transport modes. It can be seen that transfer of car use to public transport is an important tool in a wider climate change strategy.

## Table : Emissions of Carbon Dioxide by Mode (g/passenger–km ($CO_2$)

| | |
|---|---|
| Car | 120 |
| Bus | 90 |
| Rail | 61 |
| Tram | 63 |
| Air (domestic) | 158 |

Source: CfIT, "Transport and Climate Change"

## Transport

**1.13** Transport strategy is set in the context of the regional transport challenge, nine regional transport priorities and the evolution of metropolitan transport strategy following Transport Innovation Fund work.

**1.14.** The key drivers which have been identified as crucial to the wellbeing of the whole Region and have shaped the transport priorities are the need to:-

• improve international connectivity, inter-urban linkages, regional and local connections and address congestion

• support and promote the urban and rural renaissance of the Major Urban Areas, the Regeneration Zones, the needs of the New Growth Points and Settlements of Significant Development

• maximise the opportunities for the Region through support for the current regional strategies and set the framework for future growth and prosperity.

**1.15** The technical work behind the key drivers produced 9 absolute priorities to support national regional and sub-regional imperatives. These are:-

• Birmingham New Street Station

• Birmingham International Airport – runway extension and surface access

• M5/M6 capacity improvements and Motorway Box Active Traffic Management

• Rail Freight Upgrades – West Coast Main Line to key ports of Southampton and Felixstowe

• Regional rail capacity, both for passenger services and strategic freight connections

• Black Country 'strategic transport spine'

• North Staffordshire strategic public transport network

• New Growth Points/Settlements of Significant Development

• Smarter Travel Choices

**1.16** The West Midlands Metropolitan Authorities are acutely aware of the pivotal position of the Metropolitan area in terms of national and regional transport networks and of the need to address congestion, support growth and improve competitiveness for the benefit of the Region as a whole and the national economic good.

**1.17** In July 2007 the Authorities published 'Gridlock or Growth – Choices and Challenges for the Future – Towards an Integrated Transport Strategy' which prioritised a region-wide package of measures and interventions. Subsequently, in March 2008 the authorities published a follow-up report based on further research and new evidence under the title of 'Tackling Congestion – Delivering Growth'. This supports the West Midlands' ambitious plans for growth and provides a metropolitan perspective to assist with the finalisation of the West Midlands Transport Strategy which will deliver increased connectivity and tackle increasing levels of congestion for the benefit of local and national transport users.

**1.17** Current transport strategy in the Metropolitan Area, following TIF, is a jointly agreed three point

approach:

• with regional authorities to secure funding for regional transport priorities which benefit the West Midlands eg new Metro lines and additional rail capacity for central Birmingham

• Build up the "Lifestyle Choices package", including travel plans, and "hearts and minds" initiatives

• Strengthen the programme of measures to tackle congestion, particularly development of the "Quick Wins" programme of minor traffic management projects

## Appendix 2: List of Principal Bus Corridors – Corridors Served by Main, Direct Bus Services.

NB  Some existing main bus services in the corridors proceed to destinations beyond the corridor.

Where a principal bus corridor is also a rapid transit corridor in the prospectus, then the starting destination is indicated in brackets. Bus provision will be complementary to rapid transit provision to best meet the variety of public transport journey needs in the corridor.

| Birmingham / Solihull Corridor | Existing Main Bus Services Operating in the Corridor |
| --- | --- |
| 1. (Birmingham) – Perry Barr – Walsall | 51 |
| 2. (Birmingham)- Perry Barr – Pheasey | 33 |
| 3. Birmingham – Witton - Perry Common | 7 |
| 4. Birmingham – Aston – Perry Common | 65 |
| 5.(Birmingham) – Perry Barr – Sutton Coldfield | 107 |
| 6. Birmingham – Sutton Coldfield | 902, 905, 915 |
| 7. Birmingham – Walmley – Sutton Coldfield | 914 |
| 8. Birmingham – Castle Vale | 67 |
| 9. Birmingham – Fox and Goose – Chelmsley Wood | 94 |
| 10. Birmingham – Alum Rock -  Chelmsley Wood | 54/55 |
| 11.(Birmingham) – Bordesley Green - Chelmsley Wood | 97/97A |
| 12. Birmingham – Alum Rock -  Chelmsley Wood | 14 |
| 13.Birmingham -  Marston Green | 17 |
| 14. (Birmingham) – Sheldon – BIA/NEC | 57/57A/58/60 |
| 15. Birmingham – Olton – Solihull | 37 |
| 16. Birmingham - Shirley – Solihull | 6 |
| 17. Birmingham – Yardley Wood – Shirley | 12 |
| 18. Birmingham – Wake Green – Maypole | 2 |
| 19. Birmingham – Druids Heath | 50 |
| 20. Birmingham – West Heath | 45 |
| 21. Birmingham  - Cofton Hackett | 47 |
| 22. Birmingham – Northfield - Frankley | 61 |
| 23. Birmingham -  Longbridge  Rednal/Rubery | 62/ 63 |

| Birmingham / Solihull Corridor | Existing Main Bus Services Operating in the Corridor |
| --- | --- |
| 24    Birmingham – Harborne – Woodgate Valley North | 103 |
| 25.   (Birmingham) – Harborne – Bartley Green | 22/23 |
| 26.   (Birmingham) – Harborne – Northfield | 29 |
| 27.  (Birmingham) – Quinton – Stourbridge | 9/99 |
| 28.  (Birmingham) – Dudley – Wolverhampton | 126 |
| 29.  Birmingham – Cape Hill – Bearwood | 82 |
| 30.  Birmingham -  Cape Hill - Blackheath | 88 |
| 31.  Birmingham – Oldbury – Dudley | 87 |
| 32.  Birmingham  - Oxhill Road | 101 |
| 33.  Birmingham – West Bromwich – Wolverhampton | 79 |
| 34.  Birmingham – West Bromwich – Dudley | 74 |
| 35.  Birmingham – Hamstead | 16 |
| 36.  Birmingham -  Acocks Green | 1 |
| 37.  Birmingham – Inner Circle | 8 |
| 38.  Birmingham – Outer Circle | 11 |
| 39.  Solihull – Chelmsley Wood | 71 |
| 40.  Solihull – BIA - Erdington | 966 |
| 41.  Solihull – Rubery | 49 |

| Black Country Corridor | Existing Main Bus Services Operating in the Corridor |
| --- | --- |
| 1. Wolverhampton – Codsall | 535 |
| 2. (Wolverhampton) – Pendeford | 504,505,506,507 |
| 3. Wolverhampton – Underhill | 511 |
| 4. (Wolverhampton) – Wednesfield – Ashmore Park | 559 |
| 5. (Wolverhampton) – Wednesfield - Bloxwich | 560 |
| 6. Wolverhampton – Willenhall – Walsall | 529 |
| 7. Bilston – Darlaston – Walsall | 339 |
| 8. Wolverhampton – Sedgley – Dudley | 558 |
| 9. Wolverhampton – Kingswinford – Brierley Hill | 254,255 |
| 10. Kingswinford – Stourbridge | 256, 257, 259 |
| 11. Wolverhampton – Perton | 510 |
| 12. Wolverhampton – Tettenhall Wood | 501 |
| 13. Walsall – Bloxwich – Mossley | 301 |
| 14. Walsall – Pelsall | 33, 346, 361, 395 |
| 15. Walsall – Brownhills | 394,394A |
| 16. Walsall – Aldridge – Castlefort | 367,368 |
| 17. Walsall – Sutton Coldfield | 377 |
| 18. Walsall – West Bromwich -Blackheath | 404 |
| 19. Walsall – Wednesbury - Dudley | 311,313 |
| 20. Dudley – Russells Hall – Brierley Hill | 222 |
| 21. Dudley – Brierley Hill - Stourbridge | 246,311 |
| 22. Dudley – Halesowen | 242 |
| 23. Brierley Hill – Blackheath | 258 |
| 24. Brierley Hill – Halesowen | 138,139 |
| 25. West Bromwich – Sutton Coldfield | 451 |
| 26. (Birmingham) – Quinton – Stourbridge | 9 |
| 27. (Birmingham) – Dudley – Wolverhampton | 126 |
| 28. Birmingham – Cape Hill – Bearwood | 82 |
| 29. Birmingham - Cape Hill - Blackheath | 88 |

| Black Country Corridor | Existing Main Bus Services Operating in the Corridor |
|---|---|
| 30. Birmingham – Oldbury – Dudley | 87 |
| 31. Birmingham – West Bromwich – Wolverhampton | 79 |
| 32. Birmingham – West Bromwich – Dudley | 74 |
| 33. (Birmingham) – Great Barr – Walsall | 51 |

| Coventry Corridor | Existing Main Bus Services Operating in the Corridor |
|---|---|
| 1. Coventry – Keresley | 36 |
| 2. Coventry – Prologis Park | 13 |
| 3. Coventry – Lockhurst Lane – Nuneaton | 55/56/57 |
| 4. (Coventry) – Foleshill –Bedworth/Nuneaton | 20/48/50 |
| 5. Coventry – Wood End | 21,22, 10 |
| 6. Coventry – Binley – Willenhall | 13 |
| 7. (Coventry) – Potters Green/ Walsgrave – Ansty | 32/33 |
| 8. Coventry – Willenhall | 21,22 |
| 9. (Coventry) - Tile Hill/Tanyard Farm | 32/33 |
| 10. (Coventry) – University of Warwick | 12 |

# Notes

# Notes

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**0121 214 7214**

**customerrelations@centro.org.uk**