

# 1. SUSTAINABLE LIFESTYLE SCENARIO

“Rural bliss in a hi-tec haven”

## **Overview**

1.1 Britain is a country in which many people, but far from everyone, have started to pursue the goal of sustainable local living in order to achieve an improved quality of life. This has, in turn, reduced the need to travel. This improved way of life takes place in a sustainable manner encouraging self-sufficient communities driven by local needs and lifestyles. “Grass roots” changes, like Britain’s great post 1945 shift towards social democracy, resulted from a change of values. The changes were partly prompted by rising fossil fuel prices and a need to cope with the consequences of climate change but also by a belief in the rewards of community life. People, whether as employees or employers, decided that the old way of doing things just didn’t work. A sense of public pride and renewed community spirit has ensured that all those living within an area are seen to be doing ‘their bit’ and aspiring to the improved way of life.

1.2 Those who hold these new values, far from looking backwards, embrace advancing technologies and adopt day to day lifestyles that reduce their use of energy and road space for utilitarian car travel. The behaviour of society has also been influenced by the effects of policy shifts (that began in the early years of the century) towards the recolonisation of cities and charging for road use.

## ***Socio-Economic Context : Land Use Planning***

1.3 At the heart of the socio-economic world of 2030 is the issue of land use planning which takes account of transport needs whilst encouraging people to live and work in sustainable locations. Towns and cities have undergone a revival with, for example, garden apartments being built on derelict sites (such as car parks).

1.4 Some 80% of the buildings of urban Britain in 2030 are those which existed at the end of the 1990’s with minor modifications. The shift to the localised lifestyles took place within the suburbs, where the vast majority of the population now live and work. Some employers have, for instance, moved into former suburban buildings (such as schools) in order to employ local people who can walk or cycle healthily to work.

## ***Socio-Economic Context : Business / Industry***

1.5 Through societal changes (and some legislation) employer strategies in the last 30 years have called for businesses to move to appropriate locations based on where their workforce lives, the availability of good quality, sustainable transportation links and the surrounding business economy. The pressure from society has sought to eliminate personal

motor vehicle travel to work resulting in the removal of unpredictable, long and often highly stressful journeys to work. The removal of these stresses has resulted in a healthier / happier employee who in turn has a better quality of life, and more time outside work. Such changes have been particularly encouraged by smaller businesses as it was observed during the 1990s that they generally felt the impact of disruptions to the transportation network more than larger companies. The locally based arrangements are less likely to be affected by adverse weather or travel disruptions and therefore maintain a continuous, predictable workforce.

1.6 Many crops which were previously grown by farmers have changed with products such as fruit and vegetables (grown under solar heated plastic and sold in nearby towns on the day that they were picked) replacing those which were once common such as oil seed rape.

1.7 Business clustering in 2030 has resulted in many business/industries/retailers who benefit from using the same distribution services developing as concentrations of activity within an area, as it has in the past in areas such as Coventry (Motor industry) and Sheffield (Steel industry). In addition to creating geographical areas of specialist knowledge and like-minded skills this has resulted in it being possible for employees to change jobs without major relocation being necessary.

1.8 Technological advances which began in the 1990s have continued at a greater pace and with wider availability than before. Home-working and video-conferencing are now permitted which generally further reduce the need to travel. Further simple provisions, such as centrally available rooms, also help to bring people together for meetings in a far more sustainable manner.

1.9 A combined, unified delivery service exists through community distribution centres in order to prevent multi-deliveries to the door each day. This has resulted in the local corner shop becoming an outlet or distribution centre for larger supermarkets (a concept pioneered by SPAR at the turn of the century on behalf of Sainsburys). Such community based stores also sell local goods from nearby producers as well as providing a limited, but wide, range of goods and services which were previously only found at out of town centres / superstores (eg eliminating the out of town drive to large retail centres to buy small items). Cookshops have appeared in most local centres which turn the raw materials picked that day by the farmers into ready-to-eat microwave meals.

***Socio-Economic Context : Community (Including Social, Leisure and Education)***

1.10 Mixed use developments are now commonly offered by planners. These meet the demands from the increasing number of people who have chosen to live either in the centre

of concentrations where walking and cycling are possible or in the suburbs where reliable and regular public transport links are provided. The generation of a market for sustainable living has brought about changes in the property market that have led to houses of particular value being those that are served by several routes thereby giving access to a number of population centres.

1.11 Communities now have the provision of high standard local services with quality facilities such as schools, health care and local retailers all within a short walking distance of every home. Additional facilities such as community distribution and recycling centres are also locally available. Through all of these measures a growing sense of civic pride has been generated which has led to further ongoing, programmes of improvements.

1.12 Through the relocation and changes in lifestyle local, and generally healthier, leisure pursuits have seen a revival with activities such as walking and community based clubs (eg guides, cubs, WI.etc) being encouraged rather than travel based pastimes. The close proximity of community services and town centre attractions minimises the use of private vehicles within the conurbations.

### ***Socio-Economic Context : Technology***

1.13 Sustainable suburban living is made possible by a host of new technologies. Photovoltaic panels, fuel cells, heat pumps and aero-generators supply energy to hyper-efficient appliances and vehicles. Tele-services have made it possible for major growth in home-based work, learning, health and leisure activities thus reducing the individuals need to travel.

### ***The Transport Vision***

1.14 The changes in lifestyle have had two major implications for the individual (or household) and their needs for travel arrangements:

- An increased demand for goods and interchange
- The emergence of an individual / household portfolio of vehicles / modes (eg bikes, vespas, cars, walking ..etc)

1.15 Through a reduced need for routine domestic and non-leisure trips, many journeys which were seen as a chore in the 1990s have become unnecessary following the social shifts and were consequently removed from the network. The released transport capacity has been utilised for further leisure and pleasure trips which have continued to be an important and stimulating part of peoples' lives.

1.16 Concentrations of both business and social activities in the centre of population intensities have generated more local demand for services with high quality local public transport networks along radial routes of town and cities to serve the surrounding residential communities. Public transport gives consistent priority to the suburbs along radial routes and car use in the centres is reduced to a minimum. This has minimised the need for personal motorised vehicles for trips within an urban area in addition to collective transport mobility within the conurbations is now facilitated through a combination of cycling, vespas, vehicles for the disabled/elderly, hybrid-power taxis, minibuses, home delivery and walking. Such improvements are strongly supported by Local Authorities which have provided cycle and pedestrian networks for making short circumferential journeys which, unlike core radial routes, are not generally covered by frequent collective services.

1.17 For those who choose to live outside of the concentrations (eg in rural areas), parking and interchange is provided on the edges of a conurbation and at the outer limits of radial routes allowing a more sustainable option to be used to access the local central areas.

1.18 Distribution in 2030 is competitive but also offers an integrated service to different clients on different legs of a tour. In order to minimise the number of delivery vehicles on the network goods containers are capable of multiple uses allowing them to be occupied in both directions of a journey. For example a delivery can be made to a store with the vehicle taking away the sorted waste as it returns to the depot, thus minimising empty running. This is not possible in all situations due to safety concerns (eg milk). Such changes in distribution patterns have facilitated the use of the appropriate mode for an appropriate delivery contributing to the improved environment for all. For example white vans now serving clusters of suppliers bulk up deliveries to take to specific towns or parts of cities where they drop them off at petrol stations on the local mini-market/outlet centre.

### ***Inter-Urban Travel***

1.19 As unnecessary journeys have been removed from the inter-urban network the increased remaining capacity been given to trips for leisure and pleasure purposes which still take place (although some access restrictions have proved to be required in a few intense areas of tourism). The spaces, which at the turn of the Century was occupied by local 'short hop' motorway trips, are now available for long distance inter-urban travel which was the original intention of the routes.

1.20 Concentrations of industries have also led to consultants relocating to be closer to their clients although 'personal service providers' still require some inter-urban travel for business. This takes place through the optimised, smart corridors between neighbouring population concentrations.

1.21 The national rail network has always passed through the heart of many urban conurbation's with stations in the centre of towns and cities whilst motorways (predominantly) run adjacent to the outskirts of the same urban populations. Through the 'Better Way of Life' vision both of these resources have been revised extended and used as inter-urban transport corridors.

1.22 The existing motorway network has been revised to consist of some manually controlled lanes, accompanied by automated 'guided' lanes. These new lanes gradually evolved from a relatively basic format, similar to that which was used in guided bus lanes in the year 2000 in which once in the guideway, the steering is controlled automatically by guide-wheels bearing against the vertical kerbs. The guided system was subsequently upgraded to an automated, fully infrastructure controlled facility in which the driver is freed from control of their vehicle and is able to undertake a number of other leisure or business pursuits. The vehicles using such lanes continue as individuals using their own drive units or collectively in some form of shuttle transportation similar to that which was originally designed for cars in the Channel Tunnel. Depending upon the particular trip the vehicle 'slots' are either free accessed or pre-booked in advance in order to regulate demand further.

1.23 Nodal points have been created at intersections between modes / boundaries of conurbations for distribution and passenger interchange between the modes for inter-urban journeys. Links have been provided at these points to neighbouring airports, ports, inland water based travel.etc. These centres are commonly combined with sources of trip generation such as leisure attractions, theme parks or cinemas in order to confine development into a single, easily accessible, location.

1.24 Orbital branches from existing motorway corridors have been created around built up areas in order to permit goods and passengers in the controlled / automated lanes to be moved, at speed, around the perimeter of the town / city to the most appropriate inward route. Once the vehicle leaves the Inter-urban network and control is returned, the personal vehicle can use the radial routes to complete their journey allowing door-to-door movement. Although still relatively intensive the new infrastructure has a smaller footprint than other potential solutions given that the additional land take associated with a guided or automated lane is considerably less than that occupied by a full traffic lane and associated infrastructure

1.25 As the majority of people generally have moved to living in sustainable centres of concentrated population access to the central railway station for passengers wishing to make inter-urban journeys has been greatly improved. Collective transport links along radial routes and environmentally friendly circumferential routes provide access to stations. The rail system, as well as being suitable for the transportation of goods through the nodal points, has become

the quickest mode between the middle of two urban centres and consequently suitable for both business and leisure travel. Fast direct access between urban centres.

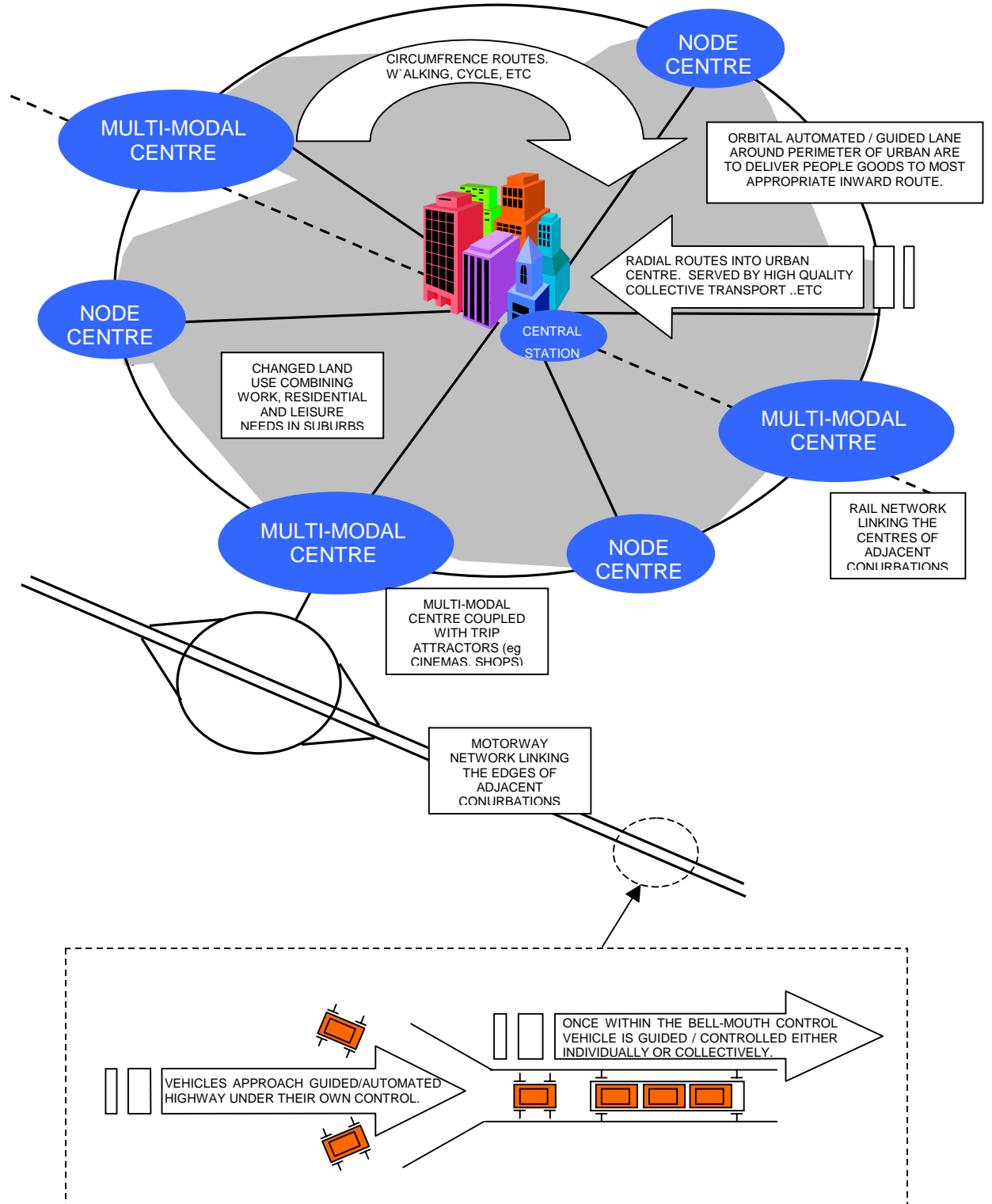
1.26 Generally the people living in the inner districts of cities are more likely to travel by train while those living in the outer suburbs are more likely to go to a nearby multi-modal transfer point and then on by motorway.

1.27 Some inter-urban deliveries of goods and raw materials are still necessary but businesses are now encouraged to look internally and take conscious decisions about goods and where they come from in order to maintain and promote sustainability. Where inter-urban transport is required in order to make deliveries the 'collective' concept has been continued in terms of logistics with a particular vehicle making multi-deliveries of similar goods throughout a chain of destinations such as a particular brand of store (eg Boots). Such a system permits freight to be transported locally by regional drivers to a nodal centre where the goods are then loaded onto a consolidated transporter for the journey between conurbations.

1.28 The advantages of such automation for the traveller are clear and include reduced accidents, 'family friendly' transportation (ie more quality time / less need to be away from home), predictable journey duration and easier to understand routes whilst all still permitting the personalisation of an individual 'vehicle'. The concept also maximises accessibility for all groups of society as an appropriate mode can be used for a particular trip.

1.29 Carbon based fuel usage was replaced by more sustainable alternatives during the last 30 years in addition to the vehicles in the guided lane being equipped with suitable features to permit them to pick up electricity from the side of the road. Other alternatives which are being developed include induction and Electro-magnetically powered vehicles. Some standardisation of vehicles has been necessary in order to permit vehicles to access the system and interact.

**Illustrative Designs**



### ***The Role of the Network Operator***

1.30 The Network Operator works closely with a number of other industries / organisations through a series of strategic partnerships in order to take account of what is required rather than leading and dictating what can be provided. Such partnerships include other modes / operators, local authorities, law enforcement groups, community groups and industry in order to ensure a smooth transition at the boundaries of the inter-urban network and provide efficient and appropriate maintenance, regulation and operation of the system.

1.31 The role of the operator within the vision can be likened to a mail sorting office where items to each destination are moved automatically through a system to reach their goal. A further analogy is the concept of checking baggage in at an airport that automatically arrives at the destination in time.