Basildon Borough
Local Development Framework

Topic Paper TP6
Transport and Utilities

February 2012

Basildon Council
BASILDON • BILLERICAY • WICKFORD

2 Topic Paper TP6: Transport & Utilities

Introduction

What is infrastructure?

1 Infrastructure concerns all the facilities, services and amenities that enable a place to function. In a modern country this includes stable water and energy supplies, effective communications and good transport systems. Planning is expected to deliver the infrastructure needed to support communities and ensure growth is sustainable[1]. This topic paper sets out the context and key issues around utilities and transport infrastructure for Basildon Borough.

Utilities

2 Electricity and gas powers the Boroughs homes, businesses and facilities. The majority is provided from the national grid and gas pipelines that cross the Borough. Basildon does not contain a power station (fossil or renewable) or a gas facility of national importance. Small scale energy generation, such as combined heat and power plants and photovoltaic cells, are becoming more common but currently provide for a small proportion of the Boroughs energy demands[2].

3 The energy market in the UK is fully competitive[3], with private companies supplying energy to meet identified demand[4]. Local authorities are not expected to identify and plan for their entire energy needs or support the infrastructure required, as they are met through market demand and managed by regulating authorities. As the majority of electricity and gas production is generated and distributed by national infrastructure, planning decisions for such projects are taken by the Secretary of State or from April 2012, the Planning Inspectorate. (The 2011 Localism Act received Royal Assent on 15th November 2011 and entails provisions for the abolition of the Infrastructure Planning Commission in 2012)[5].

4 Local planning authorities are, however, expected to identify opportunities for decentralised, low carbon and renewable energy production within their areas[6] and are able to stipulate a proportion of a developments' energy to be met through specific means[7]. Small scale energy generation is ordinarily determined by local planning authorities, although some domestic energy generation is *permitted development*, not requiring planning permission and therefore not controlled by the planning authority. The main method of promoting domestic energy generation is by setting targets for a proportion of energy to be produced on-site, which is covered in a separate Topic Paper on mitigation and adaptation to climate change.

5 Communication technology is integral to daily life, with the internet, mobile phones, radio and television being the most obvious examples. Planning is expected to support the benefits of new technology and expanding communication coverage while seeking to minimise any potential harm to the environment, visual aesthetics, health and interference with other systems[8].

Transport

6 Land use planning decisions are intrinsically linked with maintaining an effective transport network[9] and it is crucial to integrate these disciplines for the Borough to remain competitive and successful. The main road and rail routes in the Borough enable millions of journeys every year, both within the Borough and to other parts of the region, London and the rest of the country. Congestion on roads and overcrowding on trains and buses, inequity of access to goods and

1 CLG (2005) *PPS1: Delivering sustainable development,* para.14-16 & 23; CLG (2004) *PPS12 - local spatial planning,* para.4.8-4.12
2 *currently estimated from Vantage Point and the submission of planning applications*
3 See DECC (2011) *Meeting Energy Demand: Energy Markets*
4 Demand is identified through a number of methods, with energy generation meeting demand through regulation. See DECC (2011) *Overarching national policy statement for energy* (EN-1) para.2.2.24 for an explanation
5 Planning Act 2008
6 CLG (2005) *PPS1* para.13(ii)
7 Planning and Energy Act 2010; CLG (2004) *PPS22 - Renewable Energy* para.18
8 CLG (2001) *PPS8 - Telecommunications* para.1-33; CLG (2011) *Draft National Planning Policy Framework* para.95-99.
9 DCLG (2001) *Planning Policy Guidance Note 13 - Transport* p.1

services, health implications, a changing climate and increasing costs present benefits in reducing the need to travel and addressing the polluting effects of transport [10].

7 As congestion, taxation and regulation begin to affect travel choice, successful urban environments will be those that adapt to less car-intensive patterns[11]. Planning policy is expected to influence and manage these changes by promoting development in areas that are less reliant upon private transport and promote settlement patterns that reduce the need to travel[12].

8 The Transport Authority for Basildon Borough is Essex County Council (ECC), who are responsible for producing the Local Transport Plan (LTP) and managing the Highway network. The LTP is in two parts, the first sets out long term strategic transport policies for the county and the second is a shorter-term implementation plan that outlines investment priorities in particular areas[13]. As well as the Transport Authority there are a number of other agencies and businesses, including the rail and bus operators, who provide services to those who live and work in the Borough.

9 In conjunction with the Local Transport Plan, the Local Development Framework can set out how transport is expected to function within the Borough, to ensure the most appropriate use of land within the overall objectives of its Core Strategy[14]. This document outlines (among other matters) the context of existing policy and describes the projected transport conditions that need to be considered over the plan period.

Policy Context

National Policy Context

Communication

10 National Planning Policy Guidance on Telecommunications states that the requirements of the Telecommunications Act 1984 need to be considered when preparing Local Development Frameworks. The Government's policy is to facilitate the growth of new and existing telecommunication technology whilst minimising the environmental impact, in particular the need to protect the best and most sensitive environment[15]. Whilst trying to do this there may be times when limitations imposed by the nature of the telecommunications network and the technology available mean a managed policy approach is necessary to locate telecommunications development[16].

Electricity and Gas Supplies

11 Planning Policy Statement (PPS) No.1 - *Delivering sustainable development* (2005) sets out key principles for the planning system, including that:

"development plans [should] contribute to global sustainability by addressing the causes and potential impacts of climate change, through policies which reduce energy use, reduce emissions, promote the development of renewable energy resources and take climate change impacts into account in the location and design of development"[17]

12 Consequently, regional and local planning authorities are expected to assist with meeting national targets for emission reduction and renewable energy supplies by identify opportunities in their area.

10 DfT (2009) *The Future of Urban Transport;* DfT (March 2011) *Creating Growth Cutting Carbon - Making Sustainable Transport Happen*
11 Rudlin & Falk (2009) *Sustainable Urban Neighbourhood, 2nd Edition;* Architectural Press
12 DCLG (2001) *Planning Policy Guidance Note 13 - Transport;* DfT (2009) *The Future of Urban Transport*; DfT (March 2011) *Creating Growth Cutting Carbon - Making Sustainable Transport Happen*
13 See Essex County Council Transport and Planning Services for further details
14 CLG (2008) *PPS12: creating strong safe and prosperous communities through Local Spatial Planning,* para.2.2
15 DCLG (2001) *PPG8* General Policies 1-6
16 DCLG (2001) *PPG8* para.7 & 14-18
17 PPS1 (2005) para.13(ii)

13 In addition, PPS22 - Renewable Energy (August 2004) concerns those forms of energy that occur naturally and expects local planning authorities to consider opportunities for small scale renewable energy projects in all new development and encourage such schemes through positive policies[18]. The statement also identifies how LPAs should take renewable energy into account when preparing local development documents and when taking decisions.

14 Decisions on strategic energy generation infrastructure are taken at a national level. Currently, applications for large scale energy generation (over 50 megawatts onshore and 100 megawatts offshore), large gas facilities, gas and oil pipelines and electricity lines over 132kV[19] are considered by the Infrastructure Planning Commission (IPC), although their role will be subsumed by the Planning Inspectorate in April 2012, where the Major Infrastructure Planning Unit (MIPU) will take over responsibilities[20]. Decisions on national infrastructure are taken by Ministers, except where National Policy Statements (NPS)[21] are designated. On 19th July 2011, six NPS for Energy were adopted[22], relating to:

- Overarching energy;
- Fossil fuel electricity generation;
- Renewable energy;
- Gas supply infrastructure & gas and oil pipelines;
- Electricity networks infrastructure;
- Nuclear energy (Volumes 1 & 2).

15 Local planning authorities are consulted on schemes that affect their area. Any developments below the thresholds for nationally significant Infrastructure are however considered by the Local Planning Authority.

Transport

16 National Planning Policy Guidance on: Transport states Government's objectives to integrate planning and transport policy at the national, regional and local level and to promote more sustainable transport choice for people and freight. It provides evidence that the continuing growth of road traffic is damaging towns, harming the countryside and contributing to global warming[23]. The guidance states that safe, efficient and integrated transport systems are needed to support a strong and prosperous economy and a good quality of life[24]. Furthermore, in order to provide easy access to jobs, shopping, leisure and services, when preparing development plans and determining applications local authorities are encouraged to manage the pattern of urban growth to make the fullest use of public transport, give priority to pedestrians and ensure there is a realistic choice of travel to jobs, shopping, leisure and services[25].

17 In addition to national planning policy, other important national documents that influence highway decisions and design are:

- Manual for Streets(published by the Department for Transport (DfT) in 2007), which sets out an approach to residential streets that encourages shared roads that are not dominated by their function as a transport corridor. An additional publication, Manual for Streets 2 (2010), gives a

18 PPS1 (2005) *Delivering Sustainable Development;* para.18
19 DECC (2011) *Overarching National Policy Statement for Energy (EN-1)*
20 CLG (December 2010) *Major infrastructure planning reform work plan* pp.2-4
21 NPSs are policy documents relating to specific infrastructure of national importance, drafted by relevant departments and approved by Parliament (in accordance with the Localism Act 2011), providing a framework for deciding applications for such infrastructure. If an NPS is aproved by the Secretary of State, the IPC (eventually the MIPU) will make the decision, otherwise the IPC will make a recommendation and the Secretary of State will make a decision
22 Department of Energy and Climate Change (2011) *National planning policy for energy infrastructure* http://www.decc.gov.uk/en/content/cms/meeting_energy/consents_planning/nps_en_infra/nps_en_infra.aspx
23 DCLG (2001) *PPG13 Transport* p.4
24 DCLG (2001) *PPG13 Transport* para.1
25 DCLG (2001) *PPG13 Transport Para.6*

wider application of the principles beyond residential streets in both urban and rural situations.

- Design Manual for Roads and Bridges[26], which ensures quality control in the design of highway infrastructure and stipulated technical aspects of road design in the UK.

- DfT (January 2011) White Paper: *Creating Growth, Cutting Carbon, Making Sustainable Local Transport Happen,* concerns the Government's intention to promote the reduction of carbon emissions from transport and boost growth at the local level, where short term solutions are most appropriate. It sets out a number of principles around 'nudge' theory with examples of how to reduce emissions and boost growth. The paper also announces the Local Sustainable Transport Fund, a new funding arrangement for certain transport works.

- DfT (July 2011) *Climate Change and Transport Choices* provides research into public attitudes towards travel behaviour and environmental concerns. It suggests how different groups of people would react to various incentives for lower carbon travel. The research provides a rich, nationally representative picture of distinct segments of the population as a voluntary evidence source.

- DfT (2009) *Road Transport Forecasts,* provides a national forecast to 2015, 2025 and 2035, for emissions, road traffic growth, congestion and journey times. The report utilises National Transport Model (NTM) projections, which combine a wealth of data sources to assess trends in road transport related areas. Key findings are a predicted rise in traffic, a rise in congestion, a rise in journey times and a reduction in pollution.

National Planning Policy Framework (NPPF)

Transport

18 The coalition Government's draft NPPF states the need for transport systems to be balanced in favour of sustainable modes, giving people real choice about how they travel[27]. It expects the planning system to support a pattern of development which facilitates the use of sustainable modes of transport, where reasonable to do so. The objectives are to:

- Facilitate economic growth through a positive approach to development; and
- Support reductions in greenhouse gas emissions and congestion and promote accessibility through the location and mix of development[28].

Energy

19 Local planning authorities are expected to assess the quality and capacity for energy and its ability to meet demands, taking account of nationally significant infrastructure within their area[29]. In achieving the objectives of a low carbon economy, local planning authorities should recognise the responsibility of all communities to contribute towards energy production from renewable and low-carbon sources. They should also not require applicants to demonstrate the need for low carbon or renewable energy[30].

Telecommunications

20 With regard to communications, the NPPF expects the planning system to facilitate the growth of new and existing communication systems, to ensure people have choice and equitable access to the latest technology. In supporting this

26 At the time of publication the latest version is dated February 2011, but the document is updated as required. See Highways Agency for details: http://dft.gov.uk/ha/standards/dmrb/index.htm
27 CLG (2011) *Draft NPPF* p.21
28 CLG (2011) *Draft NPPF* p.21
29 CLG (2011) *Draft NPPF* para.31
30 CLG (2011) *Draft NPPF* paras.148-153

expansion, the number of telecoms masts and sites should be kept to a minimum, with equipment sympathetically designed or camouflaged[31].

Regional Policy Context

The Regional Spatial Strategy (RSS)

Utilities

21 Policy ENG1 of the RSS expects local authorities to encourage the supply of energy from decentralised and low carbon sources, and to set thresholds for developments that will need to provide ambitious but viable proportions of the energy from such sources[32]. By 2010, the aim is for 10% of the region's energy to be from renewable generation, with 17% by 2020, excluding offshore wind[33].

Transport

22 The RSS (March 2008) (soon to be revoked) includes many transport policies that require consideration by local authorities when setting out local policies. A shift in travel behaviour towards more sustainable modes through education and practical demand management measures, is aimed at reducing congestion and increasing resilience in the network while offering travel choice[34].

23 Within the RSS, The Thames Gateway is identified as an area that is likely to come under increasing pressure due to underlying growth. It identifies Basildon, within the Thames Gateway, as a Key Centre for Development and Change, with expectations that its local urban transport policies will identify ways to change travel behaviour, ensure developments are linked to the existing urban fabric and are well designed and safe, particularly for pedestrians[35]. Basildon is also a regional transport node and part of the inter-urban public transport network, where improved access should be provided to quality rail and bus services[36].

Regional Economic Strategy (RES)

Transport

24 The RES 2008-2031 promotes sustainable movement, mainly by locating new development close to public transport. Meeting the economic needs of the Region and the Borough is an important part of sustainable development. The RES imperative is to reduce the need to travel through adequate planning considerations. This fits in with the considered advice and decisions of most professional bodies and authorities concerned with the impact of travel on peoples lives and the economy. Basildon will need to contribute to achieving better management of transport infrastructure and travel.

Local Plans, Programmes and Policies

Local Utilities Plans and Programs

25 There are no local utility strategies or plans that are organised by local government programmes.

The Essex Transport Strategy: the Local Transport Plan for Essex

26 Essex County Council are the Transport Authority for Basildon and are responsible for producing the Transport Strategy, a 15 year plan which sets out the aspirations for improving travel in the County. It combines with an Implementation Plan to set out how the outcomes of the strategy will be delivered and monitored within a particular geographic area, and the priorities for investment in the short term (the Implementation Plan for the Thames Gateway is yet to be published).

27 The Strategy seeks to achieve five broad outcomes[37]:

- Provide connectivity for Essex communities and international gateways to support sustainable economic growth and regeneration;

31 CLG (2011) *Draft NPPF* para.95 & 96
32 GOEast (2008) *East of England Plan* p.62
33 GOEast (2008) *East of England Plan* Policy ENG2 p.63
34 Government Office for the East of England (March 2008) *East of England Plan* Section 7
35 GOEast (2008) *East of England Plan* Policies T1-T4, T8,T9, T13 & 14
36 GOEast (2008) *East of England Plan* Policy T5
37 Essex Local Transport Strategy page iv

- Reduce carbon dioxide emissions and improve air quality through lifestyle changes, innovation and technology;
- Improve safety on the transport network and enhance and promote a safe travelling environment;
- Secure and maintain all transport assets to an appropriate standard and ensure that the network is available for use; and
- Provide sustainable access and travel choice for Essex residents to help create sustainable communities.

28 It explains that Essex has a successful economy and is an attractive place to do business[38]. The transport network is a crucial component to the performance of this economy, with reliable connectivity enabling residents to access jobs and for local businesses to attract employees[39]. Transport improvements need to be joined up with spatial planning and economic policies, particularly as the funding available for infrastructure from Central Government is being reduced. Furthermore, the Essex population is expected to grow significantly which, without adequate provision for sustainable transport, would overwhelm our current networks and increase carbon emissions, which are already relatively high compared to the national average[40].

South Essex Rapid Transit (*SERT*)

29 The *SERT* project is a proposal for a high quality, fast, attractive bus network linking major destinations within the Thames Gateway. Initially two routes are proposed, one linking Lakeside Shopping Centre and Basildon Town Centre via Grays and the other Southend Town Seafront to the Airport. In the longer term the ambition is to provide a network across the Thames Gateway. This would provide a viable public transport option for people working and living in the growth area.

30 The scheme is in the Department for Transport 'development pool'. A 'best and final bid' is being developed by Essex County Council in order to obtain final funding from the DfT[41] to implement *SERT* from 2014/15 onwards (correct as of June 2011).

Portrait

Water Resources

31 Drinking water in Basildon Borough is supplied by Essex and Suffolk Water (ESW), from the Essex Resource Zone (ERZ). The zone is highly integrated which provides a large degree of flexibility for moving water around the zone to where it is required[42].

32 Water within the ERZ is sourced from the rivers Chelmer, Blackwater, Stour and Roman River which support pumped storage reservoirs at Hanningfield and Abberton and treatment works at Langford, Langham, Hanningfield and Layer. There are also groundwater resources which supply approximately 3% of the zone's demand from the chalk well, and additional sources in the south and south west at Linford, Stifford, Dagenham and Roding.

33 Approximately 30% of the water supplied in the Essex supply area comes from outside Essex from the following two main sources:

- The Chigwell raw water bulk supply from Thames Water, which is provided via a transfer from the lea Valley reservoirs; and
- The Ely-Ouse to Essex Transfer Scheme (EOETS) which transports water from the Ely Ouse River at Denver in Norfolk to the Hanningfield and Abberton Reservoirs.

34 In dry years, the contribution from these two external sources may be as much as 50% of the water supplied in the Essex supply area. In addition, the Environment Agency operates two river support

38 Essex County Council (2011) *The Essex Transport Strategy p.*vi
39 Essex County Council (2011) *The Essex Transport Strategy* p.vi
40 Essex County Council (2011) *The Essex Transport Strategy;* p.vi
41 Implementation of *SERT* is dependent on funding from DfT
42 Essex & Suffolk Water, Water Resource Management Plan, January 2010 - sets out the company's plan for management of water resources within its supply area until 2034/2035.

schemes on the Great Ouse and Stour which can also be called upon in dry conditions.

35 ESW also operate an effluent recycling scheme at Langford, near Maldon, which intercepts effluent from Chelmsford Waste Water Treatment Works which is treated and recycled at Langford, before being pumped into the River Chelmer where it mixes with river flows to allow re-abstraction and transfer to Hanningfield Reservoir.

36 Scenario modelling[43] has shown that supply is currently insufficient to meet demand and with no action the deficit will worsen as a result of increased demand and a changing climate.

37 ESW's main strategy for meeting the future demand for water resources is to increase the storage capacity of Abberton Reservoir, outside Colchester, Essex and apply a commensurate increase and transfer from the Ely-Ouse water transfer scheme, which is to set to become operational by 2014[44].

38 Until 2014, South Essex will therefore be deficient in water during drought years to cope with its water resource needs, meaning that development phasing up to 2014 will need to be appropriately managed so that it does not exacerbate the problem.

39 ESW has investigated sourcing additional water resources from within the ERZ, however, none are possible due to poor water quality and uneconomic abstraction. Other water management options are listed in ESW's Water Resources Management Plan, which includes more property meter installation and leakage reduction. However, the South Essex Outline Water Cycle Study recommends that more stringent water consumption policies equivalent to Code for Sustainable Homes 3 or 4[45] be put in place for development in Basildon Borough, in order to improve water efficiency and make the most sustainable use of the County's limited water resources.

Water Transmission Network

40 There are no immediate limitations on supply infrastructure pipelines, reservoirs, water treatment works or pumping stations; however once exact development locations are known this will need to be confirmed through further examination of the Water Cycle with Essex & Suffolk Water[46].

Waste Water Treatment, Collection and Water Quality

41 A number of constraints exist within the waste water collection and treatment network in the Borough[47], together with the environmental capacity of receiving watercourses, which will affect how development is planned, in terms of scale, location and phasing.

Basildon Waste Water Treatment Works and Catchment

42 The Basildon Waste Water Treatment Works (WWTW) has no capacity in its consented permits for any increased discharge of treated effluent into the River Thames arising from growth in the Borough.[48] It is also affected by capacity issues in its wider waste water network, particularly pinch points in the Laindon trunk sewer, which is awaiting upgrades by Essex & Suffolk Water.

43 After 2015, the WWTW and outfalls would need upgrading and flow redistributed to Pitsea WWTW, which has excess capacity, if its catchment area was to become a preferred location for substantial new development. This would need to funded through the Water Regulator, OfWAT, rather than developers. If funding was delayed or not forthcoming it could delay growth in its catchment until after 2015-2020[49].

43 Essex & Suffolk Water, Water Resource Management Plan, January 2010.
44 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011
45 See: Planning Portal for further details at: http://www.planningportal.gov.uk/uploads/code_for_sust_homes.pdf
46 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011.
47 Scott Wilson, South Essex Water Cycle Study Scoping Report, 2009
48 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011.
49 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011.

Pitsea Waste Water Treatment Works and Catchment

44 The Pitsea WWTW has no immediate capacity problems in its consented permits and could be upgraded to take additional flows from Basildon WWTW, as set out above. There would only be a capacity problem if more than 10,600 new homes were proposed, as upgrades may be necessary[50].

Wickford Waste Water Treatment Works and Catchment

45 The Wickford WWTW has no capacity above its consented permits for any further discharge of treated effluent into the River Crouch arising from growth in its catchment. This would only present a further capacity problem however if more than 3,000 new homes were to be proposed in the WWTW's catchment, as upgrades may be necessary[51].

Billericay Waste Water Treatment Works and Catchment

46 Subject to plant upgrades to enable improvements to the treatment of waste water to improve water quality, the Billericay WWTW is not as constrained as the Borough's other WWTW to accept additional flows arising from growth. It has an unused capacity for just over 2,100 new households. Further capacity for 18,450 new homes in Billericay's catchment could be provided by diverting some of the waste water to the Shenfield and Hutton WWTW in neighbouring Brentwood Borough[52].

Transport Characteristics

47 Throughout the Borough, Basildon maintains comparatively good highway and public transport access. Proximity to London, the M25 and M11 via the A13, A130 and A127, is advantageous for industries in terms of import, export and distribution within the greater South East and beyond. The two train lines that pass through the Borough enable relatively high levels of rail commuting. A commercially viable, extensive bus network also connects people with a range of local destinations.

48 The Borough is generally very accessible by public transport, with travel to major employers[53] being within 30 minutes for the whole Borough and as low as 10 minutes for many areas. Similarly, the majority of Basildon Borough is within 30 minutes of a hospital and within 20 minutes of a college or sixth form[54]. While the general picture for accessibility is good, there are current and emerging deficiencies within the transport network:

1. Growing congestion on the transport network at peak hours. Much of the inter-urban road network is operating at or near capacity in peak periods, resulting in a vulnerable network and uncertain journey times, particularly when incidents occur. Examples include:
    i. The A132 from the A127 (Nevendon interchange) to the A13;
    ii. The A176 (Nethermayne) between the Five Bells and Roundacre;
    iii. A general lack of capacity on the A127 and A13 during the peak period, particularly at junctions;
    iv. The Billericay / Wickford rail line is approaching capacity and is expected to become a serious concern during the plan period.
2. Concerns over parking capacity in residential areas and loss of parking due to new development;
3. Low public perception of safety and security on public transport;

50 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011.
51 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011.
52 URS/ Scott Wilson, South Essex Outline Water Cycle Study, September 2011.
53 Defined as businesses with 50 or more employees
54 SA/SEA Contextual Baseline p.176 (source: ECC 2005 Survey)

4. Low levels of walking, cycling and bus use compared to other Essex towns;

5. Poor public transport accessibility to the Basildon Enterprise Corridor resulting in high levels of commuting by car, leading to peak hour congestion;

   i. The Basildon Enterprise Corridor is one of the largest employment areas in the Thames Gateway. The corridor benefits from, but also place demands on, the strategic transport network through Basildon and the wider network. Congestion at peak hours is affecting travel to these important employment sites, compounded by inadequate direct bus or rail services. The majority of commuting to the corridor therefore occurs in the private car, due to a lack of alternative travel choices.

6. Poor accessibility to rail stations by sustainable modes of transport, particularly interchanges between rail and bus stations; and

7. Less effective north-south transport links within the Borough compared to east-west routes.

Walking and Cycling

49 Effective land use planning compliments transport policies and can ensure that common destinations are close to where people live and work, enabling joined-up trips. An important aspect is encouraging people to walk or cycle to nearby places, which has health benefits and can reduce congestion and reduce emissions. Safety in the public realm, an attractive, well designed environment and appropriate cycle storage at destinations can all encourage walking and cycling.

50 Basildon has a good cycle network[55]. However, cycling is less likely to be chosen as a method of travel than in similar sized towns across Essex. The choice to walk or cycle is strongly effected by how convenient and safe it is to store a bike when reaching a destination, particularly stations, schools, shopping areas, hospitals and community facilities.

Rail Travel

51 Railways are an important mode of transport in the Borough, connecting people to employment and leisure destinations, particularly Southend and London. London is the most frequent destination for commuters and Basildon has a much higher proportion of rail commuters than the national average (18% against 8%). Rail freight is important to the Greater Anglia economy, but the bulk of movements do not pass along rail routes within the Borough and therefore passenger transport is the main function of rail through Basildon. There are two lines to be considered:

Greater Eastern Main Line (GEML)

52 This line includes Wickford and Billericay, operating between London Liverpool Street and Stratford, to Southend Victoria and Southminster. Overcrowding at peak hours is becoming a serious concern on this line. The Route Utilisation Strategy (RUS) has forecast a major capacity challenge on the GEML up to 2031. Options for increasing peak capacity beyond that outlined in the RUS appear to be extremely limited. Assuming the RUS recommendations are implemented in full, with replacement of rolling stock, full 12-car operations and an extra peak train, modelling still predicts a capacity shortfall of 4,200 people, leading to a greater likelihood of overcrowding from Wickford and Billericay[56].

Fenchurch Street Line

53 This line includes Laindon, Basildon and Pitsea stations, operating between London Fenchurch Street and Shoeburyness via

55 A Basildon cycle map can be found at: http://www.essex.gov.uk/Travel-Highways/Cycling-Walking/Documents/BasildonWEB.pdf

56 Greater Anglia Route Utilisation Strategy December 2007

the main line, with the 'Tilbury loop' via Chafford Hundred (Lakeside) which connects at Pitsea.

54 Capacity on the route in 2007 was within acceptable seating limits for people joining at the three Basildon stations during peak hours[57]. With planned enhancements, RUS modelling shows there will be sufficient additional peak capacity to meet demand.

Road Transport and Car ownership

55 Roads accommodate the greatest proportion of all travel in the Borough, whether for commuting, leisure, business or freight. Access to the strategic highway network is very good in Basildon and has attracted businesses to the A127 corridor and the Borough in general. Proximity to London, the M25 and M11 are all advantages for industries in terms of reaching a large number of customers through import, export and general distribution.

National road forecast relevant to Basildon Borough

56 The latest DfT Forecast (2009) for England predicts a rise in traffic (measured in kilometres travelled), a rise in congestion (lost time per kilometre) and increasing journey times, but a reduction in emissions, over the next twenty four years[58]. The 2009 forecast included updated assumptions on growth, Gross Domestic Product (GDP), fuel prices, an ageing population and incorporates emission assumptions consistent with the *Cabon Reduction Strategy,* in line with UK and European targets. Population and GDP growth together account for most of the forecast growth in traffic and congestion[59].

57 The DfT forecast projects multi-modal travel up to 2035 from a base year of 2003. It presents a rise in traffic of 25% and 43% by 2025 and 2035 respectively, and an according increase in congestion of 27% and 54%. High congestion forecasts are largely due to demographic trends and planning assumptions that more people will be concentrated in urban areas where congestion is more prevalent[60]. Car traffic continues to account for the majority of road traffic at around 79% and is forecast to grow by 41% to 2035 with the largest growth on Motorways and trunk roads[61].

58 Light Goods Vehicle (LGV) traffic is expected to grow most rapidly at 104% over the period, but will still account for a relatively small amount of overall traffic. Heavy Goods Vehicle (HGV) will grow much less at about 24%, accounting for 5% of all traffic, concentrated on strategic roads and rural areas.

59 Congestion will be greatest in areas that already suffer congestion, particularly London. Total time lost due to congestion for business travel will increase by 154% by 2035. This accounts for about a quarter of all congestion, with commuting also around one quarter.

Local Road Forecasts

60 Local forecasts are based on national trends and applied to the demography and model road network for the Borough. Without intervention, basic travel growth indicates that the existing road network will be significantly congested at a number of key junctions and routes, particularly during peak hours.

61 Existing peak congestion is not severe in the Borough but does affect journeys on certain routes. Peak travel on Nethmayne, Broadmayne and the A127 is becoming congested, while junctions at St.Nicholas Lane/Upper Mayne, Roundacre, and the A13 and Clay Hill Road/London Road area, Pitsea have observed problems. In Billericay, congested areas are around the High Street / Sun Street area, Southend Road, the Western Road / High Street junction and Stock Road / Radford Way. In Wickford, the A132 / Runwell Road roundabout has observed congestion.

57 See Greater Anglia RUS December 2007 p.32
58 DfT (2009) *Road Transport Forecasts 2009*
59 DfT (2009) *Road Traffic Forecast 2009* p.34
60 DfT (2008) *Road Traffic Forecasts 2008* p.5
61 DfT (2009) *Road Traffic Forecasts 2009* pp.15-16

62 Basic growth projections for 2031 show existing locations will remain problematic, with additional pressure at each junction along the A127, new problems on Laindon High Road and at its junction with West Mayne / St. Nicholas Lane, additional pressure on Nevendon Road and on the A13 towards Thurrock[62]

Car ownership

63 In Basildon, car ownership is lower than the Essex average (76.8% compared to 80.7%[63]). High levels of rail commuting and good public transport will be a factor, although the pattern of car ownership identifies lower levels in the New Town area compared to Billericay, Wickford and (specifically) Langdon Hills[64]. Each of these areas also have a greater proportion of households with two or more cars, indicating that ownership (and car use) is linked to affluence as much as need, following national trends[65].

64 Safety on roads is measured through traffic collisions and the number of people killed or seriously injured in accidents (KSI). The traffic accident rate in Basildon is better than the Essex average, with 54.5 per 100,000 people compared to 70.6[66] . The KSI for Basildon in 2006 was also lower than the County average. Four target groups were identified as requiring particular attention: young drivers (aged 17-25); motorcyclists; drink driving; and speeding[67].

Utilities Characteristics

65 Basildon does not contain any significant electricity generating stations or gas storage facilities. A gas pipeline crosses the Borough north-south and national grid transmission lines cross east-west, linking to Tilbury and Bradwell power stations. Gas and electricity production and supply is not a particular concern in Basildon beyond the national imperative for a stable, varied energy supply[68] and greater energy efficiency in homes[69].

66 The first communications infrastructure report by Ofcom (1st November 2011) states that broadband is available on nearly every phone line, although 14% do not receive the minimum 2Mb/sec the Government expects by 2015. Mobile signals are strong enough for outside calls from 97% of properties for all four 2G networks, but only cover 66% of the landmass. Urban areas generally receive better coverage[70]. Data for the County area shows Essex receives an average 6.8Mb/sec broadband but that over 16% receive below 2Mb/sec. Mobile communication is good for the Borough and digital TV and radio are improving[71]. Increasing the stability and range of communication technology is not an identified aim of the local authority but could provide benefits to the economic, social and environmental attributes of the area.

Drivers for Change

Drivers for Change

Increasing transport activity

67 Forecasts indicate increasing travel over the plan period as the economy improves and the national population increases. Trends indicate that traffic levels, road congestion and passenger numbers on the GEML and Fenchurch Street lines, will all increase significantly. These general trends will impact on the Borough, which is a significant employment area and has high levels of rail commuting.

68 There will be a need to manage travel growth, maximise the use of existing infrastructure and reduce the need to travel, in order to avoid the harm to quality

62 Further information regarding managed traffic growth will be provided when modelling of the 2031 scenarios is available in 2012.
63 Office of National Statistics *Census 2001*
64 Office of National Statistics *Census 2001*
65 IAM (2009) *IAM Motoring Trust* p.16 and; DfT (2009) *Road Traffic Forecast*
66 Basildon Joint Strategic Needs Assessment 2007
67 Basildon Joint Strategic Needs Assessment 2007 pp.39-40
68 European Commission for Energy (November 2008) *Second strategic energy review - securing our energy future*
69 Citizens Panel Survey August 2011; DECC (2011) *Second annual energy statement (AES)*
70 Ofcom (2011) *Communications Infrastructure Report* summary
71 See: http://maps.ofcom.org.uk

of life that could result from the cumulative impact of these forecasts. Similarly, rising regulation, taxation and costs are likely to encourage lower car use, and the urban environment may need to adapt to a less car-intensive form. Basildon currently has a relatively high proportion of residents that do not own a car and rely on public transport to access goods, services, work and entertainment. However, there are high levels of car commuting for the Borough's employment areas, showing vulnerability to the possible impact of national policy and room for significant improvement in adjusting to more sustainable travel patterns.

69 A particular problem for the borough will be the predicted passenger increases on the GEML rail line that will exceed capacity, resulting in discomfort and overcrowding at peak hours.

Reducing the need to travel

70 Local, regional and national transport policies promote a reduction in travel demand, particularly for shorter journeys. People should be able to access the things they need without being forced to travel significant distances, particularly if the impact of pollution and congestion are to be addressed. Unsupported development sprawl or a lack of local community infrastructure can instil a dependence on car use, force long-distance travel and isolate people from the services and facilities they need. Planning can enable greater independence by focusing development around accessible and daily-used locations, particularly public transport interchanges, high-use community facilities and town centres, to allow walking and cycling to be genuine options and offer the critical mass necessary to support quality public transport provision.

71 Maximising the use of existing infrastructure and reducing the need to travel can be supported by appropriate consideration of the location for housing, the integration of services, leisure, convenience retail and employment opportunities. Where these generate high levels of travel, they should be accessible by a variety of transport modes.

Improve access to A127 Corridor and encourage integrated transport systems

72 Unlike the Borough's town centres, the A127 employment corridor is not served by a wide range of travel options, with most employees commuting by car. Unmanaged traffic forecasts indicate the A127 would become saturated, with AM or PM peak problems at each of the Borough's junctions, by 2031. This would likely constrain growth, reduce the attraction of the corridor to new businesses and create frustrating conditions for residents. Improving access by sustainable modes and encouraging travel planning for businesses could reduce the impact of projected growth. An integrated transport system that enables easier rail and/or bus commuting could help manage growth and improve access to the corridor, particularly for local residents.

73 To sustain and improve the attraction of the Borough's Regional Centre and Town Centres, each should be accessible by a variety of integrated transport modes, with supporting infrastructure. While the borough's public transport systems are currently effective, more modern transport hubs can offer greater integration and improve perceptions of public transport efficiency and safety. The provision of safe cycle storage, modern waiting areas, information systems, drop off and collection points and appropriate parking, can offer attractive travel choice.

74 Logistics and freight movement are likely to increase, particularly on the strategic network, in line with rising GDP[(72)]. As the economy improves, Planning can ensure businesses which produce high levels of freight traffic (other than certain retail uses) are promoted in locations that enable easy access to the network and protect residential areas from such movements.

Improving the perception of travel safety

75 Real and perceived safety and security are important aspects affecting travel choice. Appropriate design of streets and

development layouts, linked into the urban realm, with surveillance and safety as a guiding principle, can also encourage walking and cycling for shorter journeys, thereby reducing local road movements.

Increasing the use of renewable electricity generation and energy efficiency

76 International treaties, national policies and local aspirations seek to reduce the reliance on fossil fuels and particularly to improve the efficiency of homes in terms of energy use. Planning can ensure that a proportion of a developments energy is obtained from renewable sources and ensure development proposals meet set energy objectives, such as the Government's Zero Carbon Homes and the Code for Sustainable Homes[73].

77 By improving the energy efficiency of buildings and incorporating renewable energy generation, the boroughs properties can reduce energy waste, reduce emissions per household, be more resilient to changes in energy markets and promote new products and services.

73 See CLG (November 2011) http://www.communities.gov.uk/planningandbuilding/sustainability/

Monday - Friday
9:00am - 5:00pm

22066

For free translation phone

Për një përkthim falas telefononi

للترجمة المجانية الرجاء الاتصال هاتفياً

বিনাখরচে অনুবাদের জন্য টেলিফোন করুন

Za besplatne prevode pozovite

欲索取免費譯本，請致電

Pour une traduction gratuite, téléphonez

Για δωρεάν μετάφραση, τηλεφωνήστε

મફત ભાષાંતર માટે ફોન કરો

निःशुल्क अनुवाद के लिए कृपया फ़ोन कीजिए

بو ته رجومه کردنی به خورایی ته له فون بکه بو

Del nemokamo vertimo skambinkinte

സൗജന്യമായ തർജ്ജിമയ്ക്കായി ബന്ധപ്പെടുക

Po bezpłatne tłumaczenie prosimy dzwonić

Para uma tradução grátis, telefone

ਮੁੱਫ਼ਤ ਅਨੁਵਾਦ ਲਈ ਫ਼ੋਨ ਕਰੋ

Перевод – бесплатно. Звоните

Para obtener una traducción gratuita llame al

Turjubaan lacag la'aan ah ka soo wac telefoonka

இலவச மொழிபெயர்ப்புக்கு தொலைபேசி செய்யவும

Ücretsiz çeviri için telefon edin

Để cón bản dịch miễn phí hãy điện thoại

مفت ترجمے کے لئے فون کریں

Also for Audio, Large Print and Braille, phone

0800 952 0119