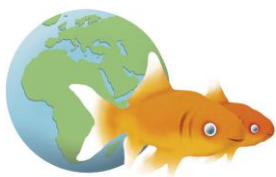


**Thurrock Transport Strategy:
2012 - 2026**

Third Local Transport Plan

January 2012



Executive Summary

Background

This Thurrock Transport Strategy describes Thurrock Council's transport strategy for the period 2012 to 2026. Based on a robust evidence base and feedback from residents and key stakeholders, it sets out the aims, objectives and a series of policies for delivering transport improvements in Thurrock. As such, this document comprises the required strategy element of the third Local Transport Plan (LTP3) for Thurrock. In addition to a transport strategy, local highway authorities are also required to develop and submit an implementation plans alongside their strategy, and these implementation plans support the delivery of this strategy. The first of these implementation plans was published in March 2011 and spans the period from 2011/12 to 2014/15.

The previous Thurrock Transport Strategy 2008 – 2021 set out the Council's transport policies and priorities. However, there arose a need for this to be refreshed in response to a number of important changes to the context in which the Thurrock Transport Strategy was developed. These changes include:

- The demise of the East of England Plan and regional planning bodies;
- The economic downturn since 2008;
- A change to the timescale of the Thurrock Local Development Framework Core Strategy and Policies for the Management of Development (previously to 2021, now to 2026) and its progress through to its adoption in December 2011;
- The new Government transport White Paper, published in January 2011;
- A proposed major transport infrastructure improvement that is likely to significantly affect the Thurrock area – the new lower Thames crossing;
- Significant additional funding from the Local Sustainable Transport Fund (LSTF) to deliver sustainable transport improvements;
- The creation of Local Enterprise Partnerships (LEP), and their role in major transport improvements; and
- The significant progress made on developing local operational policies for traffic management and maintenance.

Of particular importance is the growth agenda and the need to make sure that transport helps to deliver sustainable growth and regeneration in the Borough. The growth Thurrock needs to accommodate is significant. Between 2001 and 2026 there are an additional 23,250 new homes need to be built and 26,000 new jobs created. Growth and regeneration in Thurrock will be driven forward by the Council's Local Development Framework, and Thurrock Council's transport policies and priorities need to keep pace with this.

Vision

Thurrock Council's long-term vision for improving transport is to create a transport system for Thurrock that:

- Is fully inclusive, meeting the social needs of residents
- Is integrated to provide seamless multi-modal journeys
- Is accessible for everyone, safe and attractive to use
- Delivers sustainable community regeneration and growth
- Reflects the exceptional circumstances of Thurrock as an international centre for logistics and commercial development

The Challenge

Thurrock is on the north side of the river Thames, only 20 miles east of central London. It has a diverse range of land uses as well as associated social, economic, transport and environmental challenges. As well as current challenges, Thurrock is undergoing significant change. It is part of the Thames Gateway national growth area, the UK's top priority for social and economic regeneration, and between 2001 and 2026 there will need to be an additional 23,250 new homes and 26,000 new jobs in Thurrock. Challenges facing Thurrock include:

- There are very low levels of skills which are and could continue to be a barrier to greater aspirations and generating good job opportunities
- Though it has good employment rates, there are low numbers of people in professional or knowledge based jobs
- High levels of obesity in key communities will impact adversely on long-term health
- Multiple deprivation is high compared to the region, especially in some urban areas, which may harm social well-being and create community tensions
- High numbers of HGVs and high traffic flows on strategic roads are adversely impacting on local air quality, CO₂ emissions, and congestion. Growth could well make this worse. Worsening air quality will increase respiratory problems whilst increasing congestion could harm job creation and economic performance., particularly with regard to international gateways, such as London Gateway
- There is generally good accessibility by public transport and walking to many services, but poor access to further education and hospitals could exacerbate low skills and health issues, the latter being a particular concern with the ageing population. Many of the new jobs will be at London Gateway, which is away from the main urban areas and so less accessible for employment access by non-car means, which may limit opportunities for many social groups and fail to deliver equality of opportunity
- There are very low levels of walking and cycling which could fuel increasing obesity and so it will be necessary to learn from the success of recent School Travel Plans in increasing walking and cycling
- It will be important to maintain the increasing use of public transport to limit traffic growth, especially given forecast increases in congestion and CO₂ emissions
- Slow progress in reducing the number of accidents where people are killed or seriously injured has wider ramifications for human health,

incident based congestion, and the chances of encouraging people to walk or cycle more

For the growth to be delivered, and delivered sustainably, a solid and sound transport strategy will be needed.

Delivering Accessibility

The thrust of the accessibility strategy will be to improve accessibility by walking, cycling and public transport to services, but especially education, employment and healthcare. The priority will be to deliver these accessibility improvements where deprivation is most apparent, in order to help tackle deprivation and promote equality of opportunity, and where significant levels of growth need to be delivered and accommodated sustainably. Priorities will include:

- Core pedestrian and cycle routes, supported by 20mph zones, in Tilbury, Grays, West Thurrock, Purfleet and Ockendon, with priority being influenced by prevailing levels of obesity and deprivation. In addition to delivering accessibility, this will improve physical fitness and health, as well as community vibrancy, sociability and cohesion
- Rights of Way improvements that deliver the 'Greengrid', providing access to green space and helping to promote well-being and play opportunities for children
- Integrating with other service providers and planners to influence where and how they deliver their services as a non-transport way of improving accessibility, especially the location of new education or hospital facilities
- Working with the Voluntary and Community Sector in developing Demand Responsive and Community Transport
- Improving connections between modes and enhancing the public realm at transport interchanges / rail stations in Tilbury, Grays, Chafford Hundred, Purfleet and Stanford le Hope (London Gateway) to aid access to Thurrock's key strategic economic hubs in particular. With rail stations being gateways to the national rail network, this will also improve wider access.
- Improving information and ticketing arrangements
- Ensuring equality of opportunity by incorporating the needs of people with mobility impairments or disabilities in the design and delivery of improvements.

Tackling Congestion

The strategy for tackling congestion will be to deliver a targeted programme of measures to reduce the need to travel, encourage a modal shift to more sustainable modes of transport such as walking and cycling, particularly in the urban areas, and improve the efficiency of the transport network, especially increasing the capacity of routes providing access to key strategic economic hubs. Improving accessibility by public transport, walking and cycling, and improving the safety of these modes (see road safety), provides a solid basis on which to deliver measures that will encourage modal shift. The congestion strategy will build on this. The strategy includes:

- Using an intensive programme of smarter choices to deliver a modal shift, especially in urban areas, in particular workplace and school

travel plans. This will support the delivery of better sustainable transport infrastructure, such as cycle routes and public transport priority

- Locking in the benefits of modal shift by reallocating road space to sustainable modes of transport, thereby promoting further modal shift
- Providing additional car parking at rail stations and other transport interchange facilities to facilitate a shift to public transport for the main part of the journey
- Reallocating the stock of car parking spaces away from long stay towards short stay to promote the use of sustainable transport at peak times, such as for the journey to work and school
- Promoting modal shift on interurban journeys through high quality public transport between growth areas, key strategic economic hubs and to other Regional Transport Nodes
- Improving network efficiency by improving travel information, enforcing parking restrictions, and coordinating street works
- Promoting capacity improvements on the Strategic Road Network, with priority for freight routes to key strategic economic hubs and interurban bus routes, where modal shift and network management are insufficient. Improvements have been identified on M25, A13 and A1014
- Encouraging freight modal shift, including through a Freight Quality Partnership.

Improving Air Quality and Addressing Climate Change

Improving air quality and reducing emissions will be achieved by minimising traffic growth and encouraging a modal shift (as per the congestion strategy above). Further improvements will be achieved by reducing emissions from residual sources (such as industry) as well as reducing vulnerability to climate change. Policy interventions will be:

- Prioritising actions that both improve local air quality and reduce CO₂ emissions. These will include working with partners and transport operators to increase the use of low emission vehicles or using retrofitting, better operating practices such as switching off engines or eco-driving, and beneficial car parking for low emission cars
- process, such as by increasing onsite renewable energy generation
- Prioritising action to improve air quality in Air Quality Management Areas that fall within health-deprived areas. In improving air quality in AQMAs the Council will ensure that it does not simply move the problem elsewhere
- Making sure that other interventions, especially those to improve road safety and congestion, do not adversely impact on air quality
- Working with freight operators to reduce emissions from HGVs
- Integrating climate change adaptation when undertaking transport schemes, such as assessing flood risk, using more permeable road surfaces, and designing appropriate drainage.

Safer Roads

The Road Safety Strategy will mainly aim to support other strategy areas. The strategy, whilst aiming to reduce casualties where people are killed or seriously injured, will take a broader and proactive approach, aiming to reduce road danger and thereby promote modal shift and community regeneration,

even where large numbers of accidents are not apparent. The strategy will also aim to create a safer transport system through implementing measures that will reduce collision severity. The strategy will therefore:

- Improve conditions for vulnerable road users such as pedestrians and cyclists, by making the overall urban environment safer, especially by reducing traffic speeds in residential areas, such as widespread 20mph zones. This will improve accessibility by these modes and potentially deliver modal shift
- Give priority to improving road safety in disadvantaged communities, integrating with wider programmes such as neighbourhood renewal, as well around schools and major workplaces. Again the focus will be on reducing the adverse impact of traffic, such as traffic speed and volume, and helping support modal shift programmes. This will also improve community vibrancy and sociability and give children greater opportunities for play near where they live
- Use casualty severity as a major consideration when prioritising the above interventions
- Deploy education, training and publicity focused on the safety of vulnerable road users to improve accessibility as well as focused on reducing traffic speeds and drink driving.

Facilitating Regeneration

The strategy for regeneration strongly influences how the other strategies are prioritised and delivered, being fully integrated into them in order to facilitate economic, social and environmental regeneration. In view of this the following approach has been taken:

- Economic regeneration will be promoted by helping to improve business efficiency and journey reliability by focusing congestion reduction measures (supported by road safety measures) on freight routes that provide access to key strategic economic hubs, and on the interurban public transport routes to support modal shift. Economic regeneration will also be delivered through targeted improved accessibility, which will bring more people into the labour market, improve job matching, improve access to customers, and deliver better agglomeration in key economic activities such as the ports sector
- Social regeneration will be promoted by focusing accessibility improvements to employment and education opportunities and healthcare for deprived communities. This will be achieved by walking and cycling in order to deliver better health and community cohesion outcomes, and by public transport to improve equality of opportunity, especially by widening access for all to greater job opportunities
- Environmental regeneration will be promoted through improving the quality of the built environment by protecting the historic and cultural setting as well as the quality of the public realm. It will also be promoted by ensuring that transport schemes contribute to the protection and enhancement of the natural environment, such as by supporting the Biodiversity Action Plan, implementing the 'Greengrid' and minimising the adverse impacts on water quality from road run off or spillages

Table of Contents

1	Introduction.....	1
1.1	Background.....	1
1.2	Context	1
1.2.1	National Policy	2
1.2.2	Regional and Sub-regional Policy	4
1.2.3	Local Policy	6
2	Strategic Framework	11
2.1	Introduction	11
2.2	Vision	13
2.3	Strategic Aims and Objectives	13
3	Delivering Accessibility	15
3.1	Introduction	15
3.2	Policy Context.....	15
3.3	Data Analysis.....	16
3.4	Issues and Priorities	17
	Strategy.....	19
3.4.1	Aim	19
3.4.2	Objectives	19
3.4.3	Outcomes	19
3.4.4	Policies	19
4	Tackling Congestion	30
4.1	Introduction	30
4.2	Policy Context.....	31
4.3	Data Analysis.....	32
4.4	Issues and Priorities	33
4.5	Strategy	34
4.5.1	Aim	34
4.5.2	Objectives	34
4.5.3	Outcomes	34
4.5.4	Policies	34
5	Improving Air Quality and addressing Climate Change.....	52
5.1	Introduction	52
5.2	Policy Context.....	53
5.3	Data Analysis.....	54
5.4	Issues and Priorities	55
5.5	Strategy	56
5.5.1	Aim	56
5.5.2	Objectives	56
5.5.3	Outcomes	56
5.5.4	Policies	57

6	Safer Roads	65
6.1	Introduction	65
6.2	Policy context.....	65
6.3	Data Analysis.....	66
6.4	Issues	66
6.5	Strategy	67
6.5.1	Aim	67
6.5.2	Objectives	67
6.5.3	Outcomes	67
6.5.4	Policies	68
7	Facilitating Regeneration	73
7.1	Introduction	73
7.2	Policy Context.....	73
7.3	Data Analysis.....	74
7.4	Issues	75
7.5	Strategy	77
7.5.1	Aim	77
7.5.2	Objectives	77
7.5.3	Outcomes	77
7.5.4	Policies	77
8	Implementation, Monitoring and Programme Delivery	81
8.1	Implementation	81
8.2	Monitoring.....	81
8.3	Programming Delivery	82

1 Introduction

1.1 Background

Thurrock is on the north side of the river Thames, only 20 miles east of central London, and has a diverse range of land uses. Thurrock is home to one of the largest shopping complexes in Europe at Lakeside and has national significance with its key location and significant port capacity for the import and export of goods and services for the UK. Transport links to London and the wider south east are very good. Nevertheless, despite being quite developed, 60% of the Borough is classed as Greenbelt and there are historic villages surrounded by valuable agricultural and grazing land. It also has 18 miles of frontage on the River Thames.

The growth and change Thurrock needs to accommodate is significant. It is at the heart of the Thames Gateway, Europe's largest regeneration programme, with half of the outputs being delivered in Thurrock, bringing many opportunities, but also challenges. Thurrock needs to plan to accommodate up to 18,500 new homes over the period 2001 to 2021 and up to a further 4,750 dwellings to 2026 in order to provide a 15-year supply, as well as 26,000 new jobs by 2026. The London Gateway deep sea container port development and further development at Lakeside and Tilbury docks are all highly significant. The pressure for development and the need to ensure good quality open space compete and the Council and its partners take a strong lead in maintaining the correct balance between protecting the rural environment and enabling growth in employment and housing.

This snap shot of Thurrock shows how well connected Thurrock is. There has been a link between the transport system and prosperity throughout history. Transport's key economic role is to support the success of highly productive economic centres in the global marketplace and to enable the efficient movement of goods and people. The connectivity of the transport system as a whole in Thurrock is therefore critical in enabling people to get to work and the freight sector to deliver goods.

1.2 Context

The Transport Act 2000 and the Local Transport Act 2008 requires most local transport authorities (county councils, unitary authorities and partnerships in metropolitan areas) in England to produce and maintain a Local Transport Plan (LTP). LTPs set out the authority's local transport strategies and policies, and an implementation programme. The previous *Thurrock Transport Strategy: 2008 – 2021* set out the Council's transport policies and priorities. However, there arose a need for this to be refreshed in response to a number of important changes to the context in which the Thurrock Transport Strategy was developed. These changes include:

- The demise of the East of England Plan and regional planning bodies;

- The economic downturn since 2008;
- A change to the timescale of the Thurrock Local Development Framework Core Strategy and Policies for the Management of Development (previously to 2021, now to 2026) and its progress through to its adoption in December 2011;
- The new Government transport White Paper, published in January 2011;
- A proposed major transport infrastructure improvement that is likely to significantly affect the Thurrock area – the new lower Thames crossing;
- Significant additional funding from the Local Sustainable Transport Fund (LSTF) to deliver sustainable transport improvements;
- The creation of Local Enterprise Partnerships (LEP), and their role in major transport improvements; and
- The significant progress made on developing local operational policies for traffic management and maintenance.

Of particular importance is the growth agenda and the need to make sure that transport helps to deliver sustainable growth and regeneration in the Borough. Growth and regeneration in Thurrock will be driven forward by the Council's Local Development Framework, and Thurrock Council's transport policies and priorities need to keep pace with this.

The wider planning context is now at a stage where a much greater degree of certainty is available compared to that in recent years. The Local Development Framework's Core Strategy and Policies for the Management of Development has been through its Examination in Public and was formally adopted by Thurrock Council in December 2011, providing a clear direction for the spatial distribution of jobs and housing. Now that this greater certainty is available, with a longer time horizon of 2026, it became important to refresh the Thurrock Transport Strategy to align it with the planning process so that the Transport Strategy and the Local Development Framework are fully integrated.

The following sections summarise the policy and planning context within which this refresh of the Thurrock Transport Strategy has taken place.

1.2.1 National Policy

Creating Growth, Cutting Carbon Making Sustainable Transport Happen: The Local Transport White Paper 2011

In January 2011, the Government set out its policy direction on local transport through the Local Transport White Paper. The White Paper sets the Government's approach to shorter local journeys (so, trips of five miles or less) with the intention of supporting its principal wider goals of promoting economic growth and reducing carbon. There's a lot of weight given to immediate gains from local interventions, especially when it comes to job creation.

The White Paper establishes that creating economic growth and tackling climate change by reducing CO₂ emissions are the primary objectives at the national level for transport. The White Paper argues that by offering sustainable travel options, local authorities can change people's travel behaviour to favour sustainable modes. Decisions on which sustainable options are appropriate are best made at the local level in partnership with local residents, businesses and delivery agencies.

However, the need to reduce spending and help cut the budget deficit has shifted the focus clearly away from new and larger infrastructure. While commitment to key rail projects is restated, and other major schemes in the pipeline have funds allocated, the emphasis for local authorities is now clearly to be on smaller-scale, local measures.

Traffic Management Act 2004

The Traffic Management Act 2004 introduced a new network management duty for local traffic authorities. As a result it is now a requirement for the traffic authority to manage the road network to secure the expeditious movement of traffic on the highway network and to facilitate the same on the network of others. The main purpose of the Traffic Management Act is to deal efficiently with the traffic presented on the network, both now and in the future, and tackle the related causes of congestion and disruption on the highway. The Traffic Management Act also makes it clear that the network management duty relates not only to vehicular traffic, but to pedestrians, cyclists and other road users.

New Roads and Street works Act 1991

This was the main item of legislation that enabled local authorities to co-ordinate street works by utility companies with a view to minimising traffic disruption, including the duty to co-ordinate and the duty to maintain a 'register'.

National Planning Policy Framework

The Government published the new National Planning Policy Framework (NPPF) in March 2012, which sets out its policies for different aspects of land use planning in England. This helps local planning authorities take a consistent approach to land use and transportation development. Development plans at the local level need to be consistent with the Framework.

The NPPF outlines that the purpose of the planning system is to contribute to sustainable development and that there are three dimensions to this: economic, social and environmental. Transport has an important role to play in facilitating sustainable development. In particular, the transport system needs to be balanced in favour of sustainable transport modes by giving people a real choice about how they travel. It also suggests that encouragement should be given to transport solutions that reduce greenhouse gas emissions and reduce congestion, and that patterns of development which support the use of sustainable transport modes will be

consistent with this. Nevertheless, it does recognise that the extent to which this can be achieved will vary between urban and rural areas.

1.2.2 Regional and Sub-regional Policy

The East of England Plan (now revoked)

The East of England Plan, which contained the Regional Transport Strategy, has been revoked by the Coalition Government. However, many of the spatial planning concepts it contained, such as Key Centres for Development and Change, and Regional Transport Nodes are still pertinent as the terminology reflects their function and role. For this reason, the terminology is still used in this refreshed *Thurrock Transport Strategy*, even though the policies themselves are no longer material considerations in the development of this refreshed Thurrock Transport Strategy.

The Key Centres for Development and Change were those parts of the region where growth is likely to be focused, such as the Thurrock Urban Area. Other reflect the polycentric nature of the East of England – a region of small and medium sized towns and cities surrounded by more rural areas which look to those towns for employment and higher level services. The main exceptions are Essex Thames Gateway and the London Arc. They are characterised by towns and urban areas which have been strongly influenced by London and which are located close to each other with complex movements between them for shopping, employment, education etc. The key centres are likely to be the main drivers of economic growth, and this is likely to be the case even with the demise of the East of England Plan.

Regional Transport Nodes (of which Thurrock is one, whilst most of the others are the main towns in the region, primarily the Key Centres for Development and Change) have some or all of the following characteristics:

- Access to mainline railways;
- Good interchange between local urban systems and wider regional links;
- Served by strategic interurban bus/coach links;
- Major bus hubs with strong sub-regional bus networks;
- International airports accessed by rail and/or long distance coach services;
- International passenger ports accessed by rail and/or long distance coach services; and
- Waterway connections.

The Greater Essex Integrated County Strategy

The strategic focus of the Integrated County Strategy includes promoting economic growth and development in the Thames Gateway South Essex area and the key town of Thurrock itself. Its vision for the Thames Gateway South Essex area is “to undertake a major economic, social, and environmental transformation of the urban areas in the sub-region through a programme of large scale regeneration, employment-led development and transport improvements, so that its local economy, quality of life of residents, and its natural and built environment are significantly improved”. Key priorities for

delivering this vision and supporting the key town of Thurrock (especially the Lakeside area) are:

- Supporting the regeneration of Lakeside as a town centre and other key employment/ economic development sites;
- Supporting the development of London Gateway port;
- Enhancing connectivity to jobs and services, and delivering reliable and predictable journey times;
- Improving connectivity between the complex pattern of towns and to the strategic transport network;
- Improving access to international ports and airports; and
- Reducing congestion and crowding on transport networks.

The Integrated County Strategy recognises that the key urban areas, including Thurrock, will be the drivers of economic growth, and they need to be attractive for inward investors.

South East Local Enterprise Partnership

Initiatives recently set up by the Government, notably the Local Enterprise Partnerships, could have a major influence over how transport develops and what funding will be available. The South East Local Enterprise Partnership was approved by the Coalition Government in November 2010 and covers Greater Essex (including Thurrock), Kent and East Sussex.

It exists to enable the conditions for business growth at a strategic level. It does this by bringing together leaders from business, local government and further and higher education to articulate the area's strategic priorities and work in partnership to develop solutions to remove barriers to growth. It is the largest strategic LEP in England and has a combined population of 3.9 million people.

What its precise role will be will unfold and become apparent over the next few years, but it is likely that from 2015 it will be responsible for a devolved budget for major transport schemes (those costing more than £5m). In the meantime it has set out its strategic transport priorities:

- Reducing congestion at the existing Thames Crossing through 'free-flow charging';
- Maintaining the current level of concessions for residents of Thurrock and Dartford and regular users to encourage local mobility across the river; and
- M25 (Junctions 30/31) and A13 (between the A128 junction and the A1014 Manorway junction) capacity improvements.

If there is a proven need after taking account of these improvement measures, then the case for increasing the capacity on the river crossing should be explored, including:

- By enhancing the existing infrastructure to provide for separate capacity for local traffic distribution to relieve pressure;

- By planning and building a new river crossing linking in to existing highways infrastructure wherever possible expanding or upgrading as appropriate; and
- By building new highways infrastructure only where absolutely necessary.

Included amongst a package of secondary priorities are improvements to the A13.

Thames Gateway South Essex Partnership

Thurrock works in partnership with other local authorities and stakeholders within south Essex through the Thames Gateway South Essex Partnership. This has outlined a future vision for the sub region, the overarching aim is to “provide an improved quality of life for all the people of South Essex and to allow the area to participate, via the Thames Gateway initiative, in the prosperity of the wider South East and the East of England”.

Thurrock is highlighted as a key priority for regeneration within South Essex. The overarching vision for Thurrock is to secure Thurrock “as a world leading logistics hub and exemplar for community development, learning and enterprise for South Essex”.

Thames Gateway Delivery Plan

This is the first Delivery Plan for the Thames Gateway. The Thames Gateway Interim Plan, in November 2006, set out the vision for the Gateway, recognising its unique identity as an area with a proud past and a vibrant economic future. The Delivery Plan seeks to confirm the commitment to support the Thames Gateway vision, by outlining clear priorities and funding. The key aims for the Thames Gateway sub-region, which are also of importance for Thurrock, include:

- Building a vibrant economy – with at least 225,000 new jobs throughout Thames Gateway. It is important to create conditions so local people can access these jobs and the success is monitored;
- Improve the quality of life for residents of the Gateway – by providing 160,000 good quality homes at all levels of affordability for existing and new communities, reviving town centres, improving public services and providing a better environment through the Thames Gateway Parklands programme; and
- Establishing the Gateway as an eco-region – leading the way for the rest of the country in low-carbon and sustainable regeneration.

1.2.3 Local Policy

Local Development Framework: Core Strategy and Policies for Management of Development

Thurrock needs to plan to accommodate up to 18,500 new homes over the period 2001 to 2021 and up to a further 4,750 dwellings to 2026 in order to provide a 15-year supply, as well as 26,000 new jobs. The Local Development Framework is used by Thurrock Council to plan for the forecast housing and

jobs growth in Thurrock in a way that minimises adverse impacts on, for example, the environment and maximises potential positive impacts, such as economic opportunities.

It contains a spatial strategy that will guide the future development and use of land in Thurrock up to 2026. In particular, it identifies where housing and employment growth will happen and how growth can be delivered sustainably and help to deliver sustainable communities. The Core Strategy and Policies for Management of Development was adopted in December 2011.

The Thurrock Urban Area is the main focus for new housing growth and associated development, extending from Purfleet, West Thurrock/ Lakeside, Grays, Chadwell St Mary to Tilbury. Lakeside in particular will be a key area for housing growth, accommodating a mix of 3,300 new dwellings. Settlements such as South Ockendon, Aveley, East Tilbury and Corringham/Stanford-le-Hope will also accommodate some degree of growth, but less than in the urban area.

The regeneration of Thurrock is a key part of the borough's Local Development Framework. Five key Strategic Economic Hubs have been identified and are at:

- Purfleet. High quality mixed-use and small business development will be encouraged at Botany Way and west of the railway station. Cultural industries, including the Royal Opera House project, will be located on a site at High House Farm. There will be additional employment sites at the northern and eastern ends of Purfleet;
- Grays. The town will be modernised and regenerated as the key Civic, Cultural and Education centre in the Borough. There will be provision of approximately 1600 new jobs including commercial offices in and around Grays;
- Lakeside / West Thurrock Basin. The Lakeside Basin will be transformed into a Regional Centre (town centre), and, together with the wider area, will provide between 7,000 and 9,000 jobs. Development will include a substantial expansion of retail floorspace (50,000 m² net of comparison floorspace) to serve sub-regional needs;
- London Gateway. There will be a major logistics, import-export based employment development at London Gateway with 11,000 to 13,000 new jobs; and
- Tilbury. This is a key location for employment in the Borough and will provide between 1,600 and 3,800 additional jobs in logistics, port and riverside industries.

These Key Strategic Economic Hubs will collectively form the locations for employment growth and together will provide the engines of economic development and regeneration in Thurrock.

In order to achieve the delivery of growth in the Thurrock Urban Area, the Local Development Framework will enable improvements in accessibility and achieve modal shift to improve the quality of life for residents. Indeed, the transport policies in the Local Development Framework aim to reduce the

forecast growth in traffic as a result of the housing and jobs growth, especially in the Thurrock urban area. The Local Development Framework supports the delivery of additional highway capacity, including through the use of technology and information, but only where modal shift will be insufficient to address congestion.

The Council will work with partners to deliver a 10% reduction in forecast traffic levels by 2021 in the Thurrock Urban Area. The strategy includes plans for a network of core walking and cycling routes, the widespread introduction of 20mph zones, and the promotion of behavioural change to more sustainable modes of transport, as well as reduced car parking in new developments where accessibility is high. Priority for these measures will be the Thurrock Urban Area, especially around Grays and Lakeside.

As part of ensuring the deliverability of the Local Development Framework, the Council commissioned Colin Buchanan and Partners to identify road links and junctions that would be over-capacity and congested as a result of the forecast traffic growth, taking into account the modal shift. There are a number of locations where problems with congestion are forecast, such as parts of the A13, Grays town centre and around Lakeside Basin. Network efficiency improvements and possibly new road infrastructure will need to be implemented.

The Local Development Framework also sets out that the Council will work with partners to deliver improvements to national and regional transport networks to ensure growth does not result in routes being above capacity. Priority will be given to routes that provide access, especially for freight, to Key strategic economic hubs, the ports at London Gateway, Tilbury and Purfleet, and regeneration areas. Key improvements include the South Essex Rapid Transit scheme, rail stations, and the M25 and A13.

In the more rural parts of Thurrock, there is a policy shift towards more demand responsive transport to improve accessibility. With regard to freight, the Local Development Framework aims to achieve a shift from road to water-borne and rail freight, provide for 24-hour lorry parking, and ensure lorries keep to the most appropriate routes.

The policies for the management of development include the circumstances under which car parking availability will be lower in new developments, and sets out the need for transport assessments and travel plans as part of new development proposals, and Sustainable Distribution Plans for freight intensive new development.

Local Sustainable Transport fund

Thurrock Council was successful in securing £5m from the Department for Transport's Local Sustainable Transport Fund (LSTF), introduced by the 2011 Transport White Paper. This will be invested in transport improvements primarily in the Thurrock Urban Area with a view to delivering a modal shift away from car use. This in turn will result in economic benefits as a result of

reduced congestion and CO₂ benefits as a result of reduced traffic. The LSTF programme will deliver:

- Smarter Choices measures, including:
 - Workplace Travel Planning;
 - Sustainable travel to school;
 - Personalised Journey Planning;
 - Lift Sharing; and
 - Marketing and Promotion.
- Walking and cycling improvements;
- Public transport improvements; and
- Freight measures.

More detail about these measures can be found in the Chapter 4 – Tackling Congestion.

Thurrock Traffic Management Plan

The Thurrock Traffic Management Plan aims to facilitate traffic flows and reduce the number and duration of congestion incidents through an effective network management regime. In meeting this aim, the following objectives have been developed:

1. To reduce the number of congestion incidents and disruption related to:
 - Roadworks;
 - Road traffic accidents;
 - Events; and
 - Parking.
2. To continue to minimise incidents and delays related to severe weather;
3. To maintain and, where possible, improve journey times and speeds and therefore improve journey reliability; and
4. To make the best and most effective use of data collection and information analysis.

To meet these objectives, a number of policies have been developed. These set out how the Council will broadly carry out its network management duty, and what the priorities are. The policies cover an array of matters including:

- The updating of Thurrock's network of Traffic Sensitive Streets;
- The delivery of low cost engineering measures on Traffic Sensitive Streets suffering from congestion;
- Improved use of the Essex Traffic Control Centre for Urban Traffic Management and Control;
- Better provision of congestion information, including through Variable Message Signs, potentially through closer working with the Essex Traffic Control Centre;
- Better coordination and management of roadworks, especially on Traffic Sensitive Streets; and
- The development of contingency plans for Traffic Sensitive Streets at risk of flooding.

Thurrock Transport Asset Management Plan

The Thurrock Transport Asset Management Plan helps the Council to meet a number of statutory duties, such as the Traffic Management Act 2004. The Transport Asset Management Plan deals with structural maintenance rather than day to day routine maintenance. The Transport Asset Management Plan is therefore about preserving the value of the assets and extending their life rather than addressing defects such as pot holes or dirty signs.

The Thurrock Transport Asset Management Plan shows that the Council is in a good position with some of its transport assets in terms of their condition, such as roads. However, it recommends giving a greater priority to other asset groups, notably street lighting, drainage and traffic signals.

Shaping Thurrock Community Strategy 2011- Towards Thurrock's Centenary

The vision sets out that the Council and its partners want "Thurrock to be at the dynamic heart of the Thames Gateway, a place of ambition, enterprise and opportunity, where communities and businesses flourish". To achieve this vision, they have identified five priorities with related objectives. One of these priorities in particular relates to the Thurrock Transport Strategy, which is the priority to "encourage and promote job creation and economic prosperity". Relevant objectives that relate to this are:

- Delivering new sites for employment to create jobs over the next 25 years;
- Improving infrastructure to enable delivery of new employment, housing and community facilities; and
- Collaborating with key partners to deliver major regeneration projects.

Corporate Plan and Medium Term Financial Strategy 2011-15

The Council wants Thurrock to be at the dynamic heart of the Thames gateway, a place of ambition, enterprise and opportunity, where communities and businesses flourish. The Council's aim is to become a confident, well managed and influential council regarded by residents, peers and partners as ambitious for the people of Thurrock and totally focused on meeting their current and future aspirations. To achieve this, the Council's priorities are to:

- Encourage and promote job creation and economic prosperity;
- Improve the education and skills of local people;
- Ensure a safe, clean and green environment;
- Provide and commission high quality and accessible services that meet, wherever possible, individual needs; and
- Build pride, respect and responsibility in Thurrock's communities and its residents.

The plan recognises that regenerating Thurrock for the next generation is what the Council is about and this Corporate Plan sets out how it will transform the Borough for the 21st Century.

2 Strategic Framework

2.1 Introduction

As part of the original *Thurrock Transport Strategy: 2008-2021*, a very comprehensive evidence base was developed. This has been published as a separate document called *Thurrock Transport Strategy: Evidence Base (2007)*. This document has been used to understand the relevant characteristics of Thurrock and to identify the issues that the refreshed Thurrock Transport Strategy can address.

The issues have been derived from an assessment of the characteristics of Thurrock and identifying those key issues that relate to transport. This essentially tells us about recent trends, the current state of Thurrock, as well as what lies ahead if current trajectories continue. A SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis has been undertaken to determine whether each issue is a:

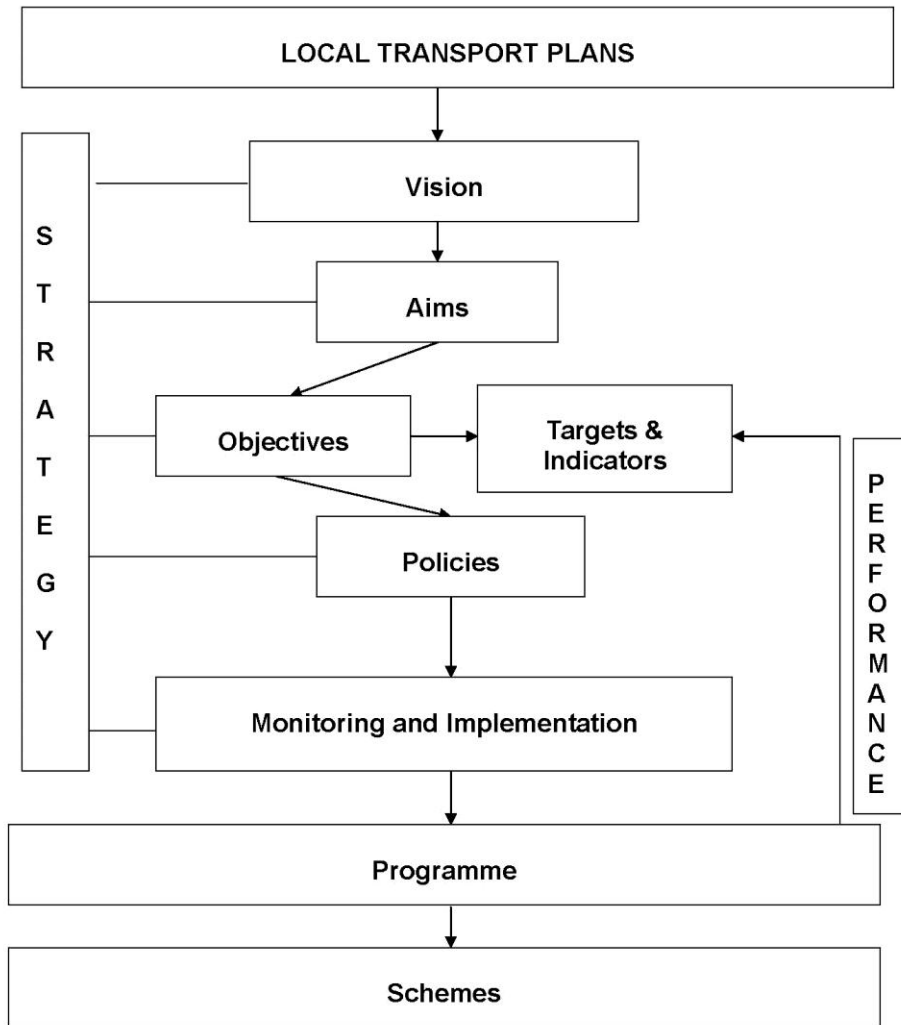
- **S**trength to build on;
- **W**eakness to address;
- **O**pportunity to take advantage of; or
- **T**hreat to neutralise.

The strategy to address the identified issues comprises the following elements:

- A Spatial Vision;
- A Set of Strategic Aims.;
- A Number of Strategic Objectives; and
- A Package of Policies.

The relationship between these is shown in Figure 2.1 overleaf.

Figure 2.1: Relationship between elements of the plan



2.2 Vision

The following vision, aims and objectives for transport reflects the role of transport in meeting the Council's overall vision, aims and priorities set out at the end of Section 1.2.3.

Thurrock Transport Strategy Vision

To create a transport system for Thurrock that:

- Is fully inclusive, meeting the social needs of residents;
- Is integrated to provide seamless multi-modal journeys;
- Is accessible for everyone, safe and attractive to use;
- Delivers sustainable community regeneration and growth; and
- Reflects the exceptional circumstances of Thurrock as an international centre for logistics and commercial development

2.3 Strategic Aims and Objectives

In delivering Thurrock's vision for transport, a series of strategic aims were developed. These aims outline the broad goals that Thurrock wishes to achieve to move towards the realisation of the vision. Within each aim, it is necessary to define a set of objectives. These are precise intentions of how an aim will be achieved. Whereas the aims are broad, the objectives are focused, tangible and precise and can be measured through the use of indicators and associated targets.

Aim

Delivering Accessibility

Thurrock Council, in partnership with other organisations, will enable better access to employment and educational opportunities and other key services, particularly to those in disadvantaged groups or areas.

Objectives

ACC1: To improve accessibility to services, especially education, employment and hospitals

ACC2: To increase levels of walking and cycling, especially where health benefits would be greater

Aim

Tackling Congestion

Thurrock Council will manage the demand for travel in Thurrock through a policy of encouraging sustainable development patterns and use of public transport, walking and cycling.

Objectives

CON1: To encourage a modal shift away from the private car to walking, cycling and public transport, especially to work and school

CON2: To encourage a modal shift for freight from Heavy Goods Vehicles onto rail and water

CON3: To improve bus satisfaction

CON4: To minimise traffic growth

CON5: To increase public transport patronage

Aim

Improving Air Quality and Addressing Climate Change

To contribute towards the mitigation of climate change and reduce the vulnerability of the transport network in Thurrock to climate change impacts, whilst also protecting human health from the adverse effects of air pollution.

Objectives

AQ&CC1: To improve air quality, particularly in Air Quality Management Areas, in line with National Air Quality Strategy objectives

AQ&CC2: To reduce nitrogen dioxide emissions from transport

AQ&CC3: To reduce particulate matter emissions from transport

AQ&CC4: To reduce carbon dioxide emissions from transport

AQ&CC5: To reduce vulnerability to the impacts of climate change

Aim

Safer Roads

Thurrock Council will work to achieve a reduction in the number of casualties on the Borough's transport network.

Objectives

SAF1: To reduce the number of people killed or seriously injured in Road Traffic Accidents

SAF2: To create a safer environment for road users, especially those who are more vulnerable

Aim

Facilitating Regeneration

Thurrock Council, in partnership with other organisations, will ensure that the transport infrastructure that is required to deliver better opportunities for residents and employees is delivered in a timely and coherent manner

Objectives

REG1: To promote economic regeneration by reducing congestion

REG2: To promote social regeneration by delivering accessibility

REG3: To promote environmental regeneration by improving the quality of the built and natural environment

3 Delivering Accessibility

3.1 Introduction

Improving accessibility so that people can get to where they need to is integral to delivering transport improvements. Access to services and employment is an essential component of a properly functioning society, enabling people to realise their aspirations or ambitions by gaining access to work, training or education, and ensuring that people are able to lead healthy lifestyles through access to healthcare and healthy food.

As well as being important for the individual, accessibility can have a positive impact on the economy by enabling access to job opportunities, but also by creating a better quality workforce, through access to education and training. Accessibility can also be a factor in community cohesion, encouraging vibrancy within neighbourhoods, reducing social exclusion and giving people the opportunity to play a full and active part in society.

Improving accessibility and tackling the problems associated with access related social exclusion is not only about transport mobility, but also about locating and delivering services in ways that enable people to reach them more easily. Reducing the need to travel is the most sustainable way to improve accessibility, having fewer negative impacts on congestion or the environment.

This chapter therefore works to ensure that Thurrock's transport system provides effective access, including for disadvantaged groups and disabled people, to jobs, services and social networks. It also considers where transport improvements can help redress inequalities, such as deprivation, and how the Council will target efforts to prevent poor accessibility from reinforcing wider social exclusion in Thurrock.

3.2 Policy Context

Access to employment, education and healthcare all have a key impact on life chances and social mobility, and ultimately on growth. The Department for Transport is working with other government departments on supporting economic growth and helping tackle worklessness through reviewing the most effective transport interventions to get people back to work.

National policy for this topic, as set out in the 2011 Transport White Paper *Creating Growth Cutting Carbon*, focuses on improving access to sustainable transport modes. This can at the same time enable growth by improving access to work, and to shops and other services, while also cutting carbon and tackling climate change. Interventions can also make a significant contribution to public health and quality of life. It particularly prioritises access to workplaces, both as a key lever to support economic growth and to enable people to get jobs.

Improving the walking and cycling environment can dramatically improve local accessibility with positive benefits for growth and the local economy. Better access to public transport, including accessibility onto the vehicles, can dramatically improve the scope of destinations for people. Schemes such as demand responsive minibuses or wheels to work schemes in rural areas can deliver a lifeline to those who would not ordinarily have access to regular transport, enabling access to employment and key local services.

The national policy emphasises improving accessibility to jobs and services, especially for those most in need. It recognises that it is important that all groups are considered when planning transport. For example, people with reduced mobility, older people and those living in rural areas face many barriers in undertaking journeys – not just physical access, but also the availability, affordability and acceptability of transport. The White Paper does make it clear that partnership working with the Voluntary, Community and Social Enterprises sector and local communities is important, and it can make an important contribution to local economies and to individuals' quality of life, enabling individuals to access to employment and key services.

National planning policy as set out in the *National Planning Policy Framework* in 2012 aims to promote a pattern of development which, where reasonable to do so, facilitates the use of sustainable transport modes. It also states that plans and decisions should ensure that developments which generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes maximised.

Local policy as set out in the Local Development Framework's *Core Strategy and Policies for the Management of Development* also has a strong emphasis on the benefits of good accessibility. It aims to ensure new development promotes high levels of accessibility by sustainable transport modes and that local services are conveniently located to reduce the need to travel by car. Furthermore, it aims to improve sustainable transport options for people such as through the development of a network of Walking and Cycling Core Routes. In rural areas, the policy is to promote and support the use of passenger services that respond to demand particularly in areas with poor accessibility, and to integrate local passenger transport services with the interurban public transport routes.

Other local policies have identified the importance of accessibility for older people in particular, and for deprived areas in relation to jobs and training.

3.3 Data Analysis

In autumn 2007, Small Fish strategy consultants were commissioned to undertake an audit and analysis of all evidence related to accessibility in Thurrock. This work culminated in the supporting document *Thurrock Transport Strategy: Evidence Base*. The evidence base analysed data in relation to the following elements of accessibility:

- Access to key services and employment;
- Public Transport Use; and
- Walking and Cycling.

Analysis of evidence and data from the *Thurrock Transport Strategy: Evidence Base* resulted in the identification of strengths, weaknesses, opportunities and threats (SWOT) related to accessibility in Thurrock. These are outlined in Table 3.3.

Table 3.3: Accessibility SWOT Matrix

Strengths	Weaknesses
<ul style="list-style-type: none"> • Generally good accessibility to services and employment • Excellent accessibility to services delivered locally such as GPs, post offices and primary schools • Very high levels of and increasing use of rail • Very good access to rail • Large recent increase in bus use • Very good rural accessibility to bus services and increasing use of community transport • Increases in walking and cycling on the school run • Good access to the countryside using rights of way 	<ul style="list-style-type: none"> • Below average accessibility to services and employment in some deprived wards • Very poor accessibility to hospital, especially for some deprived communities and especially for non-car owning households • Healthcare rated by people as difficult to access • Very low levels of walking and cycling with no ward reaching the national average, though recent increases in cycling recorded.
Opportunities	Threats
<ul style="list-style-type: none"> • Cycling and walking levels highest in deprived communities • Good access to current employment areas • Employment rated by people as relatively easy to access • Forecast increase in public transport use with planned growth • Most planned growth focused on urban areas, which are generally more accessible 	<ul style="list-style-type: none"> • Remoteness of London Gateway development from urban areas • Accessibility to further education is poor • Low levels of satisfaction with bus services, despite recent increases

3.4 Issues and Priorities

Consideration of the SWOT matrix above allowed for issues and priorities for Thurrock's revised congestion strategy to be identified.

Issues:

- Building on the increasing levels of train use in the face of capacity constraints;¹
- Addressing the low levels of bus satisfaction, building on the recent increase in bus use, and accommodating the forecast demand for public transport, which could increase viability and range of bus services;
- Continuing the development of community transport, helping to mitigate rural isolation and social exclusion of disadvantaged groups, especially given the projected increase in age of population;
- Enabling access to the countryside and green open space using rights of way to promote well-being;
- Below average accessibility in some deprived wards (Purfleet / West Thurrock, Chadwell St Mary, Belhus, and Tilbury St Chads) could exacerbate disadvantage;
- The time taken to get to hospitals, especially for non-car households, by public transport could be a barrier to seeking healthcare or keeping appointments (largely addressed by *sert*, which is outlined within the Chapter 4 – Tackling Congestion, Policy TTS17);
- Low levels of walking and cycling (though there are indications of recent increases in cycling) could have implications for health, particularly obesity². This is at odds with the good levels of accessibility for locally delivered services;
- Good access to employment areas should support job creation and job-led regeneration, though accessibility to London Gateway is not so good by sustainable transport modes;
- Cycling and walking is more established in deprived wards where the need to address obesity is greatest; and
- Time taken to get to further education by public transport could be a barrier to continuing in education, especially for the more deprived and less accessible wards. This may result in on-going low levels of skills and qualifications which in turn could impact on job creation, especially higher value jobs.

With respect to public transport, the congestion strategy contains policies on improving public transport networks for scheduled commercial services. The accessibility strategy focuses on access to public transport, such as by improving interchange and information. The accessibility strategy also considers non-conventional public transport such as Demand Responsive Transport.

Priorities:

- Improving accessibility by walking and cycling, especially to jobs and the open countryside;
- Improving access to London Gateway by sustainable modes;
- Improving access by public transport to jobs, hospital and further education; and
- Prioritising accessibility improvements for disadvantaged groups and those in deprived areas.

¹ See Chapter 4 – Tackling Congestion

² See Chapter 6 – Facilitating Regeneration

3.5 Strategy

3.5.1 Aim

Delivering Accessibility

Thurrock Council, in partnership with other organisations, will enable better access to employment and educational opportunities and other key services, particularly to those in disadvantaged groups or areas.

3.5.2 Objectives

ACC1: To improve accessibility to services, especially education, employment and hospitals

ACC2: To increase levels of walking and cycling, especially where health benefits would be greater

3.5.3 Outcomes

The accessibility strategy will work to deliver the following outcomes:

- Enhanced access to key services, goods and opportunities for disadvantaged groups, especially to employment, hospitals and further education;
- People have sustainable transport options providing accessibility to shops and businesses, education and leisure facilities;
- Residents in rural areas have access to appropriate transport options;
- Improved access to London Gateway;
- Improved access for people to sustainable transport options;
- Improved physical fitness, especially in disadvantaged communities, through greater use of active transport such as walking and cycling; and
- Sustainable access to areas of new development and regeneration.

3.5.4 Policies

The thrust of the accessibility strategy will be to improve accessibility by walking, cycling and public transport to key services and facilities, especially further education, employment and hospitals. The priority will be to deliver these accessibility improvements where deprivation is apparent and where significant growth needs to be delivered and accommodated sustainably.

Improving accessibility to key services

Considering the links between poor accessibility and social issues such as deprivation, Thurrock's comparably high levels of deprivation in the urban areas and relatively good public transport accessibility in rural areas, it has been concluded that most benefit will be achieved by tackling accessibility issues in the more deprived urban areas, which is also where most of the jobs and housing growth will be taking place.

Thurrock will be changing considerably up to 2026, with 26,000 new jobs and 23,250 new homes – resulting in a population of 166,000. The planned growth in Thurrock should generally improve physical accessibility by sustainable transport to many of the new jobs, with such growth being focused on main Thurrock Urban Area such as Lakeside Basin, Grays and Tilbury. The

exception is London Gateway, which is more remote from the major urban and deprived areas, and so good access to this will need to be given a priority. The provision of higher density housing development in areas with good sustainable transport links should have a positive impact on access to services that new residents can enjoy. Furthermore, the provision of education, culture, leisure, sports, cultural, arts and community facilities within the Thurrock Urban Area should have significant positive effects on accessibility to such services in Thurrock for many existing as well as new residents.

In effect, the spatial strategy in the adopted Local Development Framework should reduce the need to travel, which by its nature should improve accessibility to services, especially by walking and cycling for example. It will be important, however, to ensure that new development is not only accessible by virtue of its location and because of the availability of existing sustainable transport provision, but also that it has the right new sustainable transport links and connections in place.

Policy TTS1: Delivering sustainable growth

Thurrock Council will prioritise accessibility improvements by sustainable transport in areas accommodating significant new housing and jobs growth.

This policy will mainly be achieved by good integration with the Local Development Framework and its delivery. New housing and employment developments will need new sustainable transport infrastructure and connections such as walking and cycling routes, bus stops etc. The provision of such new infrastructure should help ensure that new development is well served and deliverable, as well as sustainable. Links between the new development and existing sustainable transport networks will therefore need prioritising, ensuring appropriate provision, especially for pedestrians, cyclists, public transport, and the mobility impaired, as well as by road.

The Local Development Framework adopted core strategy has identified the following primary sustainable transport accessibility requirements for the five key strategic economic hubs:

- Purfleet - Public access to and along the riverfront will be improved and new urban open spaces will be provided as part of the Greengrid network;
- Lakeside Basin - The Local Development Framework proposes the provision of a new railway station at West Thurrock, introduces the South Essex Rapid Transit (*sert* - see Policy TTS17 in the congestion chapter) and will ensure pedestrian access will be improved, including north-south access from the river through Lakeside and West Thurrock to the Green Belt and beyond to South Ockendon. There will also be improved public access to and along the riverfront at Wouldham Works and West Thurrock;
- Grays - A new Transport Zone will be developed around the station including an improved railway crossing. The pedestrian environment will be improved, including better links between north of the railway line and the south and the riverfront. The planned *sert* route will also improve accessibility around Grays;

- Tilbury - Public access and informal recreation along the riverside will be improved; and
- London Gateway - Improved interchange facilities will be provided at Stanford-le-Hope rail station and improved walking and cycling links will be developed to the new employment and port area.

It will also be vital to ensure that other improvements to transport provision in the Borough, not related to new growth and development, also help improve accessibility by sustainable transport modes, including for existing communities. The need to promote equality of opportunity will mean that the focus of accessibility improvements by sustainable transport will be on areas of deprivation.

Policy TTS2: Improving access by sustainable transport to key services and facilities

There will be an emphasis on delivering accessibility improvements by sustainable transport modes in areas of deprivation, with a focus on helping to alleviate health and skills deprivation and promoting equality of opportunity in the jobs market.

To deliver this policy, the Council will consider the availability of public transport, walking and cycling networks, but will also investigate the importance of other factors. These include the cost of public transport (already recognised in the concessionary fares scheme, Travel Thurrock), the physical accessibility of transport and also the provision of information.

There are currently specific challenges to be met around the provision of public transport to services that are less local, like the hospital and further education. The time taken to access the hospital by public transport may for some present a significant barrier to either seeking healthcare or attending health appointments. In the first instance the strategy is to target those communities where high levels of deprivation coincide with low car ownership and poor public transport access to healthcare and further education. This includes Chadwell St Mary, Belhus, Tilbury St Chads, Tilbury Riverside and Purfleet and West Thurrock.

Thurrock has a real problem with skills and qualifications. By improving access to educational opportunities, the Council will help create the right environment for growth and regeneration. Improved access is likely to have a positive impact on attendance rates, and may also encourage more people to consider further education, leading to a more highly skilled workforce.

Looking to the future, the successful delivery of 26,000 new jobs will require good and equitable access to employment, both to provide the employment needs of businesses and to promote equality of opportunity. Delivering these jobs will be vital to the regeneration of Thurrock. In addition, improving the skills of Thurrock's workforce will be a priority in trying to attract and retain higher value jobs.

Focusing on improving access to employment by public transport will promote equality of opportunity, as it will be available to all rather than only those with access to a car. Those without access to a car need to be given a wider

choice of jobs rather than just those that are very local and within walking or cycling distance. This should also bring more people into the labour market and reduce the risk of insufficient labour supply being a barrier to jobs growth (see Policy TTS1). As well as social benefits, this will have economic gains, including better jobs matching and enabling people to access more productive jobs.

Although transport improvements can improve accessibility, how services are delivered by service providers can impact on their accessibility.

Policy TTS3: Integrating with other service providers
Thurrock Council will provide accessibility planning expertise to other service providers to enable them to more accurately consider accessibility when making decisions such as where to locate or how to deliver new services.

This will be achieved by working with local communities and in partnership with other agencies and interest groups such as the health authority and the police. This may involve a strong focus on transport improvements, but may also include improvements to the way that services like healthcare and further education are provided locally.

To ensure that growth is sustainable it will be important that when new services are being planned or delivered, accessibility is incorporated into the decision making process. For example, accessibility will be considered when making decisions on the locations for new schools. Although current accessibility to further education needs improving, non-transport interventions will help accessibility.

This suggests that the delivery of the Local Development Framework will be very important. The Local Development Framework includes, for example, a Thurrock learning campus in Grays town centre for further and higher education and a Community Hospital just to the north of the town centre. This will improve access to these services and shows the importance of locational decisions. As these developments are implemented it will be essential that they maximise accessibility for sustainable modes of transport to promote equality of opportunity and will therefore be encouraged to develop Visitor Travel Plans in addition to Workplace Travel Plans; these are outlined in more detail in Chapter 4 – Tackling Congestion.

Walking and Cycling Networks

The strategy is to improve accessibility by walking or cycling by implementing safe and convenient walking and cycle networks, comprising high quality core routes supported by widespread 20mph areas (see Road Safety strategy at Chapter 6 for more on the latter).

There are wider benefits to enabling people to walk or cycle to access services or employment. Facilitating increased walking and cycling can help increase exercise, which is an essential component of a healthy lifestyle. Increasing the number of people walking and cycling should also improve sociability, community vibrancy, and reduce crime through informal surveillance.

Policy TTS4: Walking and Cycling

Priority will be given to providing high quality walking and cycling infrastructure, including an identified network of Core Walking and Cycling Routes in communities:

- Experiencing housing or employment growth;
- With high levels of deprivation; and
- With a high incidence of obesity.

The core routes will improve access to education, healthcare, transport interchanges, employment, sports facilities, the riverside (including National Cycle Route 13). Connections to and/or within Grays town centre, Tilbury, London Gateway and Lakeside Regional Shopping Centre will be a priority. The core routes will also form an integral and substantial part of the Greengrid with a focus on delivering habitat and biodiversity enhancements. The core routes will be supported by widespread provision of good quality cycle parking facilities.

Improvements will be prioritised in areas where they are likely to facilitate growth, help turn around deprived communities, and help promote a healthier lifestyle, reducing negative outcomes such as obesity. High rates of health deprivation and obesity are apparent in the Grays and Tilbury.

Whilst a range of opportunities will be taken to improve conditions for cyclists and pedestrians, the focus will be on the development of a network of core walking and cycling routes. Many of these should be on-road, but where there is significant potential for conflict between vehicles and pedestrians or cyclists, more engineered solutions such as off road cycle routes and mixed priority routes³ will be used.

Where possible, walking and cycling improvements will be identified as part of school and workplace travel plans (including further developing the Safer Routes to School initiative) and delivered as shared use routes to improve value for money. This will help ensure delivery is closely related to actual need in terms of essential and regular journeys to work, education and healthcare.

All significant new educational and employment development will therefore be required to develop and implement a travel plan based on a transport assessment (see congestion strategy). The focus will be on delivering measures which offer good value for money. Linking improvements with travel plans may also help complement measures, such as marketing techniques, which may be necessary to encourage the use of any new transport infrastructure.

Improvements to core walking and cycling routes that also help to implement the Council's Greengrid strategy will be given additional priority (see Policy TTS5 below).

³ Demonstration Projects, designed to calm traffic and remove street clutter, such as those in Hull and Norwich, have reduced injuries in Road Traffic Accidents and vehicles flows as well as increased cycle trips and pedestrian activity.

Improved walking and cycling infrastructure is necessary to promote sustainable growth. As discussed earlier, new employment sites need to be accessible to the surrounding communities and providing essential pedestrian and cycle routes will reduce the tendency for people to make relatively short journeys to work by car. All major new housing and employment sites should have safe and convenient walking and cycling networks (see also Policy TTS1) which connect with existing parts of the pedestrian and cycle network. The planning process will help to secure improvements by:

- Incorporating walking and cycle network improvements at the masterplanning stage; and
- Attracting developer contributions for walking and cycling improvements.

The improvements for core walking and cycling routes will include identifying missing links in existing networks and improvements will need to consider the quality of the design, including the provision of:

- Street lighting and other measures to improve personal security; and
- Street furniture such as benches.

In addition to the provision of infrastructure that improves design, the removal of street clutter and barriers to movement, including unnecessary pedestrian guard rails, will be incorporated into design (see Policy TTS31 Chapter 7 – Facilitating Regeneration).

It will also be important to *maintain* the safety and attractiveness of such routes. Routine maintenance procedures and interventions will therefore need to give additional priority to core walking and cycling routes, such as by addressing pot-holes or defective streetlights sooner. Similarly, the structural maintenance of footways and carriageways programmes will give additional consideration to the core walking and cycling route network. There is more on the safety aspects in Policy TTS26 (Chapter 6 – Safer Roads) and its supporting text.

Thurrock's Greengrid

The Local Development Framework's Greengrid Strategy aims to create a network of multi-functional green space and links within Thurrock's towns and countryside, helping to improve the Borough's visual environment. This includes strategic green links comprising a network of footpaths, cycle paths and green transport corridors that encourage healthier living through promoting exercise and well-being by means of better access to open and green space.

Thurrock has just over 170km of Public Rights of Way including footpaths, byways and bridleways. Public Rights of Way provide valuable access within Thurrock to the countryside, local parks and open spaces, helping to promote healthier lifestyles and wellbeing among Thurrock residents. This has increasing importance given the emerging growth and development within the Borough.

Thurrock's Rights of Way Improvement Plan (ROWIP), adopted in November 2007, sets out the improvements required to meet the current and future needs of Public Rights of Ways users. Thurrock's ROWIP has four key aims:

- To deliver a safe and accessible network of bridleways, byways and footpaths;
- To improve the accessibility of the existing network so that it available to all;
- To maintain the existing and future Public Rights of Way; and
- To provide improved information relating to Public Rights of Way, which is accessible to all, encouraging people to use the network.

Policy TTS5: Transport and the Greengrid Strategy

Priorities for improvements to the Public Rights of Way will be considered against the contribution such improvements make to:

- Improving access to education, employment and healthcare; and
- Delivering the Greengrid strategy, thereby helping to improve access to green and open spaces as well as contributing to the environmental regeneration of the Borough

Wherever possible the design of improvements will assist to deliver biodiversity enhancement and habitat corridors.

An important link in the Greengrid strategy is a high quality riverside route. Sustrans, the sustainable transport charity, is aiming to implement such a route (National Cycle Route 13) for walking and cycling and the Council supports this development which will form part of the National Cycle Network as well as the Council’s core walking and cycling route network.

Demand Responsive and Community Transport

The congestion strategy at Chapter 4 sets out the policy for conventional commercial public transport services, focusing mainly on scheduled bus and train services.

Policy TTS6 focuses more on improving accessibility where conventional commercial public transport services leave gaps. The Borough does not rely on subsidised or contracted conventional scheduled bus services in its rural areas⁴. Instead, the Borough has flexible non-conventional services provided by Demand Responsive and Community Transport schemes, particularly those in rural areas. Demand Responsive and Community Transport, often led by the voluntary and community sector, can help reduce the isolation faced by people living in the more remote rural areas, offering an essential means of access to services. This more flexible transport is likely to become increasingly important given that the population is continuing to age over time. In rural areas the strategy is two-fold:

- Improve local accessibility by increasing the availability of public transport services that operate demand responsively, including linking some rural communities with the urban areas using the Rural-Urban Bus Clubs; and

⁴ Most bus services, called ‘commercial’ bus services, are planned and provided by bus companies, which are solely responsible for the routes, times and fares charged. ‘Contracted or subsidised bus services are run by bus companies to service specifications set out by local authorities, which also pays the companies the difference between the operating cost and the income from fares on these services. Contracted services are generally only provided where no suitable commercial service exists.

- Demand Responsive and Community Transport should, where feasible, not only improve access to local services, but also integrate with the interurban public transport services (see Policy TTS17 in Chapter 4 – Tackling Congestion), with a view in particular to improving access to hospitals, further education and jobs.

Policy TTS6: Demand Responsive and Community Transport

In supporting Demand Responsive and Community Transport Services the Council will give priority to supporting those initiatives where the Voluntary and Community Sector takes a major or leading role.

The main focus of current provision, operated by Trans-Vol (Thurrock’s community transport service) and Shopmobility (which enables people with disabilities or limited walking ability to get around Lakeside Shopping Centre), is on providing a service for those people with mobility impairments. The voluntary and community sector’s role is vital, given its links with local communities and their needs, and the value for money it can provide.

In the first instance priority will be given to reviewing the eligibility criteria for community transport with a view to widening the definition of mobility difficulties to incorporate anyone without access to a conventional bus service. Opportunities will also be taken to support new services where there is thought to be the need to do so, in line with the policy.

As well as providing local access in rural areas, Demand Responsive and Community Transport will also be supported in urban areas to promote the independent living aspirations of people with mobility problems, including people with disabilities and the elderly.

Transport Interchanges

The provision of high quality transport interchange facilities is essential in Thurrock, for encouraging more people to travel by public transport. Having to interchange between modes of transport can be difficult and uncertain for elements of the journey and therefore can be a barrier to accessibility. It is important to provide facilities, which make having to interchange as safe, seamless and comfortable as possible.

Policy TTS7: Transport Interchange

Improved capacity and connections between modes of transport will be delivered at key transport interchanges, such as rail and bus stations, on the network of interurban public transport routes. Priority will be given to improvements that facilitate better access to the key strategic economic hubs of Grays, Purfleet, Lakeside Basin, London Gateway and Tilbury⁵.

It is essential that this infrastructure is in place in order to promote sustainable growth and improve accessibility to key services and employment areas within the Borough. Rail stations in particular serve not just a local need, but function as gateways to the national rail network. High quality improvements will be a priority at interchanges critical for delivering sustainable growth, such as the

⁵ These locations are set out in the adopted Local Development Framework (December 2011)

rail stations at Grays, Tilbury, Purfleet and Chafford Hundred, and the bus station at Lakeside Basin. A high priority will be to improve interchange at Stanford Le Hope rail station to improve access to London Gateway as the development is brought forward.

At rail stations the Council will continue to work with the Train Operating Companies and Network Rail to deliver accessibility improvements both on the approach to and within stations. At key interchanges identified at rail stations there will be an emphasis on ensuring adequate facilities for those wishing to change mode. This means provision of secure cycle storage, car parking facilities and taxi ranks, as well as high quality connecting bus services. Many of the improvements will be delivered as part of Station Travel Plans (see Policy TTS11 in Chapter 4 – Tackling Congestion and its supporting text), including through the Local Sustainable Transport Fund.

Improvements at interchanges will be delivered by:

- Enhancing personal security, particularly for people travelling after dark, by ensuring there is adequate lighting, good vista, provision of telephones, CCTV and the use of materials such as Perspex rather than glass, where necessary;
- Improving the quality of infrastructure like timetables, provision of real-time passenger information, shelters and the availability of seating;
- Ensuring facilities are fully accessible in accordance with the Disability Discrimination Act, for example by providing tactile paving, handrails and raised kerbs at boarding points;
- Providing improved facilities such as cycle storage and lockers for those wishing to cycle to interchanges;
- Upgrading walking and cycling routes from interchanges to the surrounding residential and employment areas to ensure they are safe and convenient for pedestrians and cyclists;
- Enhancing car parking at interchanges such as rail stations where necessary, with an emphasis on short term parking for dropping off or taxis;
- Working to improve the coordination between bus and rail services; and
- Integrating transport improvements with wider developments and improvements to public space, such as the proposed Grays Station Transport Zone set out in the adopted Local Development Framework (December 2011). This should help to create vibrant areas that provide a greater degree of informal surveillance and improve personal safety.

In the first instance an audit of interchanges will be carried out. This will enable us to develop a better understanding of the standard of current interchanges and the facilities provided. The Council will aim for all interchanges to be of a high standard and will produce a set of standards in order to develop a programme for delivery. These standards may include the provision of real-time information, cycle storage and the type of shelter or waiting facilities expected.

See also Policy TTS17: Public Transport in Chapter 4 – Tackling Congestion, particularly the ‘metrorail’ concept in the supporting text.

Improving Accessibility through Information and Ticketing

Providing information on the transport services and infrastructure the Council and its partners deliver is essential for enabling people to make use of them. It is also important for ensuring best use of the assets, delivering better value for money, and improving user satisfaction levels.

The Council will target initiatives which increase awareness of transport opportunities by:

- Providing improved public transport timetables at boarding points;
- Working in partnership with others, especially public transport operators, especially to improve ticketing arrangements;
- Taking advantage of new technologies, building on real time passenger information already installed and focusing further enhancements at key interchanges and on interurban public transport routes;
- Information will be provided in a range of formats to tackle disability discrimination. There will also be a translation of information into other languages, including for rural services, but this will be kept under review in the light of growing opportunities to learn English⁶;
- Continuing to support development of the Traveline public transport information service; and
- Improving signage on key walking and cycling routes, particularly those providing access to key strategic economic hubs.

The Council will investigate opportunities for taking advantage of smartcard technology to help improve ticketing arrangements. The council will look to develop a more effective structuring and marketing of integrated ticketing products, such as Oyster and PlusBus, as well as opportunities to develop special offers for local businesses through the workplace travel planning process, where the commercial opportunity arises (see also Policy TTS17 in Chapter 4 – Tackling Congestion).

Access for all

It is essential that transport services are accessible to all sections of the population regardless of disability, race, religion, gender or ethnic background. In particular, part three of the Disability Discrimination Act 1995 gives disabled people a 'right of access' to goods, services and facilities, based on the principle that they should not be discriminated against. This principle can also be applied to other minority groups within the community.

Policy TTS8: Mobility and Access for All
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Thurrock Council will incorporate the needs of people with mobility impairments or with disabilities when designing and delivering any transport improvements or maintenance schemes, and particularly when designing, delivering or maintaining pedestrian access routes in the built up areas.
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⁶ The Commission for Integration and Cohesion recommends that resources should be directed at increasing opportunities to learn English rather than translation services. This will clearly need to be a staged process.

The Council will ensure that transport and local services are accessible to all sections of the community. This will be through a range of interventions as described below.

Access onto public transport will be promoted by encouraging public transport operators to invest in low floor buses at the earliest opportunity, and by delivering the bus stops programme to ensure all stops are fully accessible, and prioritising those stops on the interurban bus network.

The physical highway environment, such as footways and kerbs, has a large impact on the extent to which many people with mobility problems can access local services, or even reach the bus stop. The Council will implement, including as part of structural maintenance works, dropped kerbs and accessible crossing points. This will be prioritised on core walking and cycling routes and other footways in the vicinity of GP surgeries, hospitals, residential care and nursing homes, sheltered housing and community facilities. The council will also prioritise dealing with tripping hazards in the vicinity of hospitals, GP surgeries, nursing homes and residential care homes, sheltered housing, and community facilities. The Council will also continue to use tactile paving, dropped kerbs and audible signs at pedestrian crossing points. Furthermore, the delivery of the core walking and cycling routes will include providing street furniture such as seating at convenient locations.

With regard to information, providing transport information in a range of formats will be important, as will considering the needs of disabled people when providing signing or real-time information, particularly in terms of the height of information provided.

For those using a taxi or car, the Council will require through the taxi licencing system any new taxi operators to use fully accessible vehicles and will work with partners and through the planning system to provide adequate parking for people with disabilities, including at transport interchanges.

4 Tackling Congestion

4.1 Introduction

Under the Traffic Management Act (2004), Thurrock Council has a duty to keep traffic, including pedestrians, free flowing. Congestion causes frustration and delay, and has a significant impact upon the local economy, environment and well-being of Thurrock residents.

The Eddington study identified that congestion plays a pivotal role in productivity and competitiveness, as it can have an adverse impact on the local economy and create uncertainty for businesses, which can be quantified as an economic cost. The costs of congestion are significant – analysis carried out for the Eddington study showed that 8% of UK road traffic is already subject to very congested conditions and that, without action, congestion is likely to increase by a further 30% nationally by 2025. This increased congestion could see costs to business and freight rise by over £10 billion a year.⁷

Additionally, the environmental and health impacts of stationary or slow moving traffic is felt in terms of poor air quality, leading to associated health problems, particularly for people with respiratory disease. Congestion can also significantly impact on climate change by increasing carbon dioxide emissions from transport.

Congestion also affects the quality of life for residents and visitors and the environment by contributing to the general degradation of public spaces. It is detrimental to the overall operation of the transport network, leading to the potential for higher accident rates, compromising public transport reliability and operations, and impeding walking and cycling.

The outcomes that the congestion strategy seeks to achieve are therefore two-fold: it will work to maximise the competitiveness and productivity of Thurrock's economy, enabling it to grow and facilitate regeneration in the most sustainable way, but will also work to promote the health, air pollution and climate change benefits of modal shift.

⁷ *Towards a Sustainable Transport System*, Department for Transport, October 2007

4.2 Policy Context

The overarching transport policy in the UK can be found in *Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen* (2011), the Government's transport White Paper. Through this, the Government recognises that the car is the mode of choice for all but the shortest of trips, mainly because of its freedom and flexibility, but also that traffic congestion is a drag on the local economy.

There are measures available now to manage traffic in ways which tackle congestion as well as reduce carbon emissions and bring road safety and air quality benefits. For example, the White Paper encourages more sustainable transport choices through the "nudge" concept, which works with human behavioural tendencies to encourage "good" choices. The White Paper also works to facilitate better design and management of local roads, including improvements in signalling and removing clutter caused by unnecessary signs as well as improving the attractiveness of the local environment.

Local journeys also contribute significantly to the worst congestion hotspots on the national network. The Department for Transport will seek to work directly with a small number of Local Enterprise Partnerships towards agreeing a joint approach to the worst hotspots in the major urban areas where there are benefits to be gained from such an approach.

The Traffic Management Act 2004 introduced a new network management duty for local traffic authorities to manage the road network to secure the expeditious movement of traffic on the highway network and to facilitate the same on the network of others. The main purpose of the Traffic Management Act is to deal efficiently with the traffic presented on the network, both now and in the future, and tackle the related causes of congestion and disruption on the highway. The Traffic Management Act also makes it clear that the network management duty relates not only to vehicular traffic, but to pedestrians, cyclists and other road users.

Locally, Thurrock's aim is to improve access and use of alternative and sustainable modes of transport through the Sustainable Community Strategy. The vision sets out that the Council and its partners want "Thurrock to be at the dynamic heart of the Thames Gateway, a place of ambition, enterprise and opportunity, where communities and businesses flourish". To achieve this vision, they have identified five priorities with related objectives. One of these priorities is to "encourage and promote job creation and economic prosperity". Relevant objectives that relate to this are:

- Delivering new sites for employment to create jobs over the next 25 years;
- Improving infrastructure to enable delivery of new employment, housing and community facilities; and
- Collaborating with key partners to deliver major regeneration projects.

The Thurrock Local Development Framework includes an objective to provide in Thurrock a safe transport system that supports accessibility, manages the need to travel, and encourages the use of more environmentally friendly modes of transport such as cycling, walking and public transport, all of which will work to help tackle congestion.

Finally, in summer 2011 Thurrock Council successfully secured £5m from the Department for Transport's Local Sustainable Transport Fund (LSTF). This will be invested in transport improvements primarily in the Thurrock Urban Area with a view to delivering a modal shift away from car use. This in turn will result in economic benefits as a result of reduced congestion and CO₂ benefits as a result of reduced traffic. This congestion strategy provides the framework through which the Council's LSTF programme will be delivered.

4.3 Data Analysis

In autumn 2007, Small Fish strategy consultants were commissioned to undertake an audit and analysis of all evidence related to congestion in Thurrock. This work culminated in the supporting document *Thurrock Transport Strategy: Evidence Base*. The evidence base analysed data in relation to the following elements of congestion:

- Traffic Growth;
- Heavy Goods Vehicles and Freight;
- Travel Patterns;
- Public Transport; and
- Smarter Choices.

Analysis of evidence and data from the *Thurrock Transport Strategy: Evidence Base* resulted in the identification of strengths, weaknesses, opportunities and threats (SWOT) currently related to congestion in Thurrock. These are outlined in Table 4.3.

Table 4.3: Congestion SWOT Matrix

Strengths	Weaknesses
<ul style="list-style-type: none"> • High growth in public transport patronage • High growth in rail patronage • High growth in rail freight tonnage • Good strategic road network on which to build • High proportion of residents travelling to work via rail • Large number of rail stations 	<ul style="list-style-type: none"> • Congestion on strategic road network in some areas, particularly along the A13 • Large proportion of in/out commuting • High proportion of HGVs on the network • Low bus satisfaction • Low levels of residents travelling to work via walking, cycling and bus • High proportion of workplace and resident population travelling to work by car • Uncertain cycling trends

Opportunities	Threats
<ul style="list-style-type: none"> • Good rail freight transport opportunities could lead to reduced HGV movements • 100% schools now have travel plans – implementation of these plans should bring about further reductions in the mode share of journeys to school by car • 26,000 new jobs in Thurrock could help to reduce the amount of out commuting • High number of rail stations near which to allocate growth to encourage rail use • Large proportion of workplace and resident population live within viable distances for using sustainable transport to travel to work • Develop a Freight Quality Partnership 	<ul style="list-style-type: none"> • Growth will lead to more of the strategic road network going over capacity • Growth will lead to more of the rail network going over capacity • Growth will most likely lead to an increase in maintenance requirements • Providing for increases in car, HGV and public transport movements

4.4 Issues and Priorities

Issues:

- Providing for freight modal shift and minimising the number and impacts of HGVs;
- Providing for increases in car and freight movements and public transport use arising from growth;
- Continuing to build on rail and bus patronage when growth will threaten capacity;
- Low bus satisfaction and public perceptions of buses in Thurrock;
- Ensuring growth is located in such a way to reduce the need to travel and facilitate sustainable transport modes;
- High levels of out commuting from Thurrock;
- High proportion of HGVs on the road network and likely future increases from the London Gateway port development and the expansion of Tilbury port;
- Congestion on the strategic road network, especially the A13; and
- Low levels of sustainable transport use to travel to work.

Priorities:

- Reducing traffic congestion, particularly on strategic roads;
- Minimising the effects of future growth on traffic congestion;
- Increasing bus satisfaction and improving public perceptions of buses in Thurrock;
- Facilitating modal shift to more sustainable modes of transport; and
- Providing for freight modal shift and minimising the number and impacts of HGVs.

4.5 Strategy

4.5.1 Aim

Tackling Congestion

Thurrock Council will manage the demand for travel in Thurrock through a policy of encouraging sustainable development patterns and use of public transport, walking and cycling.

4.5.2 Objectives

- CON1:** To encourage a modal shift away from the private car to walking, cycling and public transport, especially to work and school
- CON2:** To encourage a modal shift for freight from Heavy Goods Vehicles onto rail and water
- CON3:** To improve bus satisfaction
- CON4:** To minimise traffic growth and reduce average journey times
- CON5:** To increase public transport patronage

4.5.3 Outcomes

The congestion strategy will work to achieve the following outcomes:

- Deliver reliable and efficient transport networks that support economic growth, without a simultaneous growth in travel;
- Allow movement of freight, which is reliable, quick and low cost;
- Get people to work on time, safely, reliably and quickly, in reasonable comfort and at reasonable cost;
- Enable people and businesses to choose lower carbon transport options by breaking down the barriers to these behavioural changes;
- Actively promote ultra-low carbon alternatives such as walking and cycling and low carbon alternatives such as public transport options; and
- Reduce the number of short distance trips by carbon intensive modes.
- Ensure interurban travellers and freight can access a range of key destinations reliably and quickly and can return within a day.
- Enhance the resilience of national transport networks.
- Facilitate shift of freight transport to lower carbon alternatives.
- Ensure passengers and freight can access international gateways reliably and quickly, can travel to and from a wide range of destinations from the UK and have a good experience of using the UK's international gateways.
- Provide passengers and freight with lower carbon surface access alternatives to international gateways.

4.5.4 Policies

The Council's strategy for tackling congestion will be to deliver a targeted programme of measures to:

1. Reduce the need to travel by minimising congestion arising from growth
2. Encourage and seek modal shift to more sustainable modes of transport, such as public transport, walking and cycling, particularly in urban areas

3. Improve the efficiency of the existing transport network throughout the Borough
4. Increase network capacity on strategic routes, where appropriate.

Minimising Congestion from Growth

Traffic has grown substantially over the past ten years in Thurrock, although the rate of growth has slowed down considerably since economy began to slow down in 2008.

The planned expansion of 23,250 dwellings and provision of 26,000 jobs by 2026 will put enormous pressure on Thurrock's transport network. Based on TRICS data for the South East, Thurrock will need to accommodate at least 55,000 additional daily car trips from new dwellings in Thurrock by 2016 and 92,000 by 2021.

This proportion of car trips assumes that existing travel behaviour continues. There is therefore scope, through the Thurrock Local Development Framework, to work to reduce these forecasts by reducing the need to travel. In undertaking spatial planning and allocating land for new development, the Borough will work to locate new development in such a way that firstly reduces the need to travel and secondly to where existing sustainable transport infrastructure exists. This will be delivered through the Thurrock Local Development Framework Core Strategy policies, which state that the Council will ensure new development promotes high levels of accessibility by sustainable transport modes and local services are conveniently located to reduce the need to travel by car.

It may not, however, always be possible to locate development in ways that will reduce the need to travel, as other environmental, social and economic objectives must also be given consideration when locating new development.

Policy TTS9: Minimising Congestion from Growth
Where development takes place in areas that does not reduce the need to travel or in areas where access to existing sustainable transport infrastructure does not exist, the Council will prioritise the delivery of sustainable transport schemes for meeting travel demand arising from that development.

This means that, where land is developed in areas that meet wider objectives, but does not reduce the need to travel or currently have sustainable access, the Council will work closely with developers to ensure that sustainable transport schemes are delivered for those living and working at that development, to promote sustainable travel choice.

Encouraging Modal Shift

The *Thurrock Transport Strategy: Evidence Base* found that there is substantial scope for encouraging a modal shift, particularly in relation to travel to work. Smarter Choices measures comprise a range of interventions that aim to promote sustainable travel by encouraging and enabling people to increase their use of sustainable transport modes such as walking, cycling and public transport and reduce single occupancy car journeys. Current

evidence suggests that the most effective way of reducing congestion is through a package of such measures and this type of investment clearly represents good value for money.

In July 2011, Thurrock Council was successful in securing £5m from the Department for Transport's Local Sustainable Transport Fund (LSTF). This will be invested in transport improvements primarily in the Thurrock Urban Area with a view to delivering a modal shift away from car use. The key components of Thurrock's LSTF programme include smarter choices measures, walking, cycling and public transport improvements, and freight measures. Successful delivery of the LSTF programme should result in economic benefits as a result of reduced congestion and CO₂ benefits as a result of reduced traffic.

Policy TTS10: Smarter Choices

In urban areas, measures to encourage a modal shift to public transport, walking and cycling will be prioritised.

The *Stern Review on the Economics of Climate Change* (2006) identified that barriers, which prevent people from making informed decisions about transport must be removed in order to effectively address the impacts of congestion and climate change, and Policy TTS10 works to achieve this. The Local Development Framework for Thurrock will work with partners to deliver at least a 10% reduction in car traffic from the 2026 levels that have been forecast. Smarter Choices measures, designed to give better information and opportunities, will therefore be intensively developed in Thurrock and these are outlined in more detail below.

Workplace Travel Plans

Research has found that journeys to work are the hardest to shift – but also that they pay the biggest dividends as they tend to take place at peak times, affecting the economy the most and causing congestion on the road network. To date, 28 workplace travel plans have been adopted, although census travel to work data, however, shows that Thurrock has relatively low levels of walking, cycling and bus use and slightly higher than average travel by car to work. Increased adoption and implementation of workplace travel plans may work to encourage a modal shift in travel to work patterns.

Policy TTS11: Travel Plans

Travel plans will be required for all development in accordance with Government guidance and the Council's Local Development Framework Policy PMD10. Large existing employers, employment areas and visitor attractions will also be encouraged and supported to develop travel plans. Where travel plans have been adopted, the Council will require an annual review to analyse effectiveness of delivery and overall contribution towards travel conditions.

Travel planning has traditionally focused on using planning obligations (such as Section 106 agreements) and conditions to secure travel plans and

sustainable transport infrastructure at new development. Thurrock Council will take this one step further by working with large-scale existing employers to develop travel plans and deliver complementary transport improvements at or near existing employment and visitor sites to encourage a modal shift. This intensive application of Workplace Travel Planning at new and existing employment sites, supported by a programme of complementary walking, cycling and public transport improvements should work to encourage a modal shift.

To that end, voluntary workplace travel plans will be facilitated and developed in conjunction with employers in Thurrock (beginning with the largest), in order to encourage a modal shift away from single occupancy car use, particularly for those journeys to work under 5km. Through the LSTF programme, the Council will incentivise the uptake of voluntary workplace travel plans by aiming to:

- Provide experienced, professional assistance in developing workplace travel plans, initially through the Local sustainable Transport Fund;
- Identify and provide sustainable transport infrastructure required at major employment locations to improve sustainable access to employment sites, such as Lakeside and Grays;
- Provide car sharing database “group pages” for employers developing travel plans (see Liftsharing below);
- Host an annual travel plan awards ceremony;
- Provide personalised journey planning days at major employers (see Personalised Journey Planning below);
- Provide “Bikability” training programmes at major employers; and
- Reduce the need to travel by providing assistance in helping employers to identify areas where business related travel and expenses can be reduced significantly.

In addition to voluntary travel plans with existing businesses, the Council will also continue to require travel plans through s106 agreements for new developments.

Visitor Travel Plans

Additionally, the Council will look to secure Visitor Travel Plans at all new and existing hospitals and further education establishments in addition to Workplace Travel Plans at these sites, as they are also likely to be large employers. This will work to enhance sustainable access to these sites for visitors, particularly for those socially excluded populations that require access to these facilities most.

The Council will also encourage tourist destinations in Thurrock that draw a large number of visitors from the region to develop Visitor Travel Plans and will work with these organisations to provide sustainable access to these sites to help deliver their travel plans.

Station Travel Plans

Rail stations are major generators of travel and their impact on the surrounding road network can be large. Historically, there has been a strong emphasis in the rail industry on catering for car trips to stations through increasing station car parking and in some cases through parkway stations.

To encourage a modal shift to rail, the Council will work with the train operating company (the new rail franchise is to be re-let 2013) to develop station travel plans with a view to reducing congestion and encouraging more sustainable journeys to rail stations. These station travel plans will be used to identify those sustainable transport interchange improvements that are required at Thurrock's rail stations to facilitate this change. As a result, the Council will work closely with the Council's rail partners to deliver improvements required at rail stations to implement station travel plans, such as:

- Secure cycle storage and cycle hire;
- Better pedestrian and cycle access to stations;
- Better signing, information and waiting areas for buses and taxis;
- New or improved bus services;
- Car sharing and car clubs, with reserved and priority parking spaces;
- Shared taxis; and
- Better managed station car parking to give priority to car sharing and where appropriate short-term drop-off parking rather than all-day parking.

Support for the development of Station Travel Plans will be funded through the Council's LSTF award to 2014/15, by which time the Council hope to have a travel plan in place for all eight stations in Thurrock.

School Travel Plans

The adoption of School Travel Plans at 100% of Thurrock schools continues to influence the way in which parents and children choose to travel. Taking children to and from school by car has a marked effect on traffic and may influence travel behaviour of future generations. The Council will continue to provide professional support for assisting schools in developing and implementing School Travel Plans.

Policy TTS12: School Travel Plans
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Those measures within School Travel Plans that will also improve road safety and/or the health of school children will be prioritised.
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The Council will build on these achievements and focus School Travel Planning more intensively on the *delivery* of School Travel Plans. The Council will work with schools to develop a range of transport improvements to deliver on the ground in support of School Travel Plans and encouraging a modal shift. Schemes arising from School Travel Plans will also aspire to promote safer and healthier journeys to school. Measures to further encourage a modal shift in travel to school are likely to include:

- Providing experienced, professional assistance in refreshing existing school travel plans, where needed;

- Identifying road safety improvements, such as traffic calming, 20 mph zones and pedestrian crossings, to encourage walking and cycling to school where safety is an issue;
- Continuing to support the Sustrans provision of the “Bike It” for encouraging cycling at the Council’s schools;
- Enforcement of parking restrictions around schools;
- Continuing to provide the “Bikeability” cycle training programme at schools to give both children and parents the skills and confidence to cycle safely;
- Providing car sharing database “group pages” for primary schools, where parents can connect with each other to arrange a car pool; and
- Hosting an annual school travel awards ceremony.

Initially, this will be funded through the Council’s LSTF award to 2014/15, with a view to continuing to support School Travel Planning throughout the life of the Thurrock Transport Strategy, although this will be dependent on future funding allocations.

Travel awareness campaigns

Providing residents with information about sustainable travel, together with a range of incentives to use them, can be one of the most effective ways of reducing car travel. The Department for Transport’s Sustainable Travel Demonstration Towns project highlighted the importance of investing in a strong brand for a Smarter Choices programme, with a clear local identity and a positive tone, as well as ensuring that information and publicity materials were widely distributed.

The Council will therefore develop and implement travel awareness campaigns to encourage Thurrock residents and working populations to use sustainable modes of transport. This will include improved public transport marketing and information, as well as sustainable transport campaigns and events. The Council will work to promote innovative approaches to reduce the need and distance travelled by informing the local community about sustainable transport modes and the contribution this can make towards overall travel conditions, road safety, air quality and climate change.

Initially, through the Council’s LTSF programme, the Council will focus on creating a unique “brand” identity that is wider than “the Council” for promoting sustainable travel in Thurrock.

The Council’s LSTF promotional campaigns will also be focused around partnership working with local estate agents, to create a brand that will attract people to live, work and travel locally and sustainably in Thurrock. Part of this work will be focused around providing personalised journey planning to those looking to move to or within Thurrock (see below).

Lift sharing schemes

Not all single occupancy car journeys will be able to shift to walking, cycling or public transport. To that end, the Council will look to further reduce single occupancy vehicle journeys by promoting car sharing. Lift sharing saves

money and reduces the number of cars on the roads - resulting in less congestion, less pollution and fewer parking problems. Thurrock Council has had a lift sharing scheme in place since 2004, supported by Liftshare.com Ltd. The Thames Gateway Car Share site has been set up and funded through a cross-boundary partnership between the Thames Gateway South Essex Partnership, Southend Borough Council, Thurrock Council and Essex County Council.

There is, however, scope for improving the lift sharing service and encouraging more people to use the scheme. Focusing the service on developing private group schemes for specific business and school destinations via their travel plans in order to reach the highest density of people travelling to common destinations will do this.

Initially, through its LTSF programme, the Council will look to set up and promote a borough wide Thurrock liftsharing website and database. From there, the Council will focus on developing and promoting private group schemes within this area wide site for specific business and school destinations via their travel plans in order to reach the highest density of people travelling to common destinations. This will be focused on those employers developing voluntary workplace travel plans. The Council will also work with employers to ensure that car sharing is further supported by preferential parking on site, where possible.

Personalised journey planning

The Sustainable Travel Demonstration Towns project highlighted significant success in reducing traffic and encouraging a modal shift through personalised journey planning, which highlights travel choices people may not realise they have. Direct contact is made to interested individuals to provide locally relevant travel information and support. It motivates people to think about their day-to-day travel choices and to try small changes that often make life easier and travel more fun.

These projects have a uniquely customer-focused approach, which is critical to their success and therefore will be focused on providing personalised journey planning days at the largest employers in the Borough through the workplace travel planning process.

The Council will work to develop a personalised journey planning service, which provides individuals with travel advice and incentives for making journeys by sustainable modes of transport. This will be targeted first and foremost in health deprived areas to encourage people to improve their health by using less sedentary modes of transport. During its LSTF programme to 2014/15, the Council will aim to provide personalised journey planning to around 50% of Thurrock households.

Additionally, studies have shown the people who are at a point of significant change in their lives are the most likely to consider making a change in the way they travel. Since Thurrock is likely to be a place of significant housing and jobs growth, the Council feels it can capture a substantial number of

people making a life change and offer a personalised journey planning service to all new employees at workplaces with a travel plan and to parents with children starting at a new school. The Council will also work closely with local estate agents to provide personalised journey planning to people who are moving house, including offering them a service through which the Council can help them to choose and determine a sustainable location in Thurrock in which to search for housing, such as being close to their workplace.

Finally, in order to further facilitate the positive health outcomes that arise from active travel, the Council will look to provide personalised journey planning to households within those wards where health issues occur, including Grays Riverside, Tilbury and Purfleet. This will provide the learning required for delivering personalised journey planning on an area wide level across the remainder of the Borough beyond the Council's LSTF funding from 2015.

Sustainable Transport Infrastructure

Encouraging a modal shift must therefore be supported by measures which provide the necessary infrastructure for people to change their travel patterns away from car journeys and towards more sustainable modes of transport, particularly in urban areas. The experience of the Sustainable Travel Demonstration Towns underlined the importance of supporting efforts to promote walking and cycling with a strong programme of improvements in the quality and safety of the walking and cycling environment. To further encourage sustainable transport use in Thurrock it will be necessary to invest in improving the quality of these networks.

<p>Policy TTS13: Sustainable Transport - Complementary Infrastructure</p>
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<p>To reduce current and future congestion, the Council will prioritise walking, cycling and public transport infrastructure improvements in the urban areas in order to facilitate a modal shift to more sustainable modes of transport.</p>

To support implementation of this policy, the Council will identify "core" sustainable transport corridors (for an example, see Policy TTS4 in Chapter 3 – Delivering Accessibility) and focus sustainable transport infrastructure improvements on these networks. This will lead to:

- More cycleways that are joined up and enable more seamless journeys;
- Cycle parking facilities where people need them, for example at large employment sites and in retail areas;
- Priority pedestrian and cyclist crossings where people need them most;
- Footway improvements;
- The development of walking and cycling route maps for key destinations;
- Public transport interchange improvements (see Policy TTS7 in Chapter 3 – Delivering Accessibility);
- Public transport priority measures where possible and where necessary;

- Better and more bus shelters, with real time passenger information; and
- Improved public transport ticketing arrangements, such as on street ticket vending machines and through ticketing arrangements.

Some of these measures may need to be supported by traffic restraint measures in urban areas as well as the use of urban traffic control and intelligent transport systems to give priority to sustainable modes of transport.

These sustainable transport improvements in Thurrock will be developed with a view to:

- Promoting, enhancing and maintaining existing and future walking and cycling networks;
- Enhancing access for the local community to places of employment, community facilities and centres as well as to the countryside, urban green space and recreational facilities by walking, cycling and other non-motorised forms of transportation; and
- Maintaining and enhancing the National Cycle Network in Thurrock and connect it to other forms of transport, residential areas, employment sites and key services

Policy TTS13 will also support the delivery of Policy TTS4 (Walking and Cycling Routes), and Policy TTS7 (Transport Interchanges) within Chapter 3 – Delivering Accessibility. Such improvements in accessibility will be delivered in a way that will promote modal shift, such as through high quality design of sustainable transport infrastructure.

The benefits of modal shift include reducing congestion. Therefore, it is very important that these benefits are preserved otherwise they have the potential over time to induce new car traffic onto the road network. Once an appropriate level of modal shift has been achieved it is important to secure these changes in the longer-term such as by reducing the amount of road space available to traffic, as people may shift back to car use.

Policy TTS14: Locking in Benefits
 Reductions in traffic volumes from modal shift to walking, cycling and public transport will be maintained or “locked in” by complementary reallocations of road space to sustainable modes.

This means that in urban areas, where modal shift has been achieved, more road space will be given over to pedestrians, cyclists and public transport. In town centres, particularly near retail facilities, prioritisation will be given to enhancing pedestrian environments. This will also work to support the economic vitality of the town centres and encourage economic regeneration. Other measures to achieve this could include strategic closures or flexible reallocation of road space which can be altered easily according to modal demand.

Parking

Thurrock boasts a large number of relatively inexpensive or free car parking spaces, which may be linked to the high proportion of people who drive to work in Thurrock. Controlled provision and availability of car parking is essential to managing urban traffic congestion and encouraging people to use alternative forms of transport. It can also play an important part in ensuring the economic vitality of areas by enabling people to gain access. Restricting the number of spaces or limiting the availability of long-stay car parking can have a significant effect on traffic volumes, providing that these measures are complemented by the provision of adequate alternative options.

Through the Council's Local Development Framework, The Council will apply minimum car parking standards for residential parking and maximum standards for non-residential car parking]. A reduced maximum standard for non-residential car parking and a reduced minimum standard for residential car parking will be required in those parts of Thurrock which have good levels of car parking enforcement available, coupled with high levels of accessibility, as defined by Policy PMD8 of the Local Development Framework's *Core Strategy and Policies for Management of Development* document.

Policy TTS15: Car Parking

In urban areas car parking provision will be managed to favour short and medium stay and will be limited to the current number of car parking spaces. Additional parking provision may be appropriate at rail stations and other public transport interchange locations to encourage the use of rail and bus to access the main urban centres.

This means that long stay parking in the urban centres will be limited to encourage commuters to utilise public transport, walking and cycling opportunities. Permission will not be granted for new car parking unless it replaces parking elsewhere.

Parking will only be increased at rail stations where Station Travel Plans have been implemented and parking capacity shortages remain. Where parking is increased at rail stations, this will be supported by stronger parking controls in the vicinity in order to offset the potential increase in traffic surrounding the station.

Managing the Network

Under the Traffic Management Act (2004), Thurrock Council has a duty to keep traffic moving. Improving the efficiency of the existing transport network could reduce the need to increase capacity, provide better value for money in managing congestion and improve the region's economic productivity. The Eddington study⁸ recommended making best use of existing networks, such as traffic flow management on roads or lower-carbon transport choices, in order to maximise the competitiveness and productivity of the economy. The

⁸ *Eddington Transport Study*, December 2006.

challenge is therefore to improve the performance of the existing network in Thurrock.

Policy TTS16: Network Efficiency

Thurrock Council will investigate and deliver transport network management and efficiency improvements before increasing capacity.

Managing and improving the efficiency of the network will be realised in a number of ways, outlined below. Further detail of the Council's traffic management activities can be found in the *Thurrock Traffic Management Plan* (2011).

Improved information for motorists

The provision of information on congestion and incidents to motorists and other road users can be a powerful tool through which to manage congestion. In order to make the most effective use of information on congestion and incidents for traffic management purposes, the Council will review the way in which the Council disseminates information to motorists and other road users. This review will consider a range of technological and interactive information platforms.

In doing so, the Council will investigate using Essex Traffic Control Centre to reach a wider audience of drivers and road users through a diverse range of technologies. These technologies will provide road users with real-time information about on-going incidents, thereby enabling them to choose alternative routes or means of travel. Where feasible, the Council will introduce additional variable message signing to provide drivers with real-time information relating to parking availability, traffic related incidents and accidents, as well as disruptions, such as planned events and road works, and suggested diversionary routes.

Providing travellers with information on planned events ahead of time is a key way of minimising the disruption as it enables alternative routes to be chosen. Advanced roadside warnings are put in place for roadworks, usually one month before the works are due to start. Major planned roadworks are shown on a map on the Thurrock Council website. The Council will investigate working more closely with the Essex Traffic Control Centre to display the planned events on the Essex Traffic Control Centre website rather than separately on the Council's own. This should enable people to make more informed decisions about their journeys. The Council will also continue to notify the bus operators whose services are affected by any road closures or roadworks and continue to disseminate information to key interested parties.

Parking enforcement

Parked vehicles, including those being loaded or unloaded can significantly reduce the efficiency of the network. Badly parked vehicles, particularly lorries, can block a whole lane of traffic, resulting in major delays at peak times. The Council has been responsible for enforcing parking, loading and waiting restrictions in the Borough since 2005 when the Council took over responsibility from the Essex Police. The Council will work towards minimising

disruptions and delays caused by contraventions to parking, loading and waiting restrictions by prioritising enforcement:

- On traffic sensitive streets (to be reviewed through the Council's Traffic Management Plan);
- On bus and cycle lanes, particularly those cycle lanes comprising the core walking and cycling network;
- In known areas of congestion, such as Grays;
- Where persistent contraventions lead to congestion, such as around schools; and
- Based on complaints from members of the public

Intelligent Transport Systems

The Council will employ the use of Intelligent Transportation Systems to add information and communications technology to transport infrastructure and vehicles in an effort to manage traffic. Urban Traffic Management & Control (UTMC) is an Intelligent Transport System that can be an effective tool through which to manage the traffic on the road network in the most efficient way.

The Council will work in conjunction with Essex Traffic Control Centre to use UTMC as a way of monitoring, operating and controlling traffic signals through a central computer, using information gathered from sensors in the road to decide whether traffic is getting heavy or congested on a particular road. The computer then makes decisions and can change the timing of traffic lights to let the traffic move more freely, so reducing hold-ups.

The Council will also look at using the Essex Traffic Control Centre's UTMC technology to divert traffic off one strategic road onto another during times of congestion or delay by means of variable message signs, text messaging and public announcements. For developing better traffic management plans, the Council will consider using the Council's UTC system and ETCC to actively manage congestion and incidents through the development of clearance plans in order to actively clear an incident via a fully automated intervention strategy⁹. The Council will also consider using ETCC to provide active route management, directing traffic off a congested major route and onto a parallel major route.

Coordination of works

Our main approach to reducing the impact of planned events on the road network is to improve cooperation and coordination between the Council, other traffic authorities, utilities and other organisations to ensure works and other events are well planned and opportunities taken to mitigate and reduce traffic disruption. The Council is also keen to develop real incentives for works

⁹ A clearance plan is a thought out traffic management intervention which is programmed into the ETCC. If a particular road/ junction is congested, the operator can activate the automated intervention, which changes signal settings etc. to clear the logjam. Operators do not change signal settings in an ad hoc way to clear congestion, only through a clearance plan.

promoters to apply best practice and reduce the amount of time they spend digging up roads and/or disrupting traffic.

The Council will coordinate all roadworks and activities on the Council's highways, applying restrictions where necessary, with a view to minimising disruption and delays to traffic and people. To achieve this, the Council will continue to work with other traffic authorities to ensure that any potential adverse impact on traffic flow on the Council's roads caused by planned events on their roads is minimised and well managed, and that diversionary routes using the Council's roads are agreed in advance. The Council will also work with the utility companies and others to record and share information on planned roadworks, and the Council will cooperate with the main utility companies to develop a Code of Practice to reduce the impact of roadworks. The Council will consider setting up a roadworks permitting system if it can be shown that:

- Other measures prove insufficient to tackle roadworks related congestion and traffic disruption;
- It will help to reduce traffic disruption and congestion caused by planned roadworks;
- It offers value for money in terms of the benefits outweighing the costs; and
- It is affordable.

Interurban Congestion

High levels of commuting in and out of Thurrock coupled with high levels of logistics operations and heavy goods vehicles can lead to significant congestion on the strategic transport network¹⁰ between Regional Transport Nodes.

Policy TTS17: Public Transport

Thurrock Council will develop a high quality network of public transport linking Thurrock with other Regional Transport Nodes, and linking the urban areas within Thurrock. Routes will connect town centres, key strategic economic hubs, further education, and hospitals. The priorities for improvements to public transport will be:

- To facilitate public transport movement between Thurrock and the other Regional Transport Nodes by tackling congestion along key bus and rail routes
- To facilitate access to London and to national transport networks
- To improve the interchange between modes and the integration of strategic and local networks within Thurrock
- To progress bus-based rapid transit links where there is no alternative rail connection and new rail links are unrealistic

Movement between Thurrock and the other Regional Transport Nodes, particularly Basildon, Brentwood, Chelmsford and Southend, as well as other key destinations such as Ebbsfleet, Stratford and Central London will be

¹⁰ Key rail and road links

improved. The Council will work with neighbouring authorities to investigate measures to improve public transport links in order to reduce interurban congestion on roads between Thurrock and the Regional Transport Nodes listed above. Such measures will include:

- improved access by sustainable local transport to rail stations;
- facilities to support and encourage high quality interurban bus / coach services where rail is not available; and
- Rapid Transit, such as South Essex Rapid Transit (*sert*), will be developed to facilitate movements between Regional Transport Nodes¹¹

The main objective of this policy is to enable more interurban movements to be made by public transport and to provide links between modes and with local services. This includes encouraging an integrated bus, coach and rail network that provides good access to key strategic economic hubs, growth areas and service centres. Service frequency and access to services are critical factors in ensuring rail and bus/coach services provide viable alternatives to the car and reduce social exclusion.

Thurrock has seven rail stations hosting an excellent service between Southend and London, all of which are underutilised for journeys within the Borough. Spatial analysis shows that the majority of Thurrock residents are within a 1-2 mile radius of a rail station – an ideal distance for accessing rail stations by foot or bicycle. In order to further enhance the use of the Council's existing rail assets within the Borough, the Council will work with the train operating company, Essex County Council and Southend Borough Council to develop and agree a Thurrock "metrorail" marketing and promotional campaign, focused on the good value for money that this service offers through the Council's LTSF programme.

Additionally, the Council will look to develop a more effective structuring and marketing of integrated ticketing products, such as Oyster and PlusBus, as well as opportunities to develop special offers for local businesses through the workplace travel planning process, where the commercial opportunity arises. This will capture and encourage a modal shift for a number of economically significant journeys by improving sustainable access to employment throughout the Borough.

There are a number of sections of the interurban road network, both within and around Thurrock, where public transport services leave room for improvement and there is no viable rail option. In such places the option of investing in high quality bus and coach services will be considered, as this is unlikely to require new large scale infrastructure.

¹¹ Thurrock Council, in partnership with Essex County Council and Southend-on-Sea Borough Council, submitted its Best and Final Business Case for *sert* to the Department for Transport for consideration for major scheme funding approval in September 2011. The DfT has since has given the promoters until 31 March 2012 to update their business case showing evidence of the scheme's value for money and a final decision is expected from the DfT by the end of May 2012.

Network Capacity

Increasing capacity has historically been viewed as a sensible solution for reducing congestion. The Department for Transport has since identified that the provision of additional road capacity can induce new traffic onto the road network, which means the demand for car travel can change in response to changes in the supply of road space. This does not mean that the provision new transport infrastructure is undesirable, but rather that it should not necessarily be the default solution considered for mitigating congestion problems.

Thurrock Council's *Thurrock Infrastructure Prioritisation and Implementation Programme*, undertaken by Colin Buchanan and Partners in 2010, established baseline conditions for road links in Thurrock that are at or approaching capacity, leading to queuing, increased journey times and obstructed traffic flows. The addition of traffic growth and extra traffic associated with the development of the London Gateway Port at Shell Haven to take the flows to a 2025 baseline situation worsen the performance of the links that are already over capacity. All of the links that were approaching capacity under existing flows will be over capacity by 2025.

In Thurrock, the M25 and A13 are routes of national and regional importance. Adverse traffic conditions on these routes often have a knock-on effect on local roads, leading to localised gridlock on occasion and impacting negatively on economic productivity. The Dartford Crossing adds an additional element of traffic risk, as the bridge and the tunnels are more sensitive to accidents and congestion, which leads to widespread effects on Thurrock's local road network.

The M25 and the A13 (between Wennington and the A1089 Tilbury Dock Approach) are managed by the Highways Agency, as is the A1089 itself. The remainder of the A13 eastwards to the Borough boundary at Basildon falls within the Council's jurisdiction. The Council will continue to work closely with the Highways Agency to deliver improvements to the strategic road network that will facilitate growth and tackle congestion.

There is currently a need to make road network improvements to facilitate access to Key Centres of Development and Change as well as key strategic economic hubs and areas of regeneration and in support of efficient freight movements. In particular, rail stations and trunk road junctions represent gateways to the national transport network.

<p>Policy TTS18: Strategic Road Network Improvements</p>

<p>Where modal shift and network management are insufficient to tackle congestion on the Strategic Road Network, the Council will look to encourage additional capacity to reduce congestion, improve journey times, facilitate growth and improve access to key strategic economic hubs.</p>

Currently, the need for major network improvements on strategic routes to facilitate growth has been identified as:

- M25 widening to dual four lanes between Junction 27 and Junction 30 is currently underway;
- M25 improvements to Junction 30 by the Highways Agency. Options are currently under consideration for delivery post-2015, and these should be the subject of consultation during 2012. The Council will be particularly supportive of an option that will include benefits for Junction 31;
- A13 widening of the section between Junction 30 of the M25 and the junction with the A126 (potentially as part of the Junction 30 improvement options being developed by the Highways Agency for implementation post-2015);
- A13 widening of the section between the A128 and the A1014, partly to help deliver the London Gateway development; and
- A1014 London Gateway Improvements (which is likely to become a trunk road once the London Gateway port becomes operational).

Additionally, Lakeside is set to expand considerably. Improved highway accessibility to and within Lakeside Basin will be required as part of the transformation of this strategic economic hub. The precise detail of which is part of an on-going study and work is currently underway to understand the level of highway infrastructure improvements required for Lakeside through analysis of a series of options. The outcome of the study will inform the Local Development Framework's Site Specific Allocations DPD.

Furthermore, The Department for Transport and Highways Agency will be working with key partners, including Thurrock Council, over the coming years to address the issue of congestion at the Dartford Crossing. Whilst this is very much a work in progress, the priorities of the Council and the Local Economic Partnership¹² are to reduce congestion at the existing Thames Crossing through 'free-flow charging' and to maintain the current level of concessions for residents of Thurrock (and Dartford) and regular users to encourage local mobility across the river.

If there is a proven need after taking account of these measures then the case for increasing the capacity on the river crossing should be explored, including:

- By enhancing the existing infrastructure to provide for separate capacity for local traffic distribution to relieve pressure;
- By planning and building a new river crossing linking in to existing highways infrastructure wherever possible expanding or upgrading as appropriate; and
- By building new highways infrastructure only where absolutely necessary.

Thurrock is well positioned in terms of rail services, connecting with mainline services into London and having good services to all the key strategic

¹² Covering Essex, Kent and East Sussex

economic hubs except London Gateway. Some services, however, will be over capacity with growth and this will need to be addressed.

Over the longer term it will be necessary to address capacity problems on the rail network in order to accommodate further increases in rail patronage. Many rail interchanges were improved through the first Local Transport Plan and the Council will continue to work with Network Rail and train operators to make best use of existing rail capacity and to secure the necessary rail capacity and infrastructure improvements required to facilitate growth, particularly:

- 12 car platform lengthening at Tilbury loop and South Ockendon branch line stations is now a committed scheme in the government's High Level Output Statement and supported in the Greater Anglia Route Utilisation Strategy;
- Grays Station Transport Zone and improved interchanges at other stations;
- A new station at West Thurrock to facilitate growth in and around Lakeside; and
- Double tracking on the Grays-Upminster Railway line.

Freight Movements

Thurrock is traditionally an area of port-related activity, heavy industry, cement manufacture and mineral extraction, and much of its river frontage is highly industrialised. The development of the London Gateway Port at Shell Haven, with a proposed 2.3km long quayside and a 283 hectare commercial centre, will be the largest of all the new container ports in the country capable of handling the equivalent of 3.5 million 20 foot containers each year. The port and a logistics park, with warehousing distribution and associated businesses, will provide for up to 13,000 new jobs by 2026. The traffic associated with the development of the London Gateway Port will worsen the performance of transport links throughout Thurrock, but especially key routes such as the A13. Additionally, the Port of Tilbury is likely to expand considerably; adding an additional 1,600 to 3,800 new jobs by 2026 and this is likely to increase traffic along the A1089 and A13 in particular.

As a result of high freight activity, there are high levels of Heavy Goods Vehicles (HGVs) on the road network. HGVs take up more road space than cars and light duty vehicles, further limiting road network capacity and impeding traffic flows. HGV flows are highest in the following locations:

- Approaching the port and Tilbury;
- The industrial waterfront areas in Purfleet;
- The M25; and
- Along the A13, particularly at the junction with the A1089 Dock Approach Road to Tilbury.

Policy TTS19: Freight

To reduce the adverse impacts of road freight the Council will work to:

- Safeguard existing well-located freight wharves and facilities for rail and water freight interchange;
- Protect previously used rail accessible sites, including those owned by non-railway bodies, from development of non-rail based uses where there is a reasonable prospect of developing them for rail freight use; and
- Encourage new freight and logistics development to locate near and use rail freight facilities and develop sustainable distribution strategies.

The Council will continue to develop a Freight Quality Partnership, with extra impetus being delivered through the Local Sustainable Transport Fund. The partnership will be with the freight industry, businesses, residents, environmental groups and interested parties. Through this partnership the Council can deliver measures to tackle freight issues in the Borough. A Freight Quality Partnership will help to develop understanding of distribution issues and problems at the local level and to promote constructive solutions which reconcile the access needs of goods and services with local environmental and social concerns. The Freight Quality partnership in Thurrock will be focused on those freight corridors with the highest volumes of freight movements, including Purfleet, Tilbury Port and the new London Gateway Port, as well as where freight transport emissions have led to the declaration of an Air Quality Management Area.

The Council will also work with the relevant organisations to make best use of existing rail capacity and to secure the necessary rail freight capacity and infrastructure improvements required to facilitate sustainable freight movements, such as rail freight terminals at London Gateway and West Thurrock.

The Council will continue to work with the Highways Agency and other relevant organisations to reduce the impact of lorry parking on local roads, including in residential areas. To that end, the Council will look to investigate the use and implementation of secure 24-hour lorry parking provision and adequate facilities for drivers on sites at West Thurrock, Tilbury and London Gateway. This is likely to be complemented by lorry parking restrictions elsewhere.

New development sites for freight handling will be required to prepare a sustainable distribution strategy. This will work to minimise the impact of road traffic on the strategic and local road network, whilst ensuring that any opportunities that may arise for rail and water freight can be maximised.

5 Improving Air Quality and addressing Climate Change

5.1 Introduction

While congestion and traffic management are familiar territory for transport strategies, climate change is a relatively new challenge. Emissions from transport have recently come to the forefront of the environmental debate regarding the detrimental effects that poor air quality and climate change have on human health, quality of life, economic growth, the environment and future generations.

Local air quality is of immediate concern due to the adverse effects of air pollutants such as Nitrogen Dioxide (NO₂), Particulate Matter (PM) and Ozone (O₃) on human health and biodiversity. As a consequence, district and unitary authorities are charged with meeting air quality standards under the Environment Act 1995. In addition, the incorporation of an action plan into Local Transport Plans to improve air quality where transport is identified as the primary contributor to poor air quality is now a statutory requirement.

The importance of climate change as an environmental issue of global significance has increased enormously in the past few years. The Climate Change Act 2008 and the Energy White Paper (2007) highlighted the importance of the need to reduce global carbon emissions. Whilst climate change has been identified as one of the most important challenges we face as a global community, it will also have severe repercussions on a local level in Thurrock.

In developing strategies for tackling climate change and improving air quality, local authorities should be mindful of the synergies between air quality and climate change, and the added benefits to the local, regional and global environment of applying an integrated approach.

Addressing greenhouse gas emissions reductions in isolation from air pollutants fails to recognise the wider benefits of abatement measures as both sets of gases share common sources, such as fuel combustion, and there are a number of transport measures which can reduce both air pollution and greenhouse gas emissions.

The Council's air quality and climate change transport strategy therefore works to ensure that climate change is addressed in conjunction with improving air quality to protect people's health. This integrated approach will maximise the synergies between improving air quality and mitigating climate change, as well as the added health and environmental benefits to the local, regional and global level.

5.2 Policy Context

The overarching transport policy in the UK can be found in *Creating Growth, Cutting Carbon: Making Sustainable Local Transport Happen* (2011). Through this white paper, the Government recognises that the car is the mode of choice for all but the shortest of trips, mainly because of its freedom and flexibility, but also that car use is responsible for 50% of transport's carbon emissions. The White Paper therefore outlines the Government's commitment to supporting the market in electric and other ultra-low emission vehicles to improve the car's environmental performance. It also encourages and looks to enable more sustainable transport choices.

The importance of climate change as an environmental issue of global significance has increased enormously in the past few years. The Climate Change Act 2008 and the Energy White Paper (2007) highlighted the importance of the need to reduce global carbon emissions. The Government's environmental policies will be developed with a consideration of their impact on climate change and greenhouse gas emissions, and this is particularly true of air quality. Where practicable and sensible, synergistic policies beneficial to both air quality and climate change will be pursued.

The Climate Change Act creates a new approach to managing and responding to climate change in the UK, by:

- setting ambitious, legally binding targets
- taking powers to help meet those targets
- strengthening the institutional framework
- enhancing the UK's ability to adapt to the impact of climate change
- establishing clear and regular accountability to the UK Parliament and to the devolved legislatures.

The National Planning Policy Framework supports the move to a low-carbon economy. Local planning authorities should plan for new development in locations and ways which reduce greenhouse gas emissions and also support reductions in greenhouse gas emissions and congestion, and promote accessibility through planning for the location and mix of development.

Locally, Thurrock Council is working through the Sustainable Community Strategy to ensure a safe, clean and green environment, by ensuring that carbon emissions will have been reduced and Thurrock will be prepared for climate change by 2036. This strategy for air quality and climate change will work towards the achievement of these goals.

In terms of air quality, Part IV of the Environment Act 1995 introduced responsibilities to both national and local government throughout the UK. These responsibilities include the requirement upon local authorities to periodically review and assess air quality across their areas. Air quality objectives have been set for those air pollutants deemed to be of most concern. Seven of these pollutants are included under the Local Air Quality Management regime and regulations for these were introduced.

The *Air Quality Strategy* (2007) sets out a way forward for work and planning on air quality issues. It also reiterates the air quality standards and objectives to be achieved and introduces a new policy framework for tackling fine particles. Furthermore, the strategy identifies potential new national policy measures which modeling indicates could give further health benefits and move closer towards meeting the strategy's objectives.

The EU Ambient Air Quality Directive (2008/50/EC) is a revision of previously existing European air quality legislation, setting of long term air quality objectives and introduction of new air quality standards. The 2008 directive replaced nearly all the previous EU air quality legislation and was made law in England through the Air Quality Standards Regulations 2010, which establishes mandatory standards for air quality and sets limits and guides values for sulphur and nitrogen dioxide, suspended particulates and lead in air. There is currently a significant amount of controversy surrounding air quality in the UK, as particulate matter and nitrogen dioxide limit values set through the EU directive have been breached and were not brought into line prior to the 2010 deadline. In September 2011, Defra applied to the EU for a 5-year extension on nitrogen dioxide levels and is currently awaiting the outcome of this application.

The National Planning Policy Framework stipulates that planning policies should sustain compliance with and contribute towards EU limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and the cumulative impacts on air quality from individual sites in local areas. Planning decisions should ensure that any new development in Air Quality Management Areas is consistent with the local air quality action plan.

5.3 Data Analysis

In autumn 2007, Small Fish strategy consultants were commissioned to undertake an audit and analysis of all evidence related to air quality and climate change in Thurrock. This work culminated in the supporting document *Thurrock Transport Strategy: Evidence Base*. The evidence base analysed data in relation to the following elements of air quality and climate change:

- Per capita carbon dioxide emissions
- Carbon dioxide emissions from road transport
- Nitrogen oxides from road transport
- Particulate matter from road transport
- Pollutant concentrations, traffic volumes and heavy goods vehicles in Air Quality Management Areas

Analysis of evidence and data from the *Thurrock Transport Strategy: Evidence Base* resulted in the identification of strengths, weaknesses, opportunities and threats (SWOT) currently related to air quality and climate change in Thurrock. These are outlined in Table 5.3.

Table 5.3: Air Quality and Climate Change SWOT Matrix

Strengths	Weaknesses
<ul style="list-style-type: none"> • Air quality is improving at the majority of the monitoring locations • Traffic flows in most of the AQMAs are reducing • High levels of rail patronage and freight flows • Increasing levels of bus patronage 	<ul style="list-style-type: none"> • High levels of HGVs • Higher than average per capita road transport CO₂ emissions • Air quality is currently above safe levels at 13 monitoring locations • Large number of strategic roads = high traffic flows
Opportunities	Threats
<ul style="list-style-type: none"> • To encourage a modal shift to reduce emissions from transport • Good rail network means increased opportunities for moving freight from shipping by rail rather than HGV • To investigate reducing other sources of NO_x emissions in AQMAs 1, 2, 8 and 13, which may be more cost effective than transport schemes • To extend the London low emission zone • To promote cleaner vehicle fleets • To establish an effective Freight Quality Partnership 	<ul style="list-style-type: none"> • AQMAs exceeded the 2010 threshold limit value • Increases in traffic from growth will lead to increases in CO₂, NO₂ and PM₁₀ emissions. • The development of the port at London Gateway could lead to increases in HGV movements in the area which are disproportionately polluting • Total CO₂ emissions from road transport are likely to rise as a result of housing, traffic and population growth

5.4 Issues and Priorities

Consideration of the SWOT Matrix above allowed for issues and priorities for Thurrock's new air quality and climate change transport strategy to be identified.

Issues:

- AQMAs remained over the 2010 limit value for NO₂ and may not meet the 2015 target extension date (if granted by the EU), which may possibly lead to fines
- High per capita CO₂ emissions from road transport;
- High proportion of HGVs which are disproportionately polluting in terms of CO₂ and air pollution emissions;
- Current and future traffic growth is likely to lead to increases in air pollution and CO₂ emissions from transport; and
- Growth will increase total air pollution and CO₂ emissions in Thurrock

Priorities:

- Ensuring that AQMAs are below limit values by 2015;
- Reducing per capita CO₂ emissions from road transport;

- Working to reduce air pollution and CO₂ emissions from HGVs;
- Encouraging a modal shift to reduce air pollution and emissions from cars; and
- Locating growth in such a way as to reduce the need to travel and facilitate more sustainable modes of transport

5.5 Strategy

5.5.1 Aim

Improving Air Quality and Addressing Climate Change

To contribute towards the mitigation of climate change and reduce the vulnerability of the transport network in Thurrock to climate change impacts, whilst also protecting human health from the adverse effects of air pollution.

5.5.2 Objectives

AQ&CC1: To improve air quality, particularly in Air Quality Management Areas, in line with National Air Quality Strategy objectives

AQ&CC2: To reduce nitrogen dioxide emissions from transport

AQ&CC3: To reduce particulate matter emissions from transport

AQ&CC4: To reduce carbon dioxide emissions from transport

AQ&CC5: To reduce vulnerability to the impacts of climate change

5.5.3 Outcomes

The air quality and climate change strategy will work to achieve the following outcomes:

- Encourage and enable low-carbon technology innovation in the transport sector;
- Facilitate shift of freight transport to lower carbon alternatives;
- Provide passengers and freight with lower carbon surface access alternatives to international gateways;
- Enable people and businesses to choose lower carbon transport options by breaking down the barriers to these behavioural changes;
- Actively promote ultra-low carbon alternatives such as walking and cycling and low carbon alternatives such as public transport options;
- Reduce the number of short distance trips by carbon intensive modes;
- Minimise adverse impacts on air quality for local residents arising from transport;
- Improve vehicle energy efficiency across all modes and promote lower carbon fuels;
- Minimise adverse impacts on air quality for local residents around international gateways; and
- Reduced greenhouse gas and air pollution emissions.

5.5.4 Policies

Thurrock Council will deliver a targeted programme to improve air quality, reduce emissions from transport overall and address climate change impacts by:

1. Reducing the need to travel;
2. Encouraging a modal shift to more sustainable modes of transport, such as public transport, walking and cycling;
3. Reducing emissions from residual sources; and
4. Reducing vulnerability to climate change

Many of the policy interventions that improve accessibility and reduce congestion will also work to meet the Council's environmental objectives. Reducing the need to travel is dealt with in depth in the emerging Thurrock Local Development Framework, while encouraging modal shift to more sustainable modes of transport is the main focus of the congestion strategy (Chapter 4). The policies below therefore focus efforts on reducing emissions from transport at the source and ensuring that the transport network can adapt to climate change.

Encouraging Low Emissions Transport

In Thurrock, Air Quality issues have been highlighted in relation to two regulated air pollutants – nitrogen dioxide (NO₂) and particulate matter (PM₁₀). There are currently fifteen Air Quality Management Areas in Thurrock declared for exceeding pollution limits values as a result of transport emissions. Recent monitoring data also shows that there is a need for further assessment on Calcutta Road in Tilbury, which may be declared as a new AQMA for exceeding NO₂ limit values.

High daily traffic flows in Thurrock means high emissions from vehicles, and congestion and queuing from stationary or slow moving vehicles further increases tailpipe emissions. Growth is likely to exacerbate this problem.

Policy TTS20: Reducing Emissions from Transport
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The Council will work to deliver transport improvements aimed at reducing emissions from transport. To increase value for money, transport measures that reduce both greenhouse gas and air pollution emissions will be prioritised for action.

Different users of the Thurrock transport network will require different ways of reducing emissions from transport and these are outlined below. Measures to reduce emissions from freight distribution are outlined in Policy TTS24.

Passenger Cars

As seen in the congestion strategy, there is substantial scope for encouraging a modal shift, particularly in relation to travel to work. For trips between 10 and 25 miles, emissions associated with commuting trips by car are high.¹³ Travel planning will be complemented with a programme of sustainable

¹³ Department for Transport, *Carbon Pathways Analysis*, July 2008.

transport improvements, such as high quality walking, cycling and public transport infrastructure. Once modal shift has been achieved, the benefit of this behavioural change will be locked in (Policy TTS14 in the Chapter 4 – Tackling Congestion).

The Council will lead by example in this, by developing and implementing a travel plan for Thurrock Council offices, with targets set for employee modal shift. As outlined in Section 4.5.5, the Council is currently committed to the delivery of an intensive programme of Smarter Choices to encourage a modal shift to more sustainable and less polluting modes of transport through the Council's LSTF programme. The delivery of these measures (see Section 4.5.5), particularly in Grays town centre, will be essential to meeting air quality and climate change targets.

The Council will also work with partners across the Eastern region and the Department for Transport to deliver charging points for electric vehicles in Thurrock in order to encourage the uptake of low emission electric vehicles. This will help to encourage their use and adoption and will reduce air pollution as well as CO₂ emissions¹⁴. As such, the Council is part of the Eastern region's Plugged in Places project, known as EValu8. The project aims to install an operationally effective electric vehicle charging network across the East of England, using it as a test bed and innovation platform to build upon the region's significant innovation capabilities and help catalyse the new global Electric Vehicle economy.

Taxis

The Council will work with taxi companies to encourage the use of low emission taxis throughout the Borough. This will include the investigation of financial incentives for taxi operators through licensing and business rates to promote:

- Alternative fuel use/conversion
- Replacement of vehicles with low carbon vehicles (in accordance with government classification)
- Retrofit pollution reduction equipment
- Eco-driving training for taxi drivers
- Engine switch off whilst waiting to pick up passengers

Buses

The Council will work with bus operators through Quality Bus Partnerships and Contracts in Thurrock to promote and encourage:

- The use of low emission/alternative fuel buses;
- Eco-driving training for bus drivers; and
- Retrofit pollution reduction equipment.

Street Lighting

When maintaining and improving the Council's street lighting, the Council will replace conventional bulbs with lower energy bulbs. The Council will also

¹⁴ This assumes that the electricity is from renewable or low carbon sources

seek opportunities to move towards greater use of LED bulbs, which use 50-90% less energy than conventional bulbs, therefore saving a similar amount of CO₂. Although more expensive at the outset, the payback period of LED bulbs is likely to be relatively short as the cost will be offset by on-going energy cost savings. Furthermore, the Council will also investigate the opportunity for reducing the length of time street lighting is on for, as well as the introduction of new technology to make the lights more efficient.

Mitigating Climate Change from Transport Growth

The previous version of the Thurrock Transport Strategy contained a policy through which to neutralise road transport CO₂ emissions arising from growth. However, the Local Development Framework Core Strategy and Policies for Management of Development has since included and adopted a wider approach to neutralising all carbon dioxide emissions (including those from transport) through Policy PMD14, therefore rendering the previous Thurrock Transport Strategy policy redundant and therefore unnecessary.

Air Quality and Health

Exposure to air pollution emissions such as PM and NO₂ are consistently associated with respiratory and cardiovascular illness and mortality, as well as other ill-health effects, and these associations are believed to be causal. Air pollution emissions are also harmful to biodiversity and vegetation.

Local Air Quality Management exists primarily to protect human health, and it is important that those who are most vulnerable, such as health deprived populations, are protected from further health impacts as a result of poor air quality.

Policy TTS21: Air Quality and Health

Air Quality Management Areas within areas also defined as within the 20% most health deprived in England will be prioritised for action.
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Only AQMA 1 currently falls within a health deprived area. It is important to ensure in the future that spending and prioritisation is focused on the appropriate outcomes related to improving air quality, i.e. the protection of human health. This means that the delivery of the Air Quality Action Plan for transport related AQMA's within health deprived areas will be the top priority.

Air Quality, Climate Change, Congestion and Road Safety

Both road safety and air quality are about improving health and the quality of life for Thurrock residents. Many road safety improvements can, however, lead to increases in emissions. Engine idling, lower speeds and sudden acceleration and deceleration all reduce engine efficiency – leading to an increase in vehicle emissions.

Additionally, traffic restraint measures aimed at reducing vehicle flows can often lead to increases in transport emissions in the same way as road safety measures. Such measures to relieve congestion can often displace traffic onto residential roads which can lead to more people being exposed to higher levels of air pollution. Increasing capacity to relieve congestion can also

increase overall air pollution and greenhouse gas emissions by inducing additional traffic onto the network.

Policy TTS22: Air Quality, Climate Change, Congestion and Road Safety

The Council will work to ensure that road safety and congestion schemes, particularly in Air Quality Management Areas, do not increase vehicle emissions.

An air quality assessment of the impact of road safety and congestion relief schemes undertaken in Air Quality Management Areas, or areas nearing such status, will be undertaken to ensure such schemes do not increase air pollution levels from road transport.

Local Air Quality Management

Part IV of the Environment Act 1995 introduced new responsibilities to both national and local government throughout the UK. These responsibilities include a requirement for local authorities to review and assess air quality across their areas. Air quality objectives (air pollution limits) have been set for those seven air pollutants deemed to be of most concern for human health.

The Local Air Quality Management Regime requires all local authorities to review and assess local air quality in a staged process. Should this confirm that any of the objectives will not be met within the required timescale, the local authority must designate Air Quality Management Areas (AQMA) and produce an Air Quality Action Plan setting out how it intends to improve air quality in these areas.

Thurrock currently contains fifteen Air Quality Management Areas declared for exceeding threshold annual average limit values for nitrogen dioxide (NO₂), four of which were also designated for exceeding the 24-hour mean limit value for particulate matter (PM₁₀). Additionally, recent monitoring data also shows that there is a need for further assessment on Calcutta Road in Tilbury, which may be declared as a new AQMA for exceeding NO₂ limit values.

Policy TTS23: Local Air Quality Management

The Council will continue to develop and implement Air Quality Action Plans for individual AQMA as and when the need arises. Additionally, the Council will ensure that measures to reduce air pollution in one area do not displace air quality problems to another area. Where appropriate, the Council will also carry out general liveability improvements with wider benefits to maximise value for money.

It is possible that new AQMA could continue to be declared throughout the lifetime of this strategy. Policy TTS23 outlines the commitment to developing actions plans in a timely manner when pollution levels are attributed to road transport and also ensures that new AQMA are not created as a result of transport schemes delivered to improve air quality elsewhere.

There is currently a significant amount of uncertainty surrounding air quality in the UK, as particulate matter and nitrogen dioxide limit values set through the EU directive have been breached and were not brought into line prior to the 2010 deadline. In September 2011, Defra applied to the EU for a 5-year extension on nitrogen dioxide levels and is currently awaiting the outcome of this application. If accepted, the new compliance date for NO₂ would be January 2015. There is currently a need to review the existing AQMAs and reaffirm the basis of their declarations in order to ensure that the 2015 compliance date is met (if accepted). Once this has been completed, individual actions plans for each AQMA will need to be revised accordingly.

Finally, assessments of the impact of air quality improvements schemes will be undertaken to ensure such schemes do not increase air pollution levels from road transport elsewhere through traffic displacement.

Freight Emissions

Port activity in Thurrock and an extensive strategic road network results in high proportions of HGVs travelling from the port areas to other parts of the region and country as freight is transferred from water to road at these locations.

The majority of road transport CO₂ emissions in Thurrock come from diesel vehicles and a high proportion of these are likely to be the result of a large number of Heavy Goods Vehicles travelling in and through the area. A large proportion of NO₂ and PM₁₀ emissions are also likely to be attributable to freight transport.

Schemes to improve air quality and reduce CO₂ emissions will be focused on reducing emissions from those vehicles that are disproportionately polluting, such as heavy goods vehicles.

Policy TTS24: Reducing Freight Emissions

The Council will work with freight associations and operators to mitigate the adverse impacts of freight operations by reducing emissions from Heavy Goods Vehicles in Thurrock and encouraging the use of rail and water freight where feasible.

Measures to improve air quality and reduce greenhouse gas emissions will be focused on reducing emissions from those vehicles that are disproportionately polluting, such as heavy goods vehicles, which are a significant source of the NO₂ and PM₁₀ emissions in several of Thurrock's Air Quality Management Areas. In doing so, the Council will work with freight operators to increase the amount of freight that is transported via rail and water. Thurrock is well placed to do so, and the London Gateway port will help to achieve this. The Council will work closely with port operators, logistics firms and the rail industry to ensure that as much freight as possible is transferred to rail from water and vice versa. For essential road freight vehicle movements that remain, operators will be encouraged to consider:

- Eco-driver training for haulers;
- The use of alternative, low carbon fuels in their fleet; and

- The use of retrofit pollution reduction equipment

To improve the economic and environmental performance of the Borough's road based logistics industry, the Council will work to develop a Freight Quality Partnership with the local freight industry, businesses, residents and other interested parties, initially through the LSTF programme. The Freight Quality partnership in Thurrock will be focused on those freight corridors with the highest volumes of freight movements, including Purfleet, Tilbury Port and the new London Gateway Port, as well as where freight transport emissions have led to the declaration of an Air Quality Management Area.

Through this forum, the Council will look to deliver opportunities for freight fleets to undergo Eco-driver training, including drivers within the Council's own vehicle fleet. This measure will work to inform freight vehicle drivers of ways to improve fuel economy, reduce emissions and save money through more efficient driving practices.

The Council will also encourage freight operators to purchase and retrofit pollution abatement equipment to individual freight vehicles through the Freight Quality Partnership. This will help to ensure compliance with the London Low Emission Zone and also work to have immediate effect on reducing both air pollution and greenhouse gas emissions from these vehicles throughout Thurrock.

To further incentivise these projects, the Council will develop a local "Eco-Freight" accreditation scheme, where operators demonstrating significantly improved environmental performance and management, resulting from the Council's freight LSTF measures, can be recognised for their achievements.

Finally, efforts are currently underway at a national level for the investigation of a national Low Emission Zone (LEZ) framework as a potential means of encouraging uptake of cleaner vehicles in order to comply with EU air quality legislation. Once this national framework has been established, the Council will give consideration to developing a Low Emission Zone in Thurrock, in particular looking at the London LEZ model which applies to older, diesel-engined lorries, buses, coaches, large vans and minibuses. Cars, motorcycles and small vans are not currently included in the London LEZ. A Thurrock LEZ could help to ensure that air quality is improved throughout the Borough in the longer-term, but specifically in those areas with high proportions of heavy goods vehicles and poor air quality.

Adapting to Climate Change

Whilst climate change has been identified as one of the most important challenges we face as a global community, it will also have severe repercussions on a local level in Thurrock. In particular, Thurrock is relatively low lying with large swathes of land classed as being in high risk flood zone. In addition to existing flood conditions, climate change may further exacerbate weather related traffic incidents. The UK Climate Impacts Programme (2009) shows that, on a local level for Thurrock, annual mean temperature increases are predicted, although there appears to be very little seasonal variation within

these temperature increases. The Thurrock area is likely to experience no changes in *overall* annual precipitation, but there may be significant increases in winter rainfall and significant decreases in summer rainfall. This is likely to lead to drier summers and wetter winters.

Increased precipitation and storm surges could lead to increases in flooding of infrastructure, and severe weather events have a known detrimental impact on the number of Road Traffic Accidents. Increases in temperature can also lead to buckling or melting of road surfaces and rail infrastructure.

Policy TTS25: Adapting to Climate Change

When undertaking transport improvements, including maintenance schemes, the Council will integrate climate change adaptation measures into design to ensure that vulnerability to the transport network from climate change is minimised.

This means that, when delivering lower cost transport improvements (below £200k), the Council will also integrate climate change adaptation measures into the design, where applicable, to ensure that vulnerability to the transport network from climate change is minimised. Part of this assessment will determine whether the scheme is within an area of high probability for flood risk (currently Flood Risk Zones 3a and 3b). Adaptation measures may include:

- Heat resistant or permeable road and footway surfaces
- Sustainable Drainage Systems and other improved drainage measures
- Increased landscaping, to absorb and neutralise some emissions, that can withstand drought conditions
- The provision of resting areas and shading along footways and cycle routes, as well as public transport waiting areas
- Including within Quality Bus Partnerships/Contracts specifications for air conditioning, white roofs, tinted windows and adequate ventilation

When undertaking maintenance schemes, the Council will also work to integrate climate change adaptation measures to ensure value for money is maximised, including:

- Incorporating heat resistant paving materials into footway and road maintenance
- Ensuring that maintenance regimes can cope with the increased cutting of verges that may arise from an extended growing season.
- New planting schemes will be designed to cope with climate change, and require minimal maintenance
- Strengthening embankments where their collapse would cause a hazard or severe disruption to the transport network along economically important routes
- Ensuring that new signage can withstand higher wind speeds
- Maintaining and improving the drainage network along those economically important routes that are in Flood Zone 3 and also in residential areas prone to persistent flooding incidents

When undertaking large transport schemes (£200k+) the Council will carry out a climate change adaption risk assessment to ensure that large sums of money are not spent on infrastructure that is vulnerable to climate change impacts and a tool for assessing climate change risk for these large cost schemes has now been developed. This will help us to determine the vulnerability and risk of the transport project to climate change impacts and integrate appropriate climate change adaptation measures into the project's design and implementation. For example, when designing bridges the Council will ensure that they can withstand increased incidence of storm surges and are high enough to cope with predicted changes in sea level rise throughout the lifespan of the bridge.

Finally, the Council will work closely with partner agencies and organisations to ensure that climate change adaptation is given proper consideration to other transport schemes undertaken in Thurrock. For example, the Council will work with Network Rail to ensure that new rail infrastructure is not at risk of flooding and that rail tracks can withstand higher temperatures without buckling.

The Council will also work closely with the Highways Agency to ensure that large scale road schemes on the strategic road network are not at risk of flooding, can withstand temperature variations and increased precipitation and encourage the increased use of landscaping to absorb emissions.

6 Safer Roads

6.1 Introduction

Road safety continues to be a major concern nationally, despite considerable progress in reducing Road Traffic Accidents over the years. Road Traffic Accidents impact on a wide range of policy areas:

- They are a significant contributor to mortality and morbidity rates, and are one of the most common causes of death amongst people aged 18-24. As well as the human suffering, this represents a considerable impact on the resources of the health service;
- Community severance in rural and urban areas, and affecting the vibrancy of neighbourhoods;
- High traffic speeds, which exacerbate the frequency and severity of accidents, also generate more pollutants and carbon dioxide emissions;
- Safety concerns are a contributory factor of social exclusion and poor accessibility, especially for those who are most vulnerable;
- Road Traffic Accidents cause significant delays on the roads, reducing the efficiency of the transport network and causing frustration; and
- The cost to the economy of Road Traffic Accidents resulting in injury.

6.2 Policy context

At the national level, local authorities have a duty to improve road safety. This has tended to focus on reducing the number and severity of casualties and there are national performance indicators that measure progress towards casualty reduction. Accidents resulting in people being killed or seriously injured tend to have a greater policy priority. The Strategic Framework for Road Safety published in 2010 sets out the Department for Transport's approach to continuing to reduce killed or seriously injured casualties on Britain's roads. The focus is on increasing the range of educational options for the drivers who make genuine mistakes and can be helped to improve while improving enforcement against the most dangerous and deliberate offenders. Additionally, at the local level, the Department for Transport will be increasing the road safety information that is available to local citizens.

The national strategic framework, whilst setting out the role and responsibilities of the Government, also makes clear that decisions on local road safety interventions should be made locally. The Local Development Framework for Thurrock aims to promote a safe transport network, especially to help improve accessibility and encourage the use of cycling and walking.

A more detailed analysis of the road safety strategy policy context can be found in the supporting document *Thurrock Transport Strategy: Evidence Base*.

6.3 Data Analysis

In autumn 2007, Small Fish strategy consultants were commissioned to undertake an audit and analysis of all evidence related to road safety in Thurrock. This work culminated in the supporting document *Thurrock Transport Strategy: Evidence Base*.

Analysis of evidence and data from the *Thurrock Transport Strategy: Evidence Base* resulted in the identification of strengths, weaknesses, opportunities and threats (SWOT) currently related to road safety in Thurrock. These are outlined in Table 6.3.

Table 6.3: Road Safety SWOT Matrix

Strengths	Weaknesses
<ul style="list-style-type: none"> • Reduction in the number of children killed or seriously injured • Very good progress in reducing slight injury accidents • Reduction in cyclist and pedestrian injury accidents 	<ul style="list-style-type: none"> • Insufficient reduction in numbers of people killed or seriously injured, both on local roads and Highways Agency roads • Inconsistent trends in levels of people killed or seriously injured • Stubbornly high incidents of alcohol related deaths / injury accidents
Opportunities	Threats
<ul style="list-style-type: none"> • New development focused on urban areas where cycling and walking levels are higher • Reducing the number Killed or Seriously Injured casualties is a local and national priority • School Travel Plan implementation through Safer Routes to Schools • Improving enforcement technologies 	<ul style="list-style-type: none"> • Growth in travel could increase exposure to Road Traffic Accidents • Modal shift could increase pedestrian and cyclist accidents • Higher incidents of pedestrian and cyclist casualties in deprived areas

6.4 Issues

Consideration of the SWOT Matrix above allowed for issues for Thurrock's refreshed Safer Roads strategy to be identified.

Issues:

- Maintaining progress in reducing casualties in the face of travel growth;
- Good reduction in the incidence of child, pedestrian and cyclist accidents could help to promote sustainable modes of transport, especially on the school run. However, modal shift towards these modes might result in increases;

- Insufficient progress made towards the target for reducing the number of people killed or seriously injured, and these are the accident types that have the greater social and economic impact;
- Higher incidents of pedestrian and cyclist casualties in deprived areas could have adverse health impacts in these health deprived areas¹⁵ because of morbidity and may deter use of these modes, adversely impacting on accessibility and further health issues such as obesity;
- Most new development will be in those parts of Thurrock that are most accessible, thereby enabling increased walking and cycling. Good design and access standards of new development presents the opportunity to maintain the low incidence of pedestrian and cyclist accidents; and
- Unchanging causes of accidents, such as alcohol related, might make it more difficult to reduce overall casualty levels

6.5 Strategy

6.5.1 Aim

Safer Roads

Thurrock Council will work to achieve a reduction in the number of casualties on the Borough's transport network.

6.5.2 Objectives

SAF1: To reduce the number of people killed or seriously injured in Road Traffic Accidents; and

SAF2: To create a safer environment for road users, especially those who are more vulnerable

6.5.3 Outcomes

The road safety strategy will work to achieve the following outcomes:

- Reduced deaths and serious injuries, especially where casualties are
 - children
 - pedestrians and cyclists
- Reduced crime and the fear of crime on transport to ensure safer communities;
- Reduce accidents which cause journey disruption on key routes, such as Traffic Sensitive Streets;
- Improved access for vulnerable road users and improved environment for disadvantaged neighbourhoods by reducing traffic and road safety concerns; and
- Safer movements between homes, workplaces, education, town centres and healthcare.

¹⁵ See Regeneration Chapter

6.5.4 Policies

The Safer Roads strategy will aim to reduce casualties, especially the more serious casualties, but in a way that supports the other strategy areas where possible, especially accessibility, congestion, and regeneration. The strategy therefore, whilst still aiming to reduce casualties involving people killed or seriously injured, is likely to take a broader approach, aiming to reduce road danger for example, even where high numbers of recorded killed or seriously injured accidents are not necessarily apparent. It is inevitable that accidents are still likely to occur, and it will be necessary to make sure that the chances of them being serious are reduced. The strategy will therefore aim to create a safer transport system through implementing policies and measures that will reduce collision severity.

Safer Walking and Cycling

The strategies for accessibility and congestion will increase walking and cycling trips. For example, modal shift should reduce the rate of traffic growth, but it will do this by increasing walking and cycling, as well as public transport use. It will therefore be necessary for the road safety strategy to ensure accidents involving these vulnerable road users do not increase, reversing the significant reductions evident in recent years. In addition, the road safety strategy will need to ensure that road safety interventions help to deliver these other strategies, such as by enabling modal shift through removing safety concerns that pedestrians and cyclists have.

<p>Policy TTS26: Safer walking and cycling</p> <p>The Council will improve the road safety of pedestrians and cyclists and will aim to mitigate safety concerns that currently act as barriers to the use of these modes. This will support accessibility by, and modal shift to, walking and cycling.</p>

An overall safer urban environment will be created such as by reducing traffic speeds, so that not only will accidents be less likely, but when accidents do happen they will be less serious, especially those involving vulnerable road users such as pedestrians and cyclists. Widespread 20mph zones will therefore be implemented on residential streets (see Policy TTS27 below).

The Council will ensure that routine maintenance procedures and interventions, such as dealing with pot-holes or raised drainage grating, take account of the need to promote the safety of pedestrians and cyclists. For example, pot-holes on Walking and Cycling Core routes will be given additional priority. Structures such as inspection chambers should be the flat type and laid within a defined vertical distance of the road surface. Where other types exist, a programme of replacement should be prepared. Similarly, structural maintenance programmes will give a priority to promoting the safety of the core walking and cycling routes, such as by improving the quality of street lighting on these routes. Indeed, street lighting repairs and improvements should be focused particularly on the Core Walking and Cycling Routes in order to further improve conditions for pedestrians and cyclists. This will work to reduce the fear of crime on these parts of the

transport network, with a view to encouraging a modal shift towards these modes, especially after dark.

The Council will give priority to accident remedial schemes that reduce pedestrian and cyclist casualties. Furthermore it will target such road safety interventions in those areas of Thurrock where efforts are also being made to improve accessibility by walking and cycling and deliver modal shift. This will include integrating road safety schemes into Workplace Travel Plans and, especially, School Travel Plans.

Most of the measures are likely to be relatively low cost. However, major road improvements or network management measures can contribute to road safety by transferring traffic to higher quality roads where accident rates should be much lower than those of typical local urban roads. In this case the Council will be careful not to allow the effect to be eroded by increased traffic speeds. This measure could be particularly useful to remove traffic from roads being developed as cyclist and pedestrian routes, and could make widespread speed limit reductions more acceptable.

Safer Neighbourhoods

In Thurrock the level of deprivation shows there is a clear need to help regenerate some communities, including through a range of safety interventions, such as changing the balance between traffic and residents and reducing the adverse safety impact traffic can have on neighbourhoods. This can make local residential streets more liveable through creating better public space that people want to use and feel safer using.

Chapter 7, Facilitating Regeneration, explains other aspects of neighbourhood regeneration in more detail and the Safer Roads Strategy has a key role to play in achieving this.

<p>Policy TTS27: Safer Neighbourhoods</p>
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<p>Priority will be given to improving the overall safety of roads in disadvantaged communities and in areas around schools, colleges and major employment sites. Road safety measures will be fully integrated into other transport improvements and widespread 20mph zones will be implemented in those residential areas where the measure is supported by the local community.</p>
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As with Policy TTS26, there will be an emphasis on creating an overall safer urban environment such as by reducing traffic speeds, so that not only will accidents be less likely, but when accidents do happen they will be less serious, especially those involving vulnerable road users such as children and the elderly.

The focus of measures will be on reducing the impact of traffic, either traffic volume or especially traffic speed, on key routes or in residential areas, particularly those being developed as part of wider programmes to promote regeneration. Indeed, safety will be an integral part of all work programmes. Measures used will include conventional traffic management, particularly the roll out of 20 mph zones. Lowering traffic speeds in some residential areas,

such as through 20mph zones will have the additional benefit of reducing the damage caused to roads and therefore the need for maintenance. Other interventions could include banned turns, a wider use of traffic calming and Home Zones, traffic restraint measures to remove extraneous traffic, improved priority for cyclists and pedestrians, lorry restrictions, and new routes to remove traffic.

There is a risk that such measures will result in further street clutter and over-engineering and the degradation of the visual environment. There will therefore be an emphasis on high quality street scene design and measures requiring less engineering (see Policy 31 in Chapter 7 – Facilitating Regeneration), such as Vehicle Activated Signing¹⁷ and cameras that measure average traffic speeds rather than physical road humps, and the use of psychological traffic calming techniques¹⁸.

Integration with new development sites

New developments will build road safety into the access and design statements, with particular consideration given to vulnerable road users such as children, pedestrians, and cyclists. Travel Plans required as part of new development will incorporate road safety initiatives, especially to remove safety concerns acting as a barrier to the uptake of sustainable transport modes.

Casualty Severity

It was evident in the data analysis that the reduction in the number of people killed or seriously injured has been slower than the target rate. Reducing the number of people killed or seriously injured is one of Thurrock's main road safety challenges. Policies TTS26 and TTS27 will help reduce the number of people killed or seriously injured.

National research¹⁹ has shown that casualty severity is greater when traffic speeds are higher, especially for vulnerable road users. Given the extent of the challenge, it will be necessary to have more targeted policies on reducing killed or seriously injured casualties. For this reason, Policy TTS28 has been developed.

Policy TTS28: Prioritising Safety Interventions

A high priority will be given to implementing accident remedial schemes where killed or seriously injured accidents cluster at particular locations or along certain stretches of road. The number of killed or seriously injured casualties recorded in recent years, and likely to be prevented in future years, will be used to help further prioritise these road safety interventions.

¹⁷ Winnett and Wheeler (2002) concluded that vehicle-activated signs appear to be very effective in reducing speeds because they can be operated at thresholds well below normal police enforcement levels.

¹⁸ Design measures where drivers naturally adopt a lower speed, due to the perception of the road environment and the perceived level of risk.

¹⁹ Ashton S J and Mackay G M (1979), Some characteristics of the population who suffer traumas pedestrians, Goteborg 1979.

It will be necessary to reflect this in the system the Council uses for prioritising accident reduction measures. Road Traffic Accident data should also be used to help prioritise programmed maintenance works.

Casualty severity is often related to vehicle speeds. The approach for this policy will include making higher speed rural roads safer by not only reducing the number of actual injury accidents, but also ensuring that for accidents that do occur they will be less serious. This will require safer road infrastructure (as well as good enforcement of traffic regulations such as speeding and drink driving; see Policy TTS29). This could include, depending on accident causation, interventions such as clearing roadsides of obstructions that could result in a more serious collision. Managing traffic speeds will be a key intervention because of the increase in accident severity with increasing traffic speed.

Partnership working will also be key in reducing casualty severity and improving road safety. The Highways Agency is currently responsible for sections of the A13, M25 and the A1089 and the Council will work with the Highways Agency on helping to prioritise their programme and making sure that their proposals integrate with anything the Council has planned on the local highway network.

On Traffic Sensitive Streets (especially the network of Economically Important Routes), the contribution that road safety interventions can make to wider, such as economic, issues is not so obvious. However, as well as being a concern in their own right, Road Traffic Accidents often cause congestion and delays. Such congestion, and the consequent reduced journey reliability, can have an adverse impact on wider economic performance and business productivity. In addition, reduced journey reliability particularly adversely affects public transport and its patronage.

Safer Road User Behaviour

As the locations of accidents are becoming less concentrated in clusters and instead becoming more dispersed, there is an increasing need to target road user behaviour so that road users use the transport network in a safe way wherever they are. Road user behaviour is a causal factor in most Road Traffic Accidents.

Although measures to make the highway infrastructure safer can make behaviour safer, it is also necessary to target unsafe and high risk behaviour directly by equipping road users with the necessary knowledge, skills and attitudes. Some groups of road users are more likely to be injured, seriously injured or killed in accidents, such as cyclists. In addition, some types of road user behaviour are more commonly causes of accidents. Inappropriate or excessive speed is one example, and in Thurrock alcohol related accidents seems to be an intransigent and serious issue. Thurrock Council already has a comprehensive Education, Training and Publicity programme that tends to support publicity campaigns run by the Department for Transport. It also

focuses on training on key groups such as pre-school children, and 5-7 year olds.

Policy TTS29: Safer road user behaviour

Education, training and publicity measures will be used to improve road safety, with a focus on improving the road safety of vulnerable road users, especially pedestrians and cyclists, reducing dangerous traffic speeds, and reducing drink driving. The Council will also provide expertise to the police to help with enforcement on key issues, such as drink driving.

This policy would mainly be implemented in the form of targeted initiatives focused on known behavioural issues. Linking with complementary initiatives by other agencies, such as campaigns by the health authority and police enforcement activities, will improve value for money.

The strategy will:

- Focus especially on the safety of vulnerable road users, to improve the safety of these and help deliver better access and facilitate modal shift;
- Improve the skills of child cyclists and pedestrians through better training, especially in deprived areas and as part of School Travel Plans. Road safety education will also be delivered in schools; and
- Develop initiatives to reduce speeding and drink driving in collaboration with the police.

7 Facilitating Regeneration

7.1 Introduction

The regeneration of Thurrock is a key part of the borough's Local Development Framework. The five key Strategic Economic Hubs are at Purfleet; Grays; Lakeside / West Thurrock Basin; London Gateway and Tilbury. These Key Strategic Economic Hubs will collectively form the locations for employment growth will provide the engines of economic development and regeneration in Thurrock. Further detail is provided at Section 1.2.3 on the Local Development Framework.

This regeneration strategy for the Local Transport Plan identifies which aspects of transport are related to quality of life and regeneration in the Borough, and what should be treated as priorities for improvement. In particular, rather than priorities for transport interventions being driven by transport problems, this regeneration strategy presents the opportunity to prioritise transport improvements on the basis of quality of life and regeneration priorities.

Many elements of transport's contribution to the economic, social and environmental regeneration of Thurrock have already been covered in other chapters and integrated into specific policies, such as:

- Chapter 3 – Delivering Accessibility: Improving accessibility by alternative modes of transport, such as public transport, will impact positively on social regeneration mainly by enabling people to get to those services and facilities they need, such as employment and healthcare, as well as improving access by healthy means such as walking and cycling;
- Chapter 4 – Tackling Congestion: Reducing congestion will help with the Local Development Framework's jobs-led regeneration by promoting competitiveness and productivity;
- Chapter 5 – Improving Air Quality and Addressing Climate Change: Reducing pollution will impact on social regeneration directly by improving air quality and consequently human health; and
- Chapter 6 – Safer Roads: Improving road safety and reducing casualties will have the health benefit of reduced death and injury on the roads, and its focus on pedestrians and cyclists will support modal shift and therefore reduced congestion.

7.2 Policy Context

The vision in the Shaping Thurrock Community Strategy 2011 sets out that the Council and its partners want "Thurrock to be at the dynamic heart of the Thames Gateway, a place of ambition, enterprise and opportunity, where communities and businesses flourish". To achieve this vision, they have identified five priorities with related objectives. Relevant objectives that relate to this are:

- Delivering new sites for employment to create jobs over the next 25 years;
- Improving infrastructure to enable delivery of new employment, housing and community facilities; and
- Collaborating with key partners to deliver major regeneration projects.

The focus of the Local Development Framework is on growth-led regeneration and renewal. As explained in Section 1.3 on Local Policy, the Local Development Framework sets out that the Thurrock Urban Area will be the main focus for growth for new housing, employment and associated development, extending from Purfleet, West Thurrock/ Lakeside, Grays, Chadwell St Mary to Tilbury. The key strategic economic hubs, and the focus for regeneration in Thurrock, are Purfleet, Grays, Tilbury, London Gateway and Lakeside Basin.

Purfleet will have a new centre with a thriving community at its heart and Lakeside will be transformed into a Regional Centre (town centre) providing a range of retail, leisure, employment, housing and new transport facilities. Grays will be an administrative centre and will include municipal, education, health and leisure facilities catering for Thurrock's communities. Tilbury Town Centre will be an eco-quarter and an expanded Port of Tilbury and London Gateway Port will be amongst the UK's leading ports, providing employment, investment and facilities that benefit Thurrock as well as the sub-region. The Lakeside Basin will be transformed into a Regional Centre (town centre)

7.3 Data Analysis

In autumn 2007, Small Fish strategy consultants were commissioned to undertake an audit and analysis of all evidence related to regeneration in Thurrock. This work culminated in the supporting document *Thurrock Transport Strategy: Evidence Base*. The evidence base analysed data in relation to the following elements of regeneration:

- Multiple Deprivation;
- Income and Employment;
- Knowledge and Skills;
- Health; and
- Crime & Safety

Analysis of evidence and data from the *Thurrock Transport Strategy: Evidence Base* resulted in the identification of strengths, weaknesses, opportunities and threats (SWOT) currently related to regeneration in Thurrock. These are outlined in Table 7.3.

Table 7.3: Regeneration and Quality of Life SWOT Matrix

Strengths	Weaknesses
<ul style="list-style-type: none"> • Multiple deprivation generally below national average (though higher than regional average) • Health deprivation especially low in general • Good employment rates • Generally high quality strategic transport infrastructure (road and rail) to key strategic economic hubs 	<ul style="list-style-type: none"> • Multiple deprivation is high in some key communities. Tilbury St Chads has twice the level of multiple deprivation of the Borough as a whole • Health deprivation is high in some key communities • High rates of crime for the Borough • Low incomes across Thurrock, especially in some key communities where levels of income deprivation and unemployment are higher • Low occupational classes/non-professional jobs dominate • Very low qualification levels among the adult population as well low achievement levels among school children, particularly in some key communities such as Tilbury St Chads which is twice as bad as Thurrock as a whole • High rates of obesity and heart disease, especially in key communities
Opportunities	Threats
<ul style="list-style-type: none"> • 26,000 new jobs could be higher value jobs with higher rates of pay • New development (except London Gateway) being focused on urban areas where the more deprived communities are located 	<ul style="list-style-type: none"> • Impact of traffic growth and rail growth on strategic transport access to key strategic economic hubs²⁰ • Remoteness of London Gateway from main urban areas, with poor access by non-car modes • Poor suitability of resident population for higher value jobs due to low skills and qualifications • Need for supporting transport services and infrastructure to accommodate housing and employment growth

7.4 Issues

Consideration of the SWOT Matrix above allowed for issues for Thurrock's refreshed regeneration and quality of life strategy to be identified:

- Access to health care for health deprived communities such as Tilbury and Chadwell St Mary whose populations will have a greater need for healthcare;

²⁰ See Chapter 4 – Tackling Congestion

- Ensuring delivery of high quality strategic transport infrastructure (road and rail) to key strategic economic hubs;
- Affordability of transport costs because of low incomes Borough wide, but especially in income deprived wards such as Tilbury;
- Low levels of physical activity (levels of walking and cycling are also low²¹) potentially related to high levels of obesity and heart disease, especially in deprived communities such as Tilbury;
- Growth agenda provides opportunity to ensure high quality transport improvements are focused on the multiple deprived urban areas, such as Tilbury;
- New jobs could be in higher occupational classes, thereby improving incomes. However, very low levels of skills and qualifications could be a barrier to this;
- New transport projects should provide an opportunity to design them with a view to reducing the potential for crime;
- Both rail and road congestion, but especially on important routes such as the A13 and at J31, could adversely impact on journey reliability for freight, affecting productivity and job creation / jobs-led regeneration;
- Poor employee accessibility to London Gateway by non-car modes, especially walking and cycling, and train, could adversely impact on job matching and job creation/jobs-led regeneration; and
- Car based access to London Gateway could exclude key social groups from job opportunities, further embedding disadvantage and social exclusion.

²¹ See Chapter 5 – Delivering Accessibility

7.5 Strategy

7.5.1 Aim

Facilitating Regeneration

Thurrock Council, in partnership with other organisations, will ensure that the transport infrastructure and services required to deliver better opportunities for residents and employees is delivered in a timely and coherent manner

7.5.2 Objectives

REG1: To promote economic regeneration by reducing congestion

REG2: To promote social regeneration by delivering accessibility

REG3: To promote environmental regeneration by improving the quality of the built and natural environment

7.5.3 Outcomes

The regeneration strategy will work to deliver the following outcomes:

- Better business competitiveness and economic productivity through better journey reliability on key networks;
- Improved access to a range of employment and educational opportunities, especially for disadvantaged groups;
- Minimised noise pollution from transport in key urban areas;
- Minimised adverse impacts of transport on townscape and heritage;
- Better health and well-being through transport;
- Minimised adverse impacts of transport on landscape, biodiversity and the water environment; and
- Improved sustainable access to new development and regeneration areas.

7.5.4 Policies

This strategy will not generally have its own policies, programmes and interventions. Rather, it influences how the policies and interventions in the other chapters will be prioritised and delivered. It will be fully integrated into the strategies for accessibility, congestion, air quality/climate change and safety and through these will aim to facilitate economic, social and environmental regeneration.

Economic development and regeneration

Productivity growth is a key driver of wages, profits and ultimately prosperity and living standards. A high-performing transport system is a key enabler of sustained economic prosperity and this is a key issue in Thurrock with the current low wages and the need for job creation. One of the means of achieving this is by increasing business efficiency, through time savings and improved journey reliability for business travellers, freight and logistics operations.

This will therefore focus on tackling congestion, especially as it affects:

- The Thurrock Urban Area, and in particular the key strategic economic hubs such as Grays and Tilbury;
- Freight operations and freight movements on the routes, including the A13, that provide access to key employment hubs such as London Gateway; and
- The operations and journey reliability of public transport services, especially high quality interurban ones such as the South Essex Rapid Transit (*sert*). These will link growth areas and key strategic economic hubs and are an essential element of efforts to promote modal shift and hence reduced congestion

For this reason, interventions that tackle these congestion issues have been given a priority in the congestion strategy. In addition, the road safety strategy gives a priority to tackling accidents that cause congestion that adversely impacts on traffic sensitive streets, especially freight access to key strategic economic hubs and on the interurban public transport network.

The above tends to focus on how transport infrastructure is used and managed. Clearly an important part of jobs-led regeneration is the timely provision of actual transport infrastructure that enables improved access to new or growing employment sites. This is considered in the accessibility strategy, which states that:

“New developments will provide new transport infrastructure and improved connections. The provision of such new infrastructure should help ensure that new development is well served...Links between the development and existing networks will therefore need prioritising, ensuring appropriate provision, especially for pedestrians, cyclists, public transport, and the mobility impaired, as well as by road and also rail where appropriate.” The Local Development Framework will be critical in this regard.

Social Regeneration

The emphasis of the approach to social regeneration will be on access to services and opportunities, but especially access to employment, education and health care. Access to further education is especially critical given the low levels of skills and qualifications and the need to provide skills for the knowledge sector. The priority will be to target those residents and communities facing disadvantage.

A strong element of this option will be to improve incomes through better skills as well as reduce income inequalities by improving equality of opportunity. Accessibility, however, is not simply a transport issue. It is about the range of opportunities and choices that people have in accessing jobs and services, so it will be influenced by wider growth and development in Thurrock, such as the delivery of the Grays Learning Campus.

The strategy will therefore focus on delivering accessibility by:

- Prioritising improved access to employment, healthcare, and education, especially for deprived areas. Improving access to London Gateway will be

a key area for action, as will improved access for communities such as Tilbury and Chadwell St Mary;

- Having a strong focus on increasing walking and cycling, especially for the journey to work and education, with priority given to deprived areas where obesity is an issue, such as Tilbury;
- Focusing on improving accessibility by public transport will promote equality of opportunity as it will be available to all rather than only those with access to a car, providing people with a wider choice of jobs and enabling more people to enter the jobs market;
- Prioritising improvements to transport interchanges such as Stanford le Hope rail station, that improve access to key strategic economic hubs such as London Gateway; and
- Through the road safety strategy, giving priority to delivering accessibility by improving the safety of cyclists and pedestrians, especially in deprived areas.

Environmental Regeneration

Transport can have many adverse as well as beneficial impacts. As well as helping to prioritise interventions in the other policy areas, the strategy for facilitating regeneration includes the need to improve the impact that transport interventions have on the overall living environment, both the built and natural environments. The strategy will require the provision of an attractive and high quality built and natural environment, with transport playing its part. This approach should change the way Thurrock 'looks' and how people feel about their local area, and how others perceive it.

This strategy only influences how interventions in other policy areas are designed and delivered, rather than having its own programme of schemes.

Policy TTS30: Quality of the built environment

When designing and implementing transport improvements the Council will ensure they contribute to the quality of the public realm and the integrity of its historic and cultural setting.

This policy will treat the transport network as part of the public realm, especially in the urban areas, that people not only have access to but *want* to have access to. The growth agenda provides a real opportunity to ensure that transport improvements of a high quality are delivered.

This will be implemented through the rigorous application of good design principles. This will mean that transport development delivers a safe, attractive, uncluttered public realm that works effectively for all in society, including elderly and disabled people. Improving the quality of transport design will be critical in delivering modal shift to tackle congestion and improve air quality by making pedestrian and cycle routes and transport interchanges attractive to use. Reducing over-design and street clutter will also reduce future maintenance costs of new infrastructure.

Additionally, environmental regeneration will be supported by:

- Reducing the adverse impacts of roads and railways on noise and vibration, especially in built up areas and areas of tranquillity, such as by using low noise road surfacing;
- Promoting character in townscape, including preserving character in conservation areas;
- Mitigating adverse impacts on cultural heritage, such as listed buildings; and
- Delivery of the Greengrid (see Policy TTS5), which will improve the visual environment of the Borough.

This strategy will also include a strong element of protecting, and where possible enhancing, the natural environment by way of mitigating any adverse impacts on protected habitats but also using the design of transport interventions to create habitats and promote biodiversity, in a bio-diversity led approach that will help to deliver Thurrock's Greengrid.

Policy TTS31: Quality of the natural environment

When designing and implementing transport improvements the Council will ensure they contribute to the protection and enhancement of habitats and biodiversity, the integrity of water quality, and the preservation and enhancement of the natural landscape.

International and national nature conservation and landscape designations will be given the highest levels of protection from transport development. Outside of these areas, new transport infrastructure will still need to mitigate adverse impacts on biodiversity and landscape, including through fragmentation of habitat, and take opportunities to deliver enhancements. This will be a particular priority for the development of Thurrock's Greengrid, where open green spaces will be connected by green routes. The design and delivery of transport schemes that protect, enhance and provide green space should have significant positive effects on access to open space.

This will be implemented by a host of measures and considerations such as:

- Supporting the Thurrock Biodiversity Action Plan priority species and habitats;
- Protecting local wildlife sites;
- Promoting wildlife corridors through the development of the Greengrid;
- Promoting the Greengrid as part of the cycling and walking network; and
- Minimising the adverse impacts on water quality from road run off or spillages, especially in groundwater protection zone 1.

8 Implementation, Monitoring and Programme Delivery

8.1 Implementation

As outlined earlier, this refreshed *Thurrock Transport Strategy* constitutes part of Thurrock's LTP3. In addition to an LTP3 transport strategy, local highway authorities are also required by LTP3 guidance from Department for Transport to develop and submit an implementation plan alongside their strategy. The strategy and the implementation plan combined constitute the statutory Local Transport Plan. An implementation plan complements the strategy, acting as a detailed business plan for implementing the changes set out in the strategy. In March 2011, Thurrock Council published its first LTP3 Implementation Plan, in what will be a series, of Implementation Plans for the *Thurrock Transport Strategy* and spans the period from 2011/12 to 2014/15. Linking the strategy with an implementation and monitoring framework is an essential element of delivering an effective transport strategy. Thurrock Council plans to continue to produce detailed three year implementation plans for all remaining years of this *Thurrock Transport Strategy*.

8.2 Monitoring

The Implementation Plans will also include a framework for managing and monitoring performance. A number of performance indicators will be used to measure the outcomes of the policies in this refreshed *Thurrock Transport Strategy*. These will be monitored to check the Council is building on its good track record of delivery in recent years, culminating in the Council being awarded the 'most improved transport authority' in the National Transport Awards. Rather than setting arbitrary targets, the Council will mostly compare its performance with the performance of similar local authorities where possible. This will be through a number of mechanisms including a unitary council benchmarking group, which includes councils such as Medway and Luton, and the Essex district councils' benchmarking group.

The only transport target the Council has set is for a 10% reduction in *forecast traffic levels* by 2021, which equates to a modest increase in car traffic up to 2021. This is an integral target for the adopted Local Development Framework. Work on that planning document found that simply planning for increasing traffic levels resulting from housing and economic growth would be untenable in view of the congestion or the high cost of new infrastructure needed. The Council has therefore set this challenging target and the implementation plans will be a central part of achieving it.

The target itself was based on the work of the national Sustainable Travel Demonstration Towns project funded by the Department for Transport. This project found that the intensive application of Smarter Choices in three urban areas over a couple of years, during which job and housing growth continued, resulted in a 9% absolute reduction in the number of car trips and a 5% absolute reduction in car mileage. In setting a target for Thurrock, it had to be recognised that Thurrock was unlikely to achieve absolute reductions in car traffic because:

- It has a sizeable rural area where modal shift will be less likely;
- The scale of planned growth and change is significant in Thurrock; and

- Many of the new jobs will be created at London Gateway which is remote from the Thurrock Urban Area and will therefore be more car-based.

8.3 Programming Delivery

With regard to managing the transport programme, smaller schemes are not shown in the Implementation Plan, but instead are found within a detailed annual programme of transport schemes, which the Council prepares each year. Schemes are brought forward for consultation and implementation after being reviewed and assessed on their individual merits. A whole host of criteria are investigated before a scheme is programmed.

The Council has adopted a comprehensive approach to assessing and determining schemes in order to allow for the greater involvement of partners and stakeholders in reaching decisions. This should allow much greater transparency.

There will be three principal means from which schemes will be drawn:

- Strategy direction / commitments, including the Implementation Plan, such as targeting congestion measures on economically important routes, or a package of schemes in a particular area following a detailed study;
- Data-led, such as accident prevention schemes, though with a general policy steer; and
- Requests for transport improvements from Community forums, members of the public and other organisations.

An assessment panel will use a range of criteria, particularly policy fit, deliverability, risk, acceptability and cost. The panel will then examine the results and recommend priorities. Once the programme has been agreed by the Assessment Panel, it will be taken through the democratic process.

