



# The A12

## Report of the Commission of Inquiry

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Commission of Inquiry  
by Essex County Council

# **The A12**

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of Inquiry





# The A12 Inquiry

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## Executive Summary and Recommendations

There is general agreement that the A12 is a difficult road. Unless something is done it is certain to get significantly worse in the future in view of the development pressures in Essex from new housing, growing employment and substantial new port capacity in the Haven Gateway. Although there were plans earlier in the decade to upgrade it to dual 3-lane standard as far as Colchester, this is now unlikely in the foreseeable future under the present arrangements for the regional prioritisation of much transport investment.

This report therefore examines the case for more modest, and potentially more deliverable, improvements to the road and makes a number of recommendations. These will inevitably take time to plan and deliver. The report also recommends steps which can be taken more immediately to manage traffic better, reduce the number of accidents and incidents and improve their management.

The Commission of Inquiry strongly believes that the A12 should not be managed ad hoc or improved in a piecemeal way but rather that there should be a proper all embracing route management strategy which sets out planned short and medium term measures as well as improvements to the management of the road. It is equally important that the Highways Agency and the A12's stakeholders work in partnership to formulate and deliver this strategy.

The Commission therefore recommends:

- **Recommendation 1** - So long as the A12 continues to be classified as a road of only 'regional' significance on the strategic network, Essex County Council and the regional authorities should put aside any intention to promote its comprehensive improvement to dual 3-lane standard and should concentrate on developing, with the Highways Agency, medium size packages of works to address the A12's more serious deficiencies, and promote these within the regional funding context.
- **Recommendation 2** - The Department for Transport should reconsider the current classification of the A12 as a trunk road of 'regional' significance, both in the light of the new emphasis in the Eddington recommendations on competitiveness and national and international links, which the Department has accepted in its *White Paper Towards a Sustainable Transport Policy*, and because of the impossibility of funding comprehensive improvement within existing regional funding guidelines.
- **Recommendation 3** - If the Highways Agency were again to become responsible for considering major improvements to the A12, the case for such improvements should be re-evaluated and prioritised by the Department for Transport and the Highways Agency taking

account *inter alia* of the evidence, analysis and conclusions reached in this Inquiry.

- **Recommendation 4** - The Highways Agency, working with Essex County Council and other A12 stakeholders, as well as the East of England Development Agency and the East of England Regional Assembly, should take the lead in producing a New Route Management Strategy. This should set out in detail a programme of management measures and improvements to the A12 for the short, medium and longer term, together with an exploration of the sources of funding.
- **Recommendation 5** - The starting point for the New Route Management Strategy should be a plan to bring the A12 where it is not currently dual 3-lane in Essex, and as far as Ipswich, up to modern dual 2-lane standard with 9.9m wide carriageways and with lay-bys and on- and off-slip roads up to current standards.
- **Recommendation 6** - The section between Hatfield Peverel at Junction 20a and 20b and Marks Tey at Junction 25 should be given priority in upgrading substandard stretches of the road to modern dual 2-lane standard.
- **Recommendation 7** - Planning and scheme design for an upgrade of the Hatfield Peverel to Marks Tey section should begin now so that an application can be made for the Regional Funding Allocation in the next round.
- **Recommendation 8** - The New Route Management Strategy should provide for the elimination of substandard lay-bys and the provision of properly sited replacements built to current standards.
- **Recommendation 9** - The parties to the New Route Management Strategy should identify one or more locations where secure parking could be provided for 100-200 HGVs. Once built, overnight parking in lay-bys by HGVs or indeed anyone else should be prohibited and this prohibition should be effectively enforced.
- **Recommendation 10** - The New Route Management Strategy should address the hazards caused by accesses from private properties including farms to the A12, substandard access from minor roads and substandard access from the A12 to service providers such as petrol stations.
- **Recommendation 11** - The provision of a comprehensive approach to traffic management for the A12 should be an integral part of the New Route Management Strategy. We would urge the Department for Transport and the Highways Agency to prioritise the A12 as plans for rolling out this approach in the East of England unfold.

- **Recommendation 12** - Essex County Council should launch a new initiative to encourage travel planning throughout the County by employers large and small as well as encouraging individuals to consider their own travel options.
- **Recommendation 13** - The Highways Agency's work on ramp metering for the A12 should be brought to fruition in consultation with Essex County Council and included as appropriate in the New Route Management Strategy.
- **Recommendation 14** - The Highways Agency should consider where it would be beneficial to introduce additional signage detailing hazards and giving earlier warning, for example, of the need to make lane changes.
- **Recommendation 15** - The Highways Agency should urgently review the position at Mountnessing with a view to introducing signage warning of the difficult bends and perhaps reducing the speed limit through and past the junction.
- **Recommendation 16** - The Department for Transport should consider a change in the regulations to allow the use of chevrons on the A12.
- **Recommendation 17** - Essex County Council should consider the position of all at grade rights of way across the A12 and, in consultation with local residents, take steps to remove or divert them.
- **Recommendation 18** - The Highways Agency should introduce as a 12 month trial, and then evaluate for its effectiveness, an HGV overtaking ban between Hatfield Peverel and Marks Tey.
- **Recommendation 19** - The Highways Agency should urgently consider introducing a 60mph limit as a temporary measure until the Hatfield Peverel to Marks Tey section of the road is properly improved. If it is decided to reduce the speed limit, since this section is about 20 km in length, we recommend it should be enforced with an average speed (rather than a spot speed) monitoring system.
- **Recommendation 20** - Essex Police, in conjunction with Essex County Council, should introduce regular campaigns on the A12 to educate drivers on good practice and to clamp down on poor and illegal driving behaviour.

- **Recommendation 21** - Essex County Council should open discussions with the Department for Transport and the Highways Agency with the intention of itself funding Traffic Officers for a three year pilot on the A12.
- **Recommendation 22** - Essex County Council should explore with the Essex Fire and Rescue Service the reintroduction of a 'blue light' heavy recovery vehicle, how it might be funded and who might best carry the potential liabilities and, failing its reintroduction, at least explore with Essex Police how to enable heavy recovery vehicles to have a blue light escort at appropriate times.
- **Recommendation 23** - Essex County Council and the Highways Agency should review in detail with the emergency services where staging areas alongside the carriageway might best be placed for disabled or recovered vehicles and recovery equipment.
- **Recommendation 24** - The Highways Agency should provide a new lay-by to modern standard southbound on the Boreham Bypass without delay.
- **Recommendation 25** - The Highways Agency should urgently assess where to place gates in the central reservation barrier and then provide them.
- **Recommendation 26** - The highways authorities and the Highways Agency should quicken the pace at which they are providing permanent symbol signing for diversionary routes.
- **Recommendation 27** - The Highways Agency should pinpoint the additional locations at incident hotspots, prior to key diversion routes and if necessary as far back as the ports or within the M25, where additional Variable Message Signs would bring benefits.
- **Recommendation 28** - An A12 Alliance should be created, similar in concept to the one for the A47 led by Norfolk County Council, bringing together the key stakeholders and charged with the production and delivery of a New Route Management Strategy.

## **1. Introduction**

### **1.1. The A12**

- 1.1.1. The A12 is a major trunk road running between London and Great Yarmouth. This report is concerned with the section in Essex and south east Suffolk, between the M25 and the A14. It is the most heavily trafficked section of the A12. It is the only spine road through eastern Essex, as well as connecting East Anglia and the main towns of Ipswich, Colchester and Chelmsford to Greater London.
- 1.1.2. The A12 is the responsibility of the Highways Agency (HA), an executive agency of the Department for Transport (DfT). In particular the HA is responsible for the day-to-day operation and management of the A12, for its maintenance and renewal, and for carrying out minor improvement works to address specific local issues. However, the HA is not responsible (nor is it funded) for planning and progressing major improvements to the A12. This results from the classification by the DfT of roads on the HA network in England into 'roads of national significance' and 'roads of regional significance'. The A12 is classified as a 'road of regional significance', which means that major improvements can only be funded through the Regional Funding Allocation (RFA) mechanism based on recommendations by the relevant regional bodies.
- 1.1.3. The 84 km section of the A12 through Essex and as far as the A14 junction in Suffolk is widely regarded as a 'problem' road. Although as a minimum it is dual carriageway throughout, the road varies unexpectedly between 2- and 3-lane carriageways, and conforms to very different standards of width, geometry, access, lighting and lay-by provision along its length.
- 1.1.4. The A12 carries heavy traffic flows, is often seriously congested on certain sections and at specific junctions, is vulnerable to accidents and incidents which often disrupt traffic over a wide area and is generally regarded as stressful for drivers. Yet it is a road of critical importance to the economic and social wellbeing of the towns and communities it serves. It is also a strategic road linking East Anglia - and in particular one of Britain's largest port complexes - to London and the South East.
- 1.1.5. To focus attention on the A12, to address the widespread concerns about its current performance and future prospects, and to consider measures that might be taken to address them, Essex County Council (ECC) decided to set up a non-statutory inquiry into the A12 and appointed an independent Commission to carry out this task. The initiative of Lord Hanningfield, Leader of ECC, to commission an inquiry is a ground-breaking approach reflecting the powers and duties of the Council under the Local Government Act 2000 to promote the economic, social and environmental wellbeing of the community it represents.

## 1.2. The Commission of Inquiry

- 1.2.1. In March 2008 ECC appointed Sir David Rowlands (chairman), Professor Stephen Glaister, Dr David Quarmby and Lord Whitty to the Commission of Inquiry into the A12, with terms of reference to “*review the present and likely future performance of the A12 trunk road in Essex and to make recommendations which will enhance the level of service to all of its users including, where appropriate, improvements to information, emergency arrangements and capacity*”. Details of the Commission’s composition can be found at Annex 1.
- 1.2.2. We were subsequently asked by Suffolk County Council, when providing their written evidence, to extend the scope of the Inquiry to include the short stretch of the A12 beyond the Essex/Suffolk boundary up to the junction with the A14 at Copdock Mill, just south of Ipswich. Although not formally within our terms of reference we have in the course of the Inquiry looked at the A12 up to the junction with the A14. This seemed to us to be sensible. It would be artificial to treat the A12 as simply terminating for Essex’s purposes at the boundary with Suffolk.
- 1.2.3. The method of the Inquiry has been to call for evidence and information from organisations and individuals who have particular concerns about the A12 or who have information of particular interest to the Commission. Together with additional information kindly provided by the HA and ECC officers at the Commission’s request, and with the support of the Secretariat, the Commission has been able to complete its deliberations and present this report in fulfilment of its terms of reference. We were not asked, nor in practice would we have been able, to conduct formal appraisals of individual schemes proposed for the A12. Our report should therefore be read with this in mind.
- 1.2.4. The Commission held three public hearings<sup>1</sup> in April and May 2008 to explore further the views, knowledge and expertise of key witnesses many of whom also sent in written evidence. Thirty-six witnesses from 24 organisations gave oral evidence to the Inquiry including elected members of ECC and of four District Councils, officers from ECC, local MPs, Essex Police and Essex Fire and Rescue Service, local business representatives, port operators, the East of England Development Agency (EEDA) and the East of England Regional Assembly (EERA), the HA and the DfT, motoring organisations and representatives of national organisations including the Freight Transport Association, the Road Haulage Association and National Express Group. A full list of witnesses can be found at Annex 2. A number of other organisations have sent us written evidence. In addition, there were 204 responses from members of

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<sup>1</sup> Video footage of the hearings can be viewed at <http://www.essex.gov.uk/a12inquiry> (until December 2008)

the public, encouraged by press coverage of the Inquiry. Additional meetings were also held with the HA.

- 1.2.5. We are most grateful to all who appeared as witnesses at the public hearings, to all those who submitted evidence in writing, online and via email and to the HA for the additional information it willingly provided. All their inputs have proved most valuable.
- 1.2.6. We are particularly grateful to the Secretariat who worked alongside the Commission and provided invaluable support throughout the Inquiry.

## **2. The Development of the A12**

### **2.1 The A12 today and how it got there**

- 2.1.1 The original road alignment that became the A12 was first created by the Romans as a main route linking the important settlements of London (Londinium) and Venta, near Norwich, via Colchester (Camulodunum). Over the centuries settlements grew considerably and became established at key locations, such as the bridging locations across rivers or at junctions with other routes.
- 2.1.2 By the twentieth century the A12 had become established as the major route between London and the East Anglian coast, passing through what had become major towns. By the 1920s road traffic was becoming a problem in Chelmsford, exacerbated by the limited bridge crossings of the River Chelmer.
- 2.1.3 Developments during the 1930s saw the first A12 Chelmsford bypass open in 1932, running east of the town incorporating a large concrete viaduct and a new bridge across the River Chelmer. This was followed by a northern bypass of Colchester in 1933 which included the Avenue of Remembrance.
- 2.1.4 In the mid 1930s the length of the A12 between Marks Tey and Feering, a distance of some five kilometres, was widened to dual 2-lane carriageway. According to the standards of the day, the carriageways were 6.1m (20 feet) wide compared with today's standard equivalent to 7.3m (24 feet) plus 1m marginal strips on both sides. Separate cycleways and footpaths were also provided.
- 2.1.5 As traffic grew in the 1950s, and to support the plans for the expansion of the port of Harwich, a series of bypass schemes followed to create a continuous dual carriageway from London to Spring Lane, Colchester.

These were:

- to the west of Ingatestone (1959)
- to the north of Brentwood (1964)
- to the east of Witham (1965)
- to the west of Hatfield Peverel (1965)
- to the east of Kelvedon (1967)
- at Colchester North (1974)

This was followed by further work in the 1970s creating new dual 3-lane bypasses:

- from Marks Tey through to Spring Lane, Colchester (1971)
- linking the Hatfield Peverel Bypass to Chelmsford, bypassing Boreham village (1971)
- at Margaretting (1973)

The only subsequent substantial further work was the new dual 2-lane Chelmsford Bypass which opened in the mid 1980s.

2.1.6 The result of all this piecemeal development over most of the twentieth century gives us today a road which in spite of various minor improvement schemes implemented by the HA and its predecessors:

- is a mix of by-passes and on-line widening
- is a mix of dual 2-lane and dual 3-lane
- has widely varying standards of carriageway width, curves, gradients, lay-bys, on-slip and off-slip roads
- has some major junctions close together, some far apart
- retains some access to local roads, mostly with substandard geometry
- still retains a considerable number of property frontages with direct access on to the A12, including farms, houses and other property, together with cycle tracks and bus stops
- has varying levels of lighting

Unlike many other main routes, the A12 has never been the subject of strategic improvements or been paralleled by a separate motorway.

2.1.7 Despite its variable and partly substandard condition, today the A12 is one of the most heavily trafficked all purpose trunk roads in England, with average daily flows on the Witham and Colchester sections for example of some 80,000 or more vehicles per day.

## **2.2 The London to Ipswich Multi-Modal Study (LOIS) and the possibility of comprehensive improvement**

2.2.1 In 1999 the Government Offices in partnership with regional bodies began a programme of Multi-Modal Studies, to explore the issues and

possible solutions to whole corridors, bringing road, rail and local public transport into joint consideration. LOIS was one such study, concentrating on the A12 corridor, including the Great Eastern Main Line, and the surrounding area. It was published in December 2002 and in the following July the government asked the HA to develop a number of highway schemes including:

- A12/M25 Brook Street junction improvements
- A12/M25 to Chelmsford widening to dual 3-lane
- A12 Chelmsford to Colchester widening to dual 3-lane
- A120 Braintree to Marks Tey dualling

2.2.2 Improvements to the A12/ M25 Brook Street Interchange were completed and opened in March 2008. Some scheme development work was carried out on the other projects. But in 2006 with the introduction of the regionally-led RFA process for planning and prioritising transport investment within a region, the DfT transferred from the HA to the regions the responsibility for recommending and securing the funding of major improvements on such roads, prioritising them along with other transport and infrastructure investment bids against the funds available to each region.

2.2.3 As part of this process the A12 was classified as 'of regional significance' within the HA network as was the A120 - the A14 was in fact the only all purpose trunk road in the East of England region to be classified as of national significance - and both ceased to be candidates for the HA's own national road programme. Sufficient development work had been done on the A12 proposals, however, to suggest that the indicative cost of a major improvement to dual 3-lane from the M25 to Copdock Interchange with the A14 would be in the range of £800 million to £1 billion at today's prices.

2.2.4 It has been made clear to us by EERA - and it is recognised by the DfT - that the RFA process is not resourced, and probably was not intended, to embrace transport investment of this order of magnitude. The current allocation for the East of England as approved by the DfT in 2006 envisages about £100m per annum over the period to 2015/16 to fund 24 transport schemes across the region. The EERA Chief Executive told the Inquiry:

*"If we'd spent all the money that the region had on the A12 we probably wouldn't have had enough... the magnitude of the works needed to improve the A12 as a road across its length exceeded the total quantum of unallocated funding which the region had on regional transport in the whole of the East of England over 10 years... there was simply not enough money in the regional funding allocation's pot to allow a scheme of this magnitude, even broken up, to stand a realistic chance of being funded".*

- 2.2.5 So whatever view the Commission might take on the merits of comprehensive modernisation and improvement to dual 3-lane of the A12 between the M25 and the A14 at Ipswich, compared with other more modest approaches, there seems to be no opportunity for this ever to be considered as long as the current arrangements for classification of HA roads and the operation and funding of the RFA process continue. We return to this question later in the report.
- 2.2.6 Little or no preparatory work had been done on any alternative strategy for the A12 - such as a package of more modest improvements – by the time the RFA process was initiated in 2006. The eventual RFA recommendations by the East of England regional bodies contained no proposals for funding any schemes on the A12 out of its 10 year budget allocation through to 2015/16. More details of the RFA process and what it meant for Essex are in Annex 3.
- 2.2.7 The government has initiated a ‘refresh’ of the RFAs for the summer of 2008 but we cannot see how the fundamentals of the position with the A12 can change within this timescale. The result is, therefore, that no serious plans for significant improvements to the A12 currently exist.

### **2.3 Maintenance, refurbishment and minor improvements**

- 2.3.1 Meanwhile the HA, alongside its operational, management and ongoing maintenance responsibilities, continues its programme of major maintenance, renewal and refurbishment. In addition, minor improvements up to the value of £5 million can be and are carried out, mostly alongside major maintenance projects, to address specific issues and problems, such as those revealed from safety and accident analyses.
- 2.3.2 In the nine years from 1997 to 2006, the HA has spent £77 million on nine major maintenance schemes, covering about one-third of the length of the road between the M25 and the A14. This includes in particular the two phase improvement at Brentwood, with associated investment in lighting, to bring the sections between Junctions 11 and 12 up to modern dual 2-lane standard. Some £25 million is programmed for improvements and major maintenance schemes over the next four years, with a focus on works at Hatfield Peverel, Witham and Kelvedon. Full details are at Annex 4.
- 2.3.3 To get a feel for the adequacy of the level of expenditure on the A12 we asked the HA to compare it with expenditure on the A14. The position in recent years is set out in the table below:

## Highways Agency total expenditure 2003 -09 (£ million)

	<b>A12</b>	<b>A14</b>
Improvement	12.3	10.8
Maintenance	17.1	23.5
Refurbishment	81.9	32.3
<b>Total</b>	<b>111.3</b>	<b>66.7</b>

Route lengths are 84 km for the A12 and 114 km for the A14.

- 2.3.4 It is important to note that the refurbishment expenditure of £82 million over seven years is nearly three times that spent on the A14 over a somewhat longer distance of road, reflecting the different age, conditions and standards for the two roads.
- 2.3.5 Therefore, within the limits of available funds and current policy, it cannot be argued that the HA has been neglecting the A12, though the extensive substandard nature of the road means that even the expenditure described seems not to have had a major impact on people's perceptions of the difficulties and stress of using the road.

### **3. The A12 Today**

#### **3.1. General description**

- 3.1.1. We set out earlier a general description of the road and pointed towards the substandard nature of a number of sections of the road (generally where there has been on-line widening) which join by-passes (of generally better standard) of the larger and smaller towns. Annex 5 provides a detailed description of the road and its physical characteristics.
- 3.1.2. Normally trunk roads in predominantly rural areas carrying similar traffic volumes to the A12 have limited points of access, with on and off-slip roads long enough to allow for the necessary speed transition and the integration of joining traffic with existing flows. On the A12, however, over a distance of some 71 km in Essex, there are 49 private accesses, six service stations with frontage access onto the road and a further five service stations located on or very close to A12 interchanges. In addition there are 15 km of cycle ways and footpaths alongside the road and 39 public rights of way across different parts of the road. In the Suffolk section through to Ipswich, a distance of some 13 km, there are a further 20 private accesses, three service stations with frontage access and four public rights of way.
- 3.1.3. Modern standards provide a limited width hard strip on the outer edges of the carriageway, barriers down the middle, and sightlines and gradients which do not present unexpected hazards to drivers or lead to heavier

vehicles having to slow down. The current DfT standards require that a dual 2-lane carriageway has 9.3m width in each direction (2 running lanes of 3.65m and 2 hard strips 1m wide). To facilitate traffic management and future-proof subsequent maintenance, sections of the carriageway on the A12 have been widened to 9.9m in recent maintenance schemes. This allows, at reduced speed, for two lanes plus one lane contraflow on one carriageway. Annex 6 sets out carriageway widths by section.

- 3.1.4. Thirty five and a half kilometres of dual 2-lane carriageway in Essex is less than 9.9m wide in each direction. This is half the length of the A12 between the M25 and the Suffolk border. All of the A12 in Suffolk, between the Essex border and the A14 is dual 2-lane carriageway with less than 9.9m provision.
- 3.1.5. The current required standard for lay-bys on a high speed dual 2-lane carriageway includes a separation island in the layout and the recommended lay-by spacing is 2.5 km. Lay-bys may not be combined with a junction, access or slip road nor should they be sited on the inside of a bend of less than 2040m radius for a 70mph road. Of the 49 lay-bys on the A12 in Essex, 36 need upgrading to meet current standards; a further 10 need upgrading in Suffolk to meet these standards. We believe that many of the substandard lay-bys constitute a serious hazard because of short access lanes and the relatively long time taken for heavy goods vehicles to accelerate back into the running lanes.
- 3.1.6. Given six dual 2-lane sections and four dual 3-lane sections, there are eight transition points along the length of the road. See Annex 7 for the details. Under heavy traffic conditions, every such transition is a potential hazard, causing congestion, tail-backs and delays and a disruption to flow which itself increases accident risk. This is worsened where within the dual 2-lane sections there are varying geometrical standards.
- 3.1.7. Lighting is provided at some key junctions and where hazards exist. While arguably that is helpful, there are a dozen light-to-dark and dark-to-light transitions along the length of the road, again necessitating adjustment by the driver which can contribute to driving stress.
- 3.1.8. With no speed cameras to enforce the national speed limit and few Variable Message Signs, our sense is that traffic on the road is 'undermanaged', with no measures specifically addressed to known accident blackspots or to giving information to drivers facing delays ahead.

## **3.2 Traffic flows**

- 3.2.1 The reported traffic flows for the A12 range from nearly 60,000 to over 80,000 vehicles per day, in both directions, depending on the location

along the route. Heavy goods vehicles (HGVs) account for between some 10 -15% of the total flow. When we looked at some comparable roads within the East of England we found that the A12 appears to be amongst the most heavily trafficked. Within the region only the A14 around Cambridge and the short stretch of the A120 coming off the M11 to Stansted Airport carry anything like the same volume of traffic. Full details can be found at Annex 8.

- 3.2.2. Looking more widely, we asked the HA to compare for us traffic flows on the A12, three sections of the A14 – M6 to A1, A1 to A11 and A11 to Felixstowe – the A27/A259 Portsmouth to Hastings, the A303 from the M3 to Amesbury and the A34 from the M3 to the M40. The HA told us that on a total flow basis, of those they compared, the A12 is the busiest of all these routes in both directions, as the table below shows:

**Average number of vehicles per day in both directions**

A12 M25 - Ipswich	66,436
A14 A1 - A11	60,583
A34 M3 - M40	53,124
A14 M6 - A1	49,628
A14 A11 - Felixstowe	45,856
A27/ A259 Portsmouth to Hastings	41,767
A303 M3 to Amesbury	38,385

- 3.2.3. When road capacity is taken into account, one section of the A14, from the A1 to the A11 in both directions, is arguably more stressed, based on the percentage of HGV traffic and the average number of lanes. When the HA looked at the variation locally, they found that the A12 has some very busy sections but that there are busier sections on the A27 and on comparable sections of the A14.

**3.3 Accidents and safety**

- 3.3.1 Accidents are not only a particular concern for users of the A12 because of the risk of being injured or killed but also because accidents usually involve closure of part or the whole of the road, diversion of other traffic and congestion and delays. Even a damage-only accident brings the associated shock, inconvenience and hassle, as well as potential disruption to traffic generally.
- 3.3.2 The Commission had access to the HA’s own regular reports and analysis of accidents on the A12 and action taken. Analysis of the statistics for the A12 between the M25 and Ipswich suggests that overall the ‘personal injury accident rate’ - measured in personal injury accidents (pia) per 100m vehicle-kms - is in fact lower than the average for all non-built up rural Trunk A roads in England. The rolling three-year accident analysis for 2004-06 shows 11.5 pia per 100m vehicle kms for the A12

compared with the average for all non-built up rural trunk roads of 15.5 pia. Annex 9 sets out detailed pia statistics for the A12, drawn from the HA's 2007 Annual Safety Report.

- 3.3.3 However, as the Safety Report indicates, there are clusters of accidents at specific points, often where the road geometry is substandard, where there are particularly heavy traffic flows and instability in vehicle speeds and where junctions are close and considerable vehicle weaving between lanes takes place. This is reflected in the personal injury accident figures for particularly difficult sections of the road, for example, in Essex, the stretch of the A12 from Hatfield Peverel through Kelvedon to Marks Tey and, in Suffolk, around Capel St. Mary and the Copdock Interchange.
- 3.3.4 Many of our witnesses said that road users perceive the A12 to be a dangerous road - particularly in the vicinity of Hatfield Peverel and Witham. Everyone was aware that when traffic is heavy, risks increase where the road changes from dual 3 to dual 2-lane, where there are junctions with inadequate access lanes to allow for speed transition, and where high levels of traffic flow on the A12 itself cause back-ups for joining traffic, intense weaving between lanes and disruption to flow.
- 3.3.5 The HA has made, and continues to plan, a number of local interventions to change or improve the road, its markings or the configuration of junctions. For example it plans this year to spend nearly £1 million on safety fence renewal at the Ardleigh (Crown) Interchange at Junction 29.
- 3.3.6 Accidents cause traffic congestion and disruption and we shall see in a later section the scale and impact. But we should also include those accidents and incidents on the road which do not cause personal injuries. These are not recorded by the Police under normal reporting arrangements and therefore not captured and reported by the HA. However, evidence supplied to the Commission by Essex Police and set out in the table below suggests that there is a significantly higher number of non-injury accidents on the A12 than on other roads in Essex.

#### Road traffic collisions in 2007

	Number of collisions	Collisions per km
A12	842	11.9
A120	356	4.6
A130	185	4.0
A133	69	2.5
A131	56	1.9

- 3.3.7 The frequency of these incidents, which can cause traffic disruption beyond the immediate locality and indeed complete closures of the road, may be contributing to the general concern expressed to the Commission about the stress and unreliability of the road.

### **3.4 Traffic congestion**

- 3.4.1 Traffic congestion arises where traffic demand exceeds the capacity of the road and queues build up, causing delay, disruption and increasing accident risk. This happens on a regular basis, reflecting the known and predictable variations of traffic demand by time of day (morning and evening rush hours for example) and by day of week (Friday evening outbound and Sunday evening inbound). It also arises as a result of accidents and incidents where road capacity is temporarily restricted.
- 3.4.2 A key question for the Commission is whether the performance of the A12 is significantly worse than that of other trunk roads, either now or in the foreseeable future, and therefore might justify special attention of the kind which it appears not to be getting or whether similar concerns to those being expressed to us by our witnesses could be found in many other parts of England.
- 3.4.3 One way of measuring traffic congestion is in terms of 'stress'. At its simplest, stress is the daily traffic flow on a road divided by its daily capacity. Because levels of traffic vary throughout the day, the HA measures the daily capacity of a road by the maximum sustainable traffic flow in the peak hour. Roads which are congested for longer than just the morning and evening peak hour have stress levels described as 'more than 100%'.
- 3.4.4 Annex 10 is taken from the HA's Regional Network Report for the East of England 2008 and gives observed stress levels in 2006 for the strategic road network in the region. As the annex shows, the section of the A12 from Chelmsford to Colchester is currently operating at or beyond capacity particularly northbound. But it is not exceptional in this regard. Sections of other trunk roads in the East of England, notably the A11, A14 and the A47, are currently under similar stress. We look later in this report at likely future stress levels.
- 3.4.5 One factor which affects the intensity of congestion is the availability of alternative routes, particularly where congestion arises unpredictably due to incidents or accidents. It was put to us by many witnesses that the A12 is unusual in that for much of its length there are no alternative routes along the corridor. This arises particularly where the road has been improved by on-line widening of the original old A12 - so there is no 'old road' as there would be where new alignments have been taken. There are also few strategic diversionary routes for those making longer distance journeys.
- 3.4.6 Even where there are alternative routes they are of little or no value if the driver has no knowledge of congestion and delays ahead when the opportunity to take the alternative route arises. In order that such

choices do become possible, we will be considering later in the report the installation of additional Variable Message Signs at strategic locations which might enable drivers to make a strategic diversion decision.

### 3.5 Journey time reliability

- 3.5.1 The HA monitors journey times by a number of means on 91 major routes covering most of the strategic trunk road network for 15-minute time slots between 6am and 8pm. The slowest ten percent of journeys observed for each of these is identified and their average journey time calculated. It is using this data that the DfT's Public Service Agreement (PSA) target was set on improving the 10 percent of worst journeys.
- 3.5.2 The rankings for journey time reliability on this basis at March 2007 ranked the A12 (Ipswich to M25) as 32nd worst and the A12 (M25 to Ipswich) as 53rd worst of the 182 HA routes covered (i.e. 2x91 routes). The recently published DfT Annual Report 2008 now ranks the A12 (Ipswich to M25) as 9th worst and the A12 (M25 to Ipswich) as 112th worst. Whilst these rankings demonstrate that the performance of the A12 is far from good, they do not suggest it is uniquely bad by comparison with other routes.
- 3.5.3 We believe nevertheless that there are two difficulties with the PSA figures, as they relate to the performance of the A12. First, whilst the journey time reliability statistics are no doubt useful to the DfT and the HA in looking at the overall performance of the network – and they capture quite well long running impacts such as the improvement works at the M25/A12 Brook Street Interchange – they are silent about the general level of performance of the road. By definition the data relates only to the 10 percent of worst journeys. Nor as presented does the data relating to whole routes highlight particular problem sections of a road.
- 3.5.4 Secondly, we believe there is in any case a significant flaw in the PSA target and the way it is measured. It is constructed on a premise that there is a flow of traffic which is experiencing more, or less, delay. But if the road is closed for whatever reason there is no flow. It seems that in these circumstances the software which manufactures the statistics “infills” the missing data with average data. A note by the HA in response to our queries explained to us that:
- “We are not told when a road has been closed and therefore this means that previous average flow data or infilling will be used to generate values and thus showing no impact. This will therefore reflect near normal road conditions for the A12... If there are no traffic flows then there will be no delay... In short a total road closure will “artificially” not show any effect on journey time reliability...”*
- 3.5.5 So, whilst the measure may be a useful indicator of the 10 percent of worst journeys when a road is operating more or less normally, it does

not reflect the impact of road closures and associated disruption about which many of our witnesses complained.

- 3.5.6 Annex 11 lists partial and total closures of the A12 between January 2005 and April 2008. None of these closures and their impacts are captured in the HA's journey time reliability statistics but they are a very real problem for those who use the A12 and demonstrate why it has such a poor reputation. On average the road was closed somewhere over its length between the M25 and the Copdock Interchange more than once a fortnight for an average of three and a half hours at a time. This average conceals the extent of closure periods which can be as high as six to seven hours, and on one famous occasion for more than 24 hours. This means that – on a 6am to 10pm day – there is at any one time a 1 in 30 chance that the A12 is closed somewhere along its length.
- 3.5.7 We asked ECC using the HA's data to look at the day to day performance of sections of the A12 to try to understand whether there were particular difficulties with some sections. Annex 12 shows week day journey speeds for the peak morning rush hour both north and southbound for sections of the A12 from the Copdock Interchange through to Boreham over the period from September 2002 to March 2008. The performance of the Marks Tey to Boreham section is significantly different to the rest southbound and to an extent northbound too in the early part of the period. Whilst the other sections show occasional significant difficulties over the five and a half year period, the average journey speed is otherwise fairly stable. Although not shown, the picture is similar for sections of the A12 beyond Boreham to the M25.
- 3.5.8 But the Marks Tey to Boreham section particularly southbound shows an erratic performance over the period with wide swings from month to month in the average speed. This suggests there may be particular problems with this section of the A12.

### **3.6 The management of incidents**

- 3.6.1 The Essex Police, Essex Fire and Rescue Service and the HA all have roles to play in the management of and recovery from incidents. The three main elements of the Police's work on Essex roads are providing a road crash investigation service for fatal and complex incidents, road policing officers (329) and an automatic number plate recognition service for enforcement purposes. The Police provide a visible deterrent as well as actual enforcement. The Fire and Rescue Service also have a statutory duty for assisting in the saving of life and in the management road traffic accidents on the A12.
- 3.6.2 Given the frequency of accidents and incidents, and the particularly disruptive effect they can have on traffic, especially if a carriageway or the whole road is closed, we were interested to know whether the time

taken to clear up such accidents and re-open the road was a particular issue. We wanted to know whether there was a more significant role that the HA could play. Some witnesses felt that clear up times were longer than they need be, even recognising the procedures the Police had to carry out in the event of a personal injury or death.

3.6.3 It was clear that the Police were sensitive to the need to be able to clear the road quickly after incidents, and that procedures and the availability of equipment had been reviewed to see whether certain tasks could be speeded up. The HA for example has supplied GPS equipment to the Essex Police which has meant only one officer is needed to survey the site of an accident, leaving the second officer in a team free to progress other aspects of its management. The HA is also supplying an enhanced Incident Support Unit Service to the A12 thereby allowing improved clearance times after an incident.

3.6.4 We look later in this report at what more could be done to speed up the handling of accidents and incidents as well as mitigating their impacts.

## 4. Looking to the future

### 4.1 Economic and demographic changes

4.1.1 Considerable growth is planned for the East of England region in terms of both housing and jobs. Essex is expected in turn to take a substantial share of the burden as the table below shows:

#### Summary of forecast planning data for the East of England (2001-2021)

	Increase in dwellings	Increase in jobs
Bedfordshire & Luton	59,100	50,000
Cambridgeshire & Peterborough	98,300	95,000
Essex & Unitaries	127,000	131,000
Hertfordshire	83,200	68,000
Norfolk	78,700	55,000
Suffolk	61,700	53,000
<b>Total</b>	<b>508,000</b>	<b>452,000</b>

Some 44,000 of the extra dwellings will be along the line of the A12 itself, in Colchester (17,100), Braintree (7,700), Chelmsford (16,000) and Brentwood (3,500) districts. This will only intensify the already substantial local commuting flows along and around the A12. See Annex 13.

4.1.2 Development pressures will be further intensified by the planned major port developments at Felixstowe South which should come fully on

stream by 2014 and at Bathside Bay (Harwich) at a later stage. The planning applications for both developments concentrated on the impacts on the A14 and the A120 respectively with little analysis of what the position would be on the A12. From the limited information available we believe Felixstowe could increase the existing 10-15% of HGV traffic on the A12 by a further 1-2% from the middle of the next decade. Bathside Bay would eventually add further pressure as would prospective development at Stansted Airport.

## **4.2 Traffic forecasts and their implications**

4.2.1 These very substantial pressures will inevitably impact on traffic levels, as the HA recognises in its own forecasts. Annexes 14 and 15 project forward to 2016 and 2026 daily stress levels on the strategic road network in the East of England. The A12 has growing problems by 2016 with the northbound section between Chelmsford and Colchester operating at between 130-150% capacity and the southbound section above capacity too. By 2026 the road is clearly in difficulty from the M25 through to Colchester and by then Chelmsford to Colchester southbound is the most heavily stressed section forecast to operate at over 150% capacity. We find it difficult to see how, in the face of these pressures and without remedial measures, the A12 can continue to operate effectively.

## **5. What our witnesses told us**

The report draws heavily on the quantitative and qualitative evidence which we have received from a wide range of witnesses and we are grateful for the breadth of information made available to us. This section summarises some of the key issues which witnesses representing specific interests were keen to present to us.

### **5.1 Essex County Council**

5.1.1 Cabinet members voiced their concern both about the current performance of the A12 and the extra pressure that may be put upon it with the developments at Felixstowe and Bathside Bay as well as continued housing and population growth, particularly at Colchester, Braintree and Chelmsford. Journey time reliability is the predominant issue for motorists, as even small scale incidents cause delays. With limited diversionary routes there is often no other choice but to wait until the problem is rectified and the traffic begins to flow again. There is a strong feeling that the needs of the A12 are strategic and that it should receive funding from national and not regional allocations.

- 5.1.2 Lord Hanningfield in his role as Leader of the Council indicated that a case might be made for a financial contribution by Essex County Council towards measures on the A12 which could benefit users living or working in Essex.
- 5.1.3 The Director of Development, Highways and Transportation suggested that there are three generic issues with the A12: tackling driver behaviour, better partnership working and improvements to substandard sections. He also believed that the A12 requires significantly better traffic management, of which there is currently little.
- 5.1.4 ECC would like to see the introduction of average or variable speed limits enforced with cameras to smooth out traffic flows, better road markings, variable message signs to provide real time information and a campaign to promote better driver behaviour as well as penalty enforcement on those who break the law. There was, in addition, the need for dedicated facilities for HGV drivers which would reduce their need to use lay-bys on the A12 for long periods or overnight. There was also a case for exploring the deployment of dedicated traffic officers to handle incidents on the road, including those involving the emergency services.

## **5.2 Other elected representatives**

- 5.2.1 Members of Parliament for North Essex and West Chelmsford and Councillors from Chelmsford, Brentwood, Colchester and Braintree gave evidence to the Inquiry, in addition to contributions from the County Council's main opposition groups. There was fairly unanimous agreement that the unreliability of the A12 was a key concern to many of their constituents who were experiencing serious problems with the volume of traffic and poor safety features exacerbated by bad driver behaviour. The Hatfield Peverel to Marks Tey section was singled out as a particularly inadequate and dangerous stretch of road. They all acknowledged the importance of the A12 for Essex, believed that investment in the road in recent years had been inadequate and that a range of short, medium and long term measures would probably be required to improve the performance of the road, although there was some disagreement over what these measures might be and how they might be funded. The main opposition groups on the County Council also felt that planning, for example for new housing, should incorporate measures to keep additional car traffic to a minimum by focussing on public transport and that there was scope to carry more freight on the railway.
- 5.2.2 A major concern highlighted by many of the representatives was what they saw as the chaotic conditions created in town centres or on local roads whenever the A12 had to be closed because of accidents and incidents.

### **5.3 The Department for Transport and the Highways Agency**

- 5.3.1 Both the DfT and the HA were supportive of ECC's aims in setting up the A12 Inquiry. The HA recognised many of the points which ECC had made about the road and acknowledged the need to progress understanding with key partners to deliver sustainable planning and transport solutions for the A12.
- 5.3.2 Both were very conscious of the implications of its classification as a road of only regional significance. But even within that constraint the HA believed significant improvements could be made to the management of the A12 as part of its new role as a network operator rather than simply as a builder and maintainer of roads. The DfT was understandably reluctant to open up the question of its classification but did acknowledge that impending developments, both in the growing labour market underpinned by new housing along the route of the A12 and at the ports in the Haven Gateway, would be important as the Department reviewed its investment priorities in the light of recommendations in the Eddington Transport Study.

### **5.4 The emergency services**

- 5.4.1 In Essex Police's view the combination of limited hard shoulder, fixed crash barriers and absence of suitable lay-bys in some areas makes managing accidents difficult. Although other major roads with which they deal have these features, they do not have them to the same extent or in the same combination which makes the A12 uniquely difficult for the Police.
- 5.4.2 To help deal with the difficulties, the Police believed it would be useful to consider creating sections in the central crash barrier which could be removed to permit contra flow traffic and to facilitate recovery from major incidents and closures, introducing an HGV overtaking ban, variable message signs and combined average and variable speed limits. Precise locations where removable barriers would be of most benefit would require an engineering assessment. The Police explicitly said they would enforce any new requirements on the A12 with vigour and could also monitor their effectiveness.
- 5.4.3 Essex Fire and Rescue Service was supportive of these sorts of measures and also emphasised that tackling bad driver behaviour would see a decrease in the number of incidents. In addition they would like to see a reinstatement of a 'blue light' heavy recovery vehicle to speed up the clearance of accidents and incidents. A 'blue light' would give the vehicle an emergency status and enable it to manoeuvre through traffic to reach an incident.

5.4.4 Both services also said the dual carriageway often has to be closed in the event of an accident since there is nowhere else to place emergency vehicles or equipment or to take broken down and damaged vehicles. They highlighted the requirement for them to follow national guidelines and legislation in terms of road traffic collisions involving death or injury.

## **5.5 A12 motorists**

5.5.1 Two hundred and four responses were received from the public via letter, email and through the online consultation. A substantial number of additional comments were also received through a campaign organised by a local newspaper. The predominant view was that the A12 should be a dual 3-lane carriageway from the M25 to Colchester.

5.5.2 Three other themes also came through strongly. These were:

- the poor and dangerous standard of the road from Hatfield Peverel through to Kelvedon, with what is seen as dangerous slip roads, speeding, accidents and diversion on to other inappropriate roads
- bad driver behaviour, with high speeds and tailgating in the outside lane whilst the underutilised nearside lane is used for undertaking
- the desire to see a ban on HGV overtaking at least on the dual 2-lane stretches

## **5.6 A12 commercial users**

5.6.1 In a survey conducted in response to this Inquiry by the Essex Chamber of Commerce, 54% of respondents said the A12 was essential to their business and another 33% said it was important or very important. Fifty six percent said their experience of travelling on it had deteriorated over the past year. But unlike the LOIS recommendations which prioritised an upgrade of the A12 from the M25 to Chelmsford before the section from there to Colchester, the Chamber's members reversed the priority. By a clear majority (59%) respondents wanted to see an upgrade from Chelmsford to Colchester before the M25 to Chelmsford (33%) or Colchester to the Essex border (8%).

5.6.2 The Essex Federation of Small Businesses in its evidence wanted amongst other things to see improved slip roads to allow traffic to merge more easily on to the A12. It singled out Hatfield Peverel, Witham and Kelvedon as well as the Boreham Interchange. The Federation also conducted a survey in response to the Inquiry. Thirty five percent of its members use the A12 daily and 42% reported experiencing delays on most journeys.

5.6.3 The Freight Transport Association and the Road Haulage Association echoed many of the comments received from other witnesses about the A12. The latter particularly stressed the need for secure overnight HGV

parking with adequate facilities. The pilot HGV overtaking ban on the A14 had had no detrimental effect on the Road Haulage Association's members whilst presumably benefiting motorists.

## **5.7 Port operators**

5.7.1 With only five years to exercise planning consent, Hutchinson Ports are pressing ahead with the Felixstowe South development which is likely to be fully on stream by 2014. Bathside Bay has a 10 year consent period and is unlikely to start before 2015. Despite improvements to rail capacity, about three quarters of the extra traffic through Felixstowe will still go by road. About 40% of the vehicles leaving Felixstowe use the A12 and much of the traffic out of Harwich does so too. Growing volumes of HGV traffic seem inevitable.

## **5.8 Railways**

5.8.1 National Express East Anglia is the franchised train operator of services on the Great Eastern Main Line linking Norwich, Ipswich, Colchester and Chelmsford to London Liverpool Street with six passenger trains per hour and over 50 million passenger journeys per year. Chelmsford is one of the busiest regional stations with 6.5 million passengers annually. Passenger demand is higher north of Chelmsford than it is south. The majority of passengers are commuting into central London and most live no more than four miles from a railway station.

5.8.2 The line is almost at full capacity during peak periods, with the most heavily utilised sections between London and Colchester. Extra coaches have been added to relieve congestion during the peak. National Express believe there is only limited scope for modal shift and therefore little scope to relieve pressure on the A12.

5.8.3 Network Rail confirmed this and was of the view that there is little additional capacity on the line at present or in the foreseeable future, particularly for freight.

## **5.9 Environment and heritage organisations**

5.9.1 Natural England and English Heritage felt no need to give evidence to the Inquiry although invited to do so. They were content to rest on their position as statutory consultees in the event of major developments on the A12. Otherwise there were two significant local impacts which were flagged up. Although there were issues of road kill for wildlife, the Environment Agency's main concern was with water runoff. This problem could be significantly mitigated by the proposals made later for carriageway improvements. Air quality is also a problem along the A12, notably in the section at Brentwood. There is no obvious easy solution although the proposals we make to ease congestion may help.

5.9.2 The Campaign for Better Transport recommended that the Inquiry treated the A12 as a corridor, including rail and local transport, and not just as a road. It should also consider the effects of climate change and 'peak oil'. Ways needed to be found to manage demand more effectively against a background where the increased cost of road building and widening made the LOIS recommendations difficult.

5.9.3 We deal with wider environmental issues later.

## **6. Analysis of issues and performance**

### **6.1 Generic issues for the A12**

6.1.1 Whilst there are specific issues affecting individual sections of the A12, which we look at below, there are a number of issues generic to the A12 as a whole. They are not unique to the road but in combination they make it a difficult and unreliable road to use at present and one that seems likely to get significantly worse in years to come.

6.1.2 As we have shown earlier in this report, current traffic flows on the A12 are very heavy by comparison to other key routes both in the East of England and the wider South East. It is vulnerable to incidents not least because of its variable and sometimes poor standards. There are few obvious diversion routes. These factors together mean that incidents when they occur can have a very disruptive effect, not just on the A12 itself but on the wider road network in Essex.

6.1.3 Many witnesses commented on the poor standards of driving experienced on the A12 with tailgating, speeding and aggressive weaving. Coupled with its unreliability this all makes the A12 a stressful and uncomfortable road to drive along. The data does not suggest that the A12 is worse than many other rural trunk roads in terms of personal injury accidents. Indeed it seems to be better than the average. But the number of collisions, many of which cause no injury, is higher for the A12 than for other roads in Essex. This adds to disruption and congestion on the road.

6.1.4 Journey time reliability as measured by the HA for its PSA target does not show the A12 in a particularly good light, but neither does it suggest it to be the very worst of the roads on its network (although a survey of 4,000 drivers by Cornhill Insurance in 2007 suggested otherwise). However, as we have discovered in the course of this Inquiry, it seems the statistics fail to capture the impact on reliability when a road is closed, which the evidence shows is a particularly significant feature of the A12.

6.1.5 There have been improvements made by both the HA and the

emergency services in the handling of accidents and incidents in order to accelerate their clear up. But given how vulnerable the reliability of the A12 is to incidents there is clearly a premium on finding ways to cut the time taken to clear them up as well as on preventing them happening in the first instance.

- 6.1.6 Without improvements to the road and its many substandard features, it is apparent from the HA's own forecasts that by 2026 there will be a very considerable increase in daily stress levels on the A12. By then elsewhere in the East of England only the section of the A14 between St. Neots and Newmarket will be experiencing the same sort of difficulties facing the A12 particularly between Chelmsford and Colchester.

## **6.2 Section specific issues**

### **6.2.1 Hatfield Peverel to Marks Tey**

The section of road from Hatfield Peverel to Marks Tey was repeatedly cited in the evidence we received as the worst section of the A12 and requiring urgent action. Flanked either side by dual 3-lane sections, the dual 2-lane section from Junctions 20a and 20b at Hatfield Peverel through to Junction 25 at Marks Tey has a substantial number of substandard lay-bys, radii below the desirable minima, substandard junctions and a significant number of private accesses. The local alternative routings are no better. Minor roads and town centres bypassed by the A12 in the 1960s are not substitutes for a road which now carries up to 80,000 vehicles a day at this point with peak southbound flows of 4,500 vehicles an hour.

In particular, the on-and off-slips at Junction 20b are poor; the section between it and Junction 21 has houses fronting on to it and is too short to meet current standards for traffic weaving; Junction 21 has no off-slip for London bound traffic but does have a petrol station located adjacent to the junction with an exit direct on to the Ipswich bound on-slip road; on the section from Junction 22 to 23 the slip roads for the Rivenhall junction are complicated by a pub access and a bus stop, there are private accesses and for a service facility southbound as well as a footpath passing at grade (i.e. on ground level) north east of Rivenhall; and Junction 23 at Kelvedon South has farm accesses on both slip roads. This is by no means a comprehensive listing of all the difficulties on this section of the road.

Unsurprisingly the Hatfield Peverel to Marks Tey section has some of the worst safety problems on the A12. The short section around Junction 21 at Witham South has the worst safety record of any junction with 39 personal injury accidents in the three years from 2004 to 2006. The two sections from the Coleman's Interchange at Witham to Kelvedon and then from there to Feering are amongst the four worst stretches of the

A12 in Essex for personal injury accidents.

There are some modest improvements planned in the HA's forward programme. Besides some £22 million for major maintenance on this section from 2008/09 to 2011/12 the Agency plans to spend £0.6 million on lighting at Witham in 2009/10, £2.4 million on an auxiliary lane between Hatfield Peverel and Witham also in 2009/10 and £0.5 million on junction improvement at Rivenhall End in 2011/12. Although this is welcome we doubt it is enough and we look later at what more might be done.

#### 6.2.2 **Boreham**

Besides the general problems facing the emergency services on the A12, it is clear there is a particular difficulty on the Boreham Bypass southbound. There are no lay-bys on this 5 km stretch and we believe from the evidence we received that unless this is remedied the emergency services will continue to struggle with accidents and incidents on this section.

#### 6.2.3 **Mountnessing**

There are eight points along the section of the A12 from the M25 to Mountnessing where the radius is below the desirable minimum. Below Junction 12 at Marylands Interchange travelling from London are two of the tightest radii on the A12, a tight right hand bend quickly followed by an even tighter left hand bend. There is then a long uphill Ipswich bound merge joining on the inside of the tight radius. Steps have been taken to improve safety. What were until recently three Ipswich bound lanes after Junction 12 have been reduced to two with beneficial results. Nevertheless Mountnessing was cited as one of three regular hotspots by the Essex Fire and Rescue Service (the others were Hatfield Peverel and Kelvedon). We consider later what more might be done.

### 7. **Wider issues: reducing demand, impact on the rest of the network and climate change**

Before reaching conclusions the Commission needed to consider wider issues of transport and environmental policy since they inevitably impact on decisions which might be taken about the future of the road. We also heard of a number of such wider issues in evidence from witnesses. We have looked at three groups of issues:

- The scope for reducing demand for road travel through:
  - Modal shift
  - Green transport plans
  - Road user charging
- Impact of the A12 on the rest of the network
- Climate change

Any recommendations we make on improvements to the A12 will need to be subject to detailed appraisals. These will need to give full weight to wider issues.

## **Reducing demand**

### **7.1 Modal shift**

- 7.1.1 The A12 corridor to Ipswich has a mainline railway in parallel to the road. We have therefore looked at the potential for modal shift to see how far rail might be used to take commuter and commercial traffic away from the A12. The problem is that the rail network along the corridor is largely operating at capacity already.
- 7.1.2 The majority of passengers on the railway are commuting to central London although the railway also plays a role in terms of school traffic particularly in Chelmsford, which is a key commuting station that is becoming seriously overstretched. A lower proportion of commuters within Essex itself use the railway and the train is not always an attractive option for them.
- 7.1.3 Although there will be some increase in passenger capacity over the next few years it is unlikely to provide enough extra capacity to take substantial numbers of commuters off the A12. Moreover, many commuter journeys within Essex would not easily be susceptible to a switch to rail. Regretably, we have to agree with National Express and Network Rail that there is limited scope to shift commuter traffic in the corridor from road to rail even in the medium term.
- 7.1.4 There are currently 25 freight trains out of Felixstowe daily and one from Tilbury. Investment planned on the railway will provide for substantially greater cross country movements of freight from the Haven Gateway ports. But there is no additional freight capacity planned for the Great Eastern Main Line and in any event the distance into London is too short to make rail freight a viable option. Nor are there suitable inter-modal facilities there. So whilst the railway should be able to handle increased volumes of cross country traffic as Felixstowe develops further, we again have had to conclude that it will not be able to help significantly with freight traffic on the A12.
- 7.1.5 There are now only five National Express coaches running along the A12 daily, mostly for interconnections, and the popularity of coaches has decreased significantly, particularly long distance stage coaches. This may reflect both the relative ease of train travel and the fact that coaches are subject to the same congestion and unreliable journey times as cars. Nevertheless we believe it would be worth looking to see whether there is scope for coach services to make a greater contribution. We would encourage National Express - and other bus companies - in association

with ECC to look further at the possibilities of running fast coach services along the A12 corridor into London. These could relieve at least the southern end of the corridor of some of its pressures.

## **7.2 Travel plans**

7.2.1 Changes in travel to work behaviour could offer a more promising way to reduce demand for road travel. We asked both ECC and business representatives about the scope for developing green transport plans for their employees: car sharing, homeworking, staggering hours, employer supported buses and minibuses, encouragement of walking and cycling. We were not convinced that travel planning has been taken as far as it could be. There are some notable successes within Essex and the Borough and District Councils have required the production of nearly 200 travel plans as a planning condition from organisations with more than 50 employees. But more could be done. Travel planning schemes have been shown to make a difference in reducing peak hour car numbers and congestion. We believe there is a leadership role here for ECC on which we make a recommendation later.

## **7.3 Road user charging**

7.3.1 Road user charging is not only a potential source of funding for roads like the A12 but also a means of reducing the growth of demand or of redistributing it. The options can be categorised in very basic terms into:

- road user charging without additional road building in order to manage demand for present capacities (revenue used for operational purposes)
- a combination of road building and road user charging to provide additional capacity (revenue used for capital expenditure such as investment in new roads)

7.3.2 There was little appetite amongst our witnesses for charging, particularly through a local scheme. Some felt that road charging on the A12 would only be worth considering if it was not done in isolation, but was instead introduced on a regional or national basis. Others, particularly elected representatives, were firmly against the idea for reasons which included:

- lack of alternative routes and/or alternative forms of transport in rural areas
- diversion from the A12 to smaller local roads without the capacity to accommodate high volumes of traffic
- lack of certainty that it will provide benefits for those who pay

7.3.3 In the long run road user charging must be part of the answer to overstressed roads like the A12. However it would seem that the Government has suspended the development of a nationwide scheme of road charging due to concerns over privacy and fairness which have not

been resolved. Although the Local Transport Bill proposes to give local authorities powers to facilitate the introduction of local road charging schemes alongside public transport improvements it is difficult to see their application to the A12.

- 7.3.4 We have not therefore proposed road user charging options for the A12 in the short to medium term. However, they should not be ruled out as part of a long term solution within a national or regional scheme.

## **7.4 Impact on the rest of the network**

- 7.4.1 Although the A12 is classified as a road of only regional significance the reality is that it has a significant effect on other parts of the network. Solutions for the A12 should therefore take account of the impact elsewhere.
- 7.4.2 In the light of the Eddington Transport Study clearly it is important that the A12 should be of an adequate standard and that access to and from the Haven ports and the major motorways, principally using the A120 and A14, should be seen as an important objective in assessing priorities for the A12 itself and the wider network.
- 7.4.3 This applies particularly to the A120. A number of witnesses suggested that in the course of our Inquiry we should look at the A120 which is the major east-west route across central Essex from Harwich to Stansted Airport and thence into Hertfordshire. There is a key interaction with the A12 which serves to link the A120 together at Junctions 25 and 29. In principle, one of the roads can offer some degree of strategic diversion to the other when it might be in difficulties.
- 7.4.4 The problem on the A120 is that from the A12 at Marks Tey to Braintree it is an old style single carriageway with frontage development. It is then modern dual 2-lane carriageway through to Stansted Airport. In effect, witnesses were hoping the Inquiry could find some way to speed up the dualling of the Braintree to Marks Tey section on the A120, currently scheduled for completion around 2018. As a road of regional significance the A120 has been prioritised for an upgrade through the RFA process albeit very late in the 10 year funding period, hence the expected 2018 opening. The HA told us that the A120 is likely to take up four years worth of the RFA until perhaps 2020 or thereabouts. Delivery of the A120 upgrade could only be speeded up by the region re-prioritising it within the East of England allocation. This seems unlikely, given the sums involved. Improvement of the A120 would help with problems on the A12 if only at the margins. From what we have heard that seems unlikely until late in the next decade.
- 7.4.5 But as the Commission itself appreciated, we have to recognise that any significant improvement on the A12 will not only improve journeys for its

users but will also stimulate further growth in traffic, thus compounding problems of congestion and pollution. In looking at improvements to the A12 it is important to take into account the effect on other congested parts of the network – particularly on the M25 and into central London. There is no point in simply transferring congestion from the A12 onto the M25 or onto Transport for London's network. Any appraisal of proposed improvements we recommend for the A12 should give full weight to the overall impact on the network, both positive and negative.

## **7.5 Climate change**

- 7.5.1 All significant expenditure on roads should now take account of climate change impacts. Road traffic is a major and still growing contributor to CO<sub>2</sub> emissions. The Climate Change Bill, currently going through parliament with all party support, will set an intermediate target to reduce CO<sub>2</sub> emissions by 26% by 2020. The Bill's provisions will be binding on government departments by the time any proposals for major improvements on the A12 come to be appraised.
- 7.5.2 For any given level of traffic, congestion or stop/start conditions will lead to higher levels of CO<sub>2</sub> emissions than smoothly running traffic. Road improvements can make a positive contribution to traffic induced CO<sub>2</sub> where they allow for smoother flows. But improvement may also stimulate traffic growth. Road building itself is also a significantly carbon intensive operation. All of this needs to be taken into account in assessing proposals for road improvements. Although the problem of climate change cannot be resolved by reference to one sector let alone one road, we have to recognise that any significant improvements to the A12 mean adding to the current roads programme. Any such additions will need to be defensible in terms of the requirements in the Climate Change Bill.
- 7.5.3 We believe that the detailed appraisal of proposals for improvements to the A12 will need to take full account of the climate change implications on the same basis as appraisals of other investments, such as railways and bus schemes. Failure to do so will mean such proposals would attract significant criticism. They would not be defensible in wider policy terms.

## **8. Conclusions**

### **8.1 Funding**

- 8.1.1 In looking for solutions for the A12 we have looked within the constraints of the existing RFA process, although we have more to say about this later. There is a need to see if other possible sources of funding are available and to be realistic about what can be afforded in any event.

- 8.1.2 Essex County Council told us that in principle they were willing to fund proposals which might improve the A12. We set out in our conclusions and recommendations where this might be helpful. In our view the A12's stakeholders should also explore how resources might be further supplemented either from imminent mechanisms such as the community infrastructure levy, intended to replace S106 contributions from developers or other sources such as a business rate supplement, which might contribute towards a possible Regional Infrastructure Fund currently under consideration by the EEDA.
- 8.1.3 In any event improvements to the A12 can only happen if key local agencies collaborate with initiative and determination. Because of the constraints of the RFA process there is a need for medium sized packages of say up to £50 million which can be put forward for funding rather than very expensive major schemes which can never be funded.

## **8.2 Comprehensive improvement to dual 3-lane standard (the 'LOIS' proposal)**

- 8.2.1 LOIS recommended comprehensive improvement of the A12 to dual 3-lane in line with modern highway standards between the M25 and Junction 29, the Ardleigh Interchange with the A120 north of Colchester. We looked earlier at what has happened to this proposal and why work on it has stopped.
- 8.2.2 Nevertheless many witnesses believe that, given the problems of the A12 as presented to us and analysed in this report, this level of comprehensive improvement is the only acceptable long term solution. However, we are unable to recommend that this should be adopted as the preferred solution, for two reasons:
- First, as long as the A12 continues to be classified as a road of 'regional' significance in the HA's strategic road network, any improvements will have to be funded from within the RFA and other available regional sources of funds. Given current RFA funding guidelines of some £100 million per annum for the whole of the East of England, we see no prospect whatsoever that this sort of comprehensive improvement could be funded at any time in the foreseeable future. Continuing to press only for this approach rules out the development of more modest packages of schemes which could deliver significant benefits more quickly and for which there is much more likelihood of funding being available.
  - Second, if the A12 were to become a road of 'national' significance – and we believe there is a strong case for reviewing its status – then it would have to take its place in the DfT's priorities and the HA's programme for road improvements going forward. However, the Commission does not have access to up-

to-date costs, nor has there been a re-assessment of the benefits of this comprehensive improvement option since the LOIS study to take account, for example, of the more rapid growth now envisaged in the Haven ports. A re-assessment would also need to take into account the 'refresh' of the DfT's appraisal methodology in the light of the recommendation in the Eddington Transport Study and the Stern Review on The Economics of Climate Change. We therefore have no evidence of the current value for money of this approach. As a result we do not feel we are in a position to recommend the adoption of the comprehensive dual 3-lane improvement option, even if it were to be treated as a national scheme.

**8.2.3 We recommend that, so long as the A12 continues to be classified as a road of only 'regional' significance on the strategic network, Essex County Council and the regional authorities should put aside any intention to promote its comprehensive improvement to dual 3-lane standard and should concentrate on developing, with the Highways Agency, medium size packages of works to address the A12's more serious deficiencies, and promote these within the regional funding context.**

**8.2.4 We also recommend that the Department for Transport should reconsider the current classification of the A12 as a trunk road of 'regional' significance, both in the light of the new emphasis in the Eddington recommendations on competitiveness and national and international links, which the Department has accepted in its White Paper *Towards a Sustainable Transport Policy*, and because of the impossibility of funding comprehensive improvement within existing regional funding guidelines.**

**8.2.5 Finally, we recommend that, if the Highways Agency were again to become responsible for considering major improvement to the A12, the case for such improvements should be re-evaluated and prioritised by the Department for Transport and the Highways Agency taking account *inter alia* of the evidence, analysis and conclusions reached in this Inquiry.**

### **8.3 A new route management strategy**

8.3.1 We believe that there is much that could be done to improve the A12 in Essex and into Suffolk to the Copdock Interchange, short of comprehensive improvements to dual 3-lane throughout. Indeed the HA has progressively implemented minor improvements to sections of the road, and plans to continue doing so.

8.3.2 But it is difficult to avoid the conclusion that it is all rather piecemeal and that there is no overall plan to address the challenges of a heavily trafficked road for which there is no prospect of comprehensive end-to-

end improvement. Interestingly, the Route Management Strategy prepared in 2001 by the HA for the A12 (and the A120) seems to us to have offered the beginning of a coherent approach. But from discussions with the HA, it now seems to have been superseded. The HA's recent *Regional Network Review*, published in April 2008, gives a contextual overview of the A12 along with other roads in the East of England region, but it does not offer a strategy for improvements to the A12.

8.3.3 We firmly believe that there needs to be a strategy, which in the absence of comprehensive improvement would cover short, medium and longer term measures to tackle the problems described in this report. Such a strategy should include traffic management, accident prevention and incident management measures as well as physical improvements. It would provide a clear framework for the future, allow stakeholders to understand what needs to happen with the road and build a consensus for action. At present there is no consensus, just competing views about what should be done. **We recommend that the Highways Agency, working with Essex County Council and other A12 stakeholders, as well as the East of England Development Agency and the East of England Regional Assembly, should take the lead in producing a New Route Management Strategy. This should set out in detail a programme of management measures and improvements to the A12 for the short, medium and longer term, together with an exploration of the sources of funding.** Sources of funding for such a strategy could include the HA's own planned maintenance, refurbishment and minor improvements budgets, potential voluntary contributions from ECC and other local authority sources, and possible sources arising from the EEDA's proposed Regional Infrastructure Fund. ECC should also seek funding through the RFA process as appropriate.

8.3.4 It is beyond the scope of this Inquiry to set out the detail of the New Route Management Strategy. Key elements of it would rely on traffic and engineering assessments and design work still to be done as well as on local consultations about specific impacts. But we can see in broad terms what a strategy would encompass. Our recommendations for physical improvements, management measures and mechanisms for building consensus for action, which we now set out below, should be taken as a starting point.

#### **8.4 A medium term objective: modern dual 2-lane standard**

8.4.1 **We recommend that the starting point for the New Route Management Strategy should be a plan to bring the A12 where it is not currently dual 3-lane in Essex, and as far as Ipswich, up to modern dual 2-lane standard with 9.9m wide carriageways and with lay-bys and on- and off-slip roads up to current standards.**

8.4.2 This would at least mean the dual 2-lane sections throughout Essex and

into Suffolk would be of a consistent standard with offside and wide nearside hard strips, concrete drainage channels, modern safety fencing, together with the capability to set up adequate contra flow arrangements with regular gates in the central reservation, and junction accesses up to standard. The strategy should set out a prioritisation of schemes to achieve this and a possible timetable, which will depend on funding streams.

- 8.4.3 To implement modern dual 2-lane standards for those sections of the road not currently dual 3-lane would not be cheap but it would be considerably less expensive than the estimate of a possible £1 billion for a comprehensive dual 3-lane solution. We have attempted an indicative estimate of costs based on the HA's budget figure for upgrading 2.3 km of carriageway to 9.9m wide as part of the Kelvedon Bypass works planned for 2008/09. This is set out in the following table:

<b>A12 section and junction numbers – upgrade to modern dual 2-lane standards</b>	<b>Length</b>	<b>Indicative cost to upgrade</b>
Chelmsford Bypass 15 to 19	13.5 km	£44 m
Hatfield Peverel to Witham 20b to 21	1.4 km	£5 m
Witham to Kelvedon and Kelvedon Bypass 22 to 24	7.0 km	£23 m
Colchester Northern Bypass and Colchester to Stratford St Mary 27 to 30	13.6 km	£44 m
Stratford St Mary to A14 to Copdock 30 to 33	11.1 km	£36 m

These figures do not include costs to deal with structures, inadequate junction accesses, land acquisition to remove local access points, etc. The total cost over time could amount to well over £200 million and we believe therefore it would be helpful to propose clear priorities for this work.

- 8.4.4 It is arguable that in the light of the Eddington recommendations priority should be given to the parts of the road which would see the most significant increase in HGV traffic arising from the planned increase in port capacity at Felixstowe and Bathside Bay. This might suggest dealing with substandard stretches of the A12 north of the junction with the A120 at Marks Tey.
- 8.4.5 However the evidence we received points strongly towards the section between Hatfield Peverel to Marks Tey as the stretch of road most desperately in need of improvement and upgrading. This is also the Commission's view.

8.4.6 **We recommend that the section between Hatfield Peverel at Junction 20a and 20b and Marks Tey at Junction 25 should be given priority in upgrading substandard stretches of the road to modern dual 2-lane standard.** This should deal comprehensively with the problems on the section as we outlined in more detail in 6.2.1. **We also recommend that planning and scheme design for an upgrade of the Hatfield Peverel to Marks Tey section should begin now so that an application can be made for the Regional Funding Allocation in the next round.**

## 8.5 Other elements of a new route management strategy

### Lay-bys

8.5.1. **We recommend that the route management strategy should provide for the elimination of substandard lay-bys and the provision of properly sited replacements built to current standards.** The strategy will need to set out a timetable for this but we believe the cost could be containable within existing HA refurbishment and minor improvement budgets, as recent improvements have been. In the worst case scenario the estimated cost of bringing one substandard lay-by up to the current standard is about £250,000. The total cost of dealing with all of the substandard lay-bys from the M25 to the A14 would be around £12 million. Three or four new lay-bys would also be needed in each direction to meet the requirement of one every 2.5 km. Depending on the HA's current plans, and given the hazards associated with the intensive use of the current lay-bys by HGV's, there is a case for accelerating the HA's current programme.

### Secure HGV parking facilities

8.5.2 There will continue to be a problem with HGVs parking overnight in lay-bys or other inappropriate locations near to the A12 unless steps are taken to provide a proper alternative. **We recommend that the parties to the New Route Management Strategy should identify one or more locations where secure parking could be provided for 100-200 HGVs. Once built, overnight parking in lay-bys by HGVs or indeed anyone else should be prohibited and this prohibition should be effectively enforced.** A possible site for a secure parking facility could be at the Boreham Interchange. There is already parking there for a limited number of HGVs and the interchange will need substantial development in any event to accommodate the proposed Chelmsford North East Bypass.

### Private access

8.5.3 Difficult as it may be, **we recommend that the New Route Management Strategy should address the hazards caused by**

**accesses from private properties including farms to the A12, substandard access from minor roads and substandard access from the A12 to service providers such as petrol stations.** An ad hoc approach is unlikely to yield a satisfactory solution. It can only be reached through detailed planning and consultation. For the Hatfield Peverel to Marks Tey section, this would be addressed as part of the upgrade to modern dual 2-lane standards. Both on that section, and elsewhere, a careful comprehensive review of sections where substandard access is an issue needs to be carried out jointly by the HA and ECC and proposals for action built up, in consultation, on a case-by-case basis.

### **A comprehensive approach to traffic management**

- 8.5.4 Given the intensity of traffic volumes at certain times of day, the vulnerability of parts of the road to accidents and incidents, the comments about poor driver behaviour and speeding, the record and frequency of road closures, and the absence of obvious diversionary routes, the Commission was surprised by the near absence of any traffic management, speed enforcement or driver information systems.
- 8.5.5 Funding has been approved for a comprehensive traffic management scheme for the A14 route. This would install Variable Message Signs, CCTV and flow detectors over much of the A14 between the M1 and Felixstowe to provide good information to the HA for managing situations as they arise and provide driver information about traffic conditions, as well as possible strategic diversions in the event of incidents. There has been some preliminary work on extending this idea to a wider network in the East of England. If implemented, the HA told us that the A12 would rank high in the prioritisation for a phased roll out post 2011. **We recommend that the provision of a comprehensive approach to traffic management for the A12 should be an integral part of the New Route Management Strategy. We would urge the Department for Transport and the Highways Agency to prioritise the A12 as plans for rolling out this approach in the East of England unfold.**

### **8.6 More immediate measures**

- 8.6.1 In addition to the measures described above, there is a range of more immediate steps which could be implemented fairly quickly involving changes in management and operational arrangements. These fall into three categories:
- Local measures to deal with specific traffic congestion or management problems
  - Measures to mitigate the risk of incidents and accidents
  - Steps to improve the management of accidents and other incidents either through action to help clear them up more quickly or more effective measures to get traffic away from them

### Managing traffic: travel plans

- 8.6.2 We drew attention earlier to the potential to reduce traffic volumes by means of green travel plans. The evidence from elsewhere in England underlines the importance of strong local leadership to maximise their potential. **We recommend that Essex County Council should launch a new initiative to encourage travel planning throughout the County by employers large and small as well as encouraging individuals to consider their own travel options.**

### Managing traffic: ramp metering

- 8.6.3 The HA told us that they are currently undertaking a route congestion study which has identified three potential sites on the A12 for ramp metering (traffic control through traffic signals at access points). These are at Junction 12 southbound at the Marylands Interchange, Junction 19 southbound at Boreham and Junction 22 northbound at the Colemans Interchange. But further survey work needs to be done. The study has also identified that it may be possible to provide for variable speed limits. **We recommend that the Highways Agency's work on ramp metering for the A12 should be brought to fruition in consultation with Essex County Council and included as appropriate in the New Route Management Strategy.**

### Managing traffic: signage and road markings

- 8.6.4 It would help to reduce accidents on the A12 if drivers were made more aware of the difficult characteristics of the road as it moves between dual 2 and dual 3-lane and back again, with its multiplicity of slip roads, some of them dangerous, tight radii and poor sight lines. **We recommend that the Highways Agency should consider where it would be beneficial to introduce additional signage detailing hazards and giving earlier warning, for example, of the need to make lane changes.**
- 8.6.5 Essex Fire and Rescue Service in their evidence drew attention to what from their point of view are three regular hotspots – the Mountnessing, Hatfield Peverel and Kelvedon sections. It is not surprising from what we have seen that they find Mountnessing a problem. **We particularly recommend that the Highways Agency should urgently review the position at Mountnessing with a view to introducing signage warning of the difficult bends and perhaps reducing the speed limit through and past the junction.**
- 8.6.6 Quite a number of the comments we received from the public emphasised the need to make better use of the inside lane, which would incidentally reduce undertaking, and the Agency might consider what could be done to encourage such behaviour. In addition, members of the

public suggested painting chevrons on the road to encourage drivers to keep a safer distance. The HA told us that at present “keep apart” chevrons are only authorised for use on motorways and that their use on other roads would require a change in the regulations. We can see no reason in principle why chevrons cannot be employed on roads like the A12 and **we recommend that the Department for Transport should consider a change in the regulations to allow the use of chevrons on the A12.**

#### **Preventing incidents: rights of way**

- 8.6.7 We were surprised to learn that there are still at grade public rights of way across the A12 where pedestrians may cross the road on the level rather than by means of a footbridge. Whilst their origins lie in a time when the nature of the road was very different, it seems to us that their continuing existence is now wholly at odds with the kind of high speed high volume road it has become. Indeed we received two direct requests to consider an existing footpath in the Ingatestone area which residents believe represents a danger. **We recommend that Essex County Council should consider the position of all at grade rights of way across the A12 and, in consultation with local residents, take steps to remove or divert them.**

#### **Preventing incidents: HGV overtaking bans**

- 8.6.8 We have made recommendations about the need for urgent improvements to the Hatfield Peverel to Marks Tey section. These will take time to implement and until this section has been improved there is a need for interim arrangements to mitigate the severe problems experienced on that section. Many of our witnesses urged an HGV overtaking ban on some or all of the dual 2-lane sections. From what they told us, the Road Haulage Association would not be opposed to this. We believe there is a good case for such a ban at least on an experimental basis between Hatfield Peverel and Marks Tey in view of its problems. **We recommend the Highways Agency should introduce as a 12 month trial, and then evaluate for its effectiveness, an HGV overtaking ban between Hatfield Peverel and Marks Tey.**

#### **Preventing incidents: speed restrictions**

- 8.6.9 There is also a convincing case for reducing the speed limit along this section until it can be upgraded to modern dual 2-lane standard and problems such as direct access frontages are remedied. **We recommend that the Highways Agency should urgently consider introducing a 60mph limit as a temporary measure until the Hatfield Peverel to Marks Tey section of the road is properly improved. If it is decided to reduce the speed limit, since this section is about 20 km in length, we recommend it should be enforced with an average speed (rather than a spot speed) monitoring system.**

### **Preventing incidents: driving standards**

8.6.10 Finally in terms of reducing accidents and disruption, we believe that a key step must be to improve driver behaviour. We recognise this problem is not confined to the A12 and that initiatives have been implemented county wide, like the community speed watch. Nevertheless we believe that, given its unique features which the Police themselves have highlighted, the A12 merits special attention. **We recommend that Essex Police, in conjunction with Essex County Council, should introduce regular campaigns on the A12 to educate drivers on good practice and to clamp down on poor and illegal driving behaviour.**

### **Managing incidents: Traffic Officers**

8.6.11 At present the Police attend accidents and incidents and direct activities, whilst clear up is undertaken by civilian contractors with support from the HA where appropriate. The Essex Fire and Rescue Service attend on some but by no means all occasions. This is a fundamentally different set of arrangements from those which now apply on motorways where the Police are responsible for criminal issues but the management of accidents and incidents is otherwise under the direct control of the HA's Traffic Officer Service. This initiative was introduced with the specific aim of cutting clear up times and getting traffic moving normally again.

8.6.12 The HA told us that preliminary investigations suggested that there could be a sound business case for introducing Traffic Officers on to the A12, or at least parts of it, but that there were no plans to roll out the service to all purpose trunk roads. We do not believe that their introduction onto the A12 should await policy decisions in the DfT. **We recommend that Essex County Council should open discussions with the Department for Transport and the Highways Agency with the intention of itself funding Traffic Officers for a three year pilot on the A12.** The pilot should be reviewed for its effectiveness before any decisions are made about making it permanent. On the basis of two day time and one night time patrol between the M25 and the A14, the first year costs including set up would be about £1.3 million and about £750,000 a year thereafter. In making this recommendation we assume that Essex Police will wish to agree to the transfer of some of their responsibilities on the A12.

### **Managing incidents: heavy rescue vehicle**

8.6.13 The Essex Fire and Rescue Service, when raising the issue of heavy rescue vehicles, told us that they had at one time operated their own vehicle but that issues of liability had put a stop to this. We believe that such a vehicle operating under a blue light could get to an incident scene more easily than a private contractor. **We recommend that Essex**

**County Council should explore with the Essex Fire and Rescue Service the reintroduction of a 'blue light' heavy recovery vehicle, how it might be funded and who might best carry the potential liabilities and, failing its reintroduction, at least explore with Essex Police how to enable heavy recovery vehicles to have a blue light escort at appropriate times.**

#### **Managing incidents: emergency locations**

8.6.14 Without locations to which the emergency services can take damaged or broken down vehicles, clear up times are slow. Essex Fire and Rescue Service also need locations where they can position equipment used for incidents. Otherwise they simply have to take over extra road space with an inevitable impact on traffic flow. **We recommend that Essex County Council and the Highways Agency should review in detail with the emergency services where staging areas alongside the carriageway might best be placed for disabled or recovered vehicles and recovery equipment.** The conclusions should be included in the route management strategy for the A12. The Police also highlighted in their evidence that there is an acute problem London bound on the Boreham bypass between Junctions 19 and 20a. There are no lay-bys on this 5 km section making it extremely difficult to handle incidents effectively. A fairly quick solution would be a new lay-by and **we recommend that the Highways Agency should provide a new lay-by to modern standard southbound on the Boreham Bypass without delay.**

#### **Managing incidents: central reservation gates**

8.6.15 There are no central reservation crossings on the A12 in Essex. The last of them was closed recently for good safety reasons. The result is that in the event of an incident it is now virtually impossible to set up a contra flow to take vehicles away. The HA told us that they were able to fund strategically placed gates in central reservations to help clear trapped vehicles and the Essex Police evidence pointed us to a number of locations where in their view such gates would help. Although the provision of gated crossovers needs proper engineering assessment, we show in Annex 16 five locations where we believe pairs of gates would be beneficial. **We recommend that the Highways Agency should urgently assess where to place gates in the central reservation barrier and then provide them.**

#### **Managing incidents: diversion signing**

8.6.16 Vehicles leaving the A12 because of an incident must inevitably use other routes which will be less than adequate. There is no alternative to the A12 which can carry its heavy load. However, diversionary routes should be properly signed and at the moment that is not always the case. There are 23 agreed diversion routes for the trunk road network in Essex and Suffolk but so far only six of them have been signed. This needs to

be speeded up since proper symbol signing allows faster access to diversion routes in the event of an incident. **We recommend the highways authorities and the Highways Agency should quicken the pace at which they are providing permanent symbol signing for diversionary routes.**

#### **Managing incidents: driver warnings**

8.6.17 We have considered how information should be provided to warn drivers of an incident. At the moment the A12 has remarkably little in the way of messaging. There are two Variable Message Signs approaching the M25 on the Brentwood bypass and just two others at Chelmsford, partly funded by ECC. We dealt earlier with the question of a medium term information strategy. In the short term **we recommend that Essex County Council and the Highways Agency should pinpoint the additional locations at incident hotspots, prior to key diversion routes and if necessary as far back as the ports or within the M25, where additional Variable Message Signs would bring benefits.** These locations need not necessarily be on the A12 itself. But any messaging system introduced in the short term must be consistent with any medium term strategy for the A12. Initial ECC proposals for new Variable Message Signs sites are shown in Annex 17.

#### **Managing incidents: acetylene**

8.6.18 The A12 was closed in October 2007 for an inordinately long time due to a vehicle on fire with an acetylene cylinder on board. The mainline railway alongside was also badly affected. Unsurprisingly because of the chaos this created through much of Essex the incident still lives on in the memory of its residents. A number of witnesses wanted to see a change in procedures to allow fires involving acetylene to be dealt with much more quickly rather than having to wait up to 24 hours to allow cylinders to cool off before lifting any exclusion zone around them.

8.6.19 The Fire Service can only respond to incidents involving acetylene on the basis of national guidelines. They are currently under national review and Essex Fire and Rescue Service told us that in their view the guidelines would benefit from change. In view of the major disruption last October on and around the A12 we can only agree.

## 9. An A12 Alliance

- 9.1 Although we are recommending the production of a New Route Management Strategy, it cannot happen in a vacuum. The A12 needs a partnership which involves all of the key agencies and stakeholders if it is to surmount its problems. **We recommend the creation of an A12 Alliance, similar in concept to the one for the A47 led by Norfolk County Council, bringing together the key stakeholders and charged with the production and delivery of a New Route Management Strategy.** It should cover the A12 at least as far as Ipswich. As a minimum, the alliance will need to bring together Essex and Suffolk County Councils, the East of England Development Agency, the HA and representatives of the emergency services, business and other road users.