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THE A14 ELLINGTON TO FEN DITTON IMPROVEMENT SCHEME
(Report by Head of Planning Services)

1. INTRODUCTION

1.1 The purpose of this report is for the Council to consider and agree its formal response to the draft Side Road Orders for the A14 Ellington to Fen Ditton Improvement Scheme.

1.2 Further to this consultation process, it is likely that, based on the nature and number of the potential objections, that a Public Inquiry will need to be held during the second half of 2010. Following that inquiry the Secretary of State will need to consider whether to proceed with the Scheme.

1.3 There is yet no official implementation programme but if it is supported by the Government it is likely that the scheme would commence during 2011 and be complete during the second half of 2015. The potential related associated works within Huntingdon would be unlikely to be completed before the end of 2016.

2. BACKGROUND

2.1 The Council was originally formally consulted regarding the future of the A14 during the latter part of 2000 when it considered the issues emerging from the Cambridge to Huntingdon Multi-Modal Study (CHUMMS). In August 2001, the then Department of Transport, Local Government and the Regions published their final report on CHUMMS. This was considered by Council on 26th September 2001 when the resolution stated 'that action should be taken as a matter of urgency to address the problems of the A14 and implement solutions'.

2.2 In February 2005, a statement was made to Council regarding an 'alternative option' which was being considered by the Highways Agency (HA) which did not form part of the CHUMMS strategy. This involved the provision of a new A14 2-lane dual carriageway and the retention of the existing A14 and viaduct through Huntingdon. The Council formally considered this option in June 2005. In its response, the Council resolved that any choice of route would have profound and significant effects on the town of Huntingdon and the surrounding area and any decision should not just be based on highway network

or environmental effects but should also include economic impact. The resolution also included the need to provide for appropriate noise and visual intrusion mitigation measures, to address issues with the alignment of the A1 west of Brampton, to consider the junction between the new A14 and A1198 and to minimise the impact of any viaduct crossing of the River Great Ouse north of the Offords. Members also supported the removal of the A14 viaduct within Huntingdon in line with the original CHUMMS Study and the resultant reorganisation of local traffic movements through and around Huntingdon. They also noted that the CHUMMS recommendations were more aligned to meeting local Air Quality issues rather than the alternative option now proposed.

2.3 During December 2006 and March 2007, the Highways Agency undertook further public consultation seeking views on the 'route' that the new road should take between Ellington and Fen Drayton. At their meeting on 21st February 2007, Council resolved to support the 'Orange' route, subject to the Agency giving consideration of the best alignment and environmental solution for Brampton west of the A1.

2.4 In October 2007, the Highways Agency made their 'Preferred Route Announcement' and announced the Secretary of State's decision to confirm that improvements to the A14 should follow the 'Orange' route and to include the removal of the Huntingdon Viaduct. A variation to the previous consultation was also announced with the inclusion of a limited access junction between the new A14 and A1198 with the provision of west-facing slip roads.

2.5 Since that time, the Highways Agency, and their appointed Consultants, have been working on the details of the preferred scheme which culminated in the publication of these 'Draft Side Road Orders' on 30th September 2009. It is this legal process that allows communities to comment on the current proposals, to put forward alternatives, or to object to the scheme by the 6th January 2010 deadline for responses.

2.6 Members will be aware that Council most recently debated the latest proposals for the A14 at the meeting on 28th October 2009.

3. THE CURRENT PROPOSALS

3.1 The scheme as now proposed in essence takes forward the details emerging from the Preferred Route Announcement (the Orange Route) in October 2007. Based on the feedback in relation to that announcement a number of changes and improved features have now also been included. These include enhanced noise mitigation measures, improved non-motorised user (NMU) facilities, appropriate design changes to the crossing of the River Great Ouse and the East Coast Main Line (ECML) and revised junction arrangements between

the new A14 and the A1198. Details of these are addressed elsewhere in this report.

3.2 The key elements of the scheme (within Huntingdonshire) are;

- The provision of a new two-lane dual carriageway between Ellington and Brampton (A1), then a three-lane dual carriageway between Brampton (A1) and Fen Drayton.

- The widening of the A1 to the west of Brampton from two-lane to three-lane dual carriageway.

- The incorporation of major free flow interchanges including at the A1 at Brampton and with the existing A14 at Fen Drayton.

- The down grading of the existing A14 between Brampton Hut in the west and Alconbury in the north-west to Huntingdon to Fen Drayton in the east. This will include the proposed removal of Huntingdon Viaduct and the creation of new links between the old A14 and the town centre.

3.3 Other elements of the scheme as a whole (outside Huntingdonshire) include:

- The widening of the existing A14 to three-lane dual carriageway between Fen Drayton and Fen Ditton.

- The construction of local access roads between Fen Drayton and Girton alongside the A14 to separate local and strategic traffic.

- The incorporation of a new major interchange between M11/A14/A428 at Girton.

3.4 The detailed design now being considered has been undertaken by the HA's appointed 'Joint Venture Consortium' (JVC), which is made up of Costain, Skanska and WSAtkins who, as well as undertaking the design, will also construct the scheme. It should also be pointed out that as part of this engagement process, there have also been formal liaison meetings with officers of the HA as well as the County and District Council's prior to the formal publication of the draft Side Road Order process.

4. ENVIRONMENTAL STATEMENT & SIDE ROAD ORDER PROCESS

4.1 As part of the draft Side Road Order process an Environmental Statement, which considers the potential impacts of the scheme, has to be published in accordance with official guidance from the Department for Transport, the Design Manual for Roads and Bridges (DMRB) and as supplemented by HA Interim Advice Notes (IAN's).

4.2 The Secretary of State has published draft Orders for the scheme under the terms of the Highways Act 1980 which, if confirmed, would give the legal authority to build the scheme. These Orders include those for the new mainline A14, Side Road Orders for altering and extending existing side roads as local access roads and new roads such as those within Huntingdon. They also include the de-trunking Orders for what will be 'old A14' to become the responsibility of the County Council as well as any Compulsory Purchase Orders (CPO) required for the above.

4.3 The Environmental Statement is a complex and detailed document covering 20 individual Chapters and an overview of its content is included as Annex A to this report. This also contains a dialogue regarding the pertinent points and the applicable conclusions for Huntingdonshire and these will form the basis of further discussions with the JVC.

4.4 Some specific details of the points raised will need to be further clarified and officers have entered into a continuing dialogue with the JVC in order to consider and address them with a view to reaching an agreed position on as many as possible prior to any formal Public Inquiry.

5. ECONOMIC/SOCIAL BENEFIT

5.1 The Council's strategic planning policies, as set out in the recently adopted Core Strategy and the emerging Huntingdon West Area Action Plan, all support and are predicated upon the continued sustainable growth and regeneration of Huntingdon. The delivery of an improved A14, and the related enhancements to the local road network, are considered to be vital elements in respect of the delivery of the Council's committed strategies. Therefore it is considered that the Council will be submitting specific evidence regarding these issues to any Public Inquiry.

6. MEMBER DEBATE

6.1 Members will recall that the debate at the October Council meeting gave them an opportunity to listen to pertinent representations from some of our Town and Parish Council's, to discuss the draft Side Road Orders process and to ask questions on which they required further clarification.

6.2 Some of these will have been answered within the body of this report but for completeness, Annex B lists all the questions asked and provides appropriate answers including specific information provided by the JVC wherever possible. As the same questions, or questions with a similar theme, were asked by different Members, these have been collated into a generic set of questions not attributed to any particular Member.

7. CONCLUSIONS

7.1 The primary purpose of this report is to enable a formal response to be submitted to the Highways Agency with regard to the draft Orders for the A14 Ellington to Fen Ditton Improvement Scheme.

7.2 As Members will recall, since the first formal Council debate on these proposals back in December 2000 and as part of the subsequent stages of debate as the scheme has progressed to the current day, this Council has always strongly supported the overall principles associated with the proposed enhancement of the A14. However, such support has always been given with a number of strong caveats under the banner of securing the best solution for Huntingdonshire, including such matters as mitigating the effects of the scheme as far as possible, including in visual, noise and air quality terms.

7.3 The draft Orders and Environmental Statement now published and being debated are a further important step in the progress of the scheme. The published details include all the elements required to progress the scheme to its next stages with the Environmental Statement being an important tool in terms of setting-out the effects of the scheme across a number of detailed areas.

7.4 Arising from the analysis of the Environmental Statement and the Member debate there are a number of issues that remain to be addressed through further studies and discussions with the JVC. These specifically include: the impact of 'rat running' through villages south of the A14 with the inclusion of western slips on the A1198; the adequacy of the design of the junction of Hinchingbrooke Park Road with Brampton Road, and; local mitigation issues around the effects of non motorised users, landscape, drainage, ecology, nature conservation and cultural heritage .

7.5 In supporting the scheme as now proposed, it remains a key objective to secure the best possible outcome for Huntingdonshire and while it is accepted that with what is now published there will be local impacts, there is considerable weight in favour of the scheme as the majority of the communities which are adversely affected by the existing A14 will benefit from the scheme.

8. RECOMMENDATIONS

8.1 It is recommended that Council agree to the following representations being made to the Highways Agency in respect of its formal response under the draft Orders for the A14 Ellington to Fen Ditton Improvement Scheme, namely;

- That the Council positively supports the A14 improvement scheme, as submitted, and states that it wants to see the delivery of the scheme as soon as practically possible. The delivery of the

proposed improvements are necessary to support the Council's strategic planning and economic development strategies; to improve journey times; and to enhance road safety for the travelling public.

- That the Council specifically supports the associated and related proposed improvements to the local road network in and around Huntingdon.

- That the Council continues to work with the JVC in order to appropriately address specifically identified outstanding issues and local mitigation measures.

BACKGROUND INFORMATION

A14 Ellington to Fen Ditton Improvement Scheme – Draft Side Orders and Environmental Statement

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Overview of Enviromental Statement **ANNEX A**

Chapter 1 - Introduction

i) This Chapter covers the overall objectives of the Scheme and the need for the route to perform its strategic national function as well as that as a designated Trans-European route and to provide improved network capacity to support the economic/housing growth in Cambridgeshire and the wider London-Stansted-Cambridge-Peterborough Growth Area including the new town of Northstowe.

ii) It is reported that all necessary applications have been made covering TRO's, Scheduled Monuments, Listed Buildings and tree works to those protected have been submitted. The publishing of draft Orders under the Land Drainage Act 1981 relating to HDC Award drains and new, improved or stopped-up drainage for a new A14 is also covered. Finally, the chapter also covers the interrelationship between topics and areas of strong relationship i.e. Nature and Ecology Conservation and air quality, noise and water habitat. Landscape assessment and linkage to townscape and visual assessment, historic and cultural heritage. Drainage and Water Environment and Geology and Land Contamination as well as Land Use in terms of Urban and Rural issues and agricultural land quality.

Conclusion – This Chapter is relatively straightforward and sets the Scheme Overview in place

Chapter 2 – The Need for the Scheme

i) This Chapter contains an overview of existing conditions, the multi-purpose nature of the route and the particular deficiencies of the network, including delay, quantity and speed of traffic and high % of HCV's. Reference is made to the perception that accident levels are significant but acknowledges that actual numbers are not significantly different to similar 'A' roads although the effects of accidents can be significant in terms of resulting congestion and lack of diversion routes. It does note that accident rates are higher than the national average for the existing A14 between Spittals and Brampton Hut, likely due to at-grade roundabouts at each end.

ii) Outlines how the route influences the local economy and is the only high-quality route between Alconbury and Cambridge and the settlements in-between. The chapter includes dialogue on the structural condition of the Viaduct within Huntingdon and also covers the unsuitability of the current A14 to meet NMU needs.

iii) An overview of the original CHUMMS recommendations is included together with the recommendation that the Cambridgeshire Guided Busway is also taken forward and that the old A14 should include use as a public transport corridor and improved access to Huntingdon rail station and town centre.

Conclusion – A factual chapter outlining the evidence gathering that has been undertaken in developing the need for the scheme.

Chapter 3 – Scheme Description

i) This Chapter describes the Scheme in detail across four Sections. Section 1 covers Ellington to Fen Drayton, Section 2 Fen Drayton to Girton and Histon with Section 3 covering Histon to Fen Ditton. The fourth section is titled 'Huntingdon' and describes the scheme to remove the existing A14 viaduct. For the purposes of this Council's response, we have considered Section's 1 & 4 only.

ii) In terms of the detail covered, the geometry objectives are explained that the overall design seeks to minimise the effect on landscape, avoiding property, landscape pattern, curves and cutting objectives, minimising watercourse diversion and clearances of the River Great Ouse and ECML.

Conclusion – There are a number of important design issues covered by this chapter on which the Council needs to provide direct feedback as part of its formal response. These are outlined as follows;

a) The Scheme now proposed includes the provision of a partial junction between the new A14 and the A1198. In terms of the detail now included, access between both routes is restricted to west-facing slip roads to allow traffic travelling westbound to access the new A14 from the A1198 and traffic approaching from the west to exit the new A14 onto the A1198. On the east side of the junction, emergency vehicle access only is proposed. This arrangement would primarily benefit longer distance traffic.

The JVC is providing a Technical Note to outline the need for this arrangement which relates to providing adequate accessibility for traffic, particularly HCV's, to the south side of Godmanchester thereby relieving traffic from the middle of Huntingdon following any removal of the existing viaduct.

Concern has been expressed regarding potential rat-running through villages to the south of the current A14 as a result of the proposed partial junction on the A1198. The JVC have been requested to investigate this matter and provide greater justification.

In design terms, Chapter 5 outlines that the route at his point has been lowered by 3m into deeper cutting and that the general alignment has been designed to minimise 'cut & fill'. The alignment has moved marginally to in order to preserve a mature tree line north of the new A14.

There is clear evidence provided relating to the benefits in overall traffic terms of the provision of a partial junction on the A1198 and it is therefore RECOMMENDED that this Council specifically SUPPORTS the provision of this junction.

b) There has been local representation to provide a direct NMU route between Brampton village and Brampton Wood crossing an upgraded A1 and new A14. This is not proposed as part of the current proposals and the HA propose to maintain the existing route that has been in place since previous A1 realignment works were undertaken. While the call for a more direct route is understandable, it is considered that the current route in terms of distance is no worse than exists at present and is beyond that which is necessary as part of the current scheme.

c) The published Scheme confirms that any crossing of the new route would be provided by a road bridge in each case, rather than 'at-grade'. It is recommended that this should be SUPPORTED.

d) Gantries and Signage are an important recognition within the proposal to integrate the proposed scheme with the separate project underway at present to provide a driver information network between the M1 and Felixstowe. This should be SUPPORTED on the basis of overall journey improvement and driver information provision.

e) The report covers Earthworks Design outlining that cuttings in Section 1 (Ellington to Fen Drayton) would provide much of the embankment fill required within the section east of the railway (i.e. little net import/export of material) and at (b) that existing allocations within the Cambs Minerals Plan for extraction in land to either side of the A1 to the SW of Brampton and a proposed borrow pit near River Great Ouse would, subject to consent, supply the rest of the fill and bulk aggregates for Section 1. It is confirmed that fill within Huntingdon would be generated from the existing trunk road embankments. The overall net import/export of material associated with this operation should be SUPPORTED.

f) Drainage design is also included and recognition that existing systems have insufficient pollution control, lack of storage capacity and lack of flow in existing watercourses. General intentions of proposed highway drainage are covered and confirm that existing systems together with new requirements would meet current design standards. This should be SUPPORTED.

g) Lighting design is included with the aim to minimise light pollution with specific reference to work within Huntingdon as part of the Viaduct removal and new road network and the aesthetics of the daytime appearance. It is confirmed that the whole route will not be lit but includes lighting at Ellington/Brampton Hut junction, A14/A1 Brampton Interchange and local road lighting at Brampton Road and on the A1198 Ermine Street junction above the new A14. This should be SUPPORTED.

h) Environmental Design (ED) is an important area to which appropriate weight must be attributed. The ES recognises the adverse influence on the local environment of the existing A14 corridor, both natural and human, with reference to the existing effects within Huntingdon and Godmanchester. The general intentions of ED are outlined together with noise mitigation design, inc. the use of quieter road surfaces, earth mounds, planting and acoustic fencing and the aim to reduce noise levels as much as practicably possible in the areas most adversely affected. This is a specific issue arising from previous Council consideration of A14 matters and recognition that these matters are to be dealt with should be specifically SUPPORTED. An outline is provided to indicate that for the nearest and most exposed properties mitigation would be provided where possible to ensure that levels would be no greater than they would have been without the scheme. It does acknowledge that mitigation is only possible where effective measures can be introduced and that beyond typically 200 to 300m, some properties may have a small increase in noise levels. This is covered in greater detail in Chapter 9 below.

i) Details are provided for proposed mitigation measures for the part of the route of the A14 and A1 running alongside each other at Brampton West End with a proposed planted screen mound between the routes to assist route separation. The proposed noise and visual screen between the A1 and Brampton is proposed to be 7m in height (5m mound plus 2m noise fence) and provided from an early stage of construction with planting added during the first available winter as part of the overall proposal for a 40m deep woodland belt. This is a specific issue arising from previous Council consideration of A14 matters and recognition that this specific design detail has been addressed should be specifically SUPPORTED.

j) As in (i) above, the Council has previously recommended appropriate mitigation measures elsewhere within the proposed scheme as necessary. The ES covers the design proposals for the Brampton Interchange between the A1 and the new A14 and outlines that the scheme is mainly on embankment with the new A14 up to 12m above existing levels and to include lighting. This could create considerable visual intrusion into the landscape so the aim is to create substantial wooded areas in field

corners (included in the CPO draft) and at the foot of large embankments thereby enclosing this major change to the local landscape as far as practicably possible. This should be SUPPORTED.

k) A specific concern of the Council as part of previous consideration of A14 proposals has been the impact of the proposed route of the new A14 on the River Great Ouse and ECML crossing. As part of previous recommendations, the Council request that this was minimised in terms of visual intrusion as far as practically possible.

Within the design now proposed, the elongated viaduct in excess of 1km, has been reduced to two separate structures and reduced to the absolute minimum design height standard for the crossing of the river and the ECML. The impact has been further reduced by the provision of densely planted embankment slopes either side of the 460m long viaduct, together with the provision of balancing ponds and water bodies, thereby creating a pattern of tree-fringed lakes and meadows. These changes specifically address an area of this Council's previous concerns and should be SUPPORTED.

In terms of the proposed structures, the colour details for metal girders, piers and parapet barriers all have the potential for visual impact and as part of on-going dialogue and discussion with the JVC, officers continue to discuss this as a specific design detail.

l) In terms of the Council's overall requirement as part of previous consideration of the need to mitigate the impact of the route as far as practically possible, the ES includes for measures past Hilton, Fenstanton and Connington, to provide 2m or higher screening mounds with planting 20m or more deep along the route where it sits on shallow embankment. These changes specifically address an area of this Council's previous concerns and should be SUPPORTED.

Chapter 4 – Construction of the Scheme

i) This Chapter covers the Construction Strategy that has been developed and the 'buildability' of the proposals with particular relevance to the more complex junctions and interchanges and reference to the need maintain adequate traffic flow throughout the construction period.

ii) Works would commence with Section 2 (outside Hunts) first, being the most complex section with changes at Girton Interchange determining the length of the overall programme. Section 1 would follow as this can commence without substantive effect to the existing A14. After Section 3 is complete it is the intention to undertake the works within Huntingdon once the new A14 is fully open, although as much preparatory work would be undertaken in advance as possible.

iii) Extensive detail is included on the importation of fill required to construct the scheme, access needs in order to construct the crossings of the River Great Ouse and the ECML as well as construction works within Huntingdon including those for the new road network, the proposed demolition of the Viaduct and the removal of redundant embankments, including that at Views Common.

iv) It is planned that the whole A14 route should be available for opening at around the same time towards the end of 2015 with the element within Huntingdon following towards the end of 2016.

Chapter 5 – Alternatives and Consultations

i) This Chapter is simply an overview of the options that have been considered during the selection of and development of the now published scheme.

It outlines the reasons behind the choice of route option (Orange) following the 2007 public consultation. Following the 2006 consultation, the District Council and a number of other consultees raised the question of the best alignment of the route to the west of the A1. The Council recommended that this be investigated by the HA and that the best overall solution in the interests of Brampton and Buckden should be sought.

ii) Further study work was undertaken in late 2006 and is also outlined. This showed that effects on west Brampton would primarily arise from changes in traffic flows on the A1, with little difference in the effects of A14 traffic. It was concluded that the most western (brown) route would have some adverse effect on rural properties and on landscape generally, therefore the option of retaining the road in one corridor (closer to Brampton) was preferred. Cost comparison undertaken in early 2007 showed that the western route would have lower construction costs but that this would have been offset by the associated costs relating to the relocation of Huntingdon Recycling and work required to electricity transmission line pylons.

Previous recommendations from this Council asked that the HA undertake further work to select the best route for the alignment of the new A14 west of the A1 between the Orange and Brown routes in environmental terms and to mitigate the effects on, and provide the best solution for, Brampton. Information contained in the Chapter and elsewhere within the ES points to the best solution as now proposed, namely that the A1 and new A14 alignment generally share the same corridor. The reasoning behind this is that mitigation can be provided by the provision of a bund and noise barrier to the east (Brampton) side of the A1 and that this will help mitigate the effects of both routes. By providing the A14 on a more westerly alignment towards Brampton Wood, it is indicated that the same level of mitigation could not be provided to address the current and future effects of the A1.

iii) Within the immediate locale, similar mitigation is also proposed for properties on Buckden Road where the new A14 crosses. Noise barriers are proposed although it should be noted that these properties will experience an increase in recorded noise levels. Full details of this are covered in Chapter 9 and Annex F.

iv) The Chapter outlines the work associated with the 'Huntingdon Study 2006' relating to the work that a range of partners undertook to examine options around the potential removal of Huntingdon Viaduct, traffic modelling associated with the options tested as well as any benefits to Huntingdon arising from its removal. The results of that work are now included within the scheme as now proposed.

v) At the District boundary with South Cambridgeshire, amendments to the junction arrangement between the old A14 and the new route are explained. At the time of the last consultation this junction was planned to operate with that proposed at Cambridge Services (Swavesey). Following this consultation, the junction has been revised to facilitate to/from Cambridge and also results in a reduced environmental impact and cost saving due to a loss of required embankments and lesser structures. As this has no direct disbenefit to Huntingdonshire, this revision could be SUPPORTED although it should be noted that it will allow strategic traffic to mix with local traffic to/from Cambridge and the District boundary.

Huntingdon Specifics

i) The proposals for Huntingdon and the planned viaduct are covered in detail. This includes a report on why certain options have been rejected, primarily due to additional land take, loss of TPO trees and lack of suitable facilities for pedestrians and cyclists as well as overall costs. The selected option addresses these issues as far as practically possible, subject to the loss of some TPO trees and should be SUPPORTED.

ii) At Views Common, a total of 8 options have been considered based on mitigating the impact on the open aspect of Views Common and the area of 'ridge and furrow'. In choosing the option now published, this has minimised the extent of new road construction, allowed the existing pedestrian routes to remain and also facilitates the removal of redundant embankment and reinstatement of Views Common at its south-east end. This element should be SUPPORTED.

iii) The junction arrangements at Brampton Road adjacent to the railway station are described. The report outlines that a roundabout was rejected at this location due to land constraints and that a number of layouts were investigated in order to achieve a scheme that achieves the best optimum balance between traffic capacity and the needs of pedestrians and cyclists. It is reported that the capacity of this section of route is constrained by the junctions at Hinchingbrooke Park Road as well as the ring-road but that the junction design is intended to integrate with the proposed West of Town Centre Link Road planned by HDC/CCC.

iv) Access to the Rail Station is described with the selected Option meeting construction works needs as well as being able to spread the demand on the access points and the local road network thereby allowing traffic to flow more freely.

v) Five scenarios were considered for the arrangements at Mill Common, including that selected. The published scheme has been chosen to provide a safe change in driving environment between a dual carriageway and the new local road network but also providing less disruption during construction and providing separate access to properties at Mill Common and Castle Hill. It is noted that the drawback of this version compared to that included in the 2006 Huntingdon Study, is that there is a significant loss of open space from Mill Common.

vi) Traffic flows are an important element of the changes within planned Huntingdon and any decision taken relating to the Viaduct removal. From the traffic modelling undertaken, the planned changes indicate an overall drop in levels across the highway network and these are indicated in Annex C and associated plans. The only exception to this is at Brampton Road between Hinchingbrooke Park Road and east of the railway where traffic levels are predicted to rise by 10%. The overall design of the network and particularly the traffic signal arrangements adopted will seek to properly manage this increase.

vii) The only other area to consider in terms of the overall design, are the proposals for the Hinchingbrooke Park Road junction with Brampton Road. At the time of writing, it is unclear if the junction arrangements are adequate to cater for the needs of pedestrians and cyclists, particularly due to the proximity of Hinchingbrooke School and the possibly relocated Regional College. The JVC are currently investigating this option in further detail. Subject to the incorporation of appropriate mitigation measures including enhanced junction arrangements at Hinchingbrooke Park Road with Brampton Road the proposed options can be SUPPORTED.

Chapter 6 - Approach to the Environmental Impact Assessment

i) This Chapter includes a do-minimum scenario, basically a detailed assessment of what would have occurred in the same timescale had the scheme not gone ahead covering the years 2015 and 2031.

ii) At the time of writing, officers are currently in discussion with the JVC regarding the baseline list of schemes in place within the assessment, namely the WOTC link road and the planned A428 Black Cat (A1) to Caxton Common.

Chapter 7 – Policies and Plans

i) The 'current policy position' as set out in the ES can obviously only always be a 'snapshot' at that point in time e.g. HDC's policy position has now firmed up via the adoption of our Core Strategy (September 2009) and the on-going submission of the Huntingdon West AAP (to be approved by Council in December 2009) – similar issues probably relate to other documents. These changes will supersede some of the quoted historic local policies.

ii) In terms of Regional Policy, the Regional Spatial Strategy (RSS) Review is now underway with the East of England Regional Assembly (EERA) consulting on 'growth options/scenario's'. This Council and all of the other Cambridgeshire Districts, plus the County Council have responded to that process.

Chapter 8 – Traffic & Transportation

i) This Chapter outlines that a scheme of this magnitude is developed via a computer based transport model based on current and future traffic forecasts to support the design and both the environmental and economic assessment of the scheme. The origins of the model are based in the original CHUMMS work and the A14 Huntingdon Viaduct study model, which has led to the development of the specific model for the Ellington to Fen Ditton scheme involving 3 evolving versions, together with the Cambridgeshire Transport Innovation Fund (TIF) Model as well as the use of the East of England Regional Model in order to assess the strategic impact of the A14 scheme across the region.

ii) The base transport model for the whole route is based on the period for October 2006 covering morning peak hour, a typical inter-peak and evening peak hour. Traffic forecasts have been produced for the opening year of 2015 and the forecast year of 2031. Forecasts are produced for a Do Minimum and Do Something case. The Do Minimum covers the transport effects in 2015 and 2031 without the Published Scheme with Do Something is based on the delivery of the Published Scheme covering the same years. It is noted that the level of traffic in the Do Minimum and the Do Something models does differ due to the Published Scheme altering travel behaviour. The level of traffic growth applied is based on a range of considerations including national economic conditions, changes in travel behaviour over time and local patterns of future development.

iii) The Guided Bus project will not open until late 2009 so therefore the effects of this are not included in the 2006 Base Model but is included in the Do Minimum and Do Something Models for 2015 and 2031.

iv) The Chapter outlines details of Observed Traffic Flows i.e. current conditions in three broad areas namely, the Motorway and Trunk Road network, Cambridge and finally Huntingdon. The motorway and trunk road information lists are well-known

including rehearsed current flows and traffic patterns. There is nothing included of great surprise or likely dispute. The sections for Cambridge and Huntingdon outline how traffic flows are currently monitored and gives the total flows in Huntingdon for traffic entering the town. Again, these are all well documented figures based within the existing CCC monitoring system.

v) It goes on to explain in some detail the recognised issues of low traffic speeds and the effects on traffic queues and congestion. There is nothing seemingly within this section with which to raise question as we are satisfied that all reported data is factual, recorded evidence at various points on the overall route.

vi) Accidents are recorded as a significant issue on the A14 both in terms of the accident itself and the resulting impact of delay, disruption and diversion of traffic from the network. Details of personal injury figures are included. Again these are a matter of record and are not in dispute. This reporting also breaks the information into accident rates per section (of the network) with Brampton Hut to Spittals showing as being at twice the national average. The figure between Spittals and Bar Hill (South Cambs) is slightly below the national average. Incidents according to type are also included.

vii) This Chapter also details the Forecast Effects of the Scheme including the impact of local traffic in the Huntingdon area. This is also covered in Chapter 5 and reference to Annex C and the associated plans attached indicates various traffic flows at key points in the network both with and without the scheme. This section usefully explains the effects of reduced traffic levels as a result of the scheme, reflecting the role of a de-trunked A14.

viii) Other related impacts of the scheme are covered, including an explanation that all at-grade accesses would be removed from the new scheme, this being a particular issue with the current route. It also explains that traffic conditions on the A14 corridor are projected to improve and would encourage local road use without the presence of, or the effects of, A14 traffic. Improved access to Huntingdon Rail Station and improved, secondary, access to Hinchingbrooke is also covered.

ix) Importantly the ES confirms that a de-trunked A14 would not act as a formal diversion route but does acknowledge that any closure of the planned route between Brampton and Fen Drayton could result in a deterioration of local traffic conditions. This is of course a condition experienced now when current incidents occur on the existing A14 and as described elsewhere within the ES, the design of the new off-line route in accordance with current DMRB guidance will reduce the likelihood of closure to the minimum.

x) Public transport is covered within this Chapter and includes the effects of Guided Bus and on-street measures to Huntingdon and are included as a baseline condition and reference is also made to better accessibility within Huntingdon following the Viaduct removal. However, unlike Guided Bus recommendations of the original CHUMMS, any services that could emerge on what will become the old A14 corridor are not covered by these proposals and these would be likely to emerge as a result of local market conditions.

This Chapter concludes that traffic on a de-trunked (old) A14 between Alconbury and Fen Drayton would (obviously) be lower with the new A14 in place. It does note that traffic on the A1 between Alconbury and the new Brampton interchange would increase. On the non-trunk road network, the greatest impact is noted as being within Huntingdon with an increase in traffic on Brampton Road between

Hinchingbrooke and the Rail Station but elsewhere across the town, traffic levels will be significantly lower when compared to the Scheme not being built. Traffic reductions on the ring-road and through Godmanchester are particularly noted and again, Annex C and the associated plans outlines these figures.

Chapter 9 – Noise & Vibration

This Chapter provides a comprehensive explanation of how noise and vibration has been assessed in accordance with recognised standards. Variations from standard methodologies are explained and have been approved by the Highways Agency, notably the use of a default height of 4m above ground level instead of 1.5m for noise calculations in recognition that the majority of the housing in the detailed study area is of two storey construction. This variation will result in higher noise levels in most circumstances.

Calculated traffic noise impacts from the proposed scheme are compared to predicted traffic noise impacts from the existing roadway based on the anticipated date of opening in 2015 and for future year 2031. Local areas that will be adversely affected by the proposed scheme and areas that are expected to benefit from noise reductions are identified.

The noise assessment takes consideration of the effects of the proposed new section of road between Ellington and Fenstanton having regard to the noise mitigation measures proposed as part of the scheme. The assessment identifies that traffic flows and therefore associated noise levels fluctuate in intensity hourly, daily and seasonally and therefore traffic noise is assessed using a time-averaged metric, the $L_{A10,\ 18h.}$ Calculated changes in noise and vibration are compared with accepted subjective responses to changes in noise levels.

Potential noise and vibration impacts are identified from changes in:

a. Road alignment (vertical and horizontal);
b. Sound generation (traffic flow, speed, gradient and road surface type);
c. Sound propagation (ground absorption, screening, reflection and scattering).

The assessment also considers the temporary effect of construction and associated processes and the mitigation that will be required to control noise and vibration during this extensive phase of work.

<u>Noise & Human Hearing</u>

The assessment explains how the human ear responds to a wide range of sound pressures from zero, at the threshold of hearing up to 130 decibels (dB), commonly described as the threshold of pain. It lists typical noise levels associated with common noise sources.

The response of the human ear is logarithmic rather than linear in behaviour and able to detect a noise level difference of about 1 dB (A) between 2 steady sound sources when presented in rapid succession in laboratory tests under controlled conditions. However, the smallest change in environmental noise that is generally noticeable is about 3 dB (A) and a 10 dB (A) change approximates to a subjective doubling or halving of loudness. The human ear is also less sensitive to low and high frequencies than to mid range frequencies and for this reason noises that affect humans are usually expressed in dB (A) units in recognition of this frequency response. Similarly, the resultant noise level at locations affected by two or more

noise sources has to be calculated using logarithmic rather than simple arithmetic addition.

In the United Kingdom, traffic noise is normally expressed using the $L_{A10,\ 18h}$ metric which is the arithmetic average of the noise level exceeded for 10% of each hour of the 18-hour period from 0600 to 2400 on an average weekday. The assessment follows this convention. Construction noise on the other hand fluctuates with time due to the varying nature of the activities taking place and is best described using the L_{Aeq} metric which is used to describe such activities.

Methodology

The assessment shows calculated noise levels to the nearest 0.1 dB, taking account of proposed noise mitigation and includes a qualitative assessment of properties outside the immediate area of the scheme. Affected properties have been classified according to the ambient façade noise level, comparing "Do Minimum" and the scheme implementation noise levels in the opening year (2015) and for a future year (2031). Vibration and night-time noise impacts from the scheme are assessed along with the effects of temporary noise and vibration impacts from construction activity.

The detailed study area close to the road extends out as far as 600m from the centreline of the road. The qualitative assessment extends from 600m from the centreline out to a maximum of 2 km from the project boundary and this is described as the "wider area".

The report acknowledges that noise levels calculated at the façade of buildings in the assessment take account of a + 2.5 dB "façade correction" whereas the noise levels shown on noise contour maps are predicted for free-field conditions at 4m height. Consequently, noise levels at upper storey property facades are 2.5 dB higher than the corresponding level shown on the noise contour maps.

All dwellings within the detailed study area that will be affected by changes of 1 dB or more have been listed in Appendix D5 to the ES. Where affected roads beyond the detailed study area show changes in noise levels of 1 dB or more due to changes in traffic conditions resulting from the scheme a separate count of the number of properties within 50m of the affected road has also been made.

A computerised noise model, NoiseMap Server Edition has been employed to calculate noise levels from the new road having regard to noise data collected from previous studies in 2006, 2008 and 2009 which were used to verify the model predictions. Other inputs to the model involve traffic flows, vehicle mix and noise mitigation proposals like barriers, bunds, road surfacing materials and vertical and horizontal alignments.

The following descriptions of the magnitude of impacts from changes in noise levels are reproduced from recognised standards to help understand the impact of changing levels of traffic noise:

a.	0dB change	no impact
b.	0.1 to 0.9dB change	negligible impact
c.	1 to 2.9dB change	minor impact
d.	3 to 4.9dB change	moderate impact
e.	5dB or greater change	major impact

Noise Mitigation Strategy

Noise mitigation is proposed for several areas of the scheme in the form of noise barriers, earth bunds, false cuttings, vegetation and reduced noise road surfacing (see plan in annex D). The latter measure is normal for all new trunk roads. Barriers can provide reductions of 10 dB or more for well screened receptors close to the road but beyond 200 to 300 metres the effects are often negligible and ground attenuation becomes the most significant factor. In the south of Huntingdonshire there are several rural properties where it is not technically feasible to protect them with noise barriers.

Provision for residential noise insulation against road traffic noise from new or altered roads is made in the Noise Insulation Regulations 1975 (as amended) in prescribed circumstances. Part 1 of the Land Compensation Act 1973 sets out provision for compensation for loss of value in various circumstances, including noise from new highways.

Main Findings

Although, many properties in Alconbury will experience increased traffic noise due to the detrunking of the A14 spur and subsequent increase in volume on the A1, the village has existing 2m noise barriers and the increase is generally in the range of 1 to 2.9 dB which represents a “minor impact”.

The west of Brampton is the most vulnerable settlement but will be protected by a significant earth bund and noise barrier of 7m in height, resulting in a 1 to 3 dB $L_{A\ 10,18hr}$ reduction. The north of Brampton will benefit from the detrunking of the existing A14 and will also experience a 1 to 3 dB $L_{A\ 10,18hr}$ reduction; whereas properties on the southern fringes of Brampton will see a 1 to 2 dB $L_{A\ 10,18hr}$ increase. Properties at the perimeter of RAF Brampton will experience a 1 - 5 dB $L_{A\ 10,18hr}$ increase.

Buckden has little protection from A1 noise and, as a consequence increases in noise are not expected in most parts of the village. Some dwellings well away from the A1 may experience a small increase in noise but this will only be noticeable in certain wind conditions. However, a 3 dB $L_{A\ 10,18hr}$ increase will be experienced by all dwellings within 50 to 100m from Brampton Road, Buckden. Although this road will be diverted under the new A14 as a result of the scheme the isolated dwellings to the immediate south east of the scheme and Station Farm to the north will experience increases of 5 to 10 dB $L_{A\ 10,18hr}$ and Lodge Farm will experience an increase of 10 to 15 dB $L_{A\ 10,18hr.}$ 2m noise barriers are proposed at this location to protect a group of houses to the west of the scheme including Orchard View and Lodge Farm.

The main noise impact on Offord Cluny is presently from traffic in the High Street and the proposed A14 will produce a noticeable increase in background noise in parts of the village away from the High Street. Noise from the High Street will limit noise impacts in Offord Hill to a 1 to 3 dB increase.

East of the East Coast Railway and to the north of the scheme, Offord Hill Farm, Wilburton Farm, Westward Farm and Lower Debden Farm will experience increases of 5 to 10 dB. Depden Farm will experience an increase of up to 15 dB. Further east, there will be 3 to 5 dB increases at Beaconsfield Equestrian Centre and Debden Farm. To the south of the new route, Debden Top Farm, Debden House and The Cottages will experience increases of up to 15 dB from present levels of less than 50 dB. Depden Lodge Farm is presently affected by noise from the A1198 and will be affected by increases of 5 to 10 dB.

East of the A1198, Wood Green Animal Shelter will be affected by increases of 5 dB or more at the south east of the site. The western side will have little impact as a result of noise from the A1198. Moving further east, Buckland's Bush Farm and Littlebury Farm, Top Farm, Topfield Farm and Lattenbury Farm will experience a 5 to 10 dB increase in noise.

Hilton village lies to the south of the new route and outside the detailed study area. However, houses away from the B1040 will be affected by some increases where local traffic noise is insignificant. Properties facing Potton Road and the High Street will not experience significant changes due to the effect of local traffic.

Fenstanton will experience an overall reduction in noise levels as a result of the proposed scheme but it will continue to be affected by the existing A14 and there will be increases at Peartree Close of 1 to 5 dB. Old Clayfields in Hilton Road will experience an 8 dB increase. A 2m earth bund is proposed to protect houses at Mount Farm, Model Farm and Peartree Close.

In respect of ground-borne vibration the ES notes that no noise sensitive property is situated within 5m of the existing or proposed route and therefore no permanent traffic-induced vibration is expected to create an impact on residential dwellings.

In considering airborne traffic induced vibrations from Heavy Goods Vehicles the ES explains that low frequency exhaust notes from such vehicles can coincide with the resonant frequency of an element of a dwelling within 40m of a carriageway but there is never enough energy in the sound wave to cause building damage. In general, those properties that will experience an increase in noise level as a result of the scheme will be prone to increased airborne vibration but for any given level of noise exposure, the percentage of people bothered by nuisance from vibration is accepted to be 10% lower than the corresponding figure for noise nuisance.

The ES provides a qualitative assessment of scheme impacts on night-time noise by comparing the differences between daytime and night-time noise and concludes that there is generally a reduction of 6 to 10 dB when comparing noise levels from 0600 hours – 2400 hours against the night-time levels from 2400 – 0600 hours.

The ES recognises the importance of planning during the construction phase to mitigate noise and vibration effects and follows the guidance set out in BS 5228 in setting out control strategies. Most noisy construction activity will be planned for normal daytime hours but it is recognised that more detailed negotiations will be required with the relevant local authorities to ensure that noise from all construction/demolition activities is satisfactorily managed.

Conclusion

The noise and vibration information supplied in the ES has been compiled in accordance with recognised standards and represents a robust "detailed assessment" of noise and vibration including noise calculations within a defined area close to the road.

The conclusions are well researched, based on the planned route, the expected traffic flow, traffic mix and planned noise mitigation. Overall, it provides a good assessment of noise and vibration from the proposed scheme and addresses the issues required by the Design Manual for Roads and Bridges Volume 11, Section 3, Part 7 – Noise and Vibration.

Many more Huntingdonshire properties will experience an improved noise climate with the scheme in place than will experience higher noise levels. Nevertheless, a limited number of properties will experience major noise impacts. A plan at Annex E indicates areas across the area of planned changes where a significant number of properties benefit from noise reductions, together with those where an increase in noise is predicted. These properties that experience noise increases are specifically identified at Annex F.

Chapter 10 – Air Quality & Emissons

Chapter 10 covers predicted emissions from both the construction phase of the project and from road traffic predicted to use the new A14 when commissioned.

The report outlines the basis for the chosen assessment methodologies, introduces relevant national and local policies and guidelines, focusing on the National Air Quality Strategy Objectives, and the implications of the scheme on those objectives.

There is a study of existing constraints which looks at Air Quality Management Areas (AQMAs) and ecologically designated sites. The six AQMAs present in the study area are summarised. Four of the AQMAs are within the Huntingdonshire area and three of those within the study area.

The report outlines the relevant pollutant objectives contained within the National Air Quality Strategy.

Pollutants of concern

It is stated that the report concentrates on three specific pollutants.

- Nitrogen Dioxide (NO_2) is a local air quality pollutant with known health affects. NO_2 concentrations have previously been identified as an issue in Huntingdonshire and there are four existing AQMAs in the district which have been declared due to this pollutant. Road traffic emissions of NO_2 result from the oxidation of atmospheric nitrogen in vehicle engines and oxides of nitrogen are then emitted in exhaust fumes.

- Fine Particles (PM_{10}) is also a local air quality pollutant with known health affects. Concentrations of PM_{10} in Huntingdonshire have not been found to exceed objectives and there are, therefore, no AQMAs for this pollutant in the district. However, there is an AQMA for PM_{10} in areas around the existing A14 in South Cambridgeshire, and there is no explicit level where concentrations are found to have no negative health affects. Road traffic emissions of PM_{10} result from incomplete combustion of fuel, particularly in diesel engine vehicles and also from brake and tyre wear and re-suspension from the road surface.

- Carbon Dioxide (CO_2) is not a local air quality pollutant. This pollutant is of concern due to its contribution to global warming. CO_2 generation is an inevitable consequence of fossil fuel combustion and is emitted in exhaust fumes.

Generation and dispersion of NO_2 and PM_{10} have been covered quite thoroughly within the report. As local CO_2 concentrations are not relevant this pollutant has been treated differently and only its mass emissions have been calculated.

A large amount of historical NO_2 and PM_{10} monitoring data is reported largely sourced from the district councils' data with some additional data gathered by the Highways Agency's consultants.

Assessment Methodology

The methodology and the approach to the assessment are provided in detail.

Liaison meetings took place between the district air quality officers from the affected areas (CCC, HDC and SCDC) and the Highways Agency's air quality consultants (Atkins) on the principles of the air quality assessment and a number of technical details were agreed prior to the modelling exercise starting.

It was agreed that the generation and dispersion of NO_2 and PM_{10} from the scheme would be modelled using Advanced Dispersion Modelling System (ADMS) Roads version 2.3.1. ADMS is produced by Cambridge Environmental Research Consultants (CERC) and is well validated, fit for use and more advanced than most alternative dispersion models.

The processes of assessing the air quality impacts from the scheme are described in detail.

For dispersion modelling purposes the scheme was broken into four discrete areas.

Area 1 - Cambridge Northern Bypass;
Area 2 - Online A14 from Cambridge Northern Bypass to Godmanchester;
Area 3 - Existing A14 through Huntingdon from Godmanchester to A141;
Area 4 - Offline A14 from Fen Drayton to A1, A1 between Buckden and Alconbury, and A14 between Ellington and Huntingdon.

The dispersion model was built using the following information.

- Geographical information sourced from Ordnance Survey Mastermap
- Background pollutant concentrations sourced from the National Air Quality Information Archive
- Meteorological data sourced from RAF Mildenhall and Wattisham
- Traffic flow data for model verification sourced from the Highways Agency and Cambridgeshire County Council counts
- Traffic flow data for modelling of future years sourced from the traffic model outlined in Chapter 8 of the report
- Verification data sourced from the district councils and the Highways Agency's additional monitoring programme

Due to the large amount of variables and corresponding high potential for error in dispersion modelling it is important to verify a model against existing monitoring data i.e. known concentrations at given locations.

The model was verified for the base year 2007 in accordance with Defra's Technical Guidance LAQM TG(09) in an identical process to that utilised by the district councils in their Air Quality Review and Assessment work. The verification details are provided in Appendix E2.

In addition to the verification study, a sensitivity study was also conducted for Areas 1 and 2. This sensitivity study was requested by the district councils at the liaison

stage. The verification study involved running the verified base model using meteorological data sourced from a different site (Wattisham 2007) and using meteorological data from a different year (Mildenhall 2003). 2003 was chosen as an alternative year due to the particularly poor dispersion characteristics evidenced in that year.

Areas 3 and 4 were not subjected to a sensitivity study and no reasons for their exclusion from this process are provided in the report. Atkins has subsequently indicated that these areas were excluded due to time constraints and because there were no real-time monitoring data available for roadside locations in these areas.

The verified model was then run to provide a forecast of pollutant concentrations at relevant receptors in 2015 for both the do minimum scenario (no new A14) and the do something scenario (with the new A14).

Critique of the Assessment

It would have been preferable if the Huntingdonshire areas of the dispersion modelling exercise were not subjected to the sensitivity study as in South Cambridgeshire. This is unfortunate but we recognise that the modelling exercise appears to be thorough and robust and the local verification studies demonstrated a very good agreement of the base year with existing monitoring data.

Some of the most important inputs to the dispersion model were the predicted traffic flows, fleet composition and vehicle speeds which were sourced from the traffic assessment. If any significant doubts are raised as to the validity of the traffic assessment those doubts will also apply by proxy to the dispersion modelling results.

It is recognised that traffic predictions for future years have the potential to be inaccurate and therefore there is significant uncertainty about the actual pollutant concentrations that will result from the scheme. This is not a criticism of the report but a general statement of fact.

Identification and Assessment of Likely Effects

The temporary impacts during the construction phase are considered. The potentially most significant of these effects is predicted to be dust from construction vehicles, plant and practices. A Construction Environmental Management Plan (CEMP) is proposed which will identify a suite of appropriate dust mitigation measures. More detail on controls at the construction phase is given in Chapter 4.

The long term impacts from the completed scheme are considered and these impacts are largely informed by the modelling process.

Dispersion modelling of NO_2 and PM_{10} has produced predicted concentrations of the pollutants for 2015 for sensitive locations with and without the scheme in place. By comparing these values it is possible to derive the air quality impacts of the scheme.

In terms of predicted pollutant concentration increases and decreases at relevant receptors there is a far greater number of decreases than increases and this is due to the alignment of the offline section being considerably further away from settlements than the existing A14.

There are some notable increases predicted; at Alconbury due to the predicted increase in flows on the A1 and at a number of relatively isolated dwellings close to

the offline section. The increases and decreases at a number of sample locations are tabulated in the report and are further summarised in the table below. It should be noted that in no instance is it predicted that there will be an exceedence of national objectives arising from the scheme.

Receptor	Change in NO_2 concentration $\mu g/m^3$	Change in PM_{10} concentration $\mu g/m^3$
School Lane, Alconbury	+5.0	+2.0
Wood View, Brampton	-3.6	-0.9
Woodhatch Farm, Thrapston Road, Ellington	+1.2	+0.5
Rectory Farm, Great North Road, Brampton	+5.2	+1.7
Grafham Road Cottages, Grafham Road	+7.7	+2.6
Greendale, Huntingdon	-15.1	-4.8
Burrows Drive, Huntingdon	-3.3	-0.6
Cambridge Road, Godmanchester	-10.2	-2.6
Rectory Farm, Cambridge Road, Hemingford Abbots	-11.7	-5.1
Depden Farm, London Road, Godmanchester	+8.8	+2.8

A range of maps showing all the model receptors and pollutant increases and decreases are provided in the Chapter 10 Figures. In summary these have the following implications:

Alconbury. Parts of the village close to the A1 will experience increases in NO_2 and PM_{10} concentrations due to predicted increased traffic flows on this section of road. The majority of the village is to the west of the A1 and is therefore upwind. The Lordsway Park Homes estate, to the east of the A1, is predicted to experience some of the highest increases. NO_2 increases of between 2 and 6$\mu g/m^3$ and PM_{10} increases between 1 and 2 $\mu g/m^3$ are predicted. No exceedences of national objectives are predicted.

Brampton Hut. Three isolated dwellings, including Rectory Farm, west of Brampton Hut are predicted to experience increases in NO_2 and PM_{10} concentrations due to the offline section of the proposed road bringing traffic flows closer to these properties. NO_2 increases of between 2 and 5$\mu g/m^3$ and PM_{10} increases between 1 and 2 $\mu g/m^3$ are predicted. No exceedences of the national objectives are predicted.

Brampton. Receptors in the north west of the village close to the Brampton Hut Spittals Link are included in the modelling. Predicted decreases in flows of this section of the road result in predicted decreases in concentrations at these properties. Decreases in excess of 5$\mu g/m^3$ of NO_2 are predicted at some properties. Decreases of between 1 and 2$\mu g/m^3$ of PM_{10} are predicted.

Fenstanton. Significant decreases in pollutant concentrations are predicted at properties in Fenstanton due to the considerable reduction in flows on the A14 predicted. Reductions in concentrations of NO_2 of between 1 and over 5$\mu g/m^3$ of NO_2 and 1 and over 5$\mu g/m^3$ of PM_{10} are predicted.

Godmanchester. Receptors in the north of Godmanchester, close to the existing A14, are predicted to experience decreases in NO_2 of between 2$\mu g/m^3$ and greater

that 5µg/m^3 and decreases in PM_{10} concentrations of between 1µg/m^3 and greater that 5µg/m^3.

Hinchingbrooke. Receptors in the west of Hinchingbrooke, close to Spittals Link are predicted to experience decreases of NO_2 of between 3µg/m^3 and in excess of 5µg/m^3. Decreases of between 1 and 3µg/m^3 of PM_{10} are predicted.

Huntingdon. A large number of receptors were modelled in Huntingdon with particularly high coverage in south and west of the town. A large number of receptors are predicted to experience significant decreases in concentrations of NO_2 and PM_{10}. There is a relatively small area on Stukeley Road close to the railway bridge where there are predicted increases for both NO_2 and PM_{10} of 1 to 2µg/m^3. It is thought that these localised increases will result from traffic flow changes in connection with the WOTC link road. No exceedences of the national objectives are predicted.

Isolated properties close to the proposed offline A14. There are twelve relatively isolated properties which are close to the proposed alignment of the offline section of the proposed road. These properties are predicted to experience increases in concentrations of pollutants of between 1 and over 5µg/m^3 of NO_2 and 1 and 4µg/m^3 of PM_{10}. No exceedences of the national objectives are predicted.

Isolated properties close to the existing A14 between Godmanchester and Fenstanton. There are fifteen relatively isolated properties that have been modelled and decreases in concentrations of between 2 and over 5µg/m^3 of NO_2 and 1 and over 5µg/m^3 of PM_{10} are predicted.

Implications for the Huntingdonshire Air Quality Management Areas

There are currently four AQMAs in Huntingdonshire and three of these will experience significant improvements in air quality as a result of the scheme.

Air Quality Management Area No.1 Huntingdon. This area covers much of the south and west of the town, including much of the inner ring road area. Based on the modelling predictions it will be possible to amend this AQMA following completion of the A14 upgrade so that it covers a much smaller area.

Air Quality Management Area No.3 Brampton. This area covers north west parts of Brampton and Hinchingbrooke close to the Spittals Link. It is thought that it will be possible to revoke this AQMA following completion of the scheme.

Air Quality Management Area No.4 A14 Hemingford to Fenstanton. This area covers a number of isolated dwellings close to the A14 between Godmanchester and Fenstanton. It is thought that it will be possible to revoke this AQMA following completion of the scheme.

Conclusion

The air quality assessment reported in Chapter 10 of the Environmental Statement appears to be thorough and robust.

Predictions are that increases in concentrations of NO_2 and PM_{10}, at relevant receptors resulting from the scheme, will not result any exceedences of national air quality objectives and will not, therefore, result in the declaration of any new AQMAs.

Predictions are that decreases in concentrations of NO_2 and PM_{10}, at relevant receptors, resulting from the scheme will result in the eventual revocation of two existing AQMAs which currently result from road traffic emissions from the existing A14. It is thought that a third AQMA, at Huntingdon, will eventually be amended to a much smaller area as a result of the scheme.

Chapter 11 – Geology / Land Contamination

The ES dated October 2009 presented a summary of geo-environmental ground investigations but the detailed investigations were not included within the ES. The comments only relate to Section 1 of the proposed road (Ellington to Fen Drayton) which is within Huntingdonshire.

Summary Table of Contaminants above the Site Specific Assessment Criteria

Trial hole number	Contaminant	Location
SOIL LEACHATE		
TP3018	Toluene, Benzene	Rectory Farm, Brampton Hut
WS3079 & WS3077	Lead & Mercury	Goff Petroleum (GW & HH)
TP3035	Mercury	No source
TP3133	Mercury	Nr row of trees to w of track towards south of Silver Street Bridge, Debden Top Fm
TP3217	Mercury	Conington Rd (a field)
TP3179	Zinc (+ Sulphate in WS3178)	Lintons Fm s of HemGrey + Topfield Fm
GROUNDWATER		
BH3039	Ammonical nitrogen	Just past small bridge w of Brampton
WS3093	Ammonical nitrogen	Buckden South
BH3096	Ammonical nitrogen + As	Buckden South

HH = Human health, GW = Groundwater

Human health:
Despite the above findings, the report concludes that there will be no significant pollutant linkage to human health (providing the recommendations contained within the report are adhered to).

Lead and mercury was found at Goff Petroleum which has the potential to affect human health and pollute the groundwater, however, there is currently no significant pollutant linkage and the proposed development will not change this.

Elevated mercury levels were found in some trial pits in undeveloped areas which are assumed to be natural concentration levels for this area.

The ES mentions asbestos but it is also worth considering that many farm tracks in Cambridgeshire are constructed of asbestos rubble. If farm tracks are to be disturbed by the proposed development, it would be appropriate to first investigate the track for asbestos and if found to be present, the services of an appropriately qualified contractor should be commissioned to either safely remove or safely contain the asbestos to prevent the fibres from escaping into the atmosphere.

Water Pollution:

The soil leachate results from TP3018 suggest that there may have been a petrol leak in the past (Brampton Hut service station is close by). While there is currently no significant pollutant linkage as a result of this contaminant, the exposure of this soil to construction workers may complete a pollutant linkage and therefore it is agreed that construction workers should be required to wear appropriate personal protective equipment as stated in the ES.

The ES explains that the groundwater surrounding the proposed development will be monitored before, during and after the construction works to assess whether or not the development has an impact on existing groundwater quality.

Chapter 12 – Land Use

Provides a commentary upon existing land uses and how the HA would propose to provide for appropriate mitigations as part of their proposals.

Chapter 13 – not used

Chapter 14 – Pedestrian, Cyclists & Equestrians

The purpose of this Chapter is to report on the predicted effects of non-motorised users (NMU) of the scheme and includes an assessment of where the Published Scheme would introduce community severance or provide relief from existing effects which is noted as mainly improving conditions along the line of the old A14.

There are a number of errors in description of elements contained in this Chapter. While these are highlighted, it should be noted that these have been reported to the JVC.

There are numerous references in this Chapter to the presence of a Secondary School within Godmanchester. This is factually incorrect. Both such facilities are located within Huntingdon but it is agreed that this is an error without material significance.

There is a error in the scheme description for the Cambridgeshire Guided Busway. The route does not largely follow the former rail route between Huntingdon and Cambridge, it is only as far as St. Ives. On-street between St. Ives and Huntingdon follows an entirely different route.

It is confirmed that User Surveys have been carried out on various NMU routes in the vicinity of the scheme in order to assess overall usage as well as within Huntingdon Town Centre. Key findings are included and outline the high usage of the Ouse Valley Way at Buckden Marina with Equestrian usage noted north of and at Brampton Lodge, Grafham Road and Silver Street.

The situation for NMU at Brampton is outlined and notes that Brampton Wood, west of the A1, is viewed by residents as a leisure destination for recreation and that local residents consider that there is existing severance to Brampton Road due to the existing A1 and length of existing diversion. There is also reference to Brampton residents who need to travel to Brampton Hut for work and the existing route at the Brampton Hut junction being dangerous for pedestrians. The suggested response of the Council is outlined in Chapter 2 (ii) (b).

Other NMU issues are reported at Buckden, Huntingdon/Hinchingbrooke, The Offords, Godmanchester, Hilton, The Hemingfords and Fenstanton.

It is confirmed that during construction the amenity of existing NMU routes would be protected as far as possible.

The Chapter covers the effects of the new Scheme in some detail and the pertinent elements are as follows;

Brampton FP 15 – The report notes the minor stopping-up of the western part of this route where it adjoins the existing A1. This is due to the earth mound and noise protection barrier proposed to the east side of the A1. The report notes that FP 15 will now join a new Bridleway running north to Brampton Hut. While it is noted that a) the existing route of FP 15 currently terminates at the A1 with no direct connection to Brampton Hut and that b) traffic flows at Brampton Hut will reduce as part of the proposed scheme, there appears to be no continuous connection to Brampton Hut although pedestrian control facilities appear to be proposed at the existing signals. The Council needs to raise that as part of the overall scheme, a physical connection i.e. footpath/cycletrack should be sought to Brampton Hut in the interests of user safety as this appears to be the main point of destination for users of this route. In terms of safe accessibility, if the JVC cannot secure a full scheme thereby creating access, then no formal crossing or linkage to Brampton Hut should be included. A 'halfway-house' position should not be viewed as acceptable.

BW 19 to Brampton Wood and Park Road/Grafham Road - While it is understood that Brampton Parish Council is seeking to secure a more direct route between Brampton village and Brampton Wood and reinstate a ROW that was lost as part of previous works to the A1, the effects of this scheme in terms of the changes to the existing route are minimal.

Silver Street (plus connection to BW 1) - Although not a bridleway, the southern end of Silver Street does connect with Bridleway No. 1 Godmanchester (and the wider bridleway network) and the bridge would be used by riders and horses. Bridge parapets should therefore be to bridleway standard and this is confirmed elsewhere within the ES.

A1198 Ermine Street BW 7, BW 2, BW 10 – This should appear to read that a new bridge on the A1198 will be provided crossing the new A14 alignment. It is stated that the bridge would accommodate a 4m shared bridleway along the east side of the carriageway and that the bridge would accommodate equestrian provision with 1.8m parapets.

A new bridleway between Beaconsfield Equine Centre to BW 10 and the wider bridleway network is planned to the east side to tie into the bridge design.

The report also states that the links to BW 2 and BW 10 to the south would be unaffected by the Scheme. Both the written description and the plans provided are extremely unclear in that the proposed bridleway south of the new A14 appears to stop short of BW 10 and BW 2 with access to both being provided by the A1198 highway verge. It is suggested that the JVC are asked to make a 'complete' connection to BW 10 and BW 2 and that this would be both a sensible and desirable option.

Mere Way - This bridge will link BW10 Hemingford Abbots & BW 13 Hemingford Grey with BW 16 Hemingford Abbots via Mere Way. The overbridge will almost

certainly be used by riders and so the bridge parapets should be to bridleway standard. It is noted elsewhere within the ES that 1.8m equestrian parapets will be provided.

Descriptive Tables are usefully provided within the report. At Table 14.18, the first line of this table is described as 'Bridge over A14, Huntingdon'. It is not clear where this is or why it is shown in the Table as a permissive path when it appears to be public highway at Brampton Road crossing the railway. Clarification is being sought from the JVC.

Further clarification is also being sought as to the location of a stated informal use footpath between Hinchingbrooke School and the Rail Station referred to as the current link is part of the current highway network.

Additionally in Table 14.18, a permissive path from Hinchingbrooke Park Road to the proposed Huntingdon Regional College is described but it is unclear as to what this covers and clarification is being sought. Furthermore, based on the proposed new road arrangements at Mill Common, there are no details of how the link to the ring road is created?

Finally in Table 14.18 relating to FP 10, it would appear that the section of the footpath under the existing A14 viaduct/embankment was stopped up by the Huntingdon Bypass Side Roads Order 1971. This would need to be re-instated when viaduct/embankment removed but is not shown on Side Roads Order and the views of the JVC are being sought.

The new road arrangements at Mill Common and the existing permissive path appear to be in conflict as the permissive route is still shown crossing the new road infrastructure despite the description stating that 50m would be stopped up. The description describes an existing signalised crossing at the ring-road and Mill Common. This is INCORRECT as no crossing exists and again, this has been referred to the JVC.

Chapter 15 – Landscape

This is a detailed Chapter covering both landscape and tree protection issues. Officers have highlighted a number of issues that need to be addressed relating to overall landscape design and tree protection measures and discussions are taking place with the JVC to address these.

While it is not anticipated that these issues are of a size or scale to warrant a formal objection to the proposals, the Council needs to register its concern mainly relating to the detail provided in respect of highway earthworks and mitigation measures affecting two areas.

In paragraph 3.5.6 it states that the design of the embankments allows for side slopes of 1 in 3 /3.5 at this stage. It is a generally recognised principle and one that is often noted in the Highways Agency "Design Manual for Roads and Bridges" (see amongst many instances vol. 10, section 1, part 1, chapter 2, though they take 1:2 as their worst case) that slopes of this degree can be an issue when attempting to integrate a new road into a surrounding lowland landscape. Such slopes can also lead to maintenance issues and success in the take up of new planting.

The most important location where this would be an issue is the embankments adjacent to the proposed Gt Ouse viaduct, where shallower slopes would lead to

greater land take but nevertheless would result in a scheme that would be better integrated into the surrounding landscape.

In paragraph 3.9.19 it states that the environmental mitigation reflects the guidance of DMRB vol 11 (Environmental Assessment) that talks mainly of "environmental impacts" in a rather general way paying little regard to what/who are the receptors of these impacts (described in 15.2). The other main guidance on Environmental Impact Assessment – "The Guidelines for Landscape and Visual Impact Assessment" (GLVIA published by Spon for the Landscape Institute and the Institute of Environmental Management and Assessment) – tackles impact assessment more specifically as it relates to a base line landscape character and visual assessment – where the receptors are the landscape itself **and** the people who populate and use that landscape. That the ES gives much less attention, detail and weight to impacts on users (mainly recreational) of the landscape(s) surrounding the scheme only serves to underestimate the impact of the scheme, and hence to underestimate the need for adequate mitigation.

The main concern (15.5.24-27) is to mitigate the general impact (changes in land cover, light, noise, pollution) that the scheme would have on the SSSI and its surroundings at Brampton Wood. The designated landscape character areas 2 and 3 are contiguous and that impacts on one would also be experienced in the other. It is not accepted that an impact of "No change" on the "Brampton Wood to Buckden" character area (2) can be juxtaposed with an impact of "major adverse" on the "Brampton Farmland" character area (3).

Chapter 16 – Drainage and Water Environment

Land Drainage is covered in several of the sections of the Environmental Statement and outlines the principles on which the drainage has been considered for the scheme and the drainage and water environment effects from the new road and its construction.

The design has considered the ground conditions, existing drainage and aquifers. It assesses the risks to all the watercourses and ground conditions and these are shown to be either low risk or to improve the situation.

All significant watercourses have been modelled to assess flows and future needs as well as assessing the requirements to reduce all risks during construction, including pollution.

The report lists all the extra flood compensation storage that will be provided as a result of the scheme.

The work undertaken also includes a Flood Risk Assessment (FRA). This was submitted to the Council prior to the issuing of the main Environmental Statement and this Council along with the other councils affected commented on this and approved it in principle. The Environment Agency signed this off in July 2009. The FRA looks at standards to which the new works shall be designed to, and these are considered to be acceptable.

Conclusion - All watercourses affected by the scheme have been identified along with the present drainage arrangements. All the proposals improve on the present arrangements.

The design standards used for the watercourses and drainage allow for the 1:100 year storm plus climate change allowance. This is an approved standard to be working to.

All new culverts will be at least a similar size to the existing ones where they are being extended, or designed to take the flows for new ones.

Discussions are taking place with the JVC relating to the interface issues between diverted minor rural roads and existing drainage systems and it is RECOMMENDED that the Council also take the opportunity to remind the JVC of the due process that needs to be followed relating to award drainage.

The FRA for the scheme was approved by the council before the final statement was submitted but it is confirmed that, subject to the above points, it is still acceptable and it is considered that in overall terms, should improve drainage / water matters.

Chapter 17 – Ecology / Nature Conservation

1.Methodology used

The baseline data provided appears thorough and detailed with regard to existing habitats and species. A Phase 1 Habitat Survey Plan is provided together with comprehensive target notes about habitats and protected species. Appendix H also contains detailed surveys for protected species within the route. The document states that habitats have been assessed using methodology from the draft DMRB incorporating comment from the Institute of Ecology and Ecological Management. The methodology used is conventional for schemes of this type and has apparently been agreed with Natural England.

2. Impacts

Habitats
The text appears concerned with the impacts of the proposals on the Conservation Status of the habitats or species. This assessment has been made using a criterion which accepts a certain percentage loss. The impacts of the scheme have been detailed in a textual discursive manner within Chapter 17. The impacts have been partially tabulated to include :

- Table 17.5 Changes in areas of Habitat types details the total area of each habitat lost.

- Table 20.1 Cumulative Impacts goes some way towards providing the information but is insufficient.

- Table 17.8 Ecological Impact Summary Table for features on which there would be a residual moderate adverse significance of effect – only identifies two bird species, Golden Plover and Lapwing.

- Table 17.9 Ecological Impact Summary Table for features subject to moderate adverse significance of effect- only identifies two bird species Nightingale and Grasshopper Warbler.

The text states quite clearly in 17.5.56 that there will be a direct loss of habitats such as hedgerows, uncultivated field margins, and lengths of dry and wet ditch. Section

17.5.57 states that the severance of linear features cannot be fully mitigated. It would have been very helpful for all these impacts to be presented in a table form with losses identified at each location and mitigation or enhancement measures proposed for each loss identified alongside each item.

Species

Whilst dealing with death or disruption to existing populations of protected species an assessment appears to have been made based on an acceptable level of loss or effect if less than 10% of the population is affected. As the species are protected, the concept of acceptable loss or disruption appears contradictory.

The home range of each of the groups of protected species should have been mapped and therefore the direct impact on existing populations and the indirect impact on their feeding or breeding areas assessed. Has this been done?

Note – Protected species surveys should be carried out every 2 years. If the construction of the scheme is delayed these surveys should be redone

3. Questionable location of Biodiversity Mitigation Areas

It is unclear what planting is seen as 'landscape proposals' ref Figure 3.2.1 to 3.2.9 and what is classed as 'biodiversity mitigation areas' shown in pale green on figures 17.2.1 to 17.2.5 inclusive.

The areas in pale green on the latter plans overlap the areas shown for planting etc on the former. The plans 3.2.1 onwards do not have a symbol for biodiversity mitigation areas nor are they shown on the key. Table 17.5 infers that the biodiversity mitigation areas are additional to the creation of other habitat types such as hedgerow and wet grassland. No detail of the type of habitat is given. Environmental Masterplan 3.2.1 to 3.2.9 inclusive show different habitats such as hedges or grassland. These areas appear to be enhancement areas rather than mitigation. New areas of wet grassland or meadow adjacent to the new road may represent enhancement for invertebrate species or small mammals. However, they cannot be classed as mitigation areas for loss of foraging habitat for badgers.

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Particular areas of concern and the mitigation proposed:

- Buckden Gravel Pits CWS- The loss of 29 ha of open water habitat. Reshaping of bank edges is referred to in the text but not detailed. Mitigation proposals should provide for the creation of a minimum of 29 ha of open water habitat elsewhere, configured in a manner which provides suitable habitat for over-wintering bird species. This site should be located away from the road and floodlighting.

- River Great Ouse CWS– The report concludes that little damage would occur to the river bed itself and the aquatic community. However, the River Great Ouse CWS is designated as such for the assemblage of habitats within it, including wet meadows/permanent grassland, ditches, hedges and the main river. It is unclear how the construction of piers within the CWS might affect the hydrological regime within the area. Also, how the presence of the bridge itself would affect the flight patterns of over-wintering birds. The ES acknowledges that the permanent effect of the scheme would be slightly adverse. The loss of the assemblage of habitats should be addressed and their mitigation on land adjacent to the existing CWS required.

- Hedgerow removal and fragmentation or physical obstruction and therefore fragmentation- Replacement planting should be located close to the area of loss to continue or gap up existing lengths of hedgerows in order to allow existing invertebrate, mammal and bird populations to migrate into the newly planted areas.

- Removal of existing West Brook watercourse and reinstatement on western side of B1040. The new course of the brook should be excavated and established before the existing brook is removed. Presence of existing water vole population?

- Direct physical danger to, or long term disruption of feeding, breeding and foraging areas to protected species – badger, otter, bats, water vole, great crested newts, bird species of conservation concern etc. Badgers in particular are affected by these proposals. These should fall under Natural England's licensing requirements.

- Interruption and/or loss of bat flight paths, particularly the hedgerow along the eastern edge of B1040. This particular point is well addressed in the report.

- Removal of mature trees in the following locations:-
  Crack Willow on western bank of Ouse – to be felled. Bat roost.
  Belt of woodland north of Police Headquarters in Huntingdon. Occasional Pipistrelle roosts.
  Mature Oak – Top Farm. Mature trees in hedgerow south of Topfield Farm
  Mature Ash in hedgeline west of Hilton Road north of Oxholme Farm
  Concerns for all above include: Loss of bat habitat, dead wood invertebrates, nesting for bird species such as Tawny Owl, Greater Spotted Woodpecker, Tree Creeper etc. No mitigation is proposed for this loss.

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Additional points:

- Apparently all the land within 2 km of the scheme was surveyed but not all sites of nature conservation importance within 2 km are shown. Only those judged as adjacent to, or likely to be affected by the proposals are shown. i.e. Milton Road hedgerow but not Marsh Lane Gravel pits. The methodology used to make this judgement is not clear.

- It would be helpful to be assured that the home range of protected species has been considered when designing mitigation measures.

- A recent planning application for a Borrow Pit south west of the A14 adjacent to Hilton Road raised the question of the wildlife value of lakes to the immediate south of A14, on the western side of the road and raises the question whether the CWS is up to date

- Identifies lack of ecological data at viaduct over the Great Ouse crossing location.

- A total of 32 sites of ecological importance have been identified. However, the section only discusses two CWS, the River Great Ouse and Buckden Gravel Pits. Target notes within the Appendix supplement this information.

4. Habitat Enhancement Features

a. Advance creation of habitats and features for mitigation and enhancement where possible

It is not clear at which point 'replacement' habitat will be provided and established. It would be preferable to provide before existing habitat is destroyed or disrupted to allow existing mobile populations to disburse to these areas before the original habitat is destroyed.

b. Choice of flora species for mitigation and enhancement

All planting of woody species should conform in location, habitat type and species to the guidance detailed in the Cambridgeshire Landscape Guidelines and Huntingdonshire Landscape and Townscape Assessment for the landscape character area within which it occurs. The selection of species for the creation of grassland areas should be based on the common species found in similar conditions in the District detailed in the Flora of Huntingdonshire and the Soke of Peterborough Terry C Wells ISBN-0-9514427-2-4. All plant species should be grown from seed of local genetic provenance. Tree and shrub species should be grown from seed harvested in the Eastern and West Midland regions from semi natural ancient woodlands

c) Water bodies

Plans 3.2 onwards show water bodies, many of which are adjacent to the new road. The plan key states balancing pond whilst the annotation on the plan states ecology pond. This confusion requires clarification. The two functions may overlap in some situations but they are not synonymous. The pond adjacent to Byway 19 is clearly a triangular, engineered pit to hold water.

Water bodies of much greater wildlife benefit should be created, with variable gradients to the banks and variable depths to the ponds themselves. Natural colonisation should be managed to ensure maximum wildlife benefit. Clear management objectives should be identified for each water body. However, those located directly adjacent to the road, will have limited value to larger faunal species due to direct risk of injury or death. It would be wise to actively design out features which would attract Otters for example. A number of these ponds should be sited in more appropriate locations.

d) Replication of a mosaic of habitats

The total quantity or volume of habitats lost throughout the area has been calculated-ref Table 17.5. The location of new hedges, copses, tree belts and even grass areas appears to be based on the primary requirement to 'screen' the visual impact of the road. The location and configuration of the 'replacement' habitats appears to have been chosen to fulfil this function only.

5. Ecological Management-before, during and after development

Reference is made within the document to a Construction Ecological Management Programme. It is assumed that the detailed design of the landscape or habitat creation scheme will be informed by clear long term objectives identified at the detailed design stage of the project together with a comprehensive management plan to run for a considerable time after development.

Chapter 18 – Cultural Heritage

For the purposes of this report, comments are limited to the impact the proposals will have on Conservation Areas and Listed Buildings. Scheduled ancient monuments and archaeology are the remit of the County Council. Un-registered historic buildings are also not covered as Huntingdonshire does not have a policy regarding their conservation and any designations are a historic legacy.

Generally there are limited comments to make on this Chapter. The proposals will result in a reduction in the impact of the road and the traffic on a significant number of Heritage assets. The justification of the scheme seems to place a great deal of weight on this factor and it is rated highly in the assessment of significance. The reduction in the level of the noise experienced will enhance the character of a number of conservation areas, however assessing the impact on listed buildings is harder to measure.

Listed buildings are protected because of their special architectural and historic interest and their setting is an important part of this character. The setting of many of these buildings has previously been compromised by the works associated with the current A14 arrangements. Therefore it is not considered that their setting will be improved by this proposal unless physical alterations can be undertaken to remove existing and intrusive highway works (signage, lining, junction improvements removal of traffic calming measures), otherwise the conservation areas may be left with an environment still scarred by redundant highway measures. An element of improvement works factored into this programme would be desirable.

LB3 - removal and reinstatement of Grade II milestone – Listed building consent is required and a scheme for reinstatement needs to be provided. Subject to this being undertaken, then in principle there is no objection.

CA15 – It is considered that the impact of the proposal on the historically important land to the rear of Offord Cluny Manor house be considered. This land forms an important part of this buildings setting.

Impact on setting of LB37 No. 208, High Street, LB 188 Porch House, High Street and Nos. 213/215 High Street, all Offord Cluny: This small cluster of listed buildings situated along the northern part of the High Street is unlikely to be unduly affected by the scheme, largely due to the shielding afforded by the rising topography. The main part of the new A14 will be located within a cutting and therefore not readily visible and would also be approximately 1km distant. The B1043 will be elevated on an embankment as it crosses the A14 but this will finish approximately 500m from the Listed Buildings and should blend into the background. None of the works will physically impact upon the Offord Cluny 'infield' system which was historically associated with the northern bounds of the settlement.

LB 296 Rectory Farm House Cambridge Road Offord Cluny. Clarification on where this is is needed – Only two options can be found:

1) Rectory Farm House, Cambridge Road, Godmanchester – Not Listed
2) Rectory Farm, High Street, Offord D'Arcy – Not Listed

CA16 Hilton Conservation Area – The effect on this conservation area is not agreed. It is considered that there could be a moderate adverse effect on the setting of the Conservation Area particularly in views of the village from higher ground. It is requested that a reassessment is undertaken.

(Note - LB235 recently de-listed).

Huntingdon Conservation Area.

It is acknowledged that the reduction in noise levels and traffic movements will be beneficial, however the statements on physical intrusion need to be separated out from this and assessed separately i.e. benefit of loss of the embankment and the viaduct vs the harm caused by the loss of parts of Views Common and Mill Common in accordance with HA methodology (18.6.25).

The detail of the second roundabout to the west of Mill Common serving the Pathfinder link needs to be appropriately enhanced. Within the wider ES, the need for this is understood but it will be intrusive on the Conservation area as it is elevated and illuminated. Appropriate mitigation should therefore be sought.

Chapter 19 – Vehicle Travellers

The purpose of this Chapter is to assess the effect of the scheme on vehicle travellers in accordance with the DMRB. This includes views from the road and driver stress and also includes assessment of length of journey, variability of journey times, mode of transport choice, existing quality and capacity, environmental quality experienced by the traveller and the visual amenity of the journey.

There is nothing significant within the Chapter of significant concern to the Council. However for information, it concludes that in terms of the new Trunk Road, the effect on views is adverse. The reason for this is primarily due to the fact that much of the off-line route between Ellington and Fen Drayton is across existing arable land and is unavoidable. With regard to the views from Local Roads, again the effect is recorded as adverse (and unavoidable) as the scheme places a new trunk road across open countryside.

In terms of driver stress, the report concludes that this would be reduced with the new scheme as a result of reduced congestion following the provision of a high quality, faster route and the reduction in the fear of accidents, which is noted as being beneficial.

Route uncertainty is reported as being beneficial as a result of the new scheme as the level of traveller information would be provided to a far greater level than existing and would be provided to an equivalent standard to the motorway network. Therefore, with improved signing and a reduction in route uncertainty, the new scheme would result in a beneficial effect.

Traveller Care in terms of access to roadside services is noted as being affected by the loss of direct access to the strategic road network. However the Chapter concludes that on the basis that safer access would exist overall and that, together with traveller information signing, that there would be beneficial effects overall.

Chapter 20 – Cumulative Impacts

The purpose of this Chapter is to assess the potential cumulative impacts that could arise from the interaction between the various elements of the scheme as well as from other developments within the area. This is done in accordance with the requirements of the DRMB.

The Chapter confirms that all current transportation schemes listed in the East of England Regional Model are included in the traffic model for this scheme.

Likewise, all major potential land developments are also included within the modelling undertaken and these include;

a) Northstowe
b) Cambridge North (NIAB)
c) Orchard Park (Arbury Camp)
d) Cambridge North-West (not yet committed)
e) Draft Huntingdon West (not yet committed)
f) Wastewater Treatment Works, East Chesterton
g) Land between Huntingdon Road, Histon Road and A14

The Chapter also lists a summary of the Cumulative Temporary Impacts associated with the construction of the scheme and its effects on local communities and receptors and also those where those impacts are permanent. These are not listed here and have been identified as part of specific work covering previous Chapters above,

MEMBER DEBATE 28TH OCTOBER 2009 **ANNEX B**

QUESTIONS –

1) Q. A direct NMU crossing is required between Brampton and Brampton Wood.

   A. Covered in Report. It is not considered that this can be justified to rectify previous works associated with the A1. An existing less direct route exists and will be no worse as a result of the current proposals.

2) Q. Concern over the levels of air pollution over Brampton.

   A. Covered in Report. As a result of mitigation measures proposed as part of the scheme, the situation will be no worse than at present.

3) Q. Concerns over the planned removal of Huntingdon Viaduct and associated traffic increases on Brampton Road and across Huntingdon.

   A. Covered in Report. Brampton Road (between the west of town centre link road and Hinchingbrooke Park Road) indicates an increase in traffic levels of approximately 10% between Hinchingbrooke Park Road and the rail station. Elsewhere on the local highway network (west of Hinchingbrooke on the Brampton Road and George Street), traffic levels are predicted to decrease.

4) Q. The junction arrangement between the A1 and the new A14 is too tight.

   A. The scheme is being promoted in accordance with national design standards, the Design Manual for Roads and Bridges (DMRB)

5) Q. Concern over the effects on Hilton in that there are no effective noise barriers and likely flooding issues.

   A. Covered in Report. The Environmental Statement and scheme design includes the provision of noise barriers for Hilton and that drainage design, including the prevention of flooding, is in accordance with DMRB.

6) Q. A1198 junction will result in rat-running through villages south of existing A14.

   A. The response from the JVC is that the traffic model shows that, in general, traffic through villages south of the A14 reduces as a result of the scheme compared to the situation without it. The reason for this is that current 'rat-running' decreases when a more reliable and less congested route becomes available on the 'old A14'.

7) Q. Construction-related activities will place an intolerable burden on Hilton.

   A. Construction-related activities will be controlled by appropriate routing and timing restrictions.

8) Q. Concern over traffic levels through Kimbolton.

   A. This is outside the scope and remit of the current proposals

9) Q. Maintaining 2-lanes of traffic flow (each direction) must be supported.

A. Confirmed within published proposals

10) Q. Visual and Noise intrusion at Offord Cluny and Offord Darcy.

A. Covered in Report. Visual intrusion is mitigated as far as practically possible by screening and landscaping measures. Noise prevention measures are included as part of scheme and individual properties directly affected are listed in chapter 9 appendix D of the Environmental Statement.

11) Q. General concern that no flooding on any part of the route is made worse as a result of the scheme.

A. Covered in Report. The Environmental Statement confirms that all drainage issues are designed in accordance with the DMRB and that there will be no detrimental effects to flooding.

12) Q. Signing is required as part of overall scheme to ensure that strategic traffic avoid the local road network.

A. The Environmental Statement confirms that all parts of the network will be supported by appropriate signing in accordance with the DMRB

13) Q. If Huntingdon Viaduct were to be reinstated, repaired or replaced, what would be the extra cost, level of disruption and length of time involved?

A. The response from the JVC is that the scheme being taken forward, in accordance with CHUMMS recommendations, includes the removal of the Huntingdon Viaduct. Because it is recognised that the matter will be put forward as an alternative at a possible PI, a full option report on the possible retention of the viaduct is being prepared and a reassessment of costs will be undertaken. The current broad brush estimates for the removal of the Huntingdon Viaduct are as follows. Complete removal and replacement is £60 million. A partial removal and replacement of three central spans, retaining the columns is £30 million. The time taken to demolish and rebuild the structure would require closure of the A14 for a period that is estimated to be in excess of 18 months. The period is conditional on suitable possessions over road and rail. If the viaduct were to be replaced the benefits of the local road connections would naturally be lost.

14) Q. What are the projected traffic flow figures on the local road network following the viaduct removal?

A. Covered in Report. Refer to section 8 of the Environmental Statement. Plans are shown in Volume 2 section 8.

15) Q. Why will the A1 between Alconbury and Brampton Hut not be widened before 2031 at the earliest?

A. Covered in Report. Traffic modelling in accordance with DMRB indicates that this is not required. JVC responds that any request for a reassessment should be made to the Highways Agency.

16) Q. Pathfinder link (Mill Common) should include a dedicated bus access to facilitate fast/route service to Cambridge.

A. Covered in Report. Road design will allow bus use but does not provide dedicated road space. Any future bus service will emerge from local market conditions, not scheme now proposed.

17) Q. Concern over design of both access points to Railway Station.

A. Both access points are designed in accordance with DMRB and in accordance with modelled traffic predictions.

18) Q. A14 and junctions west of Brampton Hut should also be improved in accordance with a separate scheme previously promoted by the HA.

A. This is outside the scope and remit of the current proposals

19) Q. The proposed scheme should be fully future-proofed, particularly at the A1.

A. Scheme is designed in accordance with the DMRB. JVC responds that any request for a reassessment should be made to the Highways Agency.

20) Q. With the removal of Huntingdon Viaduct, the proposed road layout does not appear adequate?

A. The layout is designed in accordance with DMRB and in accordance with modelled traffic predictions.

21) Q. Better access arrangements are needed for users of Hinchingbrooke Park Road.

A. The proposed scheme includes revised junction arrangements between Hinchingbrooke Park Road and Brampton Road. The new road layout provides alternative and additional access options across the Police HQ land to an old A14 and Spittals. Further access opportunities will be explored as part of the Huntingdon West Area Action Plan, outside the scope of this scheme.

22) Q. HCV impact on A1123 related to construction activities and materials.

A. Construction-related activities will be controlled by appropriate routing and timing restrictions.

23) Q. Junction of Brampton Road/WOTC link road/Mill Common should be a roundabout.

A. A roundabout is not required as part of overall design in accordance with DMRB and in accordance with modelled traffic predictions. A roundabout would also take additional land beyond that now required and would be detrimental to NMU such as pedestrian and cyclists.

24) Q. Highways Agency appears to be ignoring WOTC link road proposals.

A. The design of road proposals and modelled traffic predictions takes full account of WOTC link road proposals as part of Huntingdon traffic model.

25) Q. There needs to be a viable alternative to the removal of the viaduct.

A. The proposals for the new A14 and the removal of the Huntingdon Viaduct have been part of extensive consultation and a range of options resulting in the Preferred Route Announcement in October 2007. An alternative option is outside the scope of the draft Side Road Order process.

26) Q. There will be an avalanche of lorries on Thrapston Road, Brampton so a lorry ban is needed and must be enforced.

A. There is a current lorry ban on Huntingdon Road and Brampton Road between Brampton and Huntingdon. This will remain as part of the proposed scheme. Traffic modelling projects that there would be no reason for lorries to therefore use Thrapston Road and the statement is without foundation.

27) Q. Has footfall been included as part of the Hinchingbrooke Park Road junction design?

A. Footfall is included as part of the traffic modelling predictions. However a Technical Note has been requested to validate the apparent lack of pedestrian/cyclist capability within the overall proposal and the JVC confirm that they are in the process of producing a technical study and sufficient land is included within the draft Orders to ensure that a suitable scheme can be provided. They further respond by stating that existing facilities for NMU's along Brampton Road would be maintained to a good standard as part of the scheme. Facilities for NMU's to cross Brampton Road would be improved: the current signal-controlled crossing at the station access would be replaced with a new signal-controlled junction with refuge islands at all arms of the junction to aid safe crossing; and there would be a new signal-controlled crossing at the Brampton Road/ Hinchingbrooke Park Road junction.

The new signal-controlled junction between Hinchingbrooke Park Road and the new Views Common Link would provide another crossing route for NMU's, where a controlled crossing within the signals would be provided to cater for the heavy school-related movements in the mornings and afternoons. Refuge islands would be provided at this junction, although as described to you at the Draft Orders Exhibition, there will be some further design optimisation required during the detailed design phase to widen the central island at this junction to better cater for cyclists. This can be undertaken within the constraints of the land contained in the published draft Compulsory Purchase Order. The existing pelican crossing outside the school would remain as part of the scheme. The existing path between Brampton Road and the school, within the school's grounds, would be improved to cycleway width standards as part of the scheme. There would be no change to the existing route for NMU's who currently travel from the station along the south side of Brampton Road before crossing the existing uncontrolled pedestrian/cycle crossing near Scholars Avenue, which would remain as part of this scheme. A 3m wide shared use facility would be maintained in the northern verge of Brampton road across the existing bridge over the East

Coast Main Line to retain access to and from Huntingdon Town Centre along this route.

28) Q. Access to the west Rail Station car park needs to be improved.

A. Revised design of the access to this car park is included as part of the overall proposals.

29) Q. Environmental protection measures should be ring-fenced.

A. Covered in Report. Environmental protection measures are a requirement of this scheme in accordance with the DMRB. The Council continues to negotiate on the level and scale to be adopted.

- Traffic levels are assessed on a Base Year of 2006 and an Opening Year of 2015 together with a Future Assessment Year of 2031. Examples of this in relation to the scheme are as follows;

Location	**2006 Flow**	**2015 Flow**	**2031 Flow**
A14 West of Brampton Hut	41,000	51,400	65,500
New A14 West of ECML/East of A1198	-	67,300	86,700
New A14 at Conington	-	59,700	75,400
Old A14 West of Hemingford Abotts	69,800	34,100	40,500
Old A14 West of Fenstanton	76,200	42,000	52,500
Brampton Road, Huntingdon	20,700	30,400 (would be 27,500 without scheme)	33,000 (would be 31,400 without scheme
George Street, Huntingdon	21,900	9,000 (would be 20,400 without scheme)	9,700 (would be 22,700 without scheme)
Castle Moat Road (ring-road) adj. Pathfinder House	19,600	12,400 (would be 20,900 without scheme)	17,700 (would be 25,600 without scheme)
The Avenue, Godmanchester	18,100	9,200 (would be 22,400 without scheme)	13,200 (would be 28,400 without scheme)
Cambridge Road, Godmanchester	10,300	4,900 (would be 12,700 without scheme)	7,100 (would be 15,700 without scheme)
Thrapston Road, Brampton	7,100	3,300 (would be 6,700 without scheme)	3,600 (would be 9,100 without scheme)
B1514 west of Hinchingbrooke School	16,500	14,700 (would be 18,900 without scheme)	16,200 (would be 22,700 without scheme)
A1 north of Buckden	43,900	54,300 (same with/without scheme)	64,700 (would be 64,000 without scheme)
A1198 (south of junction)	8,200	10,400 (would be 13,000 without scheme)	14,200 (would be 22,000 without scheme)
A1198 (north of junction)	8,200	6,600 (would be 13,000 without scheme)	9,100 (would be 22,000 without scheme)

ANNEX F

Summary of Noise Predictions			
Location	Do Minimum 2015	Scheme 2015	Comment
Alconbury Village Huntingdon Life Sciences	65 dB $L_{A\ 10,18hr}$ or less. Noise levels are predicted to be approaching 60 dB $L_{A\ 10,18hr}$.	Increase of between 1 and 2.9 dB $L_{A\ 10,18hr.}$ Minor Impact.	The A1 presently affects dwellings in Alconbury between the B1043 junction at Brooklands and School Lane. They are protected by existing 2m high noise barriers but will be impacted by the scheme due to increased traffic flows on the A1.
Home Farm, Alconbury Nook Farm, Little Stukely & neighbouring residential properties	Up to 70 dB $L_{A\ 10,18hr}$	1 to 3 dB $L_{A\ 10,18hr}$ reduction	Benefit from the detrunking of the A14 spur from Alconbury to Spittals Interchange.
Little Meadow & Woodhatch Farm, Ellington.	70+ dB $L_{A\ 10,18hr}$	<1 dB $L_{A\ 10,18hr}$ increase. Minor impact.	The existing A14 west of the A1 passes a few isolated dwellings. A 2m noise barrier is proposed at this location.
Rectory Farm, Brampton	Noise levels in the upper 50s	5 to 10 dB $L_{A\ 10,18hr}$ increase. Major impact.	Around the Brampton Hut junction both the A14 and the A1 contribute to the noise climate. A 2m noise barrier is proposed at this location.
Brampton north (Crane Street)	65 dB $L_{A\ 10,18hr}$ or higher	1 to 3 dB $L_{A\ 10,18hr}$ reduction.	Properties in this area are protected by existing 2 m high noise barriers.
A14 between Racecourse and Spittals Interchange.	Isolated houses up to 60 dB $L_{A\ 10,18hr}$ or more. Hinchingbrooke Country Park 55 dB $L_{A\ 10,18hr}$ or more up to 400m from A14.	1 to 3 dB $L_{A\ 10,18hr}$ reduction.	

Stukeley Meadows	Closest dwellings will experience noise levels in excess of 65 dB $L_{A\ 10,18hr}$. Noise levels of 60 dB + dB $L_{A\ 10,18hr}$ will extend beyond 50 m from A14.	3 to 5 dB $L_{A\ 10,18hr}$ reduction.	Protected by existing noise barriers and earth bunds.
Hinchingbrooke Hospital/Cromwell Park School	60 + dB $L_{A\ 10,18hr}$	3 to 5 dB $L_{A\ 10,18hr}$ reduction.	No noise barrier protection
Central Huntingdon	55 to 65 dB $L_{A\ 10,18hr}$	1 to 3 dB $L_{A\ 10,18hr}$ reduction in most areas of central Huntingdon near the detrunked altered A14. Some increases of 1 to <5 dB $L_{A\ 10,18hr}$ in areas such as Lodge Close due to increased traffic on the B1514 Brampton Road. Dwellings close to the main roads B1514 and B1044. These include Brampton Road, Ermine Street, Ermine Court, Stukeley Road, Goodliffe Close and Scholars Avenue. Moderate Impact.	The Huntingdon Viaduct creates a noise shadow over nearby dwellings.
Godmanchester – Cambridge Road and area to south.	Up to 65 dB $L_{A\ 10,18hr}$	1 to 3 dB $L_{A\ 10,18hr}$ reduction.	Clyde Farm, Offord Road and Bluegate on the outskirts of Godmanchester may experience a 1 to 2 dB $L_{A\ 10,18hr}$ increase. Minor impact.
Godmanchester – Central areas near main roads	60 to 65 dB $L_{A\ 10,18hr}$	1 to 3 dB $L_{A\ 10,18hr}$ reduction	
Godmanchester – Central areas away from main roads	50 to 55 dB $L_{A\ 10,18hr}$	1 to 3 dB $L_{A\ 10,18hr}$ reduction	

A14 Godmanchester to Hemingford Abbots junction	65 to 70 dB $L_{A\ 10,18hr}$ within 200m of A14.	1 to 3 dB $L_{A\ 10,18hr}$ reduction	
A14 Hemingford Abbots junction to Galley Hill junction	65 to 70 dB $L_{A\ 10,18hr}$ within 200m of A14	1 to 3 dB $L_{A\ 10,18hr}$ reduction	
Galley Hill junction to Fenstanton	On the North side of A14, Fenstanton dwellings will experience 60 to 65 dB $L_{A\ 10,18hr}$ at the nearest dwellings. On the South side of the A14 at Fenstanton noise levels will range from 60 to 70 dB $L_{A\ 10,18hr}$ at the nearest dwellings.	1 to 3 dB $L_{A\ 10,18hr}$ reduction	Existing 2m high noise barriers limit noise spread to some dwellings.
Brampton West	60dB dB $L_{A\ 10,18hr}$	1 to 3 dB $L_{A\ 10,18hr}$ reduction.	A 5m earth bund topped with a 2m high noise barrier is proposed for the protection of housing to the west of Brampton. Grafham Road Cottages will experience a 1 to 3 dB $L_{A\ 10,18hr}$ increase. Minor impact.
Brampton South	50 to 59 dB $L_{A\ 10,18hr}$	1- <5 dB $L_{A\ 10,18hr}$ increase.	Dwellings on the perimeter of the RAF Base presently experience road noise from the A1 and local roads and will be exposed to further noise from the scheme. Moderate impact. Other areas on the southern fringe of Brampton such as Lenton Close, Layton Crescent and Hawkes End will experience a

			1 dB $L_{A\ 10,18hr}$ increase. Olivia Cottage and Kenmore in Park Road will experience a 2 dB $L_{A\ 10,18hr}$ increase. Minor impact.
Buckden	Significant numbers of dwellings will experience noise levels of 65 dB $L_{A\ 10,18hr}$ or more from A1 traffic	A 3 dB $L_{A\ 10,18hr}$ increase will be experienced by all dwellings within 50 to 100m from Brampton Road. Moderate impact. The two dwellings near to the south east of the scheme and Station Farm to the north will experience increases of 5 to 10 dB $L_{A\ 10,18hr}$ and Lodge Farm will experience an increase of 10 to 15 dB $L_{A\ 10,18hr.}$ Major impact.	Buckden has little protection from A1 noise. Some dwellings well away from the A1 may experience a small increase in noise but this will only be noticeable in certain wind conditions. 2m noise barriers are proposed at this location to protect a group of houses to the west of the scheme including Orchard View and Lodge Farm.
Brampton to Fenstanton	<50 to 60 dB $L_{A\ 10,18hr}$ or more.	There will be a 15 dB $L_{A\ 10,18hr}$ increase over a wide area 400m north and south of the new River Ouse viaduct. Offord Hill will experience a 1 to 3 dB $L_{A\ 10,18hr}$ increase. Moderate impact. Offord Hill Farm, Wyboston Farm, Westward Farm and Lower Debden Farm will experience increases of approximately 5	The line of the proposed route passes through open countryside where noise levels are likely to be under 50 dB $L_{A\ 10,18hr}$ except where the line is cut by Brampton Road, the B1043 Offord Road, the A1198 Ermine Street, the B1040 Potton Road and Hilton Road. Near these locations higher noise levels will be experienced. A 2m earth bund is proposed to protect Offord Hill Farm.

		to 10 dB $L_{A\ 10,18hr.}$ Major impact. Depden Farm will experience a 15 dB $L_{A\ 10,18hr.}$ Major impact. Beaconsfield Equine Centre and Debden Farm will experience 3 to 5 dB $L_{A\ 10,18hr.}$ Moderate impact. Depden Lodge Farm will experience increases of approximately 5 to 10 dB $L_{A\ 10,18hr.}$ Major impact. Debden Top Farm, Debden House and the cottages will experience increases of up to 15 dB $L_{A\ 10,18hr.}$ Major impact. Bucklands Bush Farm, Littlebury Farm, Top Farm, Topfield Farm and Lattenbury Farm will all experience a 5 to 10 dB $L_{A\ 10,18hr}$ increase. Major impact. Some houses in Peartree Close, Fenstanton will experience 1 to 3 dB $L_{A\ 10,18hr}$ increase. Moderate impact but one house is predicted to experience a 5 dB $L_{A\ 10,18hr}$	1.5 to 2m earth bund is proposed to protect Topfield Farm. A 2m earth bund is proposed to protect houses in Mount Farm, Model Farm and Peartree Close.

		increase. Further south, Old Clayfields will see an increase of 8 dB. Major impact.	
Hilton village			Hilton village is outside the detailed study area. Some houses away from the B1040 Potton Road will be affected by some increases, particularly on the northern side where local traffic noise is insignificant. Properties facing onto Potton Road and the High Street will not experience any notable change.