

**Delivery and Site Allocations Plan
Examination
Supporting Document**



CD7.10

**Statement of Common Ground between
Wycombe District Council and
Sainsbury's Supermarkets Ltd.**

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14th December 2012

Delivered by Email

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Dear Sarah

**WYCOMBE DELIVERY AND SITE ALLOCATIONS DPD
STATEMENT OF COMMON GROUND BETWEEN WYCOMBE DISTRICT COUNCIL**

Thank you for sending the agreed final Statement of Common Ground to me by email on 13th December 2012.

I can confirm on behalf of Sainsbury's Supermarkets Ltd that the Statement of Common Ground represents the final agreed position between Sainsbury's Supermarkets Ltd and Wycombe District Council. I would also like to confirm that alongside WSP we intend to appear at the Examination on 19th December in respect of Matter 6 Issue 5.

Yours sincerely



Turley Associates

CC: Lynette Duncan, Planning Inspectorate

Statement of Common Ground

between

Wycombe District Council

and

Sainsbury's Supermarkets Ltd.

**Prepared in advance of the Hearings of the
Public Examination of the
Delivery and Site Allocations Plan
for Town Centres and Managing Development**

December 2012

1. Introduction

- 1.1. This Statement of Common Ground (“the Statement”) has been prepared by Wycombe District Council (“the Council”) in conjunction with Turley Associates and WSP on behalf of Sainsbury’s Supermarkets Ltd. (“Sainsbury’s”).
- 1.2. The Council’s position has also been informed by Buckinghamshire County Council (“the highway authority”) and their retained transport consultants, Jacobs.
- 1.3. The purpose of this statement is to set out the agreed position between the Council and Sainsbury’s on the proposals for High Wycombe Town Centre as set out in Policies HWTC1 – HWTC21 of the Delivery and Site Allocations Plan Proposed Submission Document (published June 2012), in order to identify the issues that continue to separate the parties in respect of these proposals.
- 1.4. This Statement should be read alongside the Examination Statements submitted by both parties to the Planning Inspector on 30th November 2012 in response to Matter 6 and the issues identified. However it should also be noted that this Statement was finalised after the 30th November deadline and at times supersedes comments made in the Examination Statements.

2. Context

The Delivery and Site Allocations Plan

- 2.1. The Delivery and Site Allocations Plan (DSA) includes site specific proposals for the three town centres in Wycombe district, including the High Wycombe town centre masterplan and proposals for Marlow and Princes Risborough town centres. It also includes a series of key policies to manage development across the District to secure more sustainable development in the future.
- 2.2. Preparatory work and public consultation on the DSA began in 2004 alongside the preparation of the Council's Core Strategy, which was adopted in July 2008. The DSA has been subject to a number of further rounds of public consultation in 2007, 2009, 2010 and 2011.¹
- 2.3. The Proposed Submission version of the DSA was published on Friday 1st June 2012. The deadline for comments to be submitted to the Council on the proposed plan was Friday 20th July 2012. In total 49 responses were received.²
- 2.4. The DSA was submitted to the Planning Inspectorate on Friday 21st September 2012. The DSA will now be subject to examination by a Planning Inspector, with public hearings on the DSA anticipated to be held in December 2012.

The proposals for High Wycombe town centre

- 2.5. Chapter 3 of the DSA sets out the proposals and policies for High Wycombe town centre to 2026. This includes setting out a strategic vision and objectives for the town centre (Policy HWTC1) from which more detailed delivery (policies HWTC2-6) and site specific policies (policies HWTC7-21) flow.
- 2.6. Included within the proposals are significant changes to the highway network within the town centre, including the creation of an alternative cross-town vehicular route.

Engagement with Sainsbury's on the Delivery and Site Allocations Plan

- 2.7. Sainsbury's submitted comments to the Council's consultations on the DSA in 2009 and 2011.
- 2.8. In addition to these written responses, representatives of Sainsbury's Supermarkets Ltd. attended a stakeholder workshop on the town centre proposals on 15th September 2011

¹ See the following Core Documents – CD4.4.1 & CD4.4.5 (2007); CD4.5.1 & CD4.5.4 (2009); CD4.6.1 & CD4.6.4 (2010); CD4.7.1 & CD4.7.5 (2011)

² See Core Documents CD1.14 and CD1.15

- 2.9. Since 2010 briefs for technical work and results from technical assessments have been shared with Sainsbury's representatives in addition to the formal consultation periods on the emerging DSA Plan. The Council has also offered to meet with representatives of Sainsbury's over this period, to discuss both the methodology and results of the transport assessment work and issues raised in representations submitted by Sainsbury's.
- 2.10. A meeting to discuss the last round of technical work was delayed (in agreement between Sainsbury's and the Council) from January 2012 to May 2012, until the technical material was available and Sainsbury's had the opportunity to review this work. On 1st June 2012 the most recent round of consultation commenced on the proposed submission version of the DSA Plan. The Council offered a meeting during the consultation period but this was not taken up Sainsbury's. A response was submitted by Turley Associates on behalf of Sainsbury's Supermarkets Ltd. on the proposed submission Plan in July 2012 (reference DSA12/023).
- 2.11. A meeting was held between the Council and representatives of Sainsbury's Supermarkets Ltd. on Wednesday 10th October 2012 to discuss the issues raised in Sainsbury's representation. The following people were present at the meeting:
- For Wycombe District Council:
Sarah Morgan
Ian Manktelow
John Callaghan
Richard Smith (Jacobs - WDC & BCC transport consultant)
- For Sainsbury's:
Gemma Brickwood (Turley Associates)
Mike Savage (WSP)
Brendan Weaver (WSP)
- 2.12. Since this meeting the two parties have been in constant dialogue to address the issues which were raised in Sainsbury's original representation on the proposed submission version of the DSA and in the discussions at the meeting on 10th October 2012. These issues and subsequent engagement informs the issues and areas of agreement and disagreement set out in the following sections.

3. Agreed Areas of Common Ground

Area 1 - The vision for High Wycombe town centre

3.1 Both parties agree on the vision for High Wycombe town centre (as set out in Box 1, p.8 of the DSA), which aims to create “*a place where people choose to live, work and visit*”. There is also agreement on the objectives for the town centre, in particular the objective of creating a good retail offer in the town centre.

Proposed changes to DSA Plan

3.2 No changes are required to the DSA Plan

Area 2 - Principle of retention of 2-lanes of Abbey Way flyover during the lifetime of the Plan

3.3 Sainsbury's recognise the evolution of the proposals for changes to the highway network, in particular the retention of two of the four lanes of the A40 flyover through the town centre which is proposed in the DSA Plan. It is acknowledged by both parties that the Plan, whilst not prejudicing future closure, does not propose the full closure of the flyover during the lifetime of the Plan (to 2026) and therefore the implications of a full closure are not relevant to the current discussions.

Proposed changes to DSA Plan

3.4 No changes are required to the DSA Plan

Area 3 - Change in priority traffic accessing and egressing the Dovecot (Sainsbury's) car park (Issue 1 in representation DSA12/023)

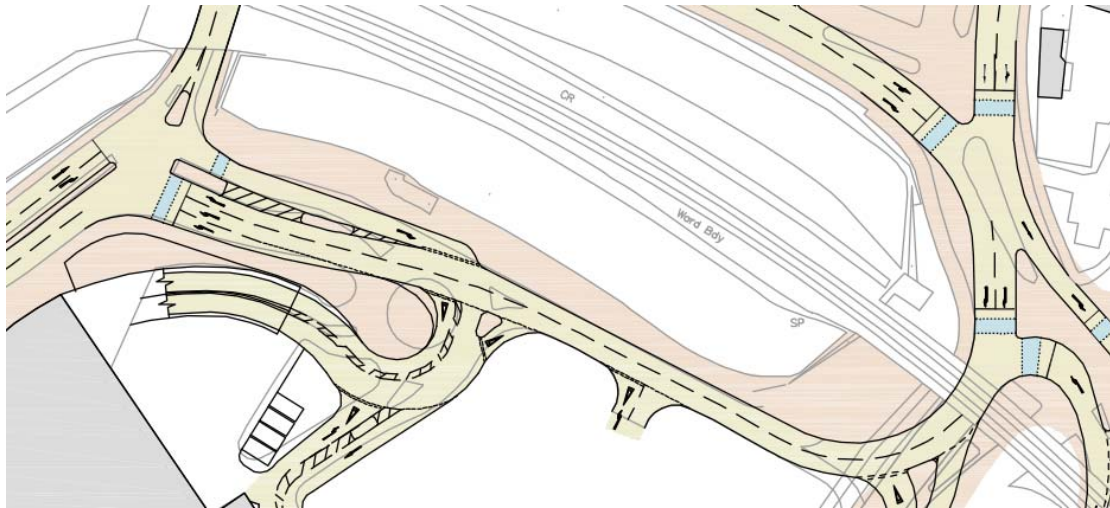
The current junction and proposed design

3.5 Sainsbury's store takes access from Bellfield Road via a signal controlled T junction. The current configuration of the junction has an eastbound free flow lane from the signalised junction with Bellfield Road direct into the car park, with a give way arrangement for vehicles travelling westbound along Premier Way (from the Premier Inn and recycling centre). This access road also serves a multi-storey town centre car park and Sainsbury's service yard. Sainsbury's and town centre car parks provide a total of 1100 car parking spaces.

3.6 The proposed design sees Premier Way changed to a two lane westbound-only carriageway, with the retention of a signalised junction with Bellfield Road. Vehicles accessing the car park from the west (Bellfield Road) would need to give way to vehicles travelling westbound, on the proposed Parker Knoll Way / Archway / Premier Way / Bellfield

Road gyratory. The proposed arrangement of the Dovecot Gyratory has not been designed to Manual for Streets standards.

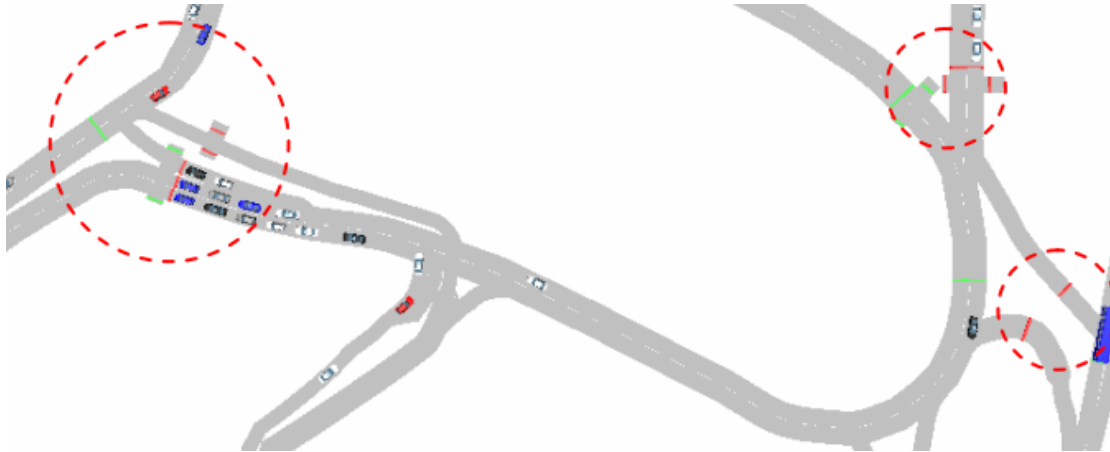
3.7 The design for the Dovecot gyratory area, which includes the access and egress point into the Dovecot (Sainsbury's) car park, is shown on drawing 14737/001/054C (Core Document CD3.10.6). An extract of this is shown below.



Sainsbury's position

3.8 At times, the car parks can generate up to 900 car movements (two-way) on a weekday with Saturdays (which have not been modelled by the Council's highway consultants) being significantly busier than weekdays (by a factor of two). The proposed Masterplan scheme at the proposed Dovecot Gyratory shows a change in priorities on the access road with the Sainsbury's and car park traffic being required to give-way to traffic on the proposed Parker Knoll Way / Archway / Bellfield Road gyratory. Entering traffic from the west, and egressing traffic, would be required to seek a gap in 2 lanes of traffic. The general strategy also suggests the local increase in traffic flows on Bellfield Road would be significant.

3.9 The model arrangement has been updated by the Council and is shown below. The proposed design drawings have not been updated to reflect the current model arrangement which now includes two outbound lanes from the Sainsbury's Car Park.



3.10 We understand that the proposed Dovecot Gyratory design has not been updated to reflect the principles of Manual for Streets 2, and the layout has not changed since the previous consultation at which time Sainsbury's objected to the arrangement in this area (2009 and 2011). We understand that the intention is for this to ultimately be revised to reflect the principles of Manual for Streets prior to implementation. We understand that the gyratory design will be revised after the EIP to comply with Manual for Streets 2. Notwithstanding that Sainsbury's have fundamental concerns regarding the current proposals for this area and the proposed changes to access to the Sainsbury's store, we are still further concerned by the potential for priority to be further taken away from Sainsbury's customers and the consequent reduction in attraction to the store.

3.11 Sainsbury's therefore consider the proposed access arrangements as proposed are not Justified. Insufficient evidence has been put forward to demonstrate the acceptable operation of the access for Sainsbury's customers and for visitors to the wider town centre generally. A full assessment of the Saturday period and consideration of alternative access arrangements, including both operational and safety implications, should be put forward before this could be considered to be Justified. This should include a comparison of the delay a customer would experience on approaching the store in the Do Minimum and Masterplan Scenarios.

3.12 Sainsbury's consultants have undertaken a review of the performance of the junction on a Saturday, as set out in Appendix C. It is concluded, that the currently proposed arrangement will not accommodate Saturday Demand flows. An alternative signalised arrangement has been considered. A signalised solution is likely to be required for the site access to operate satisfactorily on a Saturday.

The Council's position

3.13 The scheme design has been developed to provide an appropriate balance of priority between passing traffic and store traffic. This has been

tested through transport modelling as reported in Core Document CD3.10.19 *Traffic Forecasting and Assessment Report* which considers the performance of access and egress arrangements at this location during weekday peak periods using a micro-simulation modelling tool. Included within the appraisal framework developed to provide an understanding of the performance of the road network if the masterplan proposals were implemented, is an indicator relating to the performance of the Dovecot Gyratory (see paragraph 5.2.2 of CD3.10.19). The configuration of the gyratory has evolved during the assessment of the masterplan proposals. Further design and assessment work was undertaken during early 2012 (a brief for which was shared with Sainsbury's in November 2011) to address an issue identified in previous modelling work (although not raised in Sainsbury's representation during the 2011 consultation), of cars being delayed on exit from the car park in the PM peak period, due to constraints caused in part by the configuration of the signals at the Bellfield Road junction. Section 5.4.3 of CD3.10.19 concludes that following this further work the performance of both the gyratory in terms of queuing and the access and egress to the Sainsbury's store meet the defined network performance indicators. This is further demonstrated by supplementary queue length data and other technical data provided to Sainsbury's and other stakeholders during May 2012. Further data relating to link flows and turning flows, was also supplied to Sainsbury's following the meeting on 10th October 2012. It is the Council's position, supported by the highway authority, that the proposed arrangement of the gyratory operates satisfactorily in traffic capacity terms, for both passing and store traffic.

3.14 Sainsbury's representation refers to insufficient evidence to demonstrate the acceptable operation of the transport network despite the comprehensive modelling data that the Council has provided to them. It is our understanding that this statement therefore refers to the lack of a full Saturday scenario model, reflecting the level of traffic demand in the vicinity of the Sainsbury's store during the peak Saturday period. There is no evidence to suggest that a Saturday scenario has greater overall levels of traffic within the town centre. Appendix G of CD3.10.19 refers to the differences between the general levels of weekday peak period and Saturday peak traffic across the town centre. Further supporting technical detail regarding this issue was provided to Sainsbury's in May 2012³. The data shows that the weekday PM peak hour and not the Saturday peak hour corresponds to the period that the overall level of traffic passing, entering and exiting the town centre is highest. The weekday peak hours therefore provides the most appropriate assessment of the local road network. It is the Council's position that the development of a Saturday scenario model is therefore unnecessary.

3.15 In their response to the DSA consultation in 2011 Sainsbury's did request a full Saturday modelling scenario be undertaken but for the reasons set out above the Council considered this unnecessary. The draft

³ Supplementary data file: 'Saturday Background Traffic – Ratio Analysis'

brief for the next stage of technical assessment work was shared with Sainsbury's following the close of the consultation period (in November 2011 and January 2012), and showed that this was not being undertaken, but no comments were received from Sainsbury's before the formal commissioning of this work was progressed.

- 3.16 The proposed arrangement of the Dovecot Gyratory has not been designed to Manual for Streets standards, although the concept of reducing the number of existing signalised junctions, and minimising the introduction of new signals, is reflected in the scheme design. It is currently a concept level design and has been designed to a standard to inform the transport assessment undertaken. The level of detail and design work for the junction and road configurations is proportional to the stage in the process of scheme development and has been developed in order to inform the transport assessment work undertaken. In previous correspondence with Sainsbury's (namely through their previous representations on the DSA consultation), it has never been suggested that a signalised junction for car park access and egress should be included nor has it been requested to be modelled. This request was first specified in the meeting between the Council and Sainsbury's on 10th October 2012. Given the conceptual nature of the junction configuration proposals, there is scope to refine the form and function of junctions as part of detailed design work as the scheme designs progress towards implementation.
- 3.17 The outputs of the traffic modelling of the town centre indicate that the operation of the Dovecot gyratory in the Masterplan scenario is not "critical" or close to a "tipping point". Additional technical data supplied to Sainsbury's consultant in May 2012, including queue length data on each stop-line of the gyratory, supports this position⁴. The data in Appendix 1 demonstrates the mean maximum queue lengths on the Dovecot gyratory during the AM and PM peak times, in the masterplan scenario.⁵ Whilst queue lengths (travelling westbound) may, at times, stretch from the junction with Bellfield Road along Premier Way, this could be managed through the design of the junction, for example by providing a yellow box junction at the car park access point. In addition, the map demonstrates that there is not significant queuing within the gyratory itself and the introduction of a signalised junction at the car park entrance would not have a "knock-on" negative impact on other junctions within the gyratory system.
- 3.18 It is the Council's highway consultant's judgement that any further changes to the design and layout of the gyratory, including the installation of a signalised junction at the entrance to the car park, could be incorporated without having a fundamental or disproportionate negative impact on the operation of the town centre network as a whole. Although the Council has adopted the principle of designing the town centre network

⁴ 'STZ AM Masterplan.pdf' and 'STZ PM Masterplan.pdf'

⁵ This data is extracted from the information supplied to Sainsbury's in May 2012

to a Manual for Streets approach, and has adopted a position of trying to reduce the number of signalised junctions on the network, if further design and assessment work proves that such a signalised junction is required, then in principle this would be considered acceptable both by the Council and the highway authority

3.19 WDC have previously invited Sainsbury’s consultants to discuss the proposals including the form and function of the junctions in the vicinity of the store, although these opportunities have not been taken up by Sainsbury’s. Notwithstanding concerns from the Council’s transport consultant regarding the approach taken by Sainsbury’s in assessing the performance of the junction set out Appendix C, the Council and highway authority are committed to continuing engagement with Sainsbury’s and on how the form of these junctions might be improved to facilitate more optimal access and egress arrangements for Sainsbury’s customers and users of the Dovecot car park, in balance with the needs of other traffic. This could include further design and transport study work as part of an ongoing programme of scheme development work.

3.20 The DSA Plan itself does not specify the type of junction that should be provided at this location and the junction shown to date within the supporting evidence base (Drawing no.14737/001/054C (Core Document CD3.10.6) reflects a proportional level of detail and design work for the stage in the process of scheme development and to inform the transport assessment work undertaken. The Council does not believe that retaining flexibility on the future decision regarding the form of the junction into the Sainsbury’s car park renders the Plan unsound.

Agreed proposed changes to the Plan

3.21 The Council proposed to include within Appendix B of the DSA Plan text which indicates that further junction design and assessment work will be undertaken.

3.22 Sainsbury’s accept this as being a reasonable change to the plan to address the concerns raised.

3.23 The following change is proposed to Appendix B (additional text is shown in ***bold italic***; deleted text is shown as ~~struck through~~):

Appendix B

Ref.	Location	Proposed changes to Highway Network	Transport Improvement Line Required	
			New	Retain/ Amend existing
Phase 1(a) 2013-2018				
A.	Bellfield Road / Parker Knoll Way /	1) Reconfiguration of highway <i>Premier Way</i> , between Archway and Bellfield Road, to provide	✓	

	Glenisters Road / Archway / Premier Way	westbound only through traffic route		
		2) Provision of new junction at junction of Premier Way and access into Sainsbury's (Dovecot) car park. The format of junction is to be confirmed following further highway design and assessment work and consultation with stakeholders. This could include a priority arrangement or signalised junction.		
		3) Junction & traffic management changes to implement a gyratory system at Bellfield Road / Parker Knoll Way / Glenisters Road / Archway / Premier Way		

Area 4 – Appraisal of alternative options (submitted under Issue 2 - Reduction of passing trade to Sainsbury's Town Centre store, in representation DSA12/023)

Sainsbury's position

3.24 Paragraph 152 of the National Planning Policy Framework (NPPF) sets out the following requirements for local planning authorities when drafting local plans: *'Local planning authorities should seek opportunities to achieve each of the economic, social and environmental dimensions of sustainable development, and net gains across all three. Significant adverse impacts on any of these dimensions should be avoided, and wherever possible, alternative options which reduce or eliminate such impacts should be pursued.'*

3.25 The masterplan has adopted the principle of a single carriageway route along Abbey Way. However, such a route has not been promoted as a 'boulevard' type replacement route as Sainsbury's have previously put forwards for the Longer Term Masterplan.

3.26 The alternative long term boulevard route through the town centre would also be consistent with the principles of Manual for Streets 2 as required by the Council through policy HWTC3. Contrary to the requirements of Paragraph 152 of the NPPF this option along with other similar alternative options has not been pursued.

The Council's position

3.27 Within their representation Sainsbury's comment that a 'boulevard' type replacement route, as previously suggested by Sainsbury's, has not been

promoted by the Council. At the meeting on 10th October 2012 Sainsbury's confirmed that they considered this option could be delivered either at-grade along the existing alignment of the flyover (with the flyover demolished) or improvements made to the existing flyover (flyover retained). The first option was considered and dismissed as part of the option appraisal work undertaken on the town centre proposals. This is assessed as Scenario F in CD3.10.3 *Option Development and Appraisal Report*, and was dismissed on the grounds of deliverability and affordability. An option which retained the flyover as a boulevard-type dual carriageway has not been formally assessed with CD3.10.3 *Option Development and Appraisal Report*. However early option appraisal work identified that options which retained the flyover as dual carriageway and did not reduce traffic volumes in the Swan Frontage area and at Oxford Road roundabout, did not meet the objectives set for the town centre (see Chapter 3 of CD3.10.3). Therefore it is unlikely that an option which promoted environmental improvements to the existing flyover structure without reducing traffic volumes and the physical impact of the existing highway network would perform well against the appraisal criteria. CD3.10.3 sets out the significant number of options which have been appraised in developing the town centre proposals and how the results of these appraisals have influenced the development of the proposals. The Council therefore does not agree with Sainsbury's assertion that option appraisal has not been undertaken in line with paragraph 152 of the NPPF.

Agreed position

- 3.28 Following further discussions on this issue it is agreed that this is not a material consideration for the soundness of the Plan.
- 3.29 No changes are required to the DSA Plan

Area 5 – Delivery of the gas works link road (submitted under Issue 3 – Satisfactory rerouting of A40 is unachievable, in representation DSA12/023)
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Sainsbury's position

- 3.30 Sainsbury's expressed concern relating to the former gasworks site and the delivery of the gas works link road. Sainsbury's were concerned that the design of the route proposed by the Council (Core Document 3.10.5a - LPA Drawing Ref - B1279845/1 00/028) does not reflect the extant planning permission for the site and the provisions set out in the signed S.106 agreement. Sainsbury's also made reference to paragraph 5.33 of the High Wycombe Town Centre Masterplan Document (2012) which confirmed agreement with the owners of the site for the route of Rutland Street has not been agreed. Sainsbury's concluded that there is insufficient information available to satisfactorily conclude that this element of the rerouted highway network could be delivered as proposed.

The Council's position

- 3.31 Sainsbury's are correct to identify that extant outline permission for a link road connecting Suffield Road into Rutland Street remains valid as part of an outline permission granted in 2005 for site HWTC13 Lily's Walk (00/05788/OUT). A reserved matters application for the redevelopment of the site, submitted in 2008, remains undetermined by the Council (08/05875/REM). The existence of an existing outline permission which requires the details of the new road to be approved does not prejudice an alternative design being promoted and through on-going discussions with National Grid the Council and highway authority have worked hard to produce a new design acceptable to all parties (see Appendix 4 of CD2.2 and CD7.6 Statement of Common Ground between the Council and National Grid). No objection to the route has been submitted by the owners of Buckingham House.
- 3.32 There is an existing Transport Improvement Line (TIL) on the western edge of HWTC13 Lily's Walk and the eastern edge of HWTC14 Buckingham House which the proposed design follows in the majority, although some minor revisions will be required to the existing TIL. If the proposals within the DSA are found to be sound, the Highway Authority will proceed with the designation of the necessary TILs on receipt of the Inspector's report. The Council and highway authority will continue discussions with both National Grid and the owners of Buckingham House during the process of revising the TIL.
- 3.33 Policy HWTC13 and Policy HWTC14 require any re-development proposals for the site to provide the necessary land for a new link road. The extent of any highway works provided by either development will be determined through the development management process⁶. If the construction of the link road is required before any redevelopment proposals for either site come forward, the Council, in conjunction with the Highway Authority, will begin to negotiations for the land required for the link road when appropriate. If necessary the Council's may use their Compulsory Purchase Order powers to acquire lane. If highway works (including part or full provision of the link road) are not required to mitigate the redevelopment of either site, the link road will be delivered in partnership by the highway authority and the Council. Therefore the delivery of the link road is not dependent on the redevelopment of sites HWTC13 and HWTC14

Agreed position

- 3.34 Following further discussions on this issue Sainsbury's have withdrawn this objection to the plan.
- 3.35 No further changes are required to the Plan

⁶ See proposed changes FC17 in CD7.2 Index of Further Changes

Area 6 – Unjustified programme for delivery of rerouting, including delivery of Westbourne Street Link (submitted under Issue 4 in representation DSA12/023)

Sainsbury's position

3.36 Sainsbury's identified that the rerouting of the town centre highway network requires the construction of a number of new road elements to be delivered through the redevelopment of sites allocated in the consultation document. Due to complexities associated with the delivery of these sites Sainsbury's considered the programme outlined for the delivery of the highway works was unlikely to be met.

3.37 For the reasons outlined above, Sainsbury's considered there were a number of fundamental issues that required resolving prior to redevelopment of the former Gasworks (HWTC13) and that the anticipated delivery of the site from 2013 onwards was not therefore considered realistic.

3.38 The redevelopment of Baker Street (HWTC18) is also fundamental to the delivery of the rerouted road network, with the timing of the development anticipated to be 2013 onwards in the consultation document. Paragraph 3.131 outlines the Council's aspiration to relocate the fire station to Baker Street to facilitate the comprehensive redevelopment the Swan Frontage Site (HWTC10). Whilst the site is owned by the Council and availability is not in question, the consultation document makes clear that the required testing for the suitability of Baker Street to accommodate the fire station has not yet been undertaken. Therefore, without the background work necessary to bring forward the redevelopment of Baker Street Sainsbury's stated that the Council's anticipated timing for delivery could not be justified

3.39 In addition, the rerouting requires delivery of new road to the north of the town centre outside of the development plan area illustrated as on map 1 a of the consultation document. The provision of this element of the road network has not been defined and the timescales and delivery mechanisms are unclear.

The Council's position

3.40 The provision of the alternative route also requires the construction of the Westbourne Street Link road. This link road passes through the north-eastern section of the Baker Street site (HWTC18) and adjacent to the Rapid House site (HWTC19) and is in the Council's ownership. Following the receipt of the Inspector's report, a Transport Improvement Line will be designated for this link. It is proposed that policy HWTC18 requires any redevelopment proposals for the site to provide the land necessary for the provision of the link road and any highway works to be consistent with the

requirements of Policy HWTC3.⁷ The delivery of this link road is therefore not dependent on the redevelopment of the Baker Street site.

- 3.41 The DSA identifies site HWTC18 as a potential location for a re-located fire station (but does not allocate it for such a use). Further work is required to assess the suitability of HWTC18 as a site for the fire station. However the delivery of the link road is not dependent on the re-location of the fire station.
- 3.42 The Council has been working on developing a five-year implementation programme, an outline of which is set out in Appendix 6 of Core Document CD2.2. Chapter 8 of CD2.2 also identifies potential funding sources for the first five-year implementation programme (delivery of the alternative route). The total cost for the first five year programme is £5.365M - £6.415M. Funding sources identified include existing Section 106 monies and funding through the Council's Community Infrastructure Levy (see Section 9 of CD1.12; CD5.4.1; CD5.4.2). Most recently, on 5th November 2012 Wycombe District Council's Cabinet recommended the approval of the Council's Capital Programme 2013/14 – 2016/17 which included an allocation of £1.2M towards the implementation of the town centre proposals. It is recognised that not all of these funding sources are guaranteed at this stage but the Council has reasonable confidence at this stage that the funding and implementation of Phase 1 is realistic. It should also be noted that the funding identified does not include any on-site infrastructure provision from the development of either HWTC13 Lily's Walk or HWTC18 Baker Street.
- 3.43 Sainsbury's response identifies a new road link to the north of the town centre as shown on Map 1. This is the Hughenden Spine Road which is an existing improvement line and is listed in appendix A of the DSA. It is an important part of Core Strategy policy CS4.2⁸ for the Hughenden District and the provision of this road is an integral part of proposals for the redevelopment of the Hughenden District. The provision of this road is outside the scope of the town centre masterplan proposals and will be delivered through a different but complementary implementation process. Planning permission was granted for the provision of the southern section of this road in 2010 and the Council initiated Compulsory Purchase proceedings in 2012 to secure a section of the route not in its ownership.
- 3.44 In parallel with the progression of the DSA through the statutory processes, the Council and the highway authority, in conjunction with Jacobs, have been progressing the design work for the alternative route and a timetable for the submission of planning applications and outline timetable for construction. It is currently anticipated that planning applications for the Gas Works link road and Westbourne Street Link will be submitted on receipt of the Inspector's report, if the proposals within the DSA are found to be sound.

⁷ This will shortly be proposed as a change to Policy HWTC18 to the Inspector to ensure consistency of approach to the delivery of highway works across the town centre.

⁸ CD 5.2.1 *Wycombe Core Strategy* pg.34

Agreed position

3.45 Following further discussions on this issue Sainsbury's have withdrawn this objection to the plan.

3.46 No further changes are required to the Plan

4 Areas of Dispute

Issue 1 – Reduction of passing trade to Sainsbury’s town centre store

(submitted under Issue 2 - Reduction of passing trade to Sainsbury’s Town Centre store, in representation DSA12/023)

Sainsbury’s position

4.1 The dramatic reduction in passing traffic in the Oxford Road/Dovecot area from the rerouting of traffic will result in a significant decline in the level of trade the Sainsbury’s store will be able to attract. It is commonly accepted that 30% of customers to a store will be attracted from passing traffic (vehicles which are on the local road network). This should not be confused with pass-by traffic (vehicles which are on the road from which the store is accessed).

4.2 Appendix A of 'Traffic Forecasting and Assessment, Jacobs, April 2012' provides link flow data by direction for the principal town centre roads. While insufficient data is available to undertake a precise analysis, an estimate has been made of the numbers of unique vehicles passing the store the adjacent roads (Archway, Oxford Road, Bellfield Road and Parker Knoll Way). We understand that the number of unique vehicles passing the site are anticipated to be as follows in the PM peak hour:

- Do Minimum c.4,300 vehicles per hour
- Masterplan c.3,100 vehicles per hour (28% reduction)
- Longer Term Masterplan (post 2026) c.2,800 vehicles per hour (35% reduction)

4.3 Notwithstanding our concerns regarding access arrangements, we anticipate that the reduction in passing traffic of around 30% will result in a significant overall reduction in passing trade. This a substantial concern for Sainsbury’s.

4.4 In the Council’s position, they make the statement at paragraph 4.17 that: *“In the masterplan scenario, CD3.10.19 demonstrates that the combined total of traffic on Bellfield Road and passing the entrance to Sainsbury’s on the Dovecot Gyrotory is 2,750 vehicles per hour. This represents an increase of around 30%”*. To be completely clear and to avoid any confusion, this data relates to pass-by traffic. The assessment presented in the Sainsbury’s position relates to a 30% reduction in passing traffic and trade.

4.5 As currently proposed it is not considered that the plan is consistent with these national planning policy requirements. The proposed approach to substantially reroute traffic away from the town centre will result in a *'significant adverse impact'* on the Sainsbury’s store that can be avoided, or at least reduced. Taking account of the policy guidance set out at Paragraph 8 of the NPPF, it is clear that sustainable development is to be achieved through the *'simultaneous pursuit'* of economic, social and

environmental gains. Further relevant guidance is set out in Paragraph 15 of the NPPF stating *'all plans should be based upon and reflect the presumption in favour of sustainable development'*. On this basis, it is considered the proposals for High Wycombe town centre as currently drafted have an adverse economic impact on the Sainsbury's store and the town centre. As such, the proposals are unsustainable and not Consistent with national planning policy guidance.

4.6 It is understood that the retention of the Abbey Way route may in practice carry a greater amount of traffic than has been modelled; this traffic would have diverted from the Queen Alexandra Road Route. This would increase the amount of traffic passing the Sainsbury's store.

4.7 Jacobs provided a series of deterrence factors which had been applied to the Abbey Way Route in addition to the effects that time and distance would have on driver journey choice. These factors varied between 100 and 300 seconds. This is an extraordinarily high penalty to apply to a model which is testing a future network arrangement. We would expect such deterrence to be dealt with by changing vehicle speed for individual events around the network.

4.8 A first principles review of the attractiveness of each route has been undertaken and the results are summarised below for routes from the A40 (south east) to A40 (north west) and for routes from the A40 (south east) to Bellfield Road (north west)

Alternative Routes From Queen Alexandra Road / A40 To Westbourne Street / West Wycombe Road

Event	Subjective Scale of Deterrence	Route 1 - Queen Alexandra Road		Route 2 - Abbey Way	
		Count	Total Deterrence	Count	Total Deterrence
Side Junction	0.5	7	3.5	3	1.5
Crossing	2	8	16	2	4
Intermediate Junction	2	3	6	0	0
Major Junction	5	2	10	5	25
Total Events		20	35.5	10	30.5
Length			1,047m		821m
Ratios (as %) of events of Queen Alexandra Road vs Abbey Way					116%
Ratios (as %) of length of Queen Alexandra Road vs Abbey Way					128%

Alternative Routes From Queen Alexandra Road / A40 To Bellfield Road / West Wycombe Road

Event	Subjective Scale of Deterrence	Route 1 - Queen Alexandra Road		Route 2 - Abbey Way	
		Count	Total Deterrence	Count	Total Deterrence
Side Junction	0.5	7	3.5	3	1.5
Crossing	2	8	16	2	4
Intermediate Junction	2	3	6	0	0
Major Junction	5	2	10	5	25
Total Events		20	35.5	10	30.5
Length			1,212m		676m
Ratios (as %) of events of Queen Alexandra Road vs Abbey Way					116%
Ratios (as %) of length of Queen Alexandra Road vs Abbey Way					179%

4.9 In the above analysis, a subjective scale of deterrence has been applied to a number of types of events. This is purely subjective based on engineering judgement and experience. However, this is considered to be an appropriate way to understand the relative attractiveness of each route, that has otherwise been distorted by the arbitrary weightings added by Jacobs.

4.10 In each case, the Abbey Way route is the more attractive option from both a straight forwards comparison of distance, and a comparison of the number of events which may affect a driver's perception of a route. The analysis suggests that a driver may perceive Abbey Way as slightly more attractive than Queen Alexandra Road for journeys to/from the west. Similarly, a driver may perceive Abbey Way as significantly more attractive than Queen Alexandra Road for journeys to/from the north.

4.11 Based on this review it is reasonable to conclude that for the, say, 1,350vph making this cross town journey that a split of somewhere in the region of 60:40 or 70:30 in favour of Abbey Way could be expected. While testing a higher level of vehicular traffic on the alternative route, provides assurance to the highway authority regarding the robustness of the alternative route to take higher levels of traffic if necessary, this should only be a sensitivity test, not the default position given the apparent attractiveness of each route.

4.12 Whilst the Council have sought to justify the additional weighting as standard practise, Sainsbury's position is simply that the level of weighting should be realistic and appropriate. If that weighting is not realistic and appropriate to the likely physical measures being proposed then a different balance of traffic flow will result and this will influence the performance of the junctions and their ability to accommodate the flow. The Council have not undertaken this assessment and therefore do not know whether their network has sufficient robustness to accommodate these changes.

4.13 To reflect the level of confidence in the modelling of individual junctions carried out to date, and to protect sufficient flexibility for future design revisions, Sainsbury's proposed the following changes to Appendix B of the DSA Plan as set out below. The Council have subsequently rejected these changes although they have not provided any evidence to justify that the weightings applied are realistic for the measures that could be considered, or (as far as we understand) tested any alternative traffic assignments to prove the junctions could operate satisfactorily.

Appendix B

Ref.	Location	Proposed changes to Highway Network	Transport Improvement Line Required	
			New	Retain/ Amend existing
Phase 1(a) 2013-2018				
B.	Junction of Bellfield Road / West Wycombe Road	1) Re-configured junction with mini roundabout	✓	
		2) Re-configured Bellfield Road with two lanes (each 3m wide) provided going northbound and southbound separated by a continuous median strip		
Phase 2				
R.	Junction of Oxford Road / Archway	1) Reconfiguration of junction, including removal of Oxford Road roundabout, into crossroads type junction / Archway Junction 2) Junction retains access to Eden car park and service yard	✓	
T.	Oxford Road (between Oxford Road roundabout & Bellfield Road)	1) Reconfiguration of highway to provide single carriageway going eastwards & westwards with two lanes approaching junction with Bellfield Road 2) Reconfigured raised table at the junction of Bridge Street & Oxford Road 3) Wide boulevard design, with planting, pedestrian crossing points, taxi ranks and new bus lay-by and bus stop (adjacent to Marks & Spencer)	✓	

4.14 If the Council are able to re-run their assessments to demonstrate that they do have sufficient flexibility to make the changes in the form they have described without the proposed changes to policy set out above then that would give reassurance that a proper assessment has been undertaken. Without evidence to support the weighting or additional testing we believe that the scale of the residual cumulative impacts of

development cannot be determined from the Evidence Base. It is therefore our view that the Plan is unsound.

The Council's position

- 4.15 Through the DSA, the Council is planning for the long-term economic prosperity of the town centre. A key consideration of this is ensuring that the highway network operates efficiently and does not deter existing and prospective visitors for coming to and accessing the town centre and its services. In this context, the Council is not planning to maintain existing or future vehicle levels on specific routes or by specific sites or locations but rather to ensure that the town centre is accessible and the network operates satisfactorily as a whole.
- 4.16 The DSA's proposals for changes to the town centre road network aim to reduce the physical impact of the highway network on the environmental quality of the town centre to improve its economic attractiveness, including as a shopping destination. This includes improving the town centre for pedestrians and cyclists. The Sainsbury's store will benefit from the improved pedestrian environment in the vicinity of the store, including improved pedestrian connectivity to the Eden Centre, the Bus Station and the Frogmoor area.
- 4.17 In relation to revised vehicular movements, the reduction in congestion and removal of signals in the vicinity of the existing Oxford Road roundabout should be considered a further benefit to the attractiveness of the store, benefitting customers of Sainsbury's. The retention of a single carriageway Abbey Way flyover also ensures that the potential to pass and access the store from Oxford Road and Archway is retained. In addition, the masterplan proposals re-align the primary strategic north-south route directly past the entrance to the store (for traffic travelling southbound from the A4128) and in very close proximity to the car park access for vehicles travelling northbound on Bellfield Road or Archway. The Council's highway consultant has advised that at present the two-way volume of traffic on Bellfield Road is 1,100 vehicles in the PM peak hour and the northbound traffic volume on Archway is around 1,000 vehicles, giving a combined total of "pass-by" traffic of 2,100 vehicles per hour. In the masterplan scenario, CD3.10.19 demonstrates that the combined total of traffic on Bellfield Road and passing the entrance to Sainsbury's on the Dovecot Gyratory is 2,750 vehicles per hour. This represents an increase of around 30%.
- 4.18 Sainsbury's have not provided any evidence to substantiate the claim that their estimate of a 30% reduction in passing traffic will result in a "significant overall reduction in passing trade" (para. 4.3).
- 4.19 The Council does not consider Sainsbury's position that the proposal is inconsistent with the NPPF as it will reduce passing traffic past a particular store, to be a justified planning argument based on the tests of soundness

set out in paragraph 182 of the NPPF or any other part of the NPPF. Indeed the DSA puts forward positive policies and proposals promoting a competitive town centre environment in line with paragraph 23 of the NPPF.

- 4.20 Within their original response (DSA12/023) Sainsbury's commented that a more appropriate solution to the balance of traffic through the town centre may be to seek to evenly balance demand across the two routes (Abbey Way flyover and Queen Alexandra Road route). In their opinion this would result in a lower (but still material) detriment to Sainsbury's trade draw. As a result of on-going discussion Sainsbury's have also proposed changes to Appendix B to protect sufficient flexibility for future design revisions, if traffic levels on the flyover route prove to be higher than currently anticipated.
- 4.21 The proposed changes suggested by Sainsbury's are at odds with the objectives for the town centre as a whole and in particular with the policy objectives for HWTC2 Town Centre Environment, HWTC3 Connections, Movement and Access, HWTC10 Swan Frontage and HWTC16 Oxford Road roundabout area. They also do not contribute to the effectiveness of policy HWTC3.
- 4.22 The DSA's proposals for changes to the town centre road network aim to reduce the physical impact of the highway network on the environmental quality of the town centre to improve its economic attractiveness, including as a shopping destination. The areas at HWTC10 Swan Frontage and HWTC16 Oxford Road roundabout play an integral role in the integration of the older and newer parts of the town centre and the proposed designs for these areas provide for better pedestrian connectivity and the opportunity for the provision of new and/or improved public space and additional development opportunities. In relation to revised vehicular movements, the reduction on congestion and removal of signals in the vicinity of the existing Oxford Road roundabout should be considered a further benefit to the attractiveness of the store, benefitting customers of Sainsbury's.
- 4.23 The objectives and design principles set out in policies HWTC1, HWTC2, HWTC3, HWTC10 and HWTC16 have informed the proposed design, include the necessary highway changes, of the Oxford Road roundabout area and the Swan Frontage (shown indicatively in Figures 4-9), supported by the provision of the alternative route to take the majority of through traffic movements which currently use the Abbey Way flyover. Although the flyover will be retained as a single carriageway through route, the junctions at Oxford Road roundabout and Swan Frontage will be designed to give increased priority to pedestrians and public realm improvements, which in itself could act as a deterrent to drivers who assume that the flyover remains as the most direct and attractive route for vehicles. The flexibility to allow for a redesign of these areas to accommodate greater levels of traffic movements as suggested by

Sainsbury's would be at odds with the policy objectives for HWTC16 and HWTC10.

- 4.24 The traffic assessment serves to demonstrate that the single carriageway Abbey Way flyover and the alternative cross-town route can in combination accommodate the level of traffic forecast to cross the town in peak periods. Furthermore, supplementary information has been supplied to Sainsbury's at their request to demonstrate the level of performance of the concept junction design at the existing Oxford Road roundabout.⁹ The information, which appears not to have been acknowledged by Sainsbury's consultants in their response, demonstrates minimal queuing on the approaches to the junction and therefore adequate capacity to accommodate higher levels of traffic volume should these materialise on the single carriageway Abbey Way flyover. The assessment therefore demonstrates the robustness of the cross-town road network in accommodating the traffic volumes.
- 4.25 Sainsbury's have questioned the split of vehicular traffic assigned within the modelling work between the flyover and the alternative route, via Queen Alexandra Road and Desborough Road. A level of "cost" at the junctions at the either end of the flyover (Oxford Road roundabout and Swan Frontage) in the masterplan scenario was assigned within the modelling work which acts as an influence on the routing choice of vehicles. The use of surcharges to reflect the attractiveness of routes within a micro-simulation model is an industry-standard approach and is an appropriate method to reflect the attractiveness of the Abbey Way flyover and the adjacent junctions in the context of the overall objectives of the masterplan. This is considered a more robust approach to reflect the attractiveness of the routes than the purely 'subjective' approach undertaken by Sainsbury's transport consultants set out above.
- 4.26 Information on the level of cost applied in the model was supplied to Sainsbury's transport consultant following a request at the meeting on 10th October 2012. The decision on the level of cost applied is realistic and appropriate at this early concept stage in junction and link design. There is no guidance that limits the application of cost surcharges in a micro-simulation model and it is standard consultancy practice to apply much higher levels of cost surcharges of up to 5000 for example within micro-simulation models to reflect factors such as route signage. There are numerous recent examples within the industry to demonstrate that the costs applied in this model are therefore not 'extraordinarily high'.
- 4.27 The "cost" applied within the town centre model results in a higher level of vehicles choosing to use the alternative route. In reality, the volume of traffic utilising the single carriageway Abbey Way flyover proposed as part of the Masterplan will be influenced by future decisions about detailed design aspects regarding the form and function of the revised Oxford Road

⁹ See supplementary information set out in Appendix B (note produced by Jacobs and supplied to Sainsbury's

roundabout and the area between Buckinghamshire New University and the Swan Frontage – and driver behaviour in response to these. The decision on the level of cost applied in the model is therefore realistic and appropriate at this early concept stage in junction and link design.

4.28 By testing a higher level of vehicular traffic on the alternative route, this also provides assurance to the highway authority regarding the performance of the alternative route to provide for higher levels of traffic if necessary, for example if the flyover was required to be closed temporarily or the flyover was to close completely in the years beyond the end of the plan period. However of most significance at this stage of the process, is that the assessment undertaken has tested the capacity of the overall network and demonstrated that the two routes together can accommodate east-west traffic movements through the town centre. Future decisions on the exact design of the network will inform the balance of traffic achieved on the two routes. Therefore further assessment work with the weighting removed or with alternative traffic assignments, as suggested by Sainsbury's transport consultant, is considered unnecessary and inappropriate.

4.29 The Council is not proposing any changes to the Plan in relation to this issue.

<p>Issue 2 – Satisfactory rerouting of A40 is unachievable (submitted under Issue 3 in representation DSA12/023)</p>

Sainsbury's position

4.30 From the analysis of the information available it is expected that the proposed alternative A40 routing will restrict traffic movements and increase congestion, adversely impacting on town centre visitors. Consequently, it is highly probable that visitor travelling to the town centre by car will be deterred and diverted towards out of town retail destinations instead.

4.31 Traffic flow through the town centre is currently constrained by the limited capacity at junctions on the edge of the town centre (a 'gating' effect). This gating is a result of the natural capacity of those junctions and is not artificially introduced to limit traffic flow on town centre roads. The proposed masterplan does not resolve or reduce this gating effect.

4.32 Through on-going discussion with Jacobs, it is understood that the total traffic growth in the Do Minimum, Masterplan and Longer Term Masterplan Scenarios was fixed at the same level to allow a comparative test of the respective road networks; this is some 17% growth relative to existing traffic flows. Reference should be made to CD3.10.19 'Traffic Forecasting and Assessment, Jacobs, April 2012' and particularly sections 3.3 and 3.4.

- 4.33 The level of traffic growth in all scenarios was set by the Longer Term Masterplan Scenario, which is not part of the proposed Plan and would have had a greater level of restriction within the town centre. Reference should be made to Table 3-B and Appendix F of CD3.10.19 for evidence of this fact.
- 4.34 In the Longer Term Masterplan Scenario, all traffic growth in the model is associated with Development in the town centre, and it is understood that the Council promote this as a realistic future scenario.
- 4.35 In the Masterplan Scenario, some 70-75% of all traffic growth in the model is associated with Development in the town centre. This is equivalent to a total traffic growth of some 12-13% growth relative to existing traffic flows. The remaining 25-30% of traffic growth (4-5% growth relative to existing traffic flows) is added to the model to allow the operation of the Masterplan and Longer Term Masterplan Road Networks to be compared with equal traffic flows. It is understood that the Council does not promote this level of traffic growth as a realistic future scenario, but rather that the actual Masterplan Scenario would result in only the 70-75% of modelled traffic growth which is directly related to Town Centre Development.
- 4.36 In the Do Minimum Scenario, some 18-20% of all traffic growth in the model is associated with Development in the town centre. This is equivalent to a total traffic growth of some 3% growth relative to existing traffic flows. The remaining 80-82% of traffic growth (14% growth relative to existing traffic flows) is added to the model to allow the operation of the Do Minimum and Masterplan Road Networks to be compared with equal traffic flows. It is understood that the Council does not promote this level of traffic growth as a realistic future scenario, but rather that the actual Do Minimum Scenario would result in only the 18-20% of modelled traffic growth which is directly related to Town Centre Development.
- 4.37 So, in summary the following levels of actual traffic growth would be realistic level of growth which could be expected to prevail:
- Do Minimum Scenario: 3% (c.250 trips)
 - Masterplan Scenario: 12-13% (c. 950 trips)
 - Longer Term Masterplan: 17% (c.1350 trips)
- 4.38 We understand that the 17% is derived from the work presented in CD3.10.15 and 16. However, that work is in practice a 'With Development' scenario, testing the impact of the level of growth in the Core Strategy. This has been taken as the Do Minimum situation in the DSA modelling. The DSA should consider the impact of the development allocated within it, and therefore the Do Minimum should not include this growth in practice, as it is the impact of this growth that should be assessed.
- 4.39 From the evidence submitted, the following conclusions can therefore be drawn:

- The Evidence Base seeks to demonstrate that the Do Minimum and Masterplan Road Networks can accommodate the same level of road traffic in the Town Centre (broadly speaking, subject to detailed consideration of individual junctions and route choice)
- The Evidence Base does not address the true performance of the Do Minimum scenario in a true planning sense; that is the conditions which would prevail if the Masterplan were not brought forwards; traffic flows are overestimated by some 1,100 trips on the network.
- The Evidence Base does not address the true performance of the Masterplan scenario in a true planning sense; that is the conditions which would prevail if the Masterplan were brought forwards; traffic flows are overestimated by some 400 trips on the network.

4.40 Ultimately therefore the Impact of the Town Centre Masterplan Development has not been assessed. The comparisons which have been drawn CD3.10.19 do not reflect the actual performance of the true Masterplan Scenario relative to the true Do Minimum Scenario. Appropriate transport mitigation measures and strategies have therefore not been identified in the Plan.

4.41 To demonstrate the ramifications of this fact, the queuing on Marlow Hill can be examined. CD3.10.17 'Local Model Validation Report, Jacobs, March 2011' sets out existing queuing in Figure 4-B and 4-C. CD3.10.19 sets out anticipated queues in Figure 5-G in the modelled Do Minimum and Masterplan Scenarios. Extracts from these Figures are provided below for ease of Reference.

Extract from CD3.10.17 Figure 4-B: Existing AM Queues

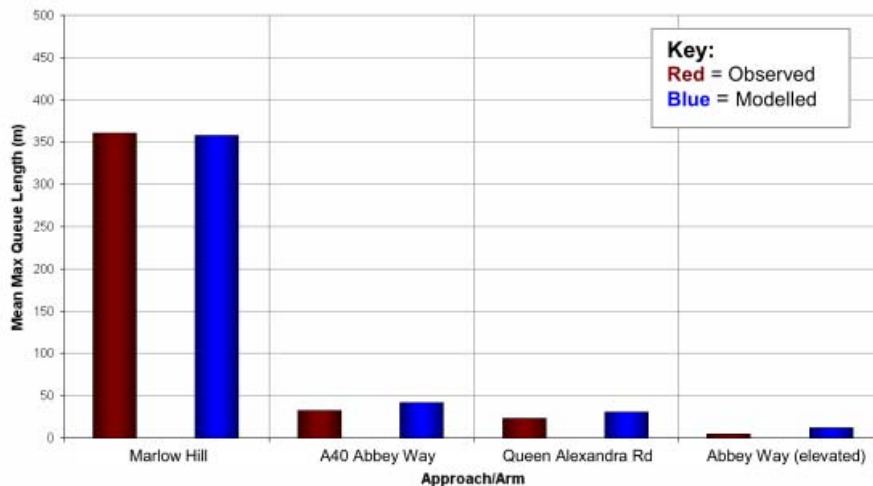


Figure 4-B Queue Length Validation AM Peak

Extract from CD3.10.17 Figure 4-C: Existing PM Queues

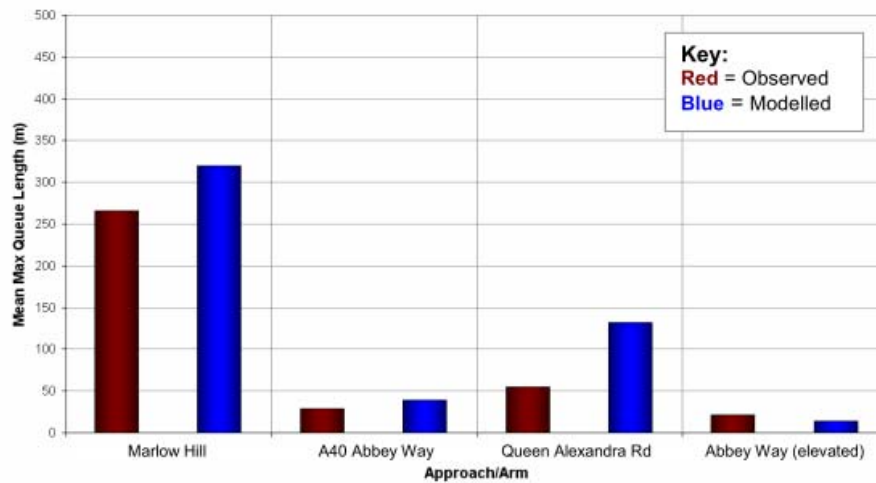


Figure 4-C Queue Length Validation PM Peak

Extract from CD3.10.19 Figure 5-G: Modelled Future Queues

Marlow Hill Queue Lengths

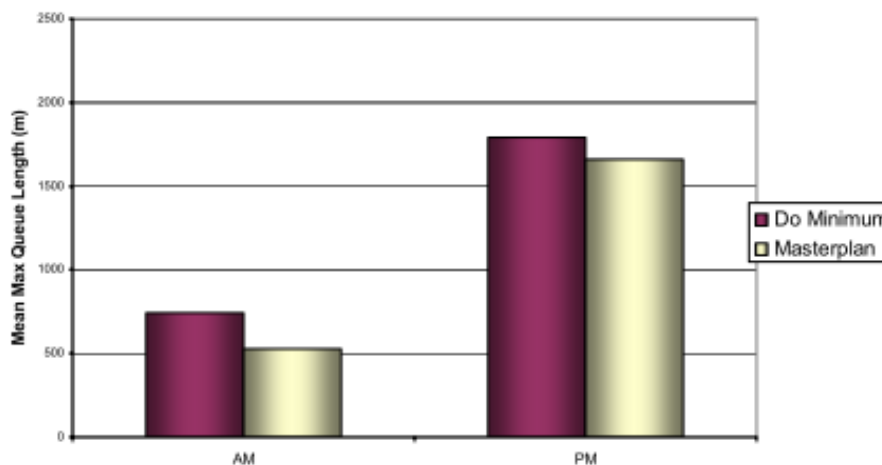


Figure 5-G Queue Length – Marlow Hill (northbound)

4.42 Evidently, existing PM queues on Marlow Hill are in the region of 250-300m in length. The Modelled Do Minimum Scenario shows vehicle queues of some 1,800m and the Modelled Masterplan Scenario shows vehicle queues of some 1,700m.

4.43 At face value, this data suggests that the Masterplan Scenario performs no worse than the Do Minimum Scenario. However, some 80-82% of the traffic growth included in the Do Minimum model (some 14% growth relative to existing traffic flows) is not expected to in fact arise in prevailing conditions. Queuing in the true Do Minimum situation, against which the development in the Town Centre Masterplan should in fact be assessed, could be expected to be closer to 500m as the true Do Minimum would attract only some 3% additional traffic compared to existing conditions.

- 4.44 In the Masterplan Scenario, some 25-30% of the traffic growth included in the Masterplan model (some 4-5% growth relative to existing traffic flows) is not expected to in fact arise in the Masterplan. Queuing in the true Do Minimum situation, against which the development in the Town Centre Masterplan should in fact be assessed, could be expected to be closer to 1,300m as the true Do Minimum would attract some 12-13% additional traffic compared to existing conditions.
- 4.45 So, the Development associated with the Town Centre Masterplan can be expected to increase queuing on Marlow Hill by some 800m relative to a true Do Minimum Scenario based on conditions which would otherwise prevail (including committed developments). This is a single example of the effect of this issue.
- 4.46 The Council are seeking approval to allocate sites within the town centre for development and make changes to the town centre network. The Council have also stated that 'A key consideration of this is ensuring that the highway network operates efficiently and does not deter existing and prospective visitors for coming to and accessing the town centre and its services'. However their modelling does not realistically assess the impact of the changes in development flows or identify the way in which customers will travel in the future. They have argued that removal of the gating effect may not be appropriate and would lead to more traffic within the town. There is however no explanation of how they will achieve a change in mode of travel and the measures required to deliver that change.
- 4.47 Without any such evidence the retailers within the town centre are being asked to agree to a set of proposals that will add traffic to the town and a significant amount of additional congestion. Congestion is indiscriminate and will affect existing customers to the town and reduce the trips to the new uses proposed in the town. This is no way to create a successful town centre.
- 4.48 The Evidence Base therefore does not assess the significant impacts of the development, and does not demonstrate that improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. The scale of the residual cumulative impacts of development cannot be determined from the Evidence Base, but is far greater than promoted by the Council.

The Council's position

- 4.49 The Council's are not proposing to re-route all traffic from the current A40, rather the plan as put forward provides an alternative additional cross-town route, not a replacement of the existing route. It is unclear how the analysis presented by Sainsbury's consultants relates specifically to their representation that the satisfactory re-routing of the A40 can be achieved. Furthermore, the entire analysis is based on their

misunderstanding of the position with regard to the Wycombe Core Strategy¹⁰ and how this informs the traffic forecasting methodology.

- 4.50 First of all, the analysis presented in the Council's evidence base demonstrates that the masterplan proposals will improve routing options and open up more direct and efficient journeys for traffic within the town centre. The reports are similarly clear in demonstrating the impacts of the masterplan proposals on congestion and delay, in absolute terms and in comparison with the Do Minimum scenario.
- 4.51 It is not the objective or stated purpose of the masterplan proposals to address all actual and perceived traffic issues within the town and in particular to address the current "gating" of traffic as it enters the town centre network. The current "gating" of traffic on Marlow Hill is a function of the current highway layout, existing junction arrangements, and pattern of current traffic demand. Gating can be an appropriate part of an overall traffic management strategy in order to manage the throughput of traffic and ensure that any resulting queuing does not affect the performance of other areas of the transport network resulting in wider strategic issues. The knock-on impacts of releasing 'gated' traffic could be to adversely affect other more sensitive locations and would therefore not be an appropriate measure as part of an overall strategy for an urban area. The masterplan proposals do not seek to remove this "gating mechanism" and within their representation Sainsbury's have not justified why this would be an appropriate measure or how this might be achieved in practice.
- 4.52 A concern raised by Sainsbury's in the meeting of 10th October 2012 was that no strategic modelling evidence was available to support the town centre proposals. The strategic modelling assessment is set out within Core Documents CD3.10.14 – CD3.10.16. These documents have been in the public domain for a number of years and have been part of the material published to support previous rounds of consultation on the DSA Plan. In addition core documents CD3.10.17 and CD3.10.19 set out the assessment undertaken using the town centre micro-simulation model. A significant amount of detailed technical data was also supplied to Sainsbury's in May 2012.
- 4.53 Sainsbury's have not engaged with the Council on this issue prior to October 2012, despite efforts from the Council and the Council's transport consultant to do so. It is also clear that Sainsbury's consultants had not read all the supporting evidence base for the town centre proposals, and in particular the strategic modelling reports, to inform their position, prior to October 2012. At and following the meeting on 10th October 2012 the Council's transport consultant has engaged with Sainsbury's transport consultant to explain the approach taken. In further correspondence on the 29th and 30th November, it was apparent that the key strategic modelling document CD3.10.16 had still not been reviewed by Sainsbury's consultants.

¹⁰ CD5.2.1 Wycombe Core Strategy

- 4.54 Sainsbury's transport consultants have requested additional information to inform their position at this late stage which has been supplied to them. Given the extent of technical evidence that has been published in support of the Council's approach and the more recent direct engagement between the two transport consultants the Council is disappointed that Sainsbury's maintain their position that the evidence base remains insufficient.
- 4.55 Sainsbury's have concerns regarding how suppressed demand is dealt with in the transport assessment, particularly in view of the forecast queuing on Marlow Hill. The overall network performance statistics reflect the full traffic demand, including the queued traffic on Marlow Hill and therefore the comparative assessment between Do Minimum and Masterplan is valid. The reduction in traffic volumes travelling cross-town is not a result of trip suppression as suggested by Sainsbury's consultants, rather this is a function of the type and distribution of trips that are forecast for the town centre. This is explained further in Appendix B. Queuing on Marlow Hill is a known existing issue that the masterplan does not influence or exacerbate and it is also notable that the Highways Agency has not objected to the proposals.
- 4.56 Sainsbury's have raised a concern relating to the level of growth in trips assumed within the Do Minimum and Masterplan scenarios. The level of traffic in the Do Minimum and Masterplan scenarios is a function of the type of traffic growth that is forecast for High Wycombe town centre. Strategic modelling, undertaken during the development of the adopted Core Strategy and DSA, demonstrated that overall traffic levels within High Wycombe are predicted to rise by approximately 16% in the period from 2006 to 2026 (see CD3.10.16).
- 4.57 Sainsbury's state that they consider the level of assumed growth to be too high because it is based on the inclusion of future Core Strategy growth. It is essential that the implications of an adopted Core Strategy in terms of overall growth levels are incorporated into the strategic modelling assessments.
- 4.58 The Council's do not agree that the forecasting approach suggested by Sainsbury's is a suitable test of the proposals. It would be irresponsible to the Council's not to account for future growth within the plan period as per the adopted Core Strategy. Notwithstanding this, the conclusion that can be drawn from Sainsbury's representation is that the traffic performance would be markedly better than that shown in the Jacobs assessment. This should provide Sainsbury's with greater confidence that the level of traffic performance will therefore be an improvement on that presented in the report.
- 4.59 Furthermore, it is noted that the analysis and conclusions presented by Sainsbury's as evidence related to Issue 2 contradicts the evidence submitted under Issue 1 (paragraphs 4.2 and 4.3). Sainsbury's

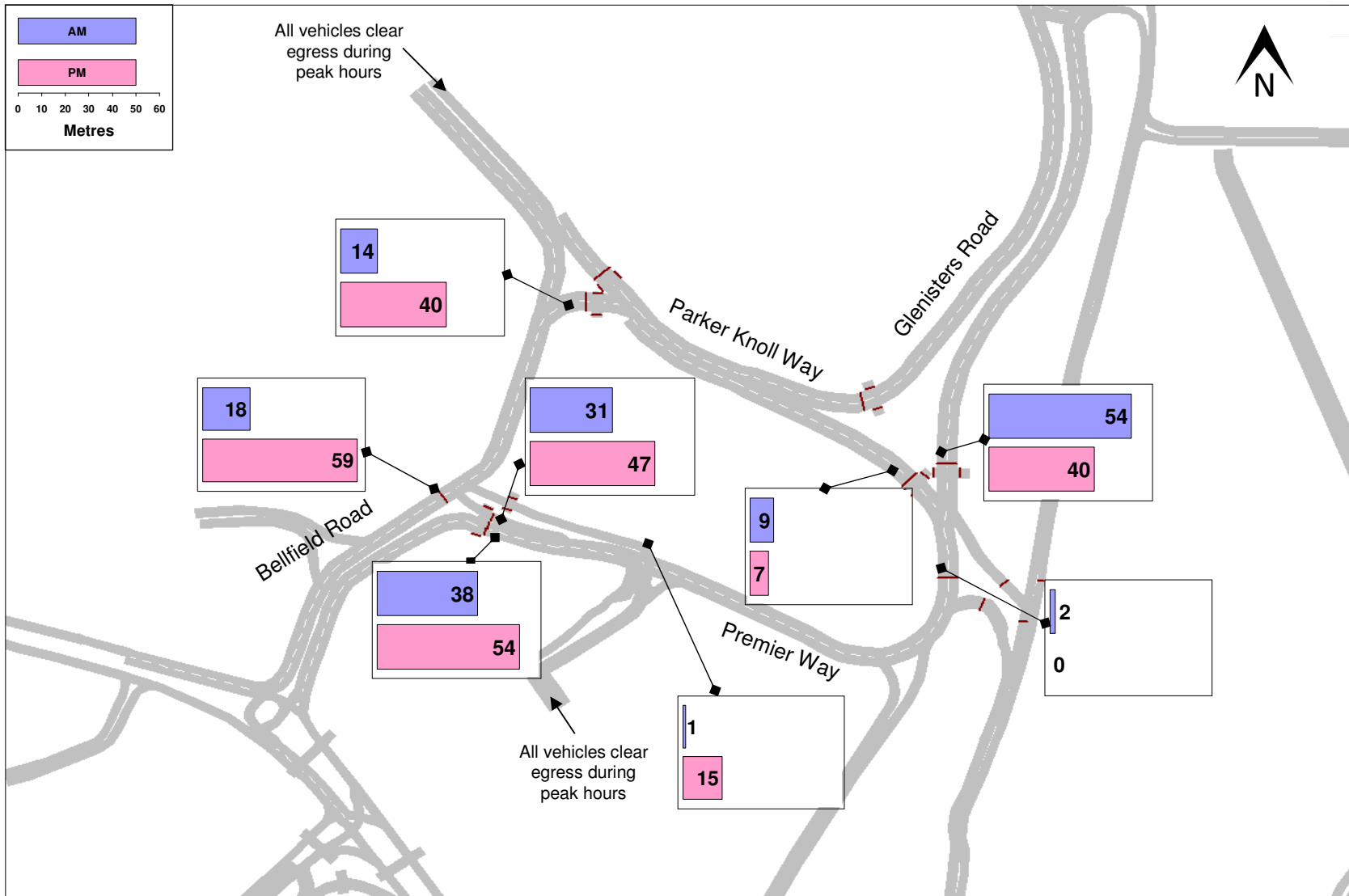
assessment of the reduction in traffic passing the store in the masterplan scenario is invalidated by their subsequent position set out in paragraph 4.3.7. Notwithstanding the fact that the Council do not agree with Sainsbury's assessment as part of Issue 1, if Sainsbury's consider that the level of traffic growth with the masterplan will be far greater than Do Minimum, it follows that the level of traffic passing Sainsbury's with the masterplan will not be 30% lower than the Do Minimum.

- 4.60 In more recent work (see CD 3.10.19) the Masterplan has been assessed on the basis of a 17% traffic growth (2010 to 2026) for the purposes of the assessment which is to demonstrate the comparative performance of the transport networks as a like-for-like scenario and consistent with the overall results of the strategic modelling. Previous strategic modelling undertaken on behalf of BCC and WDC suggests that the level of traffic growth in the town centre will be similar in the Do Minimum and Masterplan scenarios and in the PM peak is likely to be higher in the Do Minimum scenario when compared to the Masterplan. This is due to a number of factors including how travellers respond to new land use and alterations in road network configuration.
- 4.61 To assist with clarity and understanding, the Council's transport consultant has produced further narrative in support of the modelling reports showing the difference in through traffic in the Do Minimum and Masterplan scenarios, within the context of overall traffic levels. This is set out in Appendix B.
- 4.62 An appraisal framework was developed to provide an understanding of the performance of the road network if the masterplan proposals were implemented, to allow a comparison with the Do Minimum scenario (see section 5.2.2 of CD3.10.19). This includes indicators for queue length, including on Marlow Hill, journey times and rat running. By setting these indicators, the Council and highway authority have defined a process to guide the development of the plan and undertake an appraisal of the traffic performance implications balanced against the wider benefits of the Masterplan proposals.
- 4.63 The highway authority is responsible under the Traffic Management Act 2004 to tackle congestion and disruption on the local road network. Furthermore, the Local Transport Plan (CD3.2.13) sets out the highway authority's policies, strategies and the way they will prioritise improvements over the coming years to address transport related challenges and issues, including those applicable to High Wycombe Town Centre. Work being undertaken by the County Council on a transport strategy for the Southern Quadant area of the town (including the former RAF Daws Hill site) is one example of how strategic policies will be applied locally. Included within this document is the plan to deliver schemes to the south of the town centre to improve sustainable travel and reduce congestion. This includes the committed Handy Cross Hub Coachway Park and Ride proposals.

Appendix A

The following diagram is an extract from data files supplied to Sainsbury's in May 2012 showing the mean maximum queue lengths on the Dovecot gyratory in the AM and PM peak times, within the Masterplan scenario.

Mean Maximum Queue Lengths in Metres – Masterplan Scenario



Appendix B

This note was produced by Jacobs following a request from Sainsbury's transport consultants for further information relating to the operation of the revised highway network and the strategic modelling assessment work.

It was supplied to Sainsbury's transport consultants on Wednesday 28th November 2012. Some of the paragraph numbers referenced in the text have been superseded but the content remains relevant.

Buckinghamshire County Council Wycombe District Council

Delivery and Site Allocations Plan Response to Sainsbury's Issue 3

November 2012

Revision 0

DRAFT

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Buckinghamshire County Council/Wycombe District Council Delivery and Site Allocations Plan

Response to Sainsbury's Issue 3

The purpose of this note is to respond to Sainsbury's current position with regard to 'Issue 3' of their representation on the Wycombe District Council Delivery and Site Allocations Plan. This issue relates to Sainsbury's position set out by consultants WSP in the draft Statement of Common Ground (version 3) that the 'Satisfactory rerouting of A40 is unachievable'. This note considers their position with reference to key paragraphs from the statement.

It should first be recognised that the Council is not proposing the rerouting of all traffic from the current A40. The proposals are the provision of an alternative cross-town route and the downgrading of the existing A40 route. The Abbey Way flyover will be retained in single carriageway form as part of the Masterplan proposals. The Masterplan proposals therefore provide an *additional* routing option rather than a *replacement*. It should be recognised that the current cross-town road link capacity (the Abbey Way flyover) currently operates at around a third of its theoretical capacity. It is entirely feasible in operational terms that the excess road link capacity provided by the Abbey Way flyover in its current form could be reduced and in part provided for with the introduction of the additional route.

Para 5.80 "We understand that there is no strategic modelling report available".

The following strategic modelling reports are available.

- CD3.10.14 - Wycombe Transport Model: Town Centre Masterplan Note, Buckinghamshire County Council (June 2009)
- CD3.10.15 - Wycombe Transport Model: Town Centre Masterplan Tests, Halcrow (March 2009)
- CD3.10.16 - Wycombe Transport Model: Town Centre Masterplan Update, Halcrow (May 2010)

Para 5.81 "the Wycombe strategic model....does not appear to have been used to forecast the overall change in trip-making (i.e. trip distribution)

Document CD3.10.19 - 'Traffic Forecasting and Assumptions Report' sets out the forecasting approach. As identified by Sainsbury's consultants, the Wycombe strategic model was used only to confirm the overall level of traffic growth between 2006 and 2026. CD3.10.16 confirms the overall strategic traffic growth level to be 16%. The town centre micro-simulation assessment as reported in CD3.10.19 is based on a 17% overall level of traffic growth between 2010 and 2026.

The approach to the assessment including the traffic forecasting methodology was developed through a series of technical meetings with stakeholders including Eden. Stakeholders considered that the development of a new traffic baseline would be essential in order to accurately reflect the current town centre traffic volumes and patterns of movement. This approach served to resolve a perceived issue that the 2006 strategic model baseline would no longer provide a suitable basis for the assessment. In addition, stakeholders considered that a more detailed micro-simulation modelling tool would be the most appropriate model to assess the operational impacts of the Masterplan proposals. The model development and

validation is reported in document CD3.10.17. The technical approach was shared with a range of stakeholders prior to the commencement of the work.

Para 5.83 "the method appears to have been used to resolve congestion within the network, following initial assignment of the vehicle demand matrices"

This is an incorrect interpretation of the traffic forecasting and distribution methodology. As described above, the use of the strategic model is limited to providing confirmation of the overall level of traffic growth applied in the Wycombe Transport Model, and changes in overall levels of demand in the town centre.

The agreed methodology does not include the assignment of matrices taken directly from the Wycombe Transport Model. Therefore, in order to reflect a realistic traffic re-distribution response to the proposed Masterplan road network changes, manual re-assignment is necessary and appropriate.

In practice, the town centre model reflects a cordon of a wider network. In reality the trip origins and destinations are not constrained, rather the edge of the town centre reflects one of a number of access points to the town that could be used by a vehicle travelling to or through the town from a particular direction. The traffic reassignment approach is informed by local knowledge of genuine alternative routes for traffic movements associated with the town centre.

The traffic volume on Suffield Road provides a good example of why this methodology is appropriate. At present, Suffield Road is a desirable 'rat run' for traffic travelling from the west to access destinations on Queen Alexandra Road and to cross the town to destinations in the east and north. Approximately 450 vehicles are forecast to travel on Suffield Road in an eastbound direction in the Do Minimum scenario.

The provision of the Gasworks Link Road creates an alternative and more appropriate route for vehicles travelling from the west. The introduction of the junction of the Gasworks Link Road / Suffield Road / Queen Alexandra Road will discourage and constrain the level of traffic travelling eastbound on Suffield Road. This will result in the re-distribution of traffic from Suffield Road to the alternative cross town route via the Gasworks Link Road, and to the A40 West Wycombe Road. Traffic redistribution is an intuitive response and is reflected in the modelling approach.

Para 5.83 "it appears that the modelling approach assumes that these longer distance trips will use inappropriate lower capacity road and local streets"

The modelling approach does not assume this. The modelling assumes that the Priory area of the town centre will experience traffic growth of no more than 10% as a result of the Masterplan road network configuration changes. There is sufficient information to highlight the level of traffic redistribution within the town centre and this is clarified in Appendix A of CD3.10.19 'Traffic Forecasting and Assumptions Report'. Furthermore, model matrices for all scenarios are provided with the technical information for more detailed scrutiny as necessary.

5.84 We require further material to enable us to understand where the through traffic which is said to have been diverted has gone”

The information related to the overall strategic changes in traffic distribution is presented in the documents CD3.10.15 and in particular Figures 6 and 9 of CD3.10.16.

Sainsbury’s consultants highlight a remaining concern regarding a reduction in the level of cross-town traffic in the Masterplan scenario. To illustrate this, they consider the level of traffic travelling north and westbound on the Abbey Way flyover and Queen Alexandra Road in combination in the PM peak. They report a reduction in traffic of approximately 12% as follows:

- Do Minimum - c.2,050 vehicles per hour
- Masterplan - c.1,800 vehicles per hour
- Difference - c.250 vehicles per hour

The difference in the level of cross-town traffic is a function of the forecasting approach which assumes the same overall level of traffic in the town centre in each scenario. The ‘Do Minimum’ scenario is provided for comparative purposes to assess the relative performance of the Masterplan proposals against the existing town centre network with an equivalent level of traffic volume. This approach was taken following interrogation of strategic model cordon matrices which demonstrated lower levels of traffic volume in the Masterplan scenario when compared to a Do Minimum scenario. If matrices were taken directly from the Strategic Model, the performance of the Masterplan relative to the Do Minimum would be better than that shown in the current evidence base. This approach was discussed with Sainsbury’s consultants during a meeting at Wycombe District Council on 10th October 2012.

The difference in cross town traffic in this case is a result of four factors. First, the provision of the alternative route supports more efficient and direct journey patterns. The provision of the Gasworks Link provides an alternative route for traffic with an origin in the vicinity of Suffield Road / Queen Alexandra Road. In the Do Minimum road network these vehicles turn left out of Queen Alexandra Road and travel north via the Abbey Way flyover to destinations in the north or west of the town (approx. 100 vehicles). The changes in road network configuration also remove the need for vehicles u-turning at the roundabout at the south-east end of the Abbey Way flyover associated with destinations in the vicinity of Lily’s Walk. Second, the forecast models assume a small redistribution of traffic associated with south to north journeys from Marlow Hill to destinations to the north of High Wycombe via Amersham Hill / Hughenden Road (approx. 60 vehicles). The third is a general reduction in cross-town traffic as a result of the increase in trips associated with local land use within the town centre (approx. 60 vehicles). The fourth relates to changes associated with traffic routing through the Priory area which accounts for less than 10% of current traffic movements within the Priory area (approx. 30 vehicles).

The sum of the factors described in the paragraph above account for the difference in traffic between the Do Minimum and Masterplan forecast scenarios. In summary the most significant reason for the difference in traffic levels relates to improved and more direct traffic distribution within the town centre.

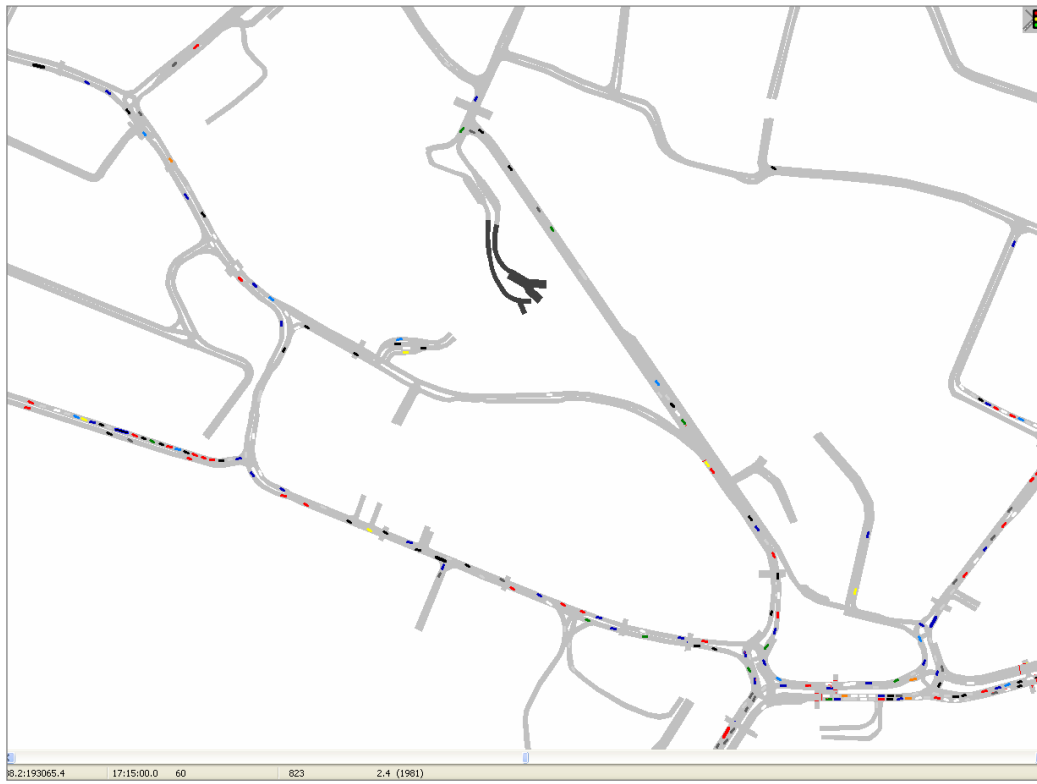
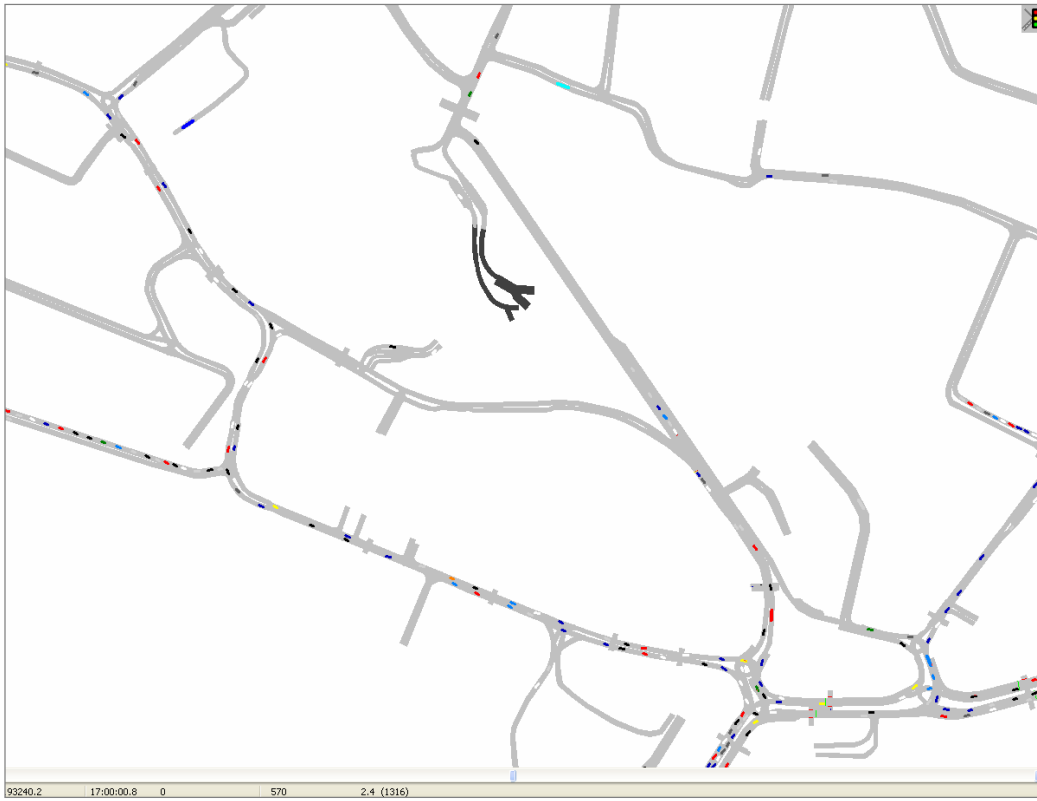
5.85 It is clear from the above that a large leap of faith has been made by the council that the growth in through trips can be reduced

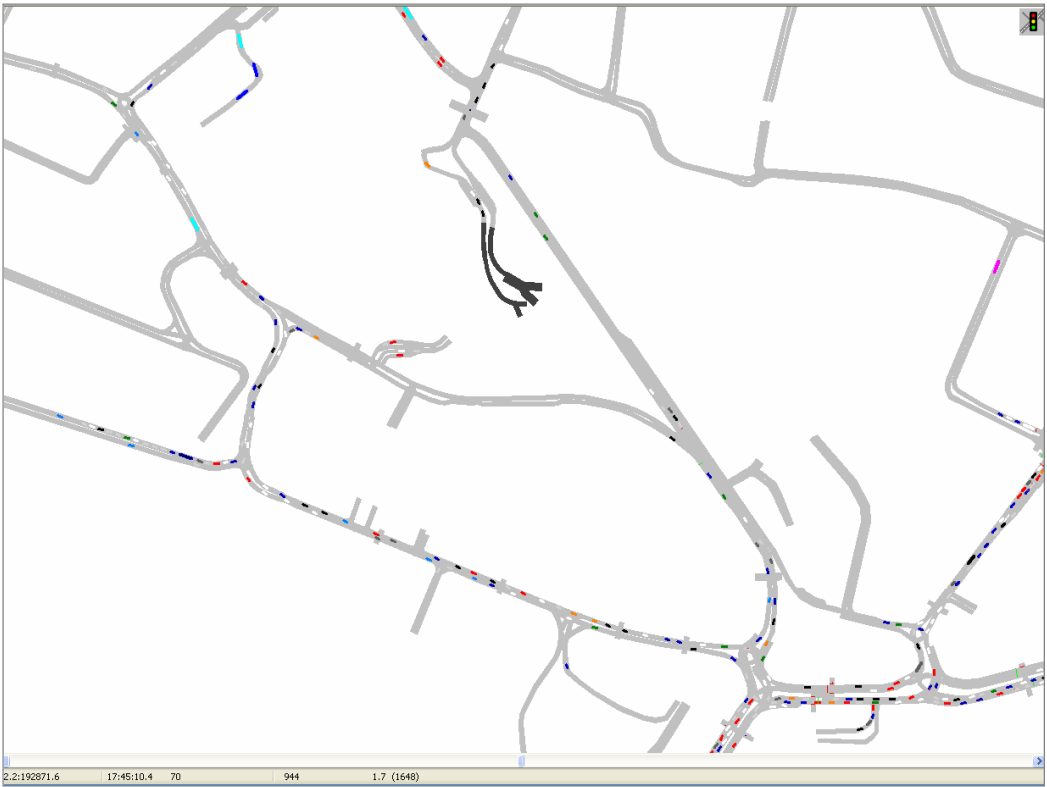
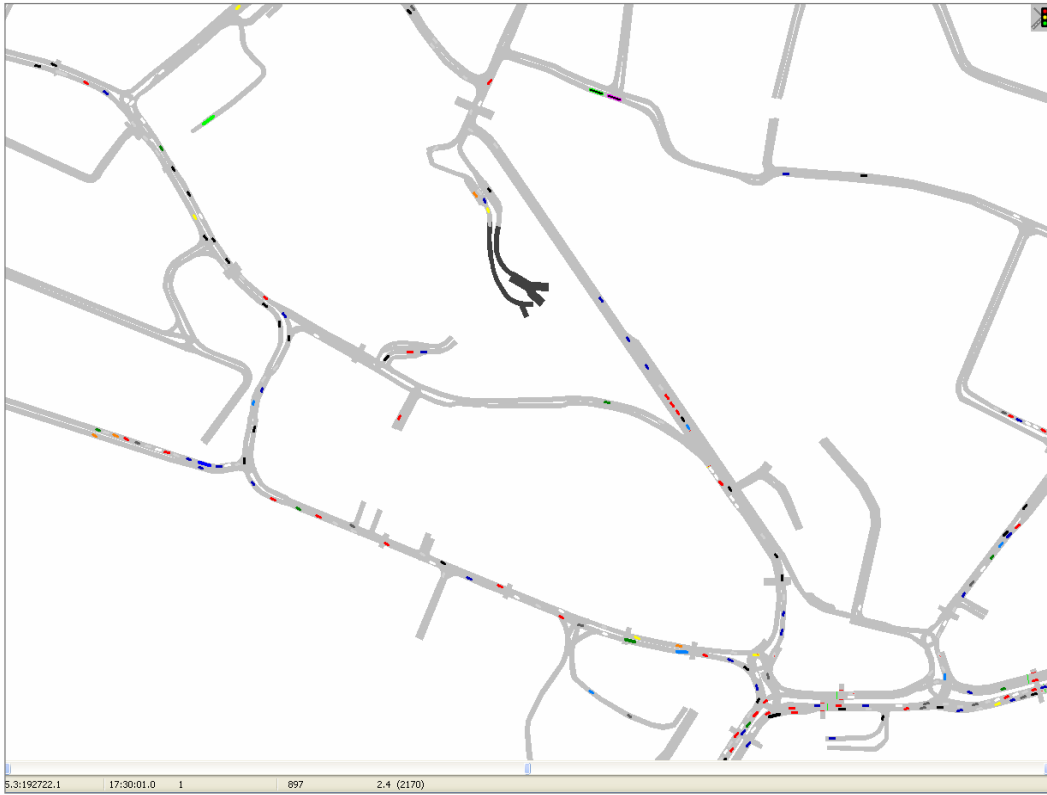
The Masterplan proposals are accompanied by a substantial evidence base that demonstrates the traffic impacts of the revised road network. The evidence base shows consistently that the overall level of traffic growth in both Do Minimum and Masterplan scenarios is similar, at levels in the region of 17%. There is no evidence to suggest that the level of traffic growth will be greater than 17%. The Council's evidence base demonstrates that the level of traffic growth within the town centre including through trips will be of the same order when comparing the Do Minimum and Masterplan scenarios.

The need to manage and reduce the level of traffic growth is entirely consistent with the County Council's Local Transport Plan 3 and Local Area Strategies which introduce the Council's approach to traffic management including wider packages of measures to limit traffic growth. The County Council's TRIM (Transfer, Re-route, Intercept, Manage) policy is aligned to reducing vehicular trips by promoting travel by alternative transport modes and is focused on limiting traffic growth and reducing congestion. There are numerous examples of recent success and planned improvements published on the Council's websites.

5.86 If this is not true the network will be more congested and new trips to the town centre will fail to get through

In order to provide further comfort related to the resilience and performance of the Abbey Way flyover and the alternative cross-town route in combination. The figures presented below illustrate the level of congestion as forecast by the traffic model in the PM peak at quarter-hour intervals from 17:00. The modelling has tested the capacity of the cross-town routes in combination and shows acceptable levels of performance, with potential to accommodate higher levels and different distributions of traffic.





Appendix C

This appendix sets out the review of the performance of the junction on a Saturday, undertaken by Sainsbury's transport consultant,

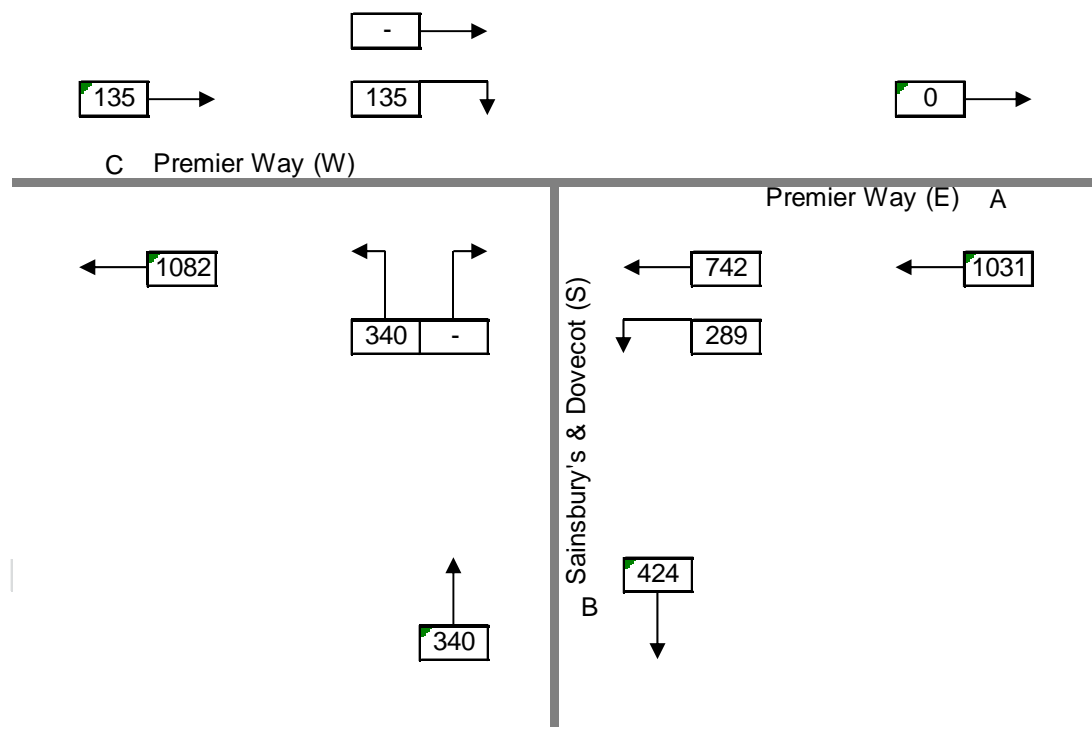
N.B: This assessment work has not been reviewed in detail by the Council and therefore the Council does not, at this stage, endorse the methodology or results of this assessment.

Sainsbury's position

The following diagram summarises traffic flow data for the site access junction based on data provided by Jacobs for the Masterplan model scenario for Friday and compares this to data for Saturday taken from the 2005 Sainsbury's Transport Assessment.

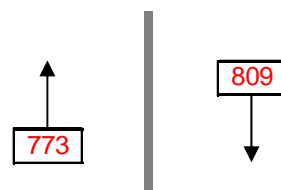
Friday

Jacobs Masterplan Model



Saturday

Sainsbury's Transport Assessment (2005)

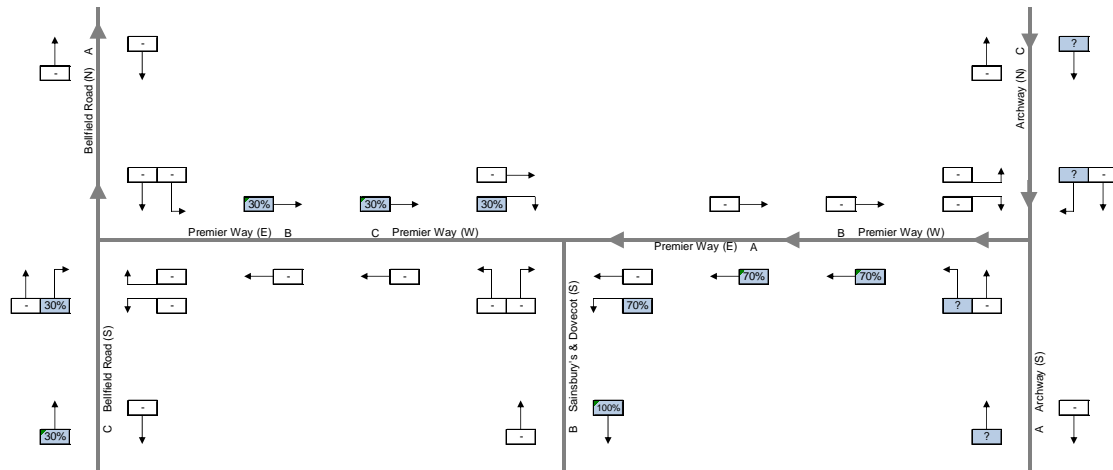


4.64 It is evident that the site access can be expected to be substantially busier than has been considered in the Masterplan modelling to date.

4.65 The following diagrams summarise traffic distribution data for the site access junction based on data provided by Jacobs for the Masterplan model scenario for Friday and compares this to data from the 2005 Sainsbury's Transport Assessment for Friday and Saturday.

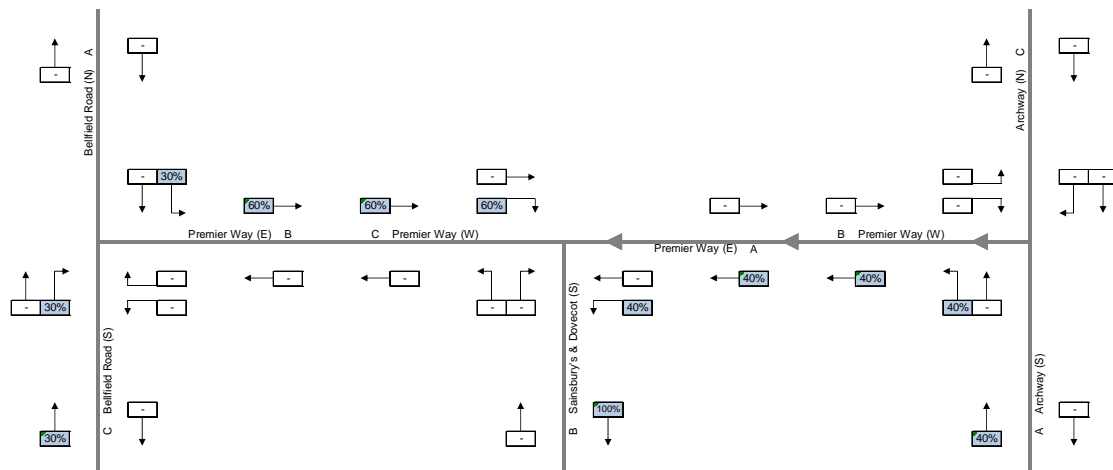
Friday

Jacobs Masterplan Model Inbound Distribution



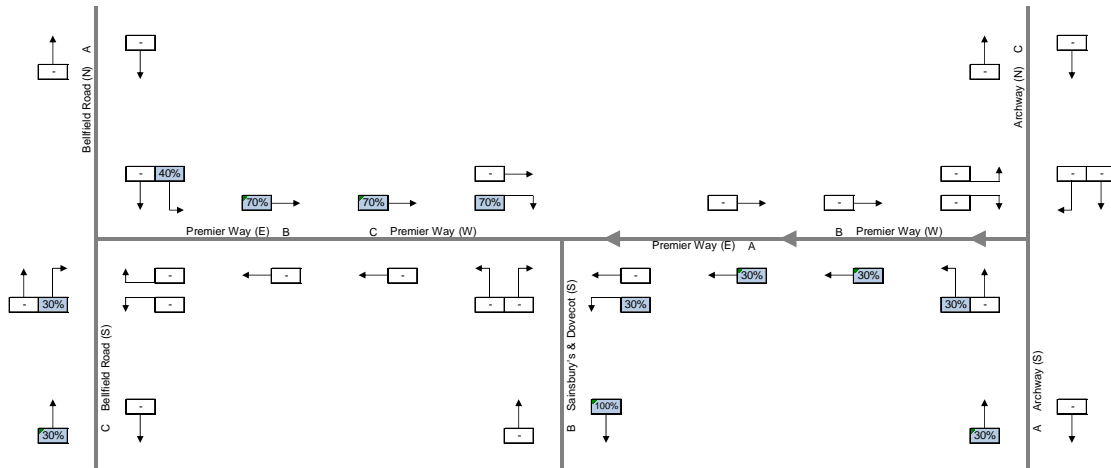
Friday

2005 Sainsbury's Transport Assessment Inbound Distribution



Saturday

2005 Sainsbury's Transport Assessment Inbound Distribution



4.66 A direct and detailed comparison cannot be made due to the proposed change in the local traffic network. However, the distribution assumptions applied in the model Masterplan model scenario are similar to those applied in the 2005 Sainsbury's Transport Assessment once a reasonable allowance has been made for traffic rerouting.

4.67 The following chart summarises Friday and Saturday traffic flows for the local road network, where these are available.

	Fri	Sat
Town Centre Masterplan Evidence Base		
Bellfield Road	1116	1028
2005 TA		
Bellfield Road	1731	2060
Glenisters Road	3028	2989

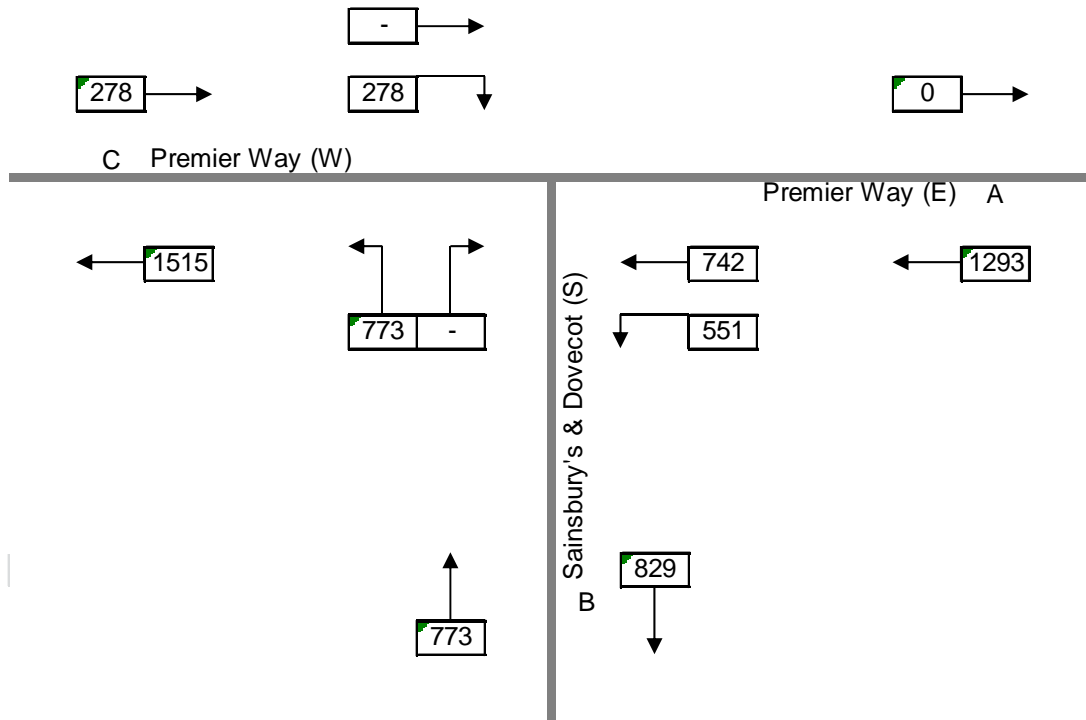
4.68 It has been assumed that the ATCs on Bellfield Road relate to different relative positions (such as to the north and to the south of Premier Way); hence the substantial difference in surveyed flow.

4.69 The increase from Friday to Saturday on Bellfield Road from the TA ATC is assumed to be due to the relative increase in traffic associated with Sainsbury's and Dovecot. From observation, it appears to be reasonable to conclude that local background traffic is similar on a Friday and a Saturday.

4.70 The following alternative design flows have therefore been considered for a Saturday in lieu of any better data being available. This applies the same through flow as taken from the Masterplan model scenario turning counts (provided by Sarah Morgan on 17/10/12) and applies the Sainsbury's and Dovecot access flows taken from the 2005 Transport Assessment. The Sainsbury's and Dovecot access flows have been distributed based on the Masterplan model scenario proportions.

Saturday

2005 Transport Assessment and Jacobs Masterplan Model Combination



4.71 These are taken to be the worst case design flows. Simplistic junction modelling has been undertaken to review how these flows may perform based on the currently proposed junction arrangement (based on the available data).

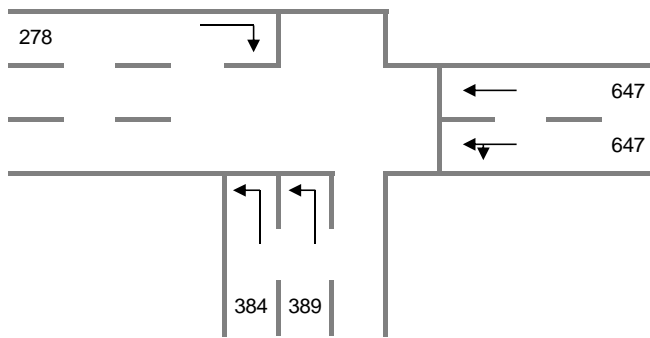
	Out			RT In		
	RFC	Queue (veh)	Delay (min)	RFC	Queue (veh)	Delay (min)
1. 3m Exit Lane (100% of Flow)	1.63	299.1	33.2	0.64	1.8	0.4
2. 3m Exit Lane (50% of Flow)	0.81	4.1	0.7	0.64	1.8	0.4
3. 3m Exit Lane (60% of Flow)	0.98	16.2	2.2	0.64	1.8	0.4
4. 3m Exit Lane (70% of Flow)	1.14	72.4	8.3	0.64	1.8	0.4

4.72 Scenario 1 considers the arrangement shown in drawing 14737/001/054C (Core Document CD3.10.6). Evidently this arrangement does not accommodate the proposed demand. The Masterplan model scenario has already been updated to add an extra outbound lane from Sainsbury's and Dovecot, so this scenario is provided for reference only.

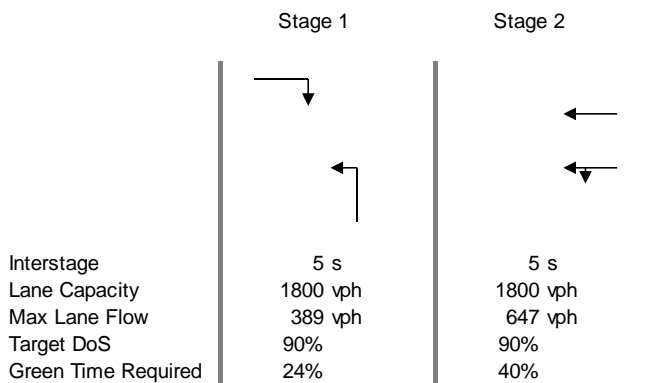
4.73 Scenario 2 considers the arrangement shown in drawing CD3.10.19 *Traffic Forecasting and Assessment Report* assuming a balanced and even usage of each lane. The outbound arrangement is at 0.81 RFC, and includes a queue of 4 vehicles per lane. The current proposal in CD3.10.19 is unlikely to be able to accommodate this queue without re-design, and Sainsbury's would need to be confident that this can be delivered. .

- 4.74 Scenarios 3 and 4 consider the arrangement shown in drawing CD3.10.19 *Traffic Forecasting and Assessment Report* assuming a weighting to the left hand lane. Given that all vehicles are turning left, and looking at the distribution, it is likely that drivers may favour the left lane rather than being evenly distributed. Testing this scenario shows that the outbound arrangement is approaching or exceeding capacity, and includes a queue of 16+ to 72 vehicles in a single lane. The average delay per vehicle exiting the car park is also at an unacceptable level (ranging from 2+ to 8 minutes).
- 4.75 It is concluded, that the currently proposed arrangement will not accommodate Saturday Demand flows.
- 4.76 An alternative signalised arrangement has been considered as summarised below, based on a simple manual calculation.

Flow Assignment (vph)



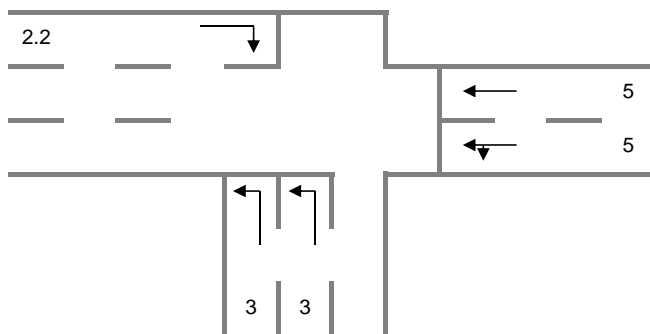
Staging



Cycle Time

Total Green Time	64%	=	18 s
Total Interstage Time	36%	=	10 s
Min Total Cycle Time	100%	=	28 s
Max No of Cycles per Hour	129		

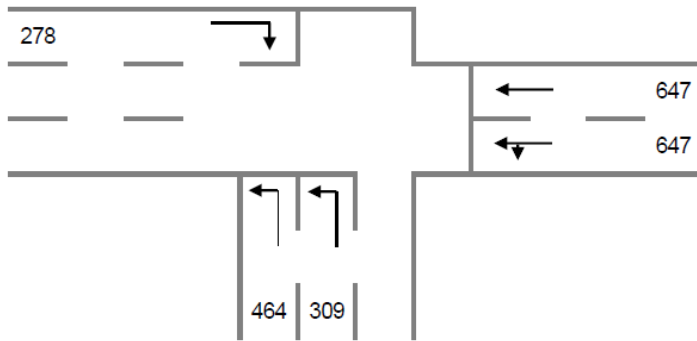
Queueing (veh)



4.77 Evidently, the scenario considered above could operate with a very short cycle time (28s), result in very short mean maximum queues, and with little delay to each arriving vehicle on average (15-20s).

4.78 Two alternative scenarios assuming a weighting to the left hand lane of 60% and 70% of the total vehicles are also considered below.

Flow Assignment (vph) 60:40 split



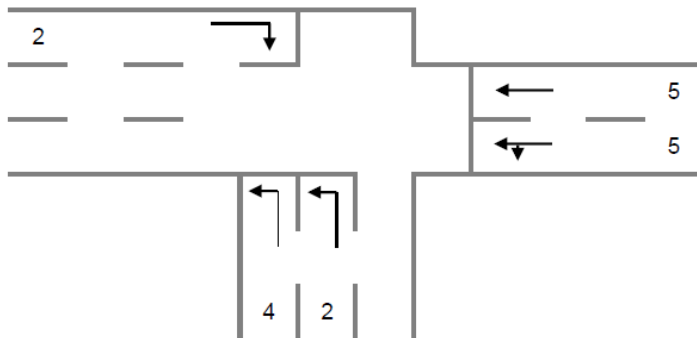
Staging

	Stage 1	Stage 2
Interstage	5 s	5 s
Lane Capacity	1800 vph	1800 vph
Max Lane Flow	464 vph	647 vph
Target DoS	90%	90%
Green Time Required	29%	40%

Cycle Time

Total Green Time	69%	=	22 s
Total Interstage Time	31%	=	10 s
Min Total Cycle Time	100%	=	32 s
Max No of Cycles per Hour	113		

Queueing (veh)



Flow Assignment (vph) 70:30 split



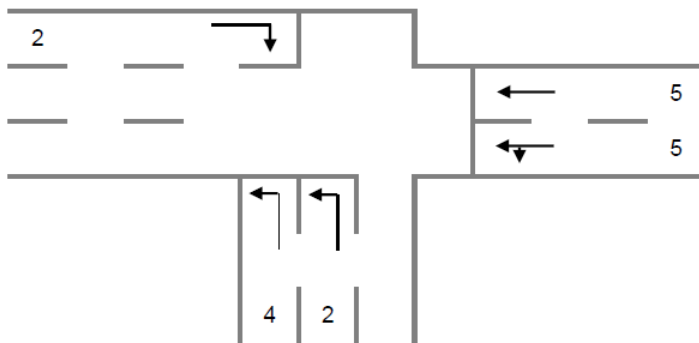
Staging

	Stage 1	Stage 2
Interstage	5 s	5 s
Lane Capacity	1800 vph	1800 vph
Max Lane Flow	541 vph	647 vph
Target DoS	90%	90%
Green Time Required	33%	40%

Cycle Time

Total Green Time	73%	=	28 s
Total Interstage Time	27%	=	10 s
Min Total Cycle Time	100%	=	38 s
Max No of Cycles per Hour	95		

Queueing (veh)



4.79 Evidently, the sensitivity test scenarios above could also operate with a short cycle time (38s), result in short mean maximum queues on the site access arm (maximum of 4).

4.80 The conclusion is therefore that a signalised solution is likely to be required for the site access to operate satisfactorily on a Saturday.