

Reply to John Cheston
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Date: 3 June 2018

Mr David Spencer
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Dear Mr Spencer

PLAN:MK EXAMINATION – COUNCIL’S RESPONSE TO THE INSPECTOR’S INITIAL OBSERVATIONS AND QUESTIONS

Thank you for your letter of 9 May 2018 to set out your initial observations and questions on the submitted version of Plan:MK.

We have provided our response to your questions below.

1. Duty to Cooperate

As you suggest, we shall submit an addendum to the Duty to Cooperate Statement to provide a commentary on the SEMLEP Planners’ Forum and Buckinghamshire Planning Policy Officers’ Group meetings, and the various other matters that you have raised, to elaborate on the cooperation that has taken place with neighbouring authorities prior to the submission of the plan.

In the case of the memorandum of understanding that was signed with Central Bedfordshire Council in March 2018, this was derived from work which had been undertaken since March 2017 on several iterations of a strategic planning framework. The purpose of this document was to identify any strategic cross-boundary issues which may exist between the two authorities and set out how these issues could be taken forward and managed through local plan-making.

For the memorandum of understanding with Aylesbury Vale District Council (AVDC), this in fact started life as a statement of common ground which set out MKC’s concerns about strategic housing sites in Whaddon and Newton Longville immediately to the south-west of Milton Keynes City. At that time, MKC’s position was that housing allocations within the Milton Keynes Housing Market Area (HMA) should count towards the needs of that HMA

irrespective of authority boundaries. MKC did not consider that this position resulted from 'unmet need' in the MKC administrative area but, given the sites' suitability, not counting them against the need of the Milton Keynes HMA would (a) result in the Council having to allocate less suitable sites in its own plan and, (b) reduce the ability of the proposed developments to be planned as part of Milton Keynes City.

This disagreement in part led to the joint commissioning of reports to establish the extent and location of HMAs across Bedfordshire and Buckinghamshire and surrounding areas (see MK/HOU/001). The reports concluded that, whilst in spatial terms it does extend across the northern third of Aylesbury Vale and into Central Bedfordshire, the Milton Keynes HMA is 'best fitted' to the Milton Keynes administrative area. Similarly, these reports concluded that the Buckinghamshire HMA is 'best fitted' to the combined administrative areas of Aylesbury Vale, High Wycombe, South Bucks and Chiltern District Councils.

As a positive outcome of these jointly commissioned findings, MKC accepted that the housing proposed to be allocated in AVDC to the south-west of Milton Keynes City should be allowed to be counted towards meeting the housing needs of the Buckinghamshire authorities.

It is important to note that no local authorities or any public bodies have asserted that the Council has not met the Duty to Cooperate in preparing Plan:MK. Furthermore, the Council has never received any requests from neighbouring authorities to provide for any of their unmet development needs. In the case of South Northamptonshire, Wellingborough and Bedford, as MK/HOU/001 makes clear, these authorities principally lie within different housing market areas and, even if they had sought assistance from MKC in meeting their housing needs, it probably would not have represented sound or sustainable planning to have done so. In other respects, the Council would have been receptive to requests from neighbouring authorities on meeting their unmet needs, but none came.

The Duty to Cooperate Statement includes a list of the strategic cross-boundary issues relevant to Milton Keynes, South Northamptonshire and Bedford. In the case of Wellingborough, efforts were made to engage with the Borough Council in August 2017 and a duty to cooperate meeting was offered. As no response to this was received, this offer was repeated in October 2017, but a response was still not forthcoming.

The MoUs that have been signed with Aylesbury Vale and Central Bedfordshire specifically address the issue of cumulative impacts from strategic sites within those authorities but in close proximity to the administrative boundary of the Borough and to Milton Keynes City.

We have been cooperating with neighbouring authorities on the route of the Bedford to Milton Keynes Waterway and will include a section on this in the addendum to the Duty to Cooperate Statement.

2. Habitats Regulations Assessment (HRA)

Natural England made no comments on the Habitats Regulations Assessment or its findings at the Regulation 19 Proposed Submission stage. In an email sent to the Council on 29 May

2018, Natural England subsequently advised that, “We had no comment to make therefore we do not disagree with the conclusions [of the HRA].”

3. Sustainability Appraisal (SA)

Your concern is that the SA Report “*appears to focus on ‘high level matters’*”.

In response, there is firstly a need to draw attention to page 1 of the report, which introduces its aims. As explained at para 2.1.2, the aim is to appraise “the plan and reasonable alternatives”, in accordance with the regulatory requirement (Regulation 12(2)).

Paragraph 2.1.3 then explains that the appraisal of ‘reasonable alternatives’ is presented within Part 1 of the report, whilst the appraisal of ‘the plan’ is presented within Part 2. As such, the report is focused on the appropriate matters.

The following is a fuller explanation of the information presented within the report:

- Part 1 (*What has plan-making / SA involved up to this point?*) - begins (see **Chapter 5**) by explaining that a decision was taken to focus on reasonable ‘spatial strategy’ alternatives in 2017. As explained at para 5.1.3, this decision was taken in the light of the plan objectives (in accordance with the regulatory requirement). **Chapter 6** then explains the process of establishing reasonable alternatives, with Figure 6.1 providing an overview of the process. An important point to note is that two of the four steps in the process involved giving consideration to site options. **Chapter 7** then presents the appraisal of the reasonable alternatives, concluding by explaining that each of the alternatives is associated with certain pros and cons. Finally, **Chapter 8** completes the ‘story’ by presenting the Council’s response to the alternatives appraisal, i.e. the justification for supporting the preferred option.
- Part 2 (*What are appraisal findings at this stage?*) - begins (**Chapter 9**) by introducing the Proposed Submission Plan, and explaining the appraisal methodology. **Chapter 10** then presents the appraisal of the Proposed Submission Plan. The appraisal is in the form of a narrative discussion under each of the 19 SA framework headings (N.B. the SA framework, which was developed following dedicated ‘scoping’, is introduced in Chapter 4). Each narrative is split into three sub-headings, such that the appraisal essentially comprises 19 x 3 = 57 separate narratives, plus a final section at the end presents conclusions and also a stand-alone discussion of ‘cumulative effects’. Within each narrative, specific policies are referenced as necessary, i.e. where there is a potential cause-effect relationship.

N.B. the **Non-technical Summary** is structured under the same headings as the main report.

Appraisal of site options

You have expressed that you are unclear “*how the non-strategic sites (including proposed allocations at Appendix A, Table 18.2)... have been assessed.*” In response, there is firstly a need to separate out three distinct matters, namely appraisal of:

1. site options in isolation;
2. site options as part of the appraisal of spatial strategy alternatives; and
3. proposed allocations as part of the appraisal of the Proposed Submission Plan.

1) Site options in isolation

Within Part 1 (*What has plan-making / SA involved up to this point?*), Chapter 5, and specifically para 5.1.5, explains that site options were appraised as part of the process of arriving at reasonable spatial strategy alternatives, i.e. sites were appraised as a means rather than an end.

Site options are then given stand-alone consideration within two sections in Chapter 6 (Establishing the reasonable alternatives). Specifically; Section 6.3 (Site options) introduces three broad categories of site option, whilst Section 6.4 (Refined site options) presents the outcomes of a screening process, and then gives detailed consideration to the shortlist of sites 'screened-in' (as candidate sites to reflect within the reasonable spatial strategy alternatives). The three categories of site option covered within Chapter 6 are as follows:

- Sites within the MK urban area - para 6.3.3 explains that reliance is placed on the SHLAA process, with it implicit that a decision was taken not to appraise urban site options as part of the SA process. This decision was taken following methodological discussions held between the report authors, AECOM and the Council. As part of these discussions, consideration was given to the question of whether it would be possible to helpfully supplement the SHLAA analysis, given the evidence-base available, and a conclusion was reached that it would probably not be possible, to any significant extent, thereby calling into question whether appraisal of urban site options could be considered a proportionate exercise, able to add sufficient value. The decision was also taken in the knowledge that this was not the 'end of the story' with regards to giving consideration to urban site options through the SA (see discussion below).
- Sites on the MK edge - the decision was taken to give urban edge site options closer attention through the SA process, recognising the potential to draw on available evidence to helpfully (and efficiently) supplement the SHLAA analysis, i.e. helpfully differentiate the merits of the sites, in respect of significant effects. All site options - both strategic and non-strategic - were subjected to an initial screening process (Table 6.3), and then a shortlist of sites was subjected to more detailed appraisal (Table 6.4 and Appendix III). One point to note is that all eight non-strategic urban edge sites were screened-out - i.e. not progressed to the detailed analysis stage - on the basis that the SHLAA analysis (and supplementary discussions between AECOM and the Council) found all of these sites to be subject to significant constraints that weighed heavily against suitability. As discussed within Table 6.4, the decision to screen-out non-strategic sites was also taken mindful of the strategic context, namely understanding that, on the one hand, there is an aspiration to focus on strategic sites, in accordance with the MK 2050 vision, whilst on the other hand there is a need to ensure a mixed land supply, to include smaller sites able to deliver early.

- Sites in the rural area - the decision was taken not to focus attention on rural site options. Para 6.3.9 of the SA Report explains that this decision was taken in the light of the fact that the SHLAA does not cover sites in the rural area, whilst strategic considerations are considered earlier, within Section 6.2 ('High level issues/options'; in particular, see paras 6.2.8 - 6.2.23). The matter of Plan:MK allocations in the rural area is also returned to within Section 6.5, under the heading 'Rural area'.

In summary, a targeted approach was taken to the appraisal of site options in isolation, in particular focusing on strategic site options around the MK urban edge. The reasons for taking this targeted approach are set out within the report, and it is considered that the reasons given are sufficient. As explained above, site options were appraised as a means to an end, i.e. as a means of building the 'bottom-up' evidence to enable the identification of reasonable spatial strategy alternatives for appraisal and consultation.

2) Appraisal of site options as part of the appraisal of spatial strategy alternatives

The reasonable spatial strategy alternatives introduced within Section 6.5, and in particular Table 6.6, vary in terms of the sites proposed for allocation both within the MK urban area and on the MK urban edge (plus they vary in respect of the quantum of homes supported at certain sites).

Focusing on non-strategic sites within the MK urban area, the reasonable alternatives reflect a strategic choice between two options: 1) a restrained approach involving just the sites supported by the SHLAA; and 2) a higher growth approach, involving an additional 28 sites not supported by the SHLAA. This strategic choice was identified following discussions between Officers and Members, and then discussions between Officers and AECOM. The choice was identified as being marginal in terms of the level of homes that they would provide, and with the potential for significant effects; and, as such, was deemed important to reflect within the reasonable spatial strategy alternatives.

3) Appraisal of site options as part of the appraisal of the Proposed Submission Plan

As discussed above, the appraisal, which is presented within Chapter 10, is structured under 19 topic headings, with each of the topic-specific narratives split-up under three sub-headings. The first sub-heading focuses on 'the spatial strategy', with consideration given to specific sites as necessary. For example, at para 10.2.2 consideration is given to certain issues/impacts associated with the proposed allocation of Milton Keynes Rugby Club, Greenleys. It is recognised that discussion of specific non-strategic sites is limited; however, this reflects the assessment that the issues/impacts associated with these sites will be limited, based on the available evidence (including evidence gathered through Regulation 18 consultation).

Appraisal of DM policy alternatives

You state in your letter: *"I am unclear how... the development management policies in Plan:MK have been assessed...I note section 10 of the SA provides commentary on where the*

policies contribute to objectives but my understanding is that SA (in incorporating SEA) should look at alternatives for policies including the option of 'do nothing'. Has this been done?"

As discussed above, Chapter 5 of the SA Report explains that the decision was taken, in late 2017 - i.e. at the time of AECOM being commissioned to lead on SA in support of preparing the Proposed Submission Plan - to focus on reasonable 'spatial strategy' alternatives only. Para 5.1.4 is of particular note, which states:

"Whilst the plan will set policy to address a range of other thematic issues through district-wide development management policy, these policy areas were not a focus of alternatives appraisal, and hence are not discussed further here, within Part 1 (but are a focus of Part 2)."

This decision was taken mindful of the regulatory requirement (Regulation 12(2)), which is to focus on "reasonable alternatives taking into account the objectives and the geographical scope of the plan." In practice, the decision was taken following discussions between AECOM and Officers regarding DM policy issues/areas where there was a strategic and marginal choice to be made between alternative approaches, and the potential for significant effects. The situation was kept under review over time, with the lead AECOM consultant having regular discussions (whilst working from the MK offices) with Officers regarding the more challenging emerging DM policies. Also, the decision was taken mindful of the context explained at para 5.1.6 of the report, namely the fact that targeted alternatives appraisal work was completed in early 2017, as reported within the March 2017 Interim SA Report. Specifically, para 5.1.6 explains that alternatives appraisal work was completed, and published for consultation, relating to two DM policy areas, and the outcome was increased certainty regarding the justification for the preferred option (such that the value of further appraisal of / consultation on reasonable alternatives is called into question).

With regards to the appraisal of the proposed DM policies presented as part of the appraisal of the Proposed Submission Plan (Chapter 10), you expressed concerned that there is no apparent appraisal of the 'do nothing' option. In this regard, there is a need to clarify that the appraisal of the Proposed Submission Plan, presented within Chapter 10 *does* take account of the do nothing option, i.e. the baseline. Specifically, Chapter 10 presents an appraisal of the effects of the Proposed Submission Plan *on the baseline*.¹

In summary, when arriving at reasonable alternatives, in late 2017, it was deemed unnecessary to establish, appraise and consult upon alternatives in relation to DM policy areas. Equally, it was not deemed necessary to appraise each DM policy in isolation, but instead was deemed appropriate and reasonable to present a narrative appraisal, with the effects of DM policies (on the baseline, i.e. the do nothing option) referenced as appropriate, i.e. where there is a notable issue / potential effect. This approach was taken in the light of the regulatory requirement, which is to simply appraise 'the plan', and in the knowledge that appraising policies in isolation is not always helpful in practice, given that policies are applied in combination.

¹ To be clear, it is not actually possible to appraise the effects of the 'do nothing' option, as the do nothing option is the baseline. Any attempt to appraise the do nothing option essentially equates to an attempt to appraise the effects of the baseline on the baseline.

The status of the site options listed in Table 6.4

Finally, on the matter of site options, you state:

“In terms of the housing sites is it clear as to the status of the shortlist in Table 6.4 (are these reasonable alternatives)? The Housing Land Supply Topic Paper would appear to suggest they might be? Is that a correct interpretation (see omission sites below)?”

The short answer is ‘no’, the site options listed in Table 6.4 are not reasonable alternatives. Table 6.4 lists the ‘shortlist’ of site options that were subjected to appraisal as *a step along the path* (see Figure 6.1) to the establishment of reasonable alternatives, which are presented in Table 6.6. Given that the objective of Plan:MK is to allocate a package of sites, rather than just one site, the sites listed in Table 6.4 are not mutually exclusive, and hence are not alternatives.

Explaining Table 6.6 and Table 7.1

You have stated:

“On a more practical level, I remain unclear on how SA arrived at the reasonable strategic housing site alternatives in section 6.5; what ‘low’ and ‘high’ mean in Table 6.6 of the SA report and what are the basis of the values in Table 7.1. Table 7.1 is described as a summary, is there a more detailed analysis? The 8 options assessed remain opaque as currently presented in SA and it is only in Section 8 that the scale of some of the options is articulated.”

It is important to clarify this matter, as Tables 6.6 and 7.1 are of central importance to the SA Report (and on this basis are repeated within the Non-technical Summary).

Table 6.6 presents the reasonable alternatives, with a row for each of the ‘variables’ identified in the preceding paragraphs. Various options are then presented across each row, i.e. for each variable, leading to the reasonable alternatives (after having applied a decision-rule regarding the maximum total number of homes to be provided for in the plan period). The options for each of the variables are introduced in preceding paragraphs, but in summary are:

Variable	Option 1	Option 2	Option 3
Urban area allocations	2,900 homes, or ‘low’ growth	3,500 homes, or ‘high’ growth	-
SE MK allocation	1,500 homes, or ‘low’ growth	3,000 homes, or ‘high’ growth	-
East of M1 allocation	Nil homes	1,500 homes, or ‘low’ growth	3,000 homes, or ‘high’ growth

With regards to Table 7.1, the values are explained at para 7.2.1, which states: *“Within each row (i.e. for each of the topics that comprise the SA framework) the columns to the right hand side seek to both categorise the performance of each option in terms of ‘significant effects’ (using red / amber / green) and also rank the alternatives in order of performance. Also, ‘=’ is used to denote instances where the alternatives perform on a par (i.e. it not possible to differentiate between them).”*

You have correctly identified that Table 7.1 is a summary. As stated at para 7.2.1, detailed appraisal findings are presented within Appendix IV.

With regards to the suggestion that the alternatives are opaque, it is correct to say that Table 7.1, which presents the summary alternatives appraisal, must be read alongside Table 6.6, which defines the alternatives. It is unfortunate that there is no obvious way to name the reasonable alternatives; however, the alternatives are presented in order of total growth quantum, with a view to supporting ease of understanding (and Table 6.6 uses different sized text, to highlight the variation in total growth quantum). With hindsight, the alternatives might have been labelled: Option 1, Option 2, Option 3a, Option 3b, Option 4a, Option 4b, Option 5a and Option 5b, i.e. labelled to more clearly articulate total growth quantum. Also, with hindsight, it would have been a good idea to depict the reasonable alternatives diagrammatically. Would it be helpful if we were to do this?

Growth level options

You have sought clarity on “what growth level options have been systematically appraised and whether any growth level options have been considered ‘unreasonable’”, and you go on to note that: *“... the SA discounted some site options on the basis that they would create a buffer in excess of 15% above OAN. The rationale for this approach needs to be examined, particularly if circumstances enable MKE to deliver during the plan period which the SA advises could result in a theoretical 21% buffer.”*

Section 6.5 deals with ‘Establishing the reasonable alternatives’, drawing upon the analysis presented within the preceding three sections, and concludes by presenting the reasonable alternatives within Table 6.6. Answering your questions in turn:

- Five alternative growth quanta are reflected across the reasonable alternatives: 27,580 homes, 28,180 homes, 29,080 homes, 29,680 homes and 30,580 homes.
- The rationale for ruling out spatial strategy options that would involve provision for a quantum of homes, in the plan period, greater than 15% above OAHN was the understanding of the strategic context, as explained within Section 6.2 (e.g. the lack of unmet needs). The view of Officers and AECOM (working in collaboration) in late 2017 was that the allocation of MKE to deliver 3,000 homes in the plan period would enable, and indeed necessitate, lower growth within the urban area, and at South East MK (in the plan period), such that the total number of homes provided for, within the plan period, would not exceed OAHN plus 15%. This was a judgement call, and, with hindsight (noting your reference to the ‘emerging’ strategic growth context), options involving provision for greater than ‘OAHN plus 15%’ might have been appraised.

Alternative plan periods

You have asked: *“Has SA examined any options of alternative plan periods and the emerging strategic growth context?”* Taking each question in turn:

- No, alternative plan periods were not examined as part of the SA process. Reasonable alternatives must be defined taking into account the objectives of the plan, and so objective 2 of the plan (which references the plan period) leads to a conclusion that there was no (reasonable) need to appraise (and in turn consult-upon) alternative plan periods.
- Yes, the emerging strategic growth context was taken into account, both when establishing the reasonable alternatives (i.e. this was a reason for exploring options that would involve providing for significantly above OAHN within the plan period) and when completing the appraisal (i.e. the appraisal of “the plan and reasonable alternatives”).

Employment site options

You have requested clarity regarding the approach that has been taken to the appraisal of employment site options / alternative approaches to the allocation of land for employment. In short:

- three site options were identified, namely those identified within Figure 6.8; and then
- two were shortlisted for further consideration through the appraisal of reasonable spatial strategy alternatives (see the final row, within Table 6.6).

The one site option not shortlisted for detailed examination through the appraisal of reasonable alternatives - North East of Newport Pagnell - was ruled-out on the basis of the analysis presented within the SHLAA, and discussions held between Officers and AECOM. The Employment Land Topic Paper (April 2018) elaborates on this subject, explaining why ‘Land east of Newport Pagnell’ performs poorly as a site option, relative to South Caldecotte.

Neighbourhood Plans

You note that: *“SA has screened out sites that are not compatible with Neighbourhood Plans (prepared against the out-going Core Strategy?) and that ‘nil allocations’ is the preferred option for the rural areas (were there any alternative options?).”*

In response, there is a need to consider the discussion of rural growth options, and site options, presented across Sections 6.2 and 6.3, and then read the three paragraphs presented in Section 6.5 under the heading of ‘Rural area’. In summary:

- Section 6.2 – the key paragraphs are 6.2.19 to 6.2.23, which deal with ‘Growth opportunities elsewhere’, seeking to demonstrate that - having taken account of recent completions and commitments, and also noting the Council’s commitment to

not overriding made Neighbourhood Plans - there is little or no strategic argument for Plan:MK allocations within the rural area.

- Section 6.3 - does not present additional analysis, but does include a brief section (para 6.3.9) explaining that the SHLAA does not examine rural site options.
- Section 6.5 - considers some additional evidence - namely the findings of the alternatives appraisal work completed in early 2017, and published for consultation within the March 2017 Interim SA Report - before concluding that: *"...on the basis of appraisal findings, and recognising additional strategic considerations... it was determined that nil allocations in the rural area is a clear preferred option, hence the approach to growth should be a constant across the district-wide reasonable spatial strategy alternatives."*

With regards to the question of whether there were any alternative options, the short answer is 'yes'. There are always alternative options to each and every preferred option; the question is are they 'reasonable'? In late 2017 the decision was reached that there was no 'reasonable' alternative to the preferred option of nil allocations within the rural area that necessitated formal appraisal and consultation, i.e. the decision was made to hold constant the approach to growth in the rural area, across the reasonable spatial strategy alternatives. N.B. your concerns regarding the role of neighbourhood plans ("this is something that I wish to explore further") are also addressed elsewhere within this response.

Monitoring; and the SA Report as an audit trail

You also wish to explore: *"... more routine matters as to whether SA informs future monitoring requirements and provides a clear and robust audit trail of where and why unreasonable options have been discounted."*

With regards to monitoring, this is dealt with by Chapter 13 of the SA Report. The aim is to meet the regulatory requirement to present 'measures envisaged concerning monitoring'.

With regards to the matter of the SA Report providing *"a clear and robust audit trail of where and why unreasonable options have been discounted"*:

- First and foremost, there is a requirement for the SA Report to explain the following three step process (or 'story'): 1) Identify reasonable alternatives; 2) Appraise reasonable alternatives; 3) Select/develop the preferred option and provide a rationale for the selection. The SA Report certainly explains this logical 'story' within Part 1.
- Also, there is naturally a need to 'tell a story' when identifying the reasonable alternatives (i.e. at step 1, as listed above). Again, the SA Report clearly does this, within Chapter 6.
- Finally, it is important to note para 5.1.7, which states: *"Appraisal findings from the March 2017 report are not repeated here, but rather are discussed as an input to the establishment of reasonable alternatives. The report remains available on the*

Council's website; however, it should be considered a historical document, prepared at a point in time, i.e. to inform the March 2017 consultation."

Air quality

Air quality is a key issue for the preparation of Plan:MK, and it is for this reason that one of the 19 SA objectives (Objective 7) deals solely with air quality. The evidence-base available to inform the appraisal, in respect of air quality, is summarised within Appendix II ('Context and Baseline Review'; see p.77). Air quality issues/impacts are then given systematic consideration as part of the appraisal of 'refined site options' (see Table 6.4 and Appendix III), reasonable alternatives (see Table 7.1 and Appendix IV) and the Proposed Submission Plan (see Chapter 10). The overall conclusion is that growth options involving allocation of East of M1 perform less well, as there could potentially be a reliance on journeys into MK by private (non-electric) car, but that it is not possible to conclude the likelihood of 'significant' negative effects.

Conclusion

The SA Report reflects AECOM's tried-and-tested approach to reporting, which is designed to ensure that regulatory requirements are clearly met, as explained on page 1 of the report and within Appendix 1 ('Regulatory checklist'). We would encourage the SA Report to be read alongside the Non-technical Summary, with a view to gaining a clear understanding of the report structure, and more generally the aims of the report.

With regards to the SA process over time, we have sought to address your concerns within the discussion above, but would wish to conclude by presenting a final discussion on perhaps the key matter at the heart of the your concerns, namely consideration of reasonable alternatives.

The aim of the SEA Directive requirement, in relation to reasonable alternatives, is to rationalise plan-making by ensuring that a clear choice is identified and examined, including through consultation. The wording of the Directive actually implies that alternative plans should be developed, appraised and consulted on; however, this is patently unreasonable for complex local plans. It is often appropriate to meet the Directive's requirement by identifying a single key choice in respect of the matter at the very heart of the plan, which for most local plans is the allocation of land to meet needs (aka the 'spatial strategy'). We appreciate that the spatial strategy alternatives defined for Plan:MK are not as distinct and engaging as we might ideally like to be the case, but they did nonetheless facilitate a useful appraisal (see Chapter 7), which elicited an important response from the Council (see Chapter 8); and we believe that it should also have facilitated informed consultation.

With regards to alternatives for more specific plan issues (e.g. DM policies), it can sometimes be appropriate to formally examine alternatives; however, for Plan:MK we determined that this was not the case. Alternatives for two DM policy issues were appraised in early 2017, but by late 2017 there was not considered to be merit in revisiting the appraisal, or presenting the earlier appraisal findings within the SA Report.

With regards to site options, these are not alternatives in the Plan:MK context, as stakeholders are not asked to choose between them; however, clearly appraisal of site options does have an important role to play. For Plan:MK a targeted approach was taken, in the light of the available evidence and understanding, and also given pragmatic considerations relating to available time and resources. Ultimately, site options were appraised with a view to contributing to the regulatory requirement (Schedule 2(8)) to provide “an outline of the reasons for selecting the alternatives dealt with”, and it is considered that this requirement is more than met through the information presented within Chapter 6 of the SA Report.

4. The Development Plan

(i) The Site Allocations Plan (SADPD) was submitted to the Secretary of State in March 2017 and currently remains at examination. Examination hearing sessions were held in September 2017 and, following further correspondence between the Inspector and the Council after the hearings, the Inspector invited the Council to prepare and consult on a schedule of main modifications to the SADPD.

A schedule of proposed main modifications was subject to public consultation between February and April 2018 and all responses were sent to the Inspector for consideration. The Council is currently awaiting the Inspector’s final report.

The SADPD is therefore not referred to in paragraphs 1.5 -1.10 of Plan:MK as it is not yet adopted and therefore does not form part of the Development Plan. On the assumption that the SADPD will be adopted, a minor modification can be made to include this as part of the Development Plan within paragraphs 1.5 – 1.10 of Plan:MK.

(ii) It is not intended that the SADPD, or any parts of it, be superseded following adoption of Plan:MK. The SADPD will remain in place until all of its sites have been developed.

(iii) Paragraph 23.5 of Appendix F is a drafting error and should be revised to replace reference to the Core Strategy with Plan:MK and to remove reference to the SADPD. A modification to cover this will be proposed.

(iv) All sites included within the final version of the SADPD have already been incorporated into the Plan:MK Policies Map as submitted. However, minor site boundary updates, in line with those outlined within the schedule of proposed main modifications to the SADPD, will be required following adoption.

(v) During the examination of the SADPD, the capacities of its sites were not questioned by the Inspector. Whilst some sites have been removed from the plan and the Inspector questioned the overall deliverability of certain sites, there were no concerns raised over the capacity of the sites that remain in the plan.

Furthermore, the Council considers that there is a high degree of certainty that the capacities of the SADPD sites as outlined in the plan, following incorporation of the proposed modifications to the SADPD, are deliverable and in many cases could be a minimum figure.

Regular feedback is sought from landowners/developers as part of the Council’s quarterly and annual monitoring and these have been used to inform the housing trajectory submitted in the Plan:MK proposed Schedule of Modifications, which includes the SADPD sites. There are also a number of SADPD sites for which planning applications have recently been submitted or are due to be submitted this year, and a number of sites which the Council already includes within its five-year housing land supply due to the certainty over their development.

Only one factual update is required in light of the SADPD proposed main modifications and this has already been incorporated into the Plan:MK Submission Schedule of Proposed Modifications. This relates to the increase in capacity of a site at Daubeney Gate, Shenley Church End from 50 dwellings to 90 dwellings. This is covered under Proposed Modification PM130 of the Plan:MK Schedule of Modifications.

5. Inter-relationship with Neighbourhood Plans

You have indicated that Plan:MK *“is not particularly clear on which are the strategic policies against which Neighbourhood Plans would be adjudged to be in general conformity with (NPPF paragraph 184)”*.

The Council acknowledges that Plan:MK provides limited guidance regarding which strategic policies should be considered when preparing a neighbourhood plan. To address this concern we would wish to propose the following modifications:

1. Paragraphs 1.8, 1.9 and 1.10 will be clarified to reflect the latest position of neighbourhood plans in the Borough of Milton Keynes and information provided in terms of guidance that the Council offers. A comprehensive list of proposed changes can be found in the minor modifications schedule.
2. The table below will be included as an additional appendix to clarify which strategic policies should be considered when preparing neighbourhood plans. This is based on NPPG guidance - *Paragraph: 076 Reference ID: 41-076-20140306*.

Policy reference in Plan:MK	Policy name in Plan:MK
MK1	Presumption in favour of Sustainable Development
DS2	Housing Strategy
DS3	Employment Development Strategy
DS4	Retail and Leisure Development Strategy
DS5	Open Countryside
DS6	Linear Parks
SD1	Place-Making Principles for Development
SD2	Central Milton Keynes – Role and Function
SD3	Central Milton Keynes – Growth and Areas Of Change
SD4	Central Milton Keynes – Connectivity
SD6	Eastern Expansion Area (Formerly Policy EA3 in the Milton Keynes Local Plan)

SD7	Western Expansion Area (formerly Policy EA6 in the Milton Keynes Local Plan)
SD8	Strategic Land Allocation
SD9	Newton Leys
SD11	General Principles for Strategic Urban Extensions
SD12	Delivery of Strategic Urban Extensions
SD13	South East Milton Keynes Strategic Urban Extension
SD14	Milton Keynes East
SD15	Land at Eaton Leys, Little Brickhill
SD16	Strategic Employment Allocation, Land South of Milton Keynes, South Caldecotte
SD17	Place-Making Principles for Sustainable Urban Extensions in adjacent Local Authorities
SD18	Campbell Park
ER1	Employment Sites within the Borough of Milton Keynes
ER2	Protection of Existing Employment Land and Premises
ER3	Retailing on Employment Land
ER4	Home Based Business
ER5	Protection of Small Business Units
ER6	Sites for Bad Neighbour uses
ER9	Employment uses and the rural economy
ER10	Character and Function of the Shopping Hierarchy
ER12	Protection of Local Shops, Post Offices, Banks and Public Houses
ER13	New shops in the Rural Area
ER14	Non-retail uses in Local Centres
ER15	New Local Centres
ER19	Non-retail uses on Ground Floors in Town Centres
HN1	Housing Mix and Density
HN2	Affordable Housing
HN4	Amenity, Accessibility and Adaptability of Homes
HN7	Houses in Multiple Occupation
HN8	Student Accommodation
HN10	Rural Exception Sites
CT2	Movement and Access
FR1	Managing Flood Risk
FR2	Sustainable Drainage Systems (suds) and Integrated Flood Risk Management
INF1	Delivering Infrastructure
NE4	Green Infrastructure
NE5	Conserving and Enhancing Landscape Character
D1	Designing a High Quality Place
D2	Creating a Positive Character
D3	Design of Buildings
D5	Canalside Development
CC2	Location of Community Facilities
CC3	Protection of Community Facilities
CC4	New Community Facilities
SC1	Sustainable Construction

In response to your query regarding the level of committed growth outside the main urban area, all committed growth within the rural area of the Borough is outlined in the Housing Trajectory Table (Appendix I.2) submitted as part of the Plan:MK Submission Schedule of Proposed Modifications.

The trajectory table outlines 2,463 existing commitments within the rural area. At the time of submission, this was the most up-to-date position. Following submission of Plan:MK, a site in the village of Lavendon has been granted planning permission at appeal for 95 dwellings.

6. Context and Review

(1) The preferred corridor for the missing link of the Oxford to Cambridge Expressway (the Expressway) will be announced in either July or August 2018. This is based upon information presented by Highways England at an 'Oxford to Cambridge Expressway Stakeholder Conference' on 23 May 2018. The timescales for the remainder of the process, as explained at the above conference, are:

- Consultation on route options - 2019/2020.
- Preferred route announcement in autumn 2020
- Development Consent Order process to begin in late 2020
- Construction to commence in 2025
- Route opening to traffic in 2030.

It should be noted that the Expressway corridors are broad areas that are several kilometres wide, and there are at present seven of them in total (A, B, B1, B2, C, C1, C2). All three main corridors (A, B and C) abut the southern edge of Milton Keynes, and extend across the area to the south to varying extents, as shown on the maps at **Appendix A**.

A delegated decision was taken by the Council's Cabinet Member for Place on 20 December 2016 which stated:

"That Milton Keynes Council strongly supports the alignment of the Expressway within the same corridor as the East-West Rail (EWR) route (Corridor B as per drawing), as for continued sustainable growth this alignment creates the best opportunity to maximise the potential offered by a major growth corridor."

The reference to Corridor B above relates to the Highways England drawing at Figure 1 below. The corridor maps in **Appendix A** had not been published at the time of the delegated decision.

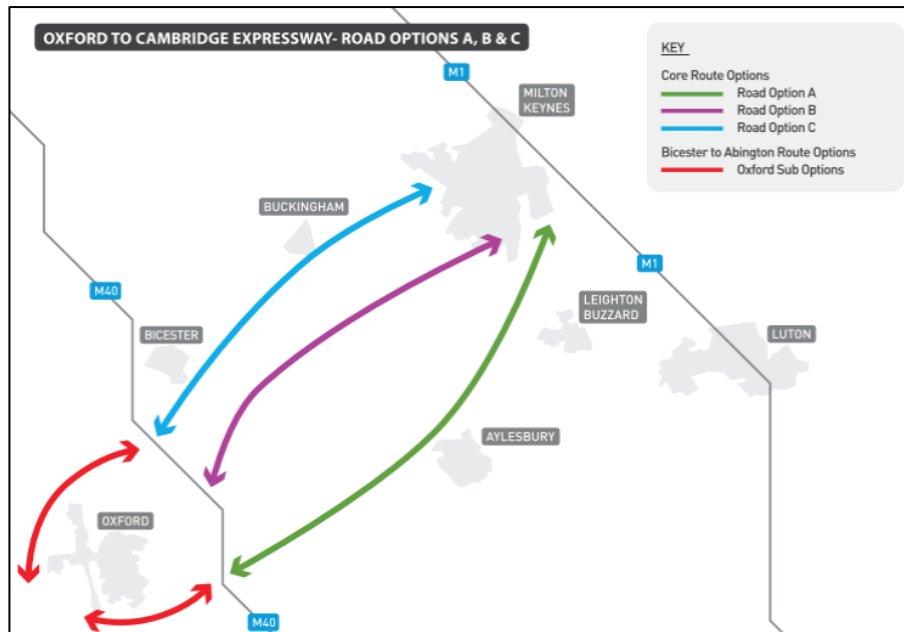


Figure 1 Highways England Expressway Corridor drawing, December 2016

The Council understands that no funds have been committed to deliver the scheme itself, beyond the Government’s Autumn 2017 Budget that announced funding to develop the wider Oxford-Milton Keynes-Cambridge corridor initiative. At present, the Expressway is within the scope of Highways England’s emerging ‘Roads Investment Strategy 2: Post-2020’ (RIS2). There are three development phases of RIS2 (Research, Decision and Mobilisation)². The Council’s understanding is that it is currently at the end of the Research phase.

(2) In October 2016, the Council established the MK Futures 2050 Programme to manage the delivery of the vision and Six Big Projects recommended by the MK Futures 2050 Commission in their report ‘Making a Great City Greater’, which was unanimously supported by the Council at its meeting on 20 July 2016.

An initial plan for the MK Futures 2050 Programme and a proposed governance structure to maintain oversight, ownership and management of the Programme was also agreed by Cabinet. This includes a schedule of regular meetings providing: biannual updates to Cabinet; monthly updates to the Programme Sponsors (Leader of the Council and CEO); a monthly Executive Coordinating Group meeting; regular meetings of the individual project managers/leads; and project team meetings for the individual projects, generally on a monthly basis.

This has enabled substantial positive progress to be made across the full programme. An update on progress across the entire programme is to be presented to Cabinet on 5 June 2018 and the papers can be viewed at: [Milton Keynes Council Cabinet meeting 050618 MK Futures Update](#). Outlined below is a more detailed update on the progress of Project One and Project Five, as requested.

² Highways England Road Investment Strategy Post 2020 <https://www.gov.uk/government/collections/road-investment-strategy-post-2020>

Project one: Growth and Strategy Bundle (Previously named “Hub of the Cambridge – Milton Keynes – Oxford Arc)

The Growth and Strategy bundle brings together work on the MK Futures 2050 Commission’s (the Commission’s) recommendations to build the economic potential of the city as the “Hub of the Cambridge – Milton Keynes – Oxford Corridor” with the preparation of a long-term, non-statutory “Strategy for 2050”, expected to be completed in early 2019.

The Strategy for 2050 will set out a framework of policies to deliver the long-term future vision identified in “Making a Great City Greater”. The Strategy will inform future iterations of the Local Plan and other strategies and policy documents, and will include policies to support the delivery of the other MK Futures 2050 projects, helping to identify and strengthen the links between them. The scope of the Strategy for 2050 will be wider than a planning policy document, taking a more holistic approach to the future development of the city rather than a purely spatial focus. It will be sensitive to Plan:MK by focusing on the post-2031 period.

A suite of five evidence papers were prepared during 2017 covering areas which needed further research following the Commission’s work. These studies have now been published online at www.MKFutures2050.com:

- Scale and Directions of Growth – future directions of growth for MK and the potential for development along the East-West corridor.
- Innovative Mobility Roadmap – the implementation of smart, shared, sustainable mobility in MK. This study is also part of the work on Project Four, and aligns with the Mobility Strategy.
- Future Communities and Meeting Housing Need – how can the design and development of neighbourhoods be more attractive, accessible, sustainable and healthy.
- Building on a Culture of Innovation – the potential to be more proactive in sustainability and design building in particular on the legacy of MK as a pioneer in sustainability policy.
- Future of Employment and Workforce Structure – implications of the future of employment and MK's future workforce structure.

These studies were prepared to explore the opportunities for growth of Milton Keynes to a population of around 400,000 people by 2050. In November 2017, the National Infrastructure Commission published their final report on the Cambridge – Milton Keynes – Oxford corridor, “Partnering for Prosperity”. Alongside a series of formal recommendations to the Government, the report also highlights the opportunity for *“the re-establishment of Milton Keynes as a development location of national significance, through the intensification and expansion of the town to a population of at least 500,000, in line with local aspirations. This presents an immediate opportunity for growth”* (Partnering for Prosperity, page 36).

In order to respond to the NIC recommendation and to assess the opportunity of growth to a population of 500,000 within and adjacent to the existing city, a Strategic Growth Study is now being prepared, working with Aylesbury Vale District and South Northamptonshire Councils.

This study will look at how, when and where growth of metropolitan Milton Keynes could be delivered including modules on: economic forecasting; the options for mobility and developing a mass rapid transit system to serve the city; the opportunities to connect to, and deliver growth around, wider infrastructure schemes including the A421 Expressway and East-West Rail; and delivery models and funding mechanisms to ensure growth happens at the right scale and pace, and supported by the necessary infrastructure and services. This work is being funded by a successful bid to the Ministry of Housing, Communities and Local Government Planning Delivery Fund scheme.

The Strategic Growth Study will be prepared over the coming months, incorporating stakeholder engagement on emerging issues as appropriate, with a final report due in December 2018. This will allow recommendations from the study to be incorporated into the development of the Strategy for 2050 for consultation and adoption by the Council in early 2019.

Project Five: Renaissance: CMK

Renaissance:CMK represents a programme of projects that aims to create an even stronger and more successful city centre that is fit for the challenges of the mid-21st century. Through investment in new employment, residential, retail and leisure opportunities, drawing on the benefits that could be created by a new city centre university, and (re)developing vacant or underused buildings and land, Renaissance:CMK will help to create a prosperous city centre and capitalise on our position on the Cambridge-MK-Oxford corridor.

Progress to-date

A stakeholder workshop was held in December 2017 that considered the various drivers for change likely to impact on the future development of CMK.

The key drivers impacting CMK identified by the workshop were:

- Business, work and technology
- Changing patterns of retail behaviour
- Improving city centre vibrancy
- Cultural offering
- Living in the city and social inclusion, and
- Transport

Based on the impacts of these drivers, a series of principles for future development have been developed and are currently being embedded into a Prospectus for CMK, the development of which is being led by Milton Keynes Development Partnership. It is intended that the Prospectus as well as being a measure for development proposals within CMK, will provide a stimulus for an increased pace of the right development that helps the city centre meet these challenges and continue to deliver its role as the economic and cultural engine for the whole of Milton Keynes.

(3) Milton Keynes Council has actively sought to respond to the challenges of the NIC 2017 report and embrace the recommendations it outlines for Milton Keynes. In November 2017,

the Leader of the Council wrote to the Chancellor backing the housing commitments recommended in the NIC's vision for the CaMKOx corridor and outlined the growth aspirations of Milton Keynes, specifically recognising the potential that Milton Keynes could contribute up to 10% of the 1 million new homes needed in the corridor (a copy of this letter is attached to this response at **Appendix B**). Subsequently, this aspiration has been carried forward into the draft proposed Milton Keynes Council Plan (2016 – 2020) which can be viewed at: [MKC Draft Council Plan 2016 - 2020](#), which makes a commitment to support the aspiration that Milton Keynes should grow to a population of 500,000 and beyond by 2050 and outlines this as a key priority for the Council.

As outlined above, the ongoing joint strategic growth study being prepared under Project One of the MK Futures Programme is also based on the NIC recommendation for the potential growth of Milton Keynes to a population of 500,000 people within and adjacent to the existing city. Additionally, this work is also assessing the best options for the city to connect to, and unlock the growth potential of, key east-west infrastructure improvements outlined within the NIC report, including East – West Rail and the A421 Expressway. The preparation of the study in partnership with neighbouring authorities Aylesbury Vale District Council and South Northamptonshire Council also begins to put in place the collaborative working recommendations of the NIC, whilst the outputs of the study also have the potential to lay the foundations for future collaborative working on, for example, a joint spatial plan.

Furthermore, in response to the National Infrastructure Commission report recommendations that ***“Current governance mechanisms are not sufficient to deliver the step-change in strategic leadership and collaboration needed... and will require a fundamental shift in the scale at which local authorities collaborate on planning and infrastructure”***, and to strengthen existing regional working relationships, MKC has been proactively and closely working with the 17 local authorities within the South East Midlands and Buckinghamshire Thames Valley Local Enterprise partnerships. The Central Area growth board, constituted as a joint committee, is in the process of being established to coordinate cross-boundary working on strategic planning, economic development and infrastructure planning at a sub-regional level. MKC has played a leading role in the establishment of the Growth Board.

Buckinghamshire County Council is the only authority within this footprint which has not joined the Central Area Growth Board at this time, although the door remains open should it wish to become a full member at any time.

In the visioning document *‘Helping the Cambridge, Milton Keynes and Oxford corridor reach its potential’* published as part of the Autumn Budget 2017, the Government announced its ambition to work with the central area on housing and growth deals throughout 2018. MKC is in the early stages of working proactively with its neighbours on a housing and growth deal.

With regards to wider working across the corridor, Milton Keynes Council remains an active and engaged member of the Fast Growth Cities network, and is working with partners in the cities of Cambridge, Oxford, Swindon and Norwich to establish a vision for the cities within the east/west growth corridor.

7. Objectively Assessed Housing Need and the plan's housing requirement/target

The examination will proceed on the basis of an objectively assessed need (OAN) based on the established approach rather than the nascent 'standardised OAN methodology'. With this in mind there are a number of steps (or adjustments) in calculating the OAN which warrant particular scrutiny to ensure the OAN is robust in meeting housing needs. The areas I will wish to focus on are as follows:

(a) Whether the demographically adjusted starting point of 24,744 dwellings is justified in terms of migration change and household formation (suppression)

The Milton Keynes Strategic Housing Market Assessment (SHMA) 2017 discusses this issue at paragraph 2.9 onwards (page 18). It recognises that the DCLG household projections are the starting point for assessment of housing need (in accordance with PPG paragraph: 015, Reference ID: 2a-015-20140306) but also that the PPG suggests that plan makers may consider sensitivity testing, specific to their local circumstances. (Paragraph: 017 Reference ID: 2a-017-20140306). The PPG states that relevant issues can include migration and demographic structure.

The SHMA notes that as demographic projections are trend-based, a critical issue is the period over which the trends are based, and the SHMA contains reasoned and evidence-based consideration of the reliability of the five-year trend period used for the DCLG household projections (the DCLG household projections are based on the Office for National Statistics' population projections, which use a five-year trend period), as against a longer, ten-year trend period for migration. The SHMA concludes, with justification, that five-year trend migration scenarios are less reliable, due to their potential to roll forward short-term trends that are unduly high or low hence it also includes projections based on long-term trends, whilst recognising that no one scenario will provide a definitive assessment of future population.

This issue is significant in Milton Keynes because, as shown in Figures 9 and 10 of the SHMA, recent migration trends for Milton Keynes have been lower than their historic rate. Therefore the five-year migration trend model in the 2014 based SNPP and DCLG household projections use migration data which is out of line with past trends and generates a lower level of household growth than the SHMA projections.

The demographically adjusted starting point that the SHMA identifies is fully justified in terms of migration change.

In terms of any potential household growth suppression, the "starting point" estimate for OAN is the latest 2014-based household projections published by DCLG and is discussed in detail from paragraph 2.53 onwards on page 34 of the SHMA. These projections contain Household Representative Rates (HRRs) which are a demographic tool used to convert population into households and are based on those members of the population who can be classed as "household representatives" or "heads of household".

The proportion of people in any age cohort who will be household representatives vary between people of different ages, and the rates also vary over time. The 2011 Census

identified that the DCLG 2008-based household projections had significantly overestimated the number of households.

The 2012-based projections supersede both the 2008-based household projections and the interim 2011-based household projections. The changes since 2008 were anticipated and these reflect real demographic trends.

The 2014-based projections have subsequently superseded the 2012-based projections using more up to date data from the Annual Population Survey. The DCLG Household Projections 2014-based Methodology Report does confirm that additional weight is given to the Labour Force Survey (LFS) in later years, but this only relates to estimates for the period that post-date the most recent Census and has no impact on the future projection (page 17, emphasis added):

The LFS is a sample survey and as such subject to a margin of error but the data are far more up-to-date than the Census and some allowance for recent movements in the LFS are considered necessary. The LFS data has been incorporated into the England level projections for the 2012 period. The LFS data is seasonally adjusted and smoother as presented in the previous section. The smoothed LFS household representative rates are spliced onto the 2011 census data points.

Adjustments are then made to all age and relationship status groups so that they move towards the smoothed LFS value with:

*a. **The maximum weight of 50%** to reflect uncertainty over accuracy and*

*b. **the LFS weight is linked to the time since the last Census (the longer the time elapsed since the last Census, the less time there is for household representative rates to get back on to trend).***

*For example **in the 2014-based projections, the LFS data receives a 15% weight** derived as the maximum weight (50%) multiplied by the time in years elapsed since the 2011 Census divided by the maximum years between Censuses (3/10). **After 2014, the projections revert to the pre-LFS adjustment trends, reflecting the importance of retaining a view of long term trends.** The post-2014 projections are not affected directly by the 2012 LFS adjustments.*

The revisions, shown in Figure 5, are extremely small but the largest changes were to the household representative rates for males and females aged 75 to 79 and 85+.

***The overall impact is small** and reduced the projected number of households in 2039 by 3,000 or **0.01 per cent** compared to what would have been produced using the unadjusted household representative rates.*

It is inappropriate to assume simply that the underlying rate should return to a previous figure when the cause of the change is fundamentally due to societal changes in the trends for when young people will choose to live as a couple. Instead, the SHMA makes a specific adjustment

to take account of homeless households and concealed families that would not be captured by the household projections (para 4.26). This is consistent with advice in the PAS Good Plan Making Guide (see SHMA para 4.83).

The demographically adjusted starting point that the SHMA identifies is fully justified in terms of household formation.

(b) The robustness of the employment forecasts given the background in Milton Keynes has been one high jobs growth and relatively modest levels of housing provision. I need to be assured that the jobs forecasts are robust and not an under-estimate.

As discussed in the Milton Keynes SHMA 2017 at paragraph 4.33 onwards on page 64, the East of England Forecasting Model (EEFM) July 2016 suggested that total employment would increase from 186,600 in 2016 to 218,500 in 2031; an increase of 31,900 jobs over this 15-year period to 2031. This represents an average growth of around 2,100 jobs each year, equivalent to an annual rate of 1.05% per annum. This is slightly higher than the alternative forecast by Experian which suggests a growth of 28,000 extra jobs over the same period; an average of around 1,900 jobs each year.

The EEFM provides a consistent model of employment forecasts across the South East of England. It is underwritten by a range of data sources covering both past trends in employment growth and economic projections of the future economy. It presents a robust assessment of jobs growth for authorities in the South East of England.

c) The validity of assumptions on working age population, double jobbing and commuting.

The Milton Keynes SHMA 2017 considers the working age population at paragraph 2.27 on page 26 onwards. The model used by ORS takes the population projections calculated using 10-year migration trends for Milton Keynes and applies economic activity rates in line with those calculated by the Office for Budget Responsibility (OBR) at a national level. As is shown in Figure 18 on page 31, this sees very little change to male economic activity rates, except for those aged over 65 years in line with planned changes to the state pension age; however, female economic activity rates are projected to rise in line with trends from the past 60 years and also from changes in the state pension age.

In terms of double jobbing, the EEFM identifies an increase of 31,900 jobs, the number of workplace employed people is only forecast to increase by 27,500 workers – which implies that 4,400 of the extra jobs will be fulfilled by an increase in “double jobbing. This represents 13.8% of the new jobs in Milton Keynes, but is consistent with the current rate of double jobbing and the growth of part-time working and people holding second jobs.

For commuting, this is discussed at paragraph 4.34 onwards. It is possible to analyse total commuting numbers, commuting ratios and commuting rates. It is not possible to hold any more than one of these numbers constant.

The Milton Keynes SHMA 2017 held the commuter rates constant, which means that changes to in and out-commuting are independent. The growth in jobs influences the number of in-

commuters (a larger increase in jobs will lead to more people commuting into the area) whilst the growth in resident workers influences the number of out-commuters (a larger increase in working residents will lead to more people commuting out of the area).

The SHMA approach is preferable to relying on constant commuting ratios (where any change in both in and out-commuting is determined exclusively by the growth in jobs, without any regard to underlying changes in the resident workforce) or on commuting numbers (as these would inevitably change given that neither the number of jobs or the number of working residents will remain constant).

(d) Is there any updated evidence on market signals for 2016/17? Is the SHMA clear on what is the rental affordability ratio in MK as a signal? Given the affordability ratios are significant and past housing delivery in MK has been adrift of the Core Strategy requirement, the examination will need to explore whether or not the proposed 10% uplift would be sufficient and the legitimacy or otherwise of factoring in concealed households as an alternative for any suppression in household formation rates as opposed to being part of the equation on market signals.

Our SHMA consultants have not undertaken any further updates in relation to market signals. The market signals relate to the base date of the Plan which is the reference point for establishing the OAN.

The SHMA considers the market signal indicators set out in the PPG (*Reference ID: 2a-019-20140306*) where there is published data available at a local level. This includes house prices, rents, affordability (in terms of the ratio between lower quartile house prices and earnings), rate of development and overcrowding. The PPG indicators do not specifically include rental affordability as a signal; however, level of rent and the affordability ratio based on the relationship between house prices and incomes have been considered.

The median workplace affordability ratio in Milton Keynes was 7.54 in 2016 (it rose to 8.65 in 2017) and represent a useful measure to compare with other adopted market signal uplifts across England. The approach to the 10% uplift has had regard to other comparator areas in England, and the accepted approach at their local plan examinations includes:

- Cheshire East = 3% uplift (7.36 median workplace affordability ratio)
- South Cambridgeshire = 10% uplift (10.12 median workplace affordability ratio)
- Stevenage = 10% uplift (7.42 median workplace affordability ratio)
- East Hertfordshire = 14% uplift (11.38 median workplace affordability ratio)
- Mid Sussex = 20% uplift (12.54 median workplace affordability ratio)
- Waverley = 20% uplift (14.84 median workplace affordability ratio)
- Cambridge = 30% uplift (12.97 median workplace affordability ratio)

Therefore, while a number of other authorities have seen higher than a 10% market signal uplift applied they have all had significantly worse affordability ratios than Milton Keynes.

The inclusion of concealed families is a necessary step in calculating the OAN because they are not included in the DCLG household projections. Therefore, the OAN should make an

allowance for concealed families irrespective of whether any further market signal uplifts are applied. However, if further market signal uplifts are applied then the concealed families should be incorporated within that uplift to prevent double counting.

(e) The SHMA recommends various uplifts to OAN including, amongst others, 10% uplift for market signals. Taking Figure 2 of the SHMA - the combined uplift (of balancing jobs, market signals and backlog) is 1,739 on the demographically adjusted 24,744 to arrive at the OAN of 26,500. The 1,739 figure, as I understand it is the uplift for balancing jobs and workers. Whilst recognising there needs to be some caution that various uplifts can compound/overlap, I remain unclear on the judgement that has been applied that 1,739 is the appropriate basis to ensure that the OAN meets the full needs arising from issues around past delivery including affordability and ensuring the demand for future jobs can be sustainably met.

Figure 2 of the Milton Keynes SHMA 2017 outlines the potential adjustments to the demographic starting point for OAN. This includes adjusting the demographic starting point to a higher figure to account for 10-year migration trends and the inclusion of a second home and vacancy rate.

For clarity, it also includes four further potential adjustments, namely:

- Concealed families and homeless households – 815 dwellings
- Market signals uplift - 2,394 dwellings including the concealed families and homeless households;
- Jobs and workers - 1,739 dwellings; and
- Backlog at the start of the plan period - 553 dwellings

The final OAN of 26,439 includes both the 815 dwellings for concealed families and homeless households and the 1,739 dwellings to accommodate the necessary growth in jobs and workers. There is no double counting between these two adjustments because the concealed families and homeless households are already resident in Milton Keynes, but require their own home, while the jobs and workers' uplift is to accommodate workers who are not currently resident in Milton Keynes.

To then include either of the wider market signal uplift, or the backlog of need at the start of the plan period would represent double counting. For example, if more homes had been built in the past then demographic trends would have shown higher rates of growth. This would have seen more people living in Milton Keynes and therefore more workers. This in turn would have reduced the imbalance between jobs and workers, so counting the backlog at the start of the plan period would have required a downward adjustment in the number of dwellings needed to balance jobs and workers on a one for one basis.

Similarly, as acknowledged in the question, there is also an overlap between market signal adjustments and jobs and workers adjustments. Building more homes to address an imbalance between jobs and workers also sees more homes being built to address market signal pressures. If jobs and workers had been in balance in Milton Keynes, the 10% market

signal response, including concealed families, would have applied, but to count it in addition to the jobs and workers uplift would represent double counting.

(f) The OAN does not include C2 accommodation. The Plan in considering the SHMAs 1200 C2 bedspaces over the plan period at Policy HN3 sets no specific target or allocations but seeks provision on residential development proposals. Can I be clear on the following: what are the site size thresholds the LPA anticipates on-site provision; whether up to 15% is the anticipated level of on-site provision; whether the plan viability assessment has considered this requirement; and by not setting a C2 requirement should the OAN be increased by 878 dwellings as per paragraph 6.22 of the SHMA?

At present, the Council does not anticipate setting a site size threshold for seeking on-site provision of Class C2 residential development. It is likely to be appropriate, feasible and viable to secure on-site provision across a range of development sizes, given the fact that C2 provision can take various forms some of which may be as small as 2-3 units in size to meet very specific needs in the community. This is why Policy HN3 as currently drafted does not set a threshold. A flexible policy approach to grappling with the complexities of how such specialist needs are identified and the ways in which residential care are provided for, in terms of the built form as well as the operational and revenue funding context, is the Council's preferred approach. For the same reasons, Policy HN3 has deliberately avoided setting a target or indicator for the level of on-site provision that will be sought.

Whilst setting a threshold and target for on-site provision would provide greater certainty to applicants and decision-takers, the Council considers this approach within policy to be too rigid for grappling with such a complex form of housing need and provision. However, the Council will undertake further research and analysis on what an appropriate threshold and indicative target might be (taking into account the make-up of housing land supply) in the event that, during the course of the examination, you consider that the policy or supporting text would benefit from further specific guidance for seeking on-site provision.

The Council's 'Whole Plan Viability Study, November 2017' has not tested a fixed cost or range of costs associated with making on-site provision of C2 residential development or paying a commuted sum. This was due to the policy approach taken by the Council for meeting such needs, which meant a generic figure could not be derived for testing. However, the Council will seek to derive and test a set of assumptions in this regard as part of the further research and analysis mentioned above.

Given the complexities of identifying this housing need, delivering the appropriate provision and the increased emphasis on enabling people to receive care within their own home (as set out paragraphs 7.27 and 7.29-7.31 of the Proposed Submission Plan:MK, October 2017, and as recognised in the SHMA at paragraph 6.19) the Council does not consider it the setting of a target for C2 residential development to be a sound approach. As such, the Council is open to discussing with you whether increasing the OAN by 878 dwellings would be an appropriate way forward.

From what I have read the housing target in Plan:MK is the same as the OAN, in that there have been no adjustments to increase the housing requirement for policy objectives – for example increasing supply of affordable housing. Is that correct?

The housing target in Plan:MK (26,500) is the same as the OAN (26,500 rounded). Within this target of 26,500, the plan aspires to provide for the additional 8,200 affordable homes that are assessed by the SHMA as being required over the plan period. This produces the 'at least 31%' target in the plan for affordable housing set out in Policy HN2.

The SHMA also contains the Gypsy and Traveller Accommodation Assessment (GTAA). Para 5.117 refers to a separate briefing note to the LPA on interviews with stakeholders and neighbouring authorities. Is that note available to the examination? There is reference to a review of the GTAA in Autumn 2018. Will this be part of any wider assessment of caravan and houseboat need as required by the Housing and Planning Act 2016?

We shall make available to the examination the separate statement on stakeholder engagement that was produced as part of the GTAA.

Paragraph 5.135 of the SHMA contains a recommendation to the Council to undertake a review of unauthorised transit encampments once there is three years' worth of evidence following the changes to the Government's Planning Policy for Travellers Sites in August 2015. The Council has not yet acted on this recommendation, but it is happy to do so and to undertake a wider assessment of caravan and houseboat need as required by the Housing and Planning Act 2016 at the same time.

8. Housing Land Supply

It is correct that the plan has a strategic objective to deliver at least 26,500 homes by 2031 but, to create resilience, land for a total of 29,000 homes (proposed to be modified to 29,500) has been identified. We would submit, however, that 29,000 homes should not be the target included in the Monitoring Framework in Appendix F. This should instead refer to 26,500 homes as the monitoring target, as this is the OAN identified for the Borough until 2031. A modification will be proposed to address this.

With regards to other potential sources of supply over the plan period (smaller omission sites, regeneration and capacity within central Bletchley), no further work has been carried out in relation to the potential yield from these options aside from the assumptions outlined within the Housing Land Topic Paper. With regards to smaller omission sites, the SHLAA does outline the capacity of each of these sites and their total capacity is assessed as an option within the Sustainability Appraisal report. However, as outlined in the Housing Land Supply Topic paper, given the sensitivities and uncertainties around the regeneration programme, a figure cannot be attributed at this time to the potential supply that would be delivered from this source. The Central Bletchley Urban Design Framework is also still being prepared; until this is nearer completion no figure can be attributed to this source either.

None of these additional sources would however provide any duplication with the sources of supply outlined in table 4.3 of Plan:MK, they would provide additional supply above that which is outlined.

As noted, estate regeneration is a key imperative over the plan period, however it is not the intention that this will lead to any net loss in housing. It therefore is the intention that the housing target in the plan is a net figure; however it is not clearly stated within the plan. It is proposed that relevant modifications are made to the Strategic Objectives, Policy DS2 and Table 4.3, the monitoring framework in Appendix F, and any relevant supporting text within the plan to outline clearly that the housing target of 26,500 is a net figure.

The sites described as existing commitments and listed within Table 18.1 are an amalgam of sites including those with permissions, those with prior approval and those which are allocations, both former Local Plan/Core Strategy and neighbourhood plan allocations, which do not yet have planning permission. The table below recreates Table 18.1, without the proposed modifications, with an additional column which outlines the planning status of each of the sites.

The only plan allocations that will be ‘rolled forward’ are those within Policies SD6 (Eastern Expansion Area), SD7 (Western Expansion Area), SD8 (Strategic Land Allocation) and Policy SD9 (Newton Leys).

Appendix A – Housing Sites

Table 18.1: Existing Commitments (with additional column outlining planning status of site)

Area	Site	Status	Physical Completions
STRATEGIC GROWTH SITES AND CITY COMPLETION			
BROOKLANDS	BROOKLANDS	Permission	1549
BROUGHTON	BROUGHTON	Permission	224
KINGSMEAD	KINGSMEAD	Permission	353
TATTENHOE PARK	TATTENHOE PARK	Permission	1009
WEA	WEA	Permission	6009
SLA	SLA	Permission	3079
ASHLAND	ASHLAND	Permission	34
OAKGROVE	OAKGROVE	Permission	278
OXLEY PARK	OXLEY PARK	Permission	122
NEWTON LEYS	NEWTON LEYS	Permission	661
CMK/CAMPBELL PARK	CMK/CAMPBELL PARK	Allocation (1500 dws) Permission (420 dws)	1920
OTHER LARGE (OVER 10 UNITS) DELIVERABLE BROWNFIELD SITES			
CENTRAL MILTON KEYNES	YMCA REDEVELOPMENT	Permission	261
CENTRAL MILTON KEYNES	LAND AT 809 TO 811 SILBURY BOULEVARD	Permission	139

CENTRAL MILTON KEYNES	SITE B1.1	Permission	24
WOLVERTON	AGORA REDEVELOPMENT	Permission	100
WOLVERTON	RAILCARE MAINTENANCE DEPOT, STRATFORD ROAD	Permission	375
BLETCHLEY	LAND TO SOUTH OF PRINCES WAY & WEST OF ALBERT STREET	Permission	184
BLETCHLEY	18A ST GEORGES ROAD	Permission	10
HEELANDS	SUFFOLK PUNCH SITE	Permission	27
COFFE HALL	LAND AT OUR LADY OF LOURDES CHURCH (SAP 1)	Permission	11
BLETCHLEY	LEISURE CENTRE PHASE 2	Permission	50
BLETCHLEY	LATHAMS BUILDBASE	Allocation	75
BLETCHLEY	25 to 27 AYLESBURY STREET	Permission	14
BLETCHLEY	7 & 7A AYLESBURY STREET	Permission	14
FULLERS SLADE	76 TO 83 SHEARMANS	Permission	14
NEW BRADWELL	82 TO 84 NEWPORT ROAD	Permission	34
RESERVE SITES/GREENFIELD			
BLETCHLEY	LAKES ESTATE NEIGHBOURHOOD PLAN SITES	Neighbourhood Plan Allocation	130
BLETCHLEY	EATON LEYS	Permission	600
BLETCHLEY	OFF PENN ROAD	Permission	39
BLETCHLEY	LAND AT SKEW BRIDGE COTTAGE, DRAYTON ROAD	Permission	10
BLETCHLEY	SW OF BWMC, DUNCOMBE STREET	Permission	12
STONY STRATFORD	STRATFORD HOUSE	Permission	13
MIDDLETON	PHEONIX LODGE	Permission	21
MEDBOURNE	SITE 4, VERNIER CRESESNT	Permission	10
BROUGHTON	BROUGHTON ATTERBURY (former employment allocation)	SADPD Allocation	130
WESTCROFT	RESERVE SITE 3	Allocation	22
CROWNHILL	RESERVE SITE OFF HENDRIX DRIVE	Allocation	10
GRANGE FARM	RESERVE SITE (off Nicholson Grove)	Allocation	19
MONKSTON	LILLESBALL AVENUE	Permission	24
WALNUT TREE	RESERVE SITES A & D HINDHEAD KNOLL	Allocation	25
GRANGE FARM	LAND OFF SINGLETON DRIVE (SAP3)	SADPD Allocation	22
MEDBOURNE	LAND NORTH OF VERNIER CRESCENT (SAP5)	SADPD Allocation	14
FISHERMEAD	GURNARDS AVENUE (SAP6)	SADPD Allocation	14
WALNUT TREE	LAND AT BERGAMOT GARDENS (SAP8)	SADPD Allocation	15
BRADWELL COMMON	LAND OFF HAMPSTEAD GATE (SAP12)	SADPD Allocation	16
BRADVILLE	LAND OFF HARROWDEN (SAP14)	SADPD Allocation	27
SHENLEY BROOK END	MANIFOLD LANE (SAP16)	SADPD Allocation	18

WAVENDON GATE	LAND AT TOWERGATE, GROVEWAY (SAP18)	SADPD Allocation	150
WALTON MANOR	LAND AT WALTON MANOR, GROVEWAY/SIMPSON ROAD (SAP19)	SADPD Allocation	135
MONKSTON PARK	LAND OFF LADBROKE GROVE (SAP21)	SADPD Allocation	25
PRIOR NOTIFICATION (RESIDENTIAL CONVERSION)			
CALDECOTTE	5 AND 6 COPPERHOUSE COURT	Prior Approval	11
CENTRAL MILTON KEYNES	TOWERGATE HOUSE, 352 AVEBURY BOULEVARD	Prior Approval	32
CENTRAL MILTON KEYNES	TERNION COURT	Prior Approval	23
CENTRAL MILTON KEYNES	BRICKHILL HOUSE 1ST & 2ND FLOORS	Prior Approval	10
CENTRAL MILTON KEYNES	GRANT THORNTON HOUSE, 210 SILBURY	Prior Approval	35
BLETCHLEY	QUEENSWAY HOUSE	Prior Approval	28
BLETCHLEY	MAYBROOK HOUSE	Prior Approval	13
BLETCHLEY	86 TO 96 QUEENSWAY	Prior Approval	10
OLDBROOK	MILBURN AVENUE	Prior Approval	14
OLDBROOK	CLYDE HOUSE	Prior Approval	24
GRANGE FARM	FIRST AND SECOND FLOOR 134 DUNTHORNE WAY	Prior Approval	10
RURAL SITES			
NEWPORT PAGNELL	TICKFORD FIELDS	Neighbourhood Plan Allocation	1200
BOW BRICKHILL	LAND EAST OF TILLBROOK FARM	Permission	36
BOW BRICKHILL	BLIND POND FARM, WOBURN SANDS ROAD	Permission	14
NEWPORT PAGNELL	POLICE STATION HOUSES, HIGH STREET	Neighbourhood Plan Allocation	14
OLNEY	FORMER EMPLOYMENT ALLOCATION PHASE 1	Permission	33
OLNEY	FORMER EMPLOYMENT ALLOCATION PHASE 2	Permission	33
WOBURN SANDS	NAMPAK PHASES 4	Permission	14
WOBURN SANDS	NAMPAK PHASES 5 AND 6	Permission	81
WOBURN SANDS	GREENS HOTEL	Permission	9
WAVENDON	FROSTS GARDEN CENTRE, WAIN CLOSE	Permission	53
WAVENDON	LAND NORTH OF WAVENDON BUSINESS PARK	Permission	134
HANSLOPE	LAND BETWEEN 36 AND 38 LONG STREET ROAD	Permission	12
HANSLOPE	CASTLETHORPE ROAD	Permission	150
SHERINGTON	LAND WEST OF HIGH STREET (Sherington Neighbourhood Plan Site)	Permission	36
OLNEY	LAND OFF EAST ST	Permission	14
OLNEY	OLNEY NEIGHBOURHOOD PLAN SITES	Permission	250
OLNEY	LAND SOUTH OF LAVENDON ROAD FARM	Permission	50
CASTLETHORPE	MALTINGS FIELD (Castlethorpe	Permission	30

	Neighbourhood Plan site)		
NEWPORT PAGNELL	NETWORK HOUSE	Permission	73
NEWPORT PAGNELL	FORMER ASTON MARTIN/TESCO SITE	Permission	86
	Total		20603

You have asked whether the sites in Policies SD6-SD9 remain allocations or have been permitted in whole or part. Clarification is also sought about the status of Eaton Leys.

Policies SD6 - SD9 are site specific policies for the Eastern Expansion Area (EEA), Western Expansion Area (WEA), Strategic Land Allocation (SLA) and Newton Leys carried over from earlier plans. These sites are no longer allocations as they all benefit from planning permission. The table below provides information on housing development on these sites as at 1 April 2018. Column 2 identifies the total number of dwellings expected to be constructed on each site and column 3 identifies how many dwellings have been completed. Column 4 identifies the number of dwellings with reserved matters approval that have not yet been completed. Column 5 (the notes column) indicates the number of dwellings remaining to be completed on each site.

To clarify the point about Eaton Leys, this site is an existing housing commitment as shown in Appendix A, p.208 as the site has outline planning permission under MKC Ref 15/01533/OUTEIS. It is no longer an allocated strategic housing site. To avoid any confusion about the status of Eaton Leys, the third bullet-point about it in para 5.17 can be deleted.

Table with information on the number of dwellings on the Urban Extension sites mentioned in Policies SD6-SD9

Site	Expected number of dwellings on each site	Number of dwelling completions	Number of dwellings with REM and not yet completed	Notes
EEA (Broughton)	1530	1438	177	Entire site has reserved matters (REM) approval, with only 177 dwellings (dws) still to be constructed. There are more dwellings being delivered than suggested by the outline permission, as further sites have been developed for housing within the Broughton EEA area.
EEA (Brooklands)	2501	1136	1016	Final REM applications have now been submitted and it is likely these will be approved

				within the next few months. The whole site will then benefit from REM approval.
WEA (Area 10)	4320	415	801	Approximately 3,000 dws remaining with only outline permission.
WEA (Area 11)	2220	546	557	Approximately 1,100 dws remaining with only outline permission.
SLA	3079	34	859	Approximately 2,180 dws remaining with only outline permission.
Newton Leys	1650	1050	525	Approximately 60 dws remaining with only outline permission.

Note: Dwelling numbers at 1 April 2018.

You have asked whether the policies [SD6-SD9] remain necessary to manage development at these locations in the context of the new policy framework in Plan:MK. For example, could the principles (with amendment) in Policy SD11, together with the generic development management policies in Plan: MK, apply to all strategic sites?

Although Policy SD11 encapsulates many of the principles applied in previous developments, following internal consultation, the conclusion reached was that rather than relying on this policy, the carried over Policies SD6-SD9 should be retained. These policies are still regularly used in determining planning applications and are considered necessary to help manage and complete development at these locations. This is particularly important for sites such as the WEA and SLA (see table above) which are at an early stage of development where many thousands of dwellings remain to be completed. The areas covered by these policies are at various stages of development and continuity of Local Plan policy is vital in ensuring consistency between what has been delivered to date and what remains.

Other reasons for retaining the carried over policies are that they provide a finer grain of detail than that provided in Policy SD11 and reflect the individual circumstances of each site. Their retention helps to mitigate risks to the development of these sites and their removal would increase uncertainty and ambiguity making the delivery of development on these sites more difficult to achieve. Additionally, the policies for the EEA, WEA and SLA are linked to Development Frameworks for these sites, which have the status of Supplementary Planning Documents (SPDs), and these frameworks are in turn linked to Design Codes and to reserved matters for these sites. The Development Frameworks for these sites which the Council would like to retain for the reasons mentioned above would also carry very little weight in decision-making and at appeal, if the policies on which these frameworks were based were to be deleted from the plan.

You have asked if the wording of policies is up-to-date (for example, Policy SD8 refers to the Core Strategy and Core Strategy policies).

It is acknowledged that the wording of these policies can be dated and exceptionally, as in Policy SD8 for the SLA, there are references within that policy to the Core Strategy, the site appearing on a CS Key Diagram and to other Core Strategy Policies (CS14 Community Energy Networks and CS10 Housing Land Supply), policies proposed to be replaced by other Plan: MK policies when the plan is adopted. But that does not make these policies no longer fit for purpose and the fact remains that sites within the SLA and WEA have been granted outline planning permission against the principles of these policies and what remains to happen is for reserved matters applications to be considered against these policies and the supporting Development Framework SPDs.

In circumstances where there are references to the Core Strategy within Policy SD8, the Council would propose that the policy be amended to remove any reference to them and where Core Strategy policies and the key diagram are referred to in the policy, Policy SD8 should be amended to refer to the relevant replacement Plan:MK policies. For example, Plan: MK Policy SC3 would replace the reference in SD8 to Core Strategy Policy CS14 and Plan:MK Policies HN1, HN2 and HN11 would replace the reference to CS10. The key diagram reference would also be updated.

In response to the questions about Table 18.2, the large majority of sites within it are 'new' to Plan:MK as residential allocations and have been sourced from the SHLAA work. There are however the following sites included which are from the SADPD process:

- Shenley Church End – Independent School
- Kents Hill Park – Timbold Drive
- CMK – E of John Lewis Car Park

Due to the uncertainties around the examination of the SADPD when preparing the submission version of Plan:MK, these sites could not be considered commitments as they did not have an allocation for residential use, no planning approval or planning application submitted for residential use, and there were still some outstanding questions from the SADPD Inspector regarding them. The Council still however wished to allocate these sites for residential use and therefore included them within Plan:MK for allocation should the SADPD not be found sound.

Furthermore, the site "Bletchley – Former MFI Store" which is included within Table 18.2 was also contained within the SADPD submission document. This site however has been recommended for removal from the SADPD by the Inspector, as there was concern regarding the ability for it to be developed within the SADPD plan period. Again, the Council still wish for the site to be re-allocated for residential use and have therefore included it within Table 18.2.

With regards to the difference in total housing land supply to be allocated for the urban area between Table 4.3 (2,900) and Table 18.2 (2,978), this was as a result of rounding down. This has however now been corrected in the proposed modifications, whereby exact figures have been proposed under modifications PM13 and PM14.

The Council are satisfied that Policy DS2 is clear that the sites listed within Table 18.1 are sites to be allocated by Plan:MK for residential use. Furthermore, these sites are marked on the updated policies map as housing allocations and are included, with individual site maps, in the *'Proposed Submission Plan:MK Policies Map: Schedule of new and deleted designations'* (Submission document MK/SUB/010), both of which assist in providing awareness of their new designation.

Following site assessments carried out in the preparation of the SHLAA (2017), it was felt that, with the exception of the sites covered by Policies SD20 and SD21, further site specific detailed policies were not required for the sites allocated and listed within Table 18.2.

With the exception of the above two sites, and the sites at High Park Drive (a current employment use) and the former MFI Store (a current retail use which was assessed through the SADPD), all the sites within Table 18.2 have some existing support for residential use, whether through a neighbourhood plan, the SADPD, or as a previously allocated reserve site.

Furthermore, 17 of the 43 sites, which account for 1,910 dwellings, are under the ownership of Milton Keynes Development Partnership. Under their terms an adopted development brief, which has been publicly consulted on, must be in place before they commence marketing or development of any of these sites. This will ensure that all of the larger sites within Table 18.2 are assessed in more detail and guidance for their future development is provided. A number of the sites within Table 18.2 already have adopted development briefs.

Given the large number of sites allocated within Table 18.2, providing a more detailed approach to each site would be substantial extra work. However, if it is deemed necessary for this approach to be taken or, alternatively, a specific policy to allocate all of the small/medium sites listed within Table 18.2 to be provided, modifications to the submitted Plan:MK can be proposed.

Five-year housing land supply

The Council is currently in the process of updating its annual five-year housing land supply report to take account of completions in 2017/18, updated projections for delivery of sites and the outcomes of a number of Section 78 appeals. The data used in this report will then be used to update the housing land supply position and trajectory for Plan:MK as of 1 April 2018.

To avoid any partial updating of evidence at this stage, the explanation below of the Council's five-year land supply is only based on a starting date of 1 April 2017. A further update will be provided to the examination once the data is available to provide a position as of 1 April 2018.

The housing trajectory submitted within the schedule of proposed modifications provides the basis for establishing the five-year land supply position of the submitted (with modifications) Plan:MK. The trajectory follows the Sedgefield method for dealing with any under delivery accrued since 1 April 2016 (as of 1 April 2017, a shortfall of 537 dwellings exists), however the position using the Liverpool method is also provided within the trajectory and below for comparative purposes. Furthermore, a 20% buffer has been applied to the requirement for

competition and choice and a 10% discount has been applied to any site which shows delivery within year 5 of the five-year period to allow for any potential slippage.

The Council intends to continue applying these principles moving forward and any future update on the housing trajectory and five-year land supply position submitted to the examination will incorporate these.

The five-year land supply position as of 1 April 2017 for the submitted Plan:MK, both with and without the proposed modifications is as follows:

Submitted Plan:MK

Sedgefield method: 5.92 years

Liverpool method: 6.08 years

Submitted Plan:MK (with proposed modifications)

Sedgefield method: 6.04 years

Liverpool method: 6.20 years

9. Settlement Hierarchy and Spatial Distribution of Housing

Chapter 6 of the SA Report explains the work undertaken to give consideration to 'spatial strategy alternatives', the outcome of which was the identification of a set of 'reasonable' spatial strategy alternatives for formal appraisal (and consultation).

The possibility of Plan MK allocating sites within the rural area (or allocating a quantum of homes, to be delivered through neighbourhood plans) is discussed within Chapter 6, as follows -

- Section 6.2 (paras 6.2.19 to 6.2.23) deal with 'Growth opportunities elsewhere', seeking to demonstrate that - having taken account of recent completions and commitments, and also noting the Council's commitment to not overriding made neighbourhood plans - there is little or no strategic argument for Plan:MK allocations within the rural area.
- Section 6.3 - does not present additional analysis, but does include a brief section (para 6.3.9) explaining that the SHLAA does not examine rural site options.
- Section 6.5 - considers some additional evidence - namely the findings of the alternatives appraisal work completed in early 2017, and published for consultation within the March 2017 Interim SA Report - before concluding that: *"...on the basis of appraisal findings, and recognising additional strategic considerations... it was determined that nil allocations in the rural area is a clear preferred option, hence the approach to growth should be a constant across the district-wide reasonable spatial strategy alternatives."*

As such, it is fair to say that the option of Plan:MK directing growth to the rural area was considered through the SA process, before being ruled-out as ‘unreasonable’ in late 2017, i.e. at the time of identifying reasonable spatial strategy alternatives for formal appraisal and consultation.

(a) You have asked whether paragraph 4.24 in the plan also relates to ‘key settlements’. No, paragraph 4.24 does not relate to the key settlements of Newport Pagnell, Olney and Woburn Sands.

(b) You have asked how Plan:MK will guide the preparation and review of neighbourhood plans over the proposed plan period. Please refer to our comments on this matter in the section of this letter on the inter-relationship with neighbourhood plans.

(c) You asked how many key settlements are within the tier 3 villages and other rural settlements. The number of rural settlements is 32 as indicated in the table below.

1. Astwood	17. Little Linford
2. Bow Brickhill	18. Long Street
3. Castlethorpe	19. Lower Weald
4. Calverton	20. Middle Weald
5. Chicheley	21. Moulsoe
6. Clifton Reynes	22. New Haversham
7. Cold Brayfield	23. Newton Blossomville
8. Emberton	24. North Crawley
9. Filgrave	25. Ravenstone
10. Gayhurst	26. Sherington
11. Hanslope	27. Stoke Goldington
12. Hardmead	28. Tyringham
13. Haversham	29. Upper Weald
14. Lathbury	30. Warrington
15. Lavendon	31. Wavendon
16. Little Brickhill	32. Weston Underwood

Note: Wavendon is still considered a village. Filgrave and Gayhurst, Haversham and New Haversham have been split in this table.

(d) You have queried if “all key settlements and villages/rural settlements have made neighbourhood plans and what level of growth is anticipated in the current round of neighbourhood plans and over what period”.

In respect of the additional clarification needed on which settlements have made neighbourhood plans, the table below outlines the approximate number of housing allocations (committed and proposed) in each neighbourhood plan, its current status and the proposed plan period.

Neighbourhood Plan	Stage	Number of homes allocated	Plan Period
Woburn Sands	Made	None	2014-2026
Lakes Estate	Made	170	2015-2026
Central Milton Keynes	Made	None	2015-2026
Wolverton	Made	Encourages redevelopment of the Agora site but this is not a proper site allocation as no quantum of homes is given	2015-2025
Great Linford North	Made	None	2013 -2026
Great Linford South	Made	None	2013 -2026
Newport Pagnell	Made	1400	2016 -2031
Walton	Made	c.500	2016 -2026
Olney	Made	300	2016 -2031
Castlethorpe	Made	32	2015 -2030
Sherington	Made	45	2016 -2031
Woughton	Made	None	2017 -2031
Stony Stratford	Made	None	2018 -2026
Campbell Park	Examination	225	2018 -2026
West Bletchley	Regulation 16 consultation	50 excluding potential redevelopment of Wellington Place	2016 -2026
Hanslope	Pre-Reg 14 draft	315	2018 -2031
Stantonbury	Reg 14 draft	100	2016 -2031
Ravenstone	Reg 14 draft	8	2018 -2031

(e) You asked whether Plan:MK leaves a policy gap, in broad terms, of what is expected in the key settlements and rural areas. We agree that the presentation of Policy DS1 is vague in relation to the role of key settlements and how future 'windfall' development proposals would be determined.

To make Policy DS1 more definite and help clarify the role of key settlements the Council proposes to modify Policy DS1 by inserting the following text before table 4.2:

'The provision of new homes and jobs will take account of the settlement hierarchy set out in table 4.2. The majority of development will be focused on and adjacent to, the existing urban area of Milton Keynes at the locations specified in table 4.2 and from selective infill, brownfield, regeneration and redevelopment opportunities. Within the rural area of the Borough most new development will be concentrated within the key settlements of Newport Pagnell, Olney and Woburn Sands. Elsewhere within the rural area new development will occur within villages and other rural settlements at locations identified in made neighbourhood plans.'

This will be added to the list of main modifications.

How would future 'windfall' development proposals be determined?

Windfall development proposals would be considered against the relevant policies of the development plan. If development is proposed within a defined boundary of a settlement and not in the open countryside there would be no objection in principle to the proposal provided it was acceptable in all other respects.

Why has the Council chosen this approach to tier 2 and 3 settlements in Policy DS1 and why is this considered to be the most appropriate?

The Council's policy is to focus most new residential development within and adjacent to the existing urban area of Milton Keynes and Policy DS2 (Housing Strategy) reflects this approach. The plan allocates sufficient land for around 29,000 dwellings, which is in excess of its OAN figure of around 26,500 dwellings. There is therefore little justification for encouraging additional development within the rural area. However, the Council expects most new residential development in the rural area to be concentrated within the tier 2 key settlements of Newport Pagnell, Olney and Woburn Sands as these towns are the most sustainable locations with the largest range of facilities and the best public transport links. Appendix A of the plan demonstrates that the scale of committed development in these settlements is significant, particularly at Newport Pagnell at around 1370 dwellings and Olney 380 dwellings, with the majority of dwellings coming forward at locations identified in the made neighbourhood plans for both settlements on sites such as Tickford Fields.

Given this background of the local community identifying sites for development in both Newport Pagnell and Olney, it is perhaps not surprising that the Council is continuing this approach elsewhere in other settlements within the rural area. Paragraph 4.24 of the plan highlights that the Council's approach to delivering new development in villages and rural settlements now places the emphasis on neighbourhood plans. In the Council's view, development within villages and rural settlements is more likely to be more acceptable if the local community takes ownership of and helps shape development within their area, identifying the need for new development and deciding where it should be located against the alternative of planning by appeal.

10. Strategic Sites

South East Growth Area

The total site area of the South East Strategic Urban Extension (SE SUE), including the additional parcels of land proposed within the 'Schedule of Proposed Modifications, March 2018', is approximately 200.7 hectares. The Council has undertaken an analysis of how the Expressway may route through the site and the land take it would require. Assuming that it would require a 100m wide corridor to accommodate the highway infrastructure, drainage and buffers to adjacent land uses, the analysis indicates that the assumed Expressway would take up approximately 29.8 hectares, leaving 170.9 hectares for development.

Assuming 50% of the site is available for housing at a net density of 35 dwellings per hectare (gross density of 17.5 dwellings per hectare) in line with the Council's SHLAA methodology, the Council considers that the site could accommodate around 3,000 homes with the assumed Expressway running through it, and potentially around 3,500 homes without the assumed Expressway.

PM38 within the 'Schedule of Proposed Modifications, March 2018' unfortunately did not set out the Council's reasoning for the modifications due to an editing error in the drafting. The proposed modifications relate to three aspects, which are taken in turn below:

- a) The timing restriction on applications,
- b) Specific requirements for the development to meet, and
- c) Consistency of wording across the strategic site policies within Plan:MK.

The first paragraph of Policy SD13 within the Proposed Submission Plan:MK, October 2017 states:

"Planning permission for housing and associated uses will not be permitted until 2019/20, once the detailed alignment of the Cambridge-Milton Keynes-Oxford Expressway is known."

PM38 within the 'Schedule of Proposed Modifications, March 2018' proposes the following change:

"If the chosen corridor for the Oxford Cambridge Expressway (OCE) maintains the possibility that the OCE could be routed through the site, then planning permission for housing and associated uses will not be permitted until ~~2019/20, once~~ the detailed alignment of the ~~Cambridge-Milton Keynes-Oxford Expressway~~ OCE is known."

This proposed change was drafted in the light of certain representations on Policy SD13 which indicated the wording was not flexible enough to accommodate earlier or delayed decisions on the Expressway as well as further information made available to the Council regarding the extent of the three Expressway corridors being considered by Highways England. This indicated that the corridor decision expected in 2018 could provide greater certainty on whether or not the Expressway could be routed through the site. The reference to 2019/2020 was therefore removed, instead taking a more flexible approach that could respond to changing circumstances and when increased certainty would be available on whether the site would be affected by the Expressway.

For reference, the additional and specific requirements for the site as set out within PM38 are:

B. In addition to the requirements set out in other policies within this plan, including policies INF1, SD1, SD11 and SD12, development of the site will be required to:

1. Provide schools to accommodate seven forms of entry for secondary education and 6 forms of entry for primary education, as well as necessary nursery and early years provision. Schools should be capable of dual use as community facilities.

2. Ensure ~~Dd~~development ~~will be is~~ well connected and integrated with ~~the established MK grid squares to its north and west~~ adjacent grid squares, public transport services and the strategic and local highway network in line with the Council's Mobility Strategy.

3. ~~The urban extension will~~ Incorporate buffer areas, structural landscaping and strategic green infrastructure to prevent coalescence with Woburn Sands and Bow Brickhill, respect and reinforce the distinct character of ~~the surrounding settlements of~~ Wavendon, Woburn Sands and Bow Brickhill ~~through providing new or reinforced green buffers, thereby protecting existing settlement character,~~ and mitigate any harm caused to the Brickhills area and wider landscape character.

The changes set out above were made partly in response to a number of representations which argued the policy lacked detail when compared to other strategic site policies within Plan:MK, and because the changes are considered to make the policy more effective by providing additional clarity on site-specific infrastructure and design matters that the applicants and decision takers will be expected to respond to and consider when preparing and considering applications.

Milton Keynes East

The Council received a letter from the Ministry of Housing, Communities and Local Government (MHCLG) on 8 May 2018 outlining the next steps for its HIF bid. The letter is set out in **Appendix C** to this response. This is the latest information available to the Council on the process of taking forward its HIF bid. At present, the Council's provisional view is that it will work towards submitting a bid in December 2018. Other than the recent information provided by the MHCLG referred to above, the circumstances surrounding this site have not changed that would fundamentally affect the role or status of the MKE SUE as explained within the Proposed Submission Plan:MK, October 2017 or Housing Land Supply Topic Paper.

The Council has commenced work to prepare a Development Framework to support the HIF bid and, in anticipation of a successful decision being received in February 2019, to enable subsequent planning applications and commencement of development to proceed swiftly. A principal aim of the Development Framework is to provide a robust framework and sufficient detail, supplementary to Plan:MK, that would shorten the planning application process for the initial infrastructure works and first phase of development so that development can commence in late 2019 with the first housing being completed in early 2022. This is considered to constitute a positive approach towards seeking the delivery of sustainable development over and above the OAN, in support of the Council's and the National Infrastructure Commission's (NIC) wider growth ambitions for this area, and to provide further contingency in the housing land supply over the plan period.

Further work on the capacity of the site which fully accounts for site constraints and infrastructure requirements, and their associated land take, is being undertaken as part of the preparation of the Development Framework. However, the Council estimates that, subject to securing funding within the HIF bid timescales, the site is capable of delivering around 3,000 homes within the plan period and around 5,000 in total.

The Council's stated position, as set out its draft Council Plan³, is to grow the population of Milton Keynes to around 500,000 people by 2050. This vision has emerged from and is consistent with the recommendations of the MK Futures 2050 Commission and the NIC. Ongoing work by the Council's MK Futures 2050 Team to understand how this could be achieved indicates that the existing urban area of Milton Keynes would not be large enough to accommodate this population increase through intensification and densification alone. Rather, to achieve this vision, it is accepted by the Council that Milton Keynes city will need to expand in a concentric or radial fashion in all directions subject to any constraints (for example landscape, ecological or heritage). MKE sits within a relatively unconstrained and sequentially preferable location compared to the omission sites for outward expansion, as evidenced within the SA/SEA accompanying the Proposed Submission Plan:MK, October 2017 and Housing Land Supply Topic Paper. The development of MKE within the plan period, or reserving it as an allocation for post-2031, is therefore not considered to be contrary or prejudicial to any wider strategic directions of growth that may be pursued on the back of the MK Futures 2050 work or the awaited response from Government to the NIC's recommendations.

Strategic Employment Land

You have asked whether it is purposeful that Policy DS3 omits a reference to South Caldecotte and Milton Keynes East (MKE) as part of the Employment Development Strategy.

As the employment equivalent of Policy DS2, which does refer to the strategic housing allocations, we consider that Policy DS3 would be more effective if it were to be modified to refer to South Caldecotte and MKE.

General

The Council agrees with your suggestion that the unallocated 'strategic development sites' mentioned in paragraph 5.18 should be defined in the Glossary so applicants and decision makers are clear about the scale of development to which Policy SD11 applies. We shall therefore propose a minor modification to include the following definition of 'strategic development site' in the Glossary:

"A strategic development site is a site for 500 dwellings or more or a site with more than 20 hectares of employment land."

11. Other Evidence Base

³ Draft Milton Keynes Council Plan 2016-2020 available at <http://milton-keynes.cmis.uk.com/milton-keynes/Calendar/tabid/70/ctl/ViewMeetingPublic/mid/397/Meeting/5921/Committee/1210/Default.aspx>

Transport

Since publication of the 'Traffic Forecasting Report, October 2017' and 'Impacts of Plan:MK, November 2017' reports, the Council has been progressing transport modelling via the following work streams to inform how the Council will manage highway impacts associated with existing development commitments and the additional growth contained within Plan:MK:

1. Updating the Reference Case 2031
2. Strategic Urban Extensions impacts
3. A5 corridor pressures
4. Local road network pressures

The Council has undertaken work to produce an updated Reference Case 2031 that takes account of the following:

- Inclusion of a committed scheme to upgrade the 'Kelly's Kitchen' roundabout on the A5
- Changes to the A421 dualling scheme – removal of free flow lane
- Correction to H6/V10 roundabout
- Refinement of the model representation of Salford Road/Bedford Junction
- Refinement of the model representation of Cranfield University and Open University loading points

The final version of Technical Note 20 which sets out this work is due to be published imminently on the Council's website, but is appended in draft form to this response (**Appendix D**). No substantial changes exist between the draft and final versions.

The Council has undertaken a first round of testing on a range of highway mitigation schemes, including changes to junction 14 of the M1 motorway, associated with the MKE SUE. These are over and above the 'built-in' mitigation measures that were tested and reported on within the 'Impacts of Plan:MK, November 2017' report, including a new overbridge and a revised road network east of the M1. This work is due to be published imminently on the Council's website as Technical Note 21, but is appended in draft form to this response (**Appendix E**). No substantial changes exist between the draft and final versions.

Work to scope, define and test additional highway mitigation measures (over and above the 'built-in' mitigation measures that were tested and reported on within the 'Impacts of Plan:MK, November 2017', including a new bridge crossing and revised road network) in relation to the South East Strategic Urban Extension and South Caldecotte Strategic Employment Allocation is currently ongoing. This work is being progressed partly via the Development Framework process for the two sites and via internal transport work. Due to resource constraints, progress on this strand of work has been slower. However, it is expected that outputs from this work will be ready by the late summer/early autumn 2018 in order to inform the Development Frameworks for both sites.

Scoping, defining and testing mitigation measures to alleviate congestion along the A5 and adjacent grid roads and to address other specific pressures on the local road network is ongoing but the outputs of this work will not be available until late autumn 2018.

Viability

Table 8.1 of the Council’s ‘Whole Plan Viability Study, November 2017’ sets out which of the Plan:MK policy requirements were tested as part of the study alongside development costs, affordable housing requirements and other planning obligations. They are:

- Policies SD1-21
- Policy ER1
- Policies HN1-HN5
- Policy INF1
- Policies FR1 and FR2
- Policy NE4
- Policy L4
- Policies D1-D5
- Policy CC1
- Policy SC1
- Policy SC3

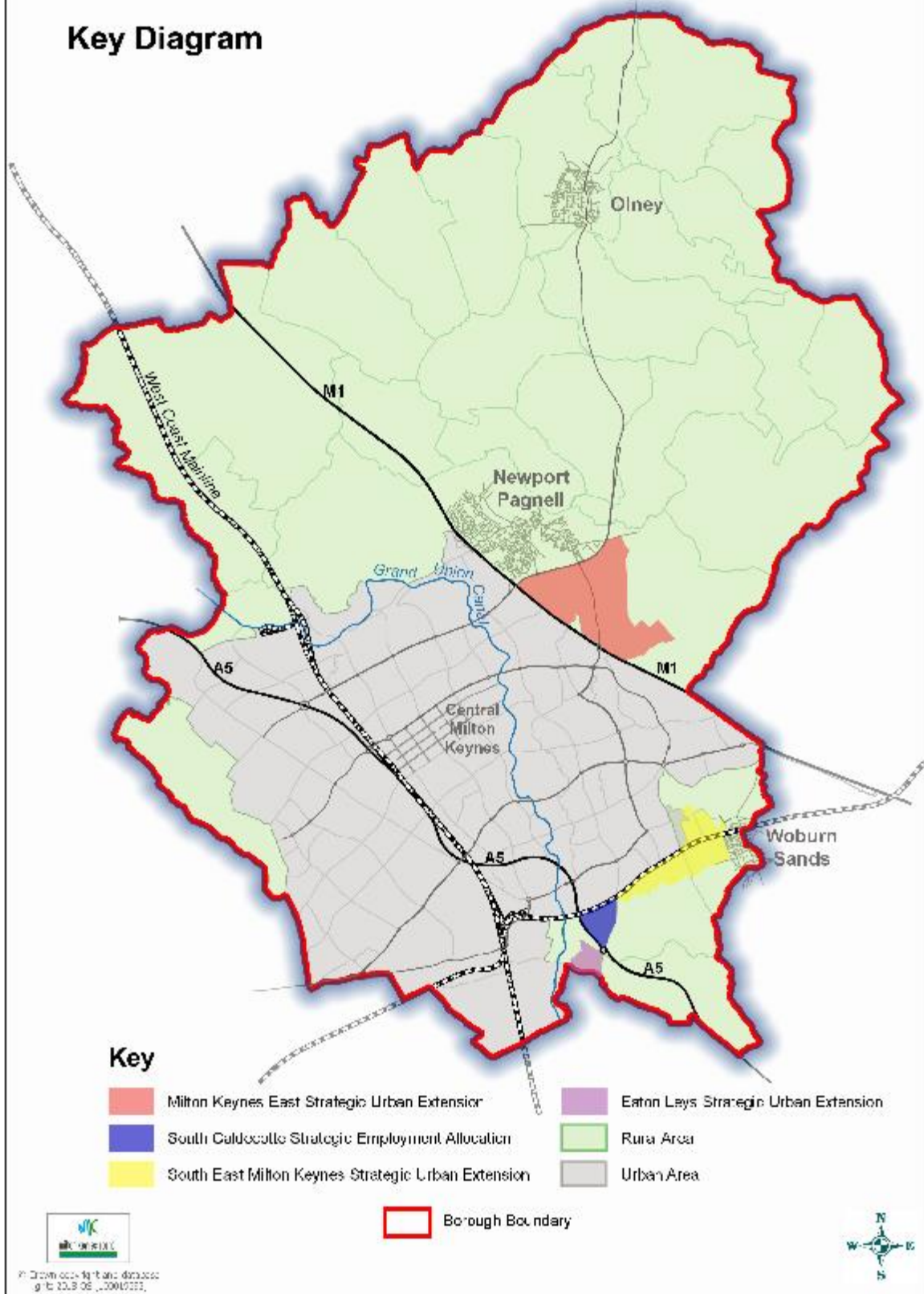
Table 8.1 sets out some basic assumptions on the costs of these policy requirements. Paragraphs 8.7-8.11 of the study set out the assumed costs associated with Policy HN4. For Policy SC1, the main cost elements are professional fees, £500 per dwelling for achieving carbon neutrality, and £6-9 per dwelling for achieving the water efficiency standards.

The appraisals carried out within the ‘Whole Plan Viability Study, November 2017’ test the range of development typologies against different combinations of policy requirements and planning obligations. The impacts of the above policy requirements were considered within the context of their cumulative impact alongside other planning obligations. This discussion is set out within section 10 (residential appraisals), section 11 (non-residential appraisals) and section 12 (local plan viability) of the Study.

12. Key Diagram

We have reformatted the Key Diagram at Figure 2 into a more schematic map which shows the extent of the Milton Keynes administrative area, the key settlements, key transport corridors and the proposed strategic sites. The Key Diagram is reproduced below and its amendment is proposed as a minor modification (MiM139) in the Plan:MK Submission Schedule of Proposed Minor Modifications 2018.

Key Diagram



13. Schedule of Modifications

You have requested that the *“list of modifications should be separated out into separate schedules of main and additional modifications. The main modifications should be renumbered and referenced with the prefix MM.”*

We have therefore revised the schedule of modifications accordingly. We also confirm that they will remain as ‘live’ documents throughout the examination hearings.

We trust that the above comments are of assistance in clarifying the areas of uncertainty about Plan:MK that you have highlighted. Please let us know if there any outstanding issues and we shall address them in our statements on the Matters, Issues & Questions.

Yours sincerely



John Cheston
Development Plans Manager

LIST OF APPENDICES

A: Highways England Expressway Corridor maps

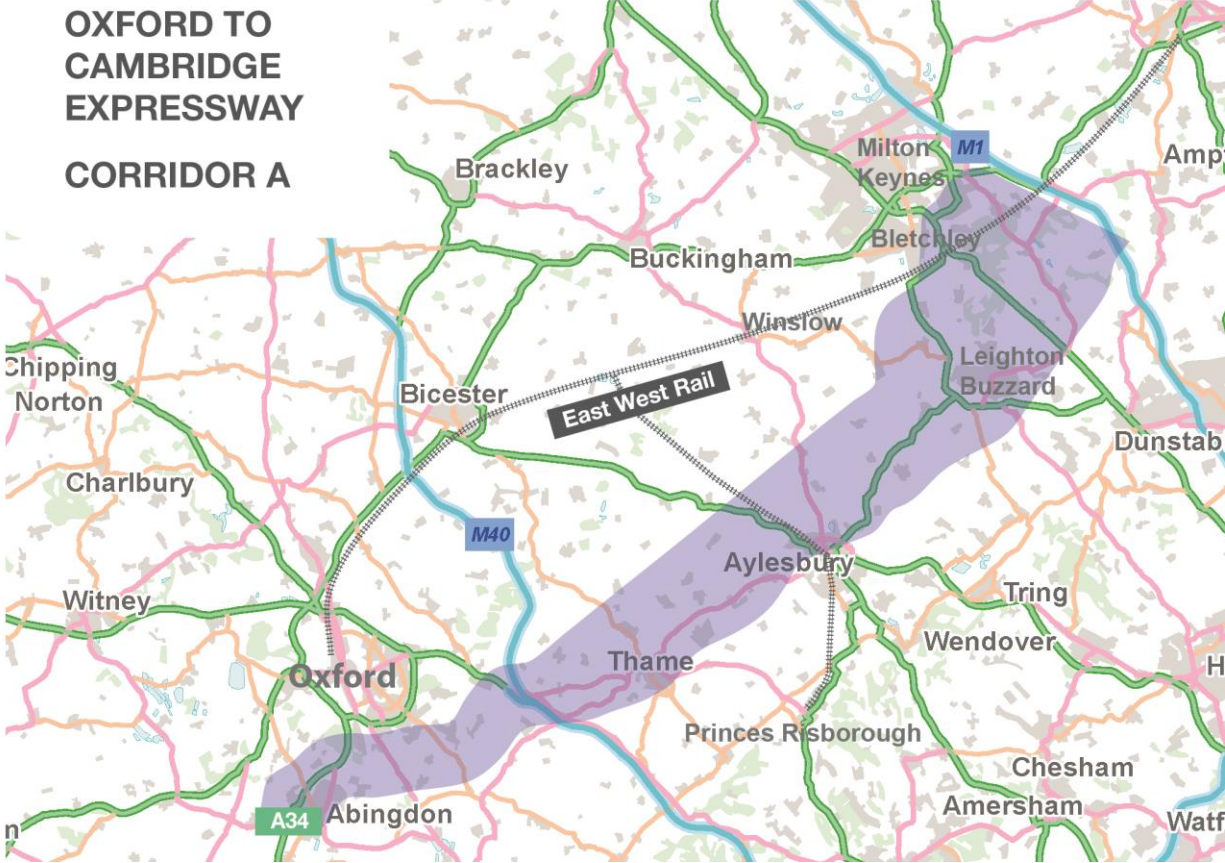
B: Letter from the Leader of Milton Keynes Council to the Chancellor of the Exchequer

C: Letter from MCHLG regarding the Council’s bid for Forward Fund under the Housing Infrastructure Fund

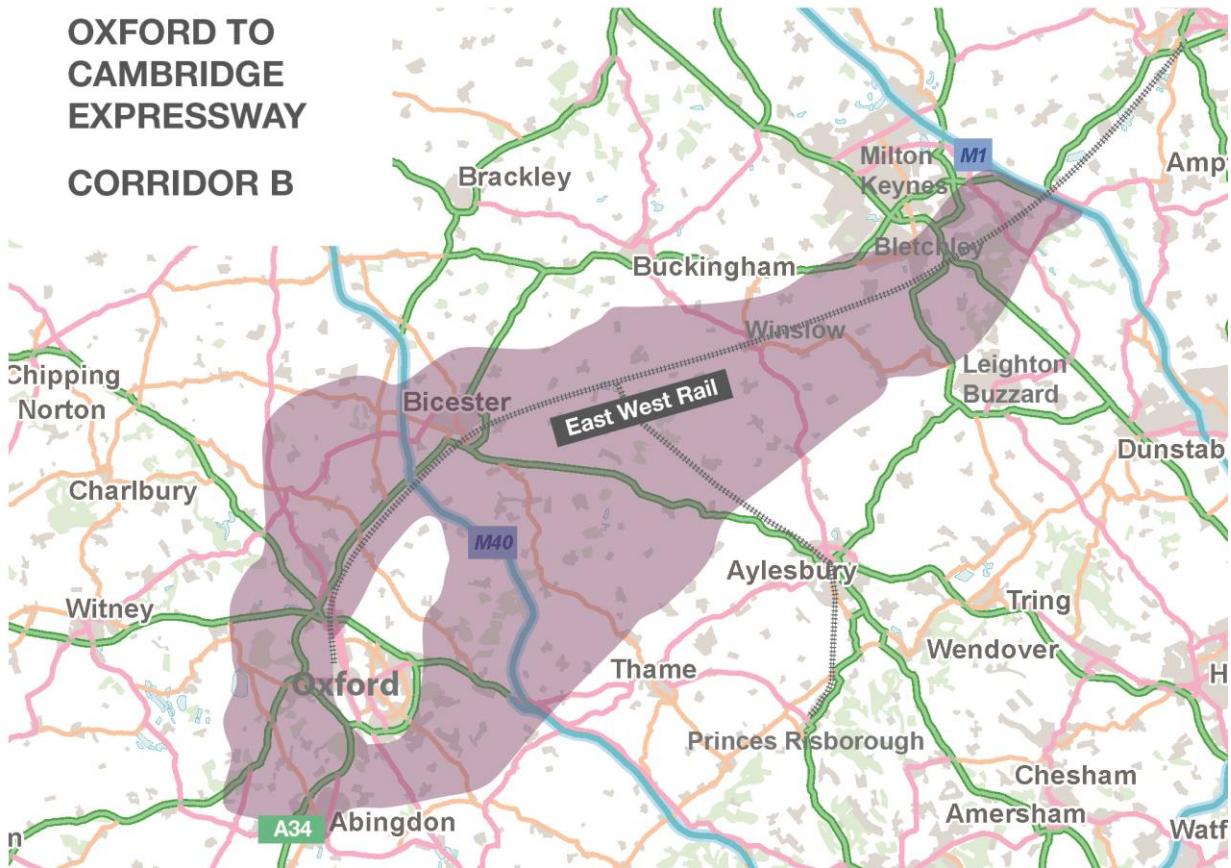
D: AECOM Transport Technical Note 20

E: AECOM Transport Technical Note 21

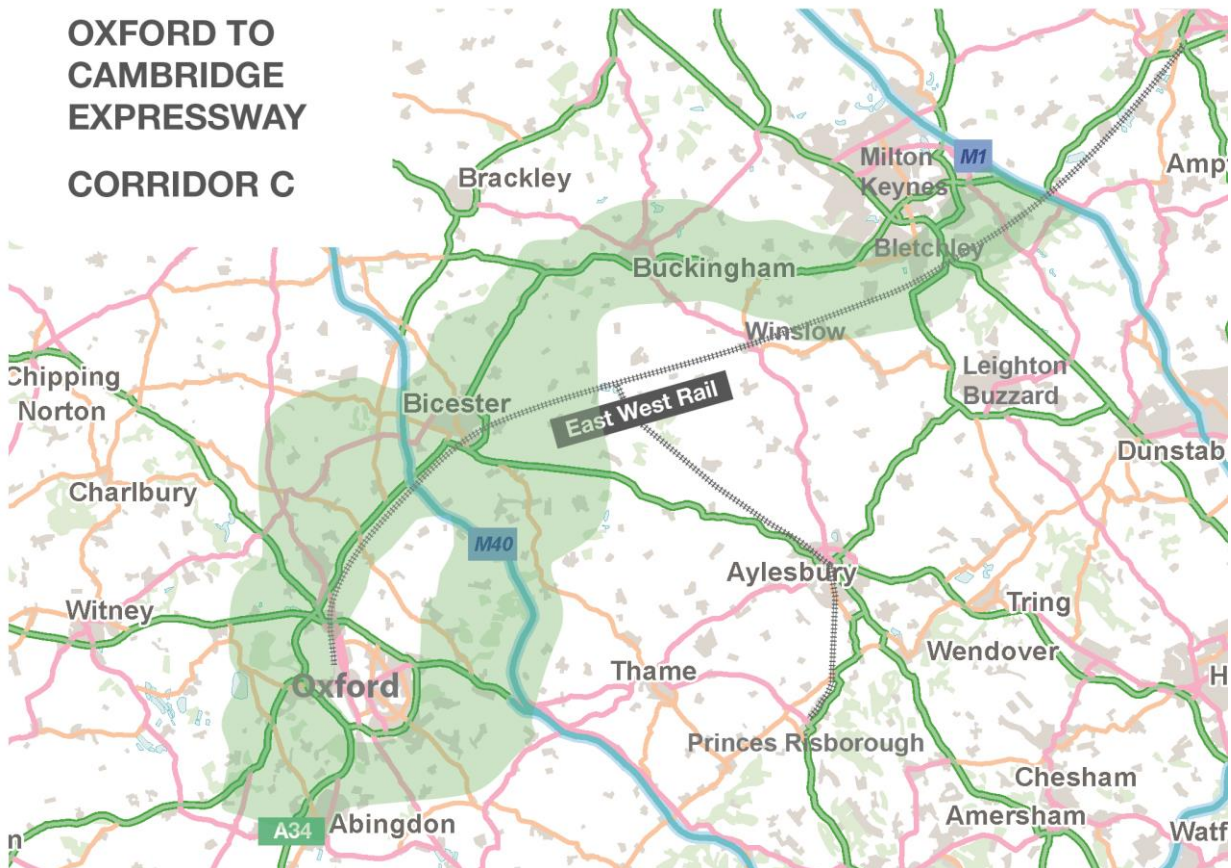
Appendix A Expressway Corridors Maps (courtesy of Highways England, 30 May 2018)



**OXFORD TO
CAMBRIDGE
EXPRESSWAY
CORRIDOR B**



**OXFORD TO
CAMBRIDGE
EXPRESSWAY
CORRIDOR C**



Appendix C HIF letter from MHCLG, 8 May 2018



Ministry of Housing,
Communities &
Local Government

Ministry of Housing, Communities and Local

Government

Fry Building
2 Marsham Street
London, SW1P 4DF

Tel: 0303 444 0000

E-Mail: HIF@communities.gsi.gov.uk

www.gov.uk/mhclg

8 May 2018

Dear Sarah,

HIF/FF/615 - Milton Keynes East Sustainable Urban Extension

Following the recent Housing Infrastructure Fund announcement of the 45 places progressing to the next stage of the Forward Funding process, we are writing to provide further information on co-development and set out next steps.

Timeline

Co-development will take place over an 11-month period from May 2018 to March 2019, but we recognise that not all projects will require the full amount of time to be ready to submit a business case. We have therefore allocated three submission deadlines to give you the flexibility to submit your business case when you are ready. These deadlines are:

- 10 September 2018 – funding decisions expected from Nov 2018
- 3 December 2018 – funding decisions expected from Feb 2019
- 1 March 2019 – funding decisions expected from May 2019

You will be able to submit your business case at any time during the process, but in the early stages of co-development, we will discuss which deadline you are aiming to meet. Please note that funding will be available at each of the three assessment points with no advantage given to those who choose to submit a business case by the first deadline. We will ensure that longer-term strategic projects submitting their business cases later in the process will have the same level of opportunity as those which are ready to go sooner.

Co-development support

Through co-development we will support and challenge you to develop your project and business case. Our support may include:

- Providing access to specialist advice to help develop your project
- Providing guidance on completing the business case
- Providing support to produce the economic and financial cases

Co-development support will be allocated proportionately based on the ambition, scale and complexity of projects.

Participating in co-development does not guarantee HIF funding and any decision is subject to the assessment of the business case and Ministerial decision.

During co-development, we may decide to withdraw support if a project no longer meets the criteria of HIF (as detailed in the prospectus and supporting documents) or is deemed undeliverable within the spending window of HIF. Local authorities who still wish to submit their business case can do so at their own risk.

Business case questions

The structure of the business case submission will be similar to that of the initial Expression of Interest form. You will be asked to respond to a number of questions, based on HMG's Five Case Model. Your business case will be submitted via the Homes England portal. We will be sending you a copy of the business case questions in the coming days so you can proceed with the work to develop your project.

Process / next steps

To help us determine how we can best support you through co-development, we would like to meet with you to discuss your project. We will be writing to you in the next few months to arrange this meeting and to set out some areas for discussion on the basis of the information you provided at EOI.

This meeting is intended to discuss what is required to enable your project to submit a business case. Once this is known, and a business case submission deadline agreed, a support plan from HMG can be established.

During co-development, Homes England will be your primary point of contact and will coordinate any specialist support allocated to your project. Accordingly, you will be allocated a Homes England lead contact.

Finally, if you have not already responded to our request for any transport modelling or WebTAG analysis undertaken to date, please do so as soon as possible.

We look forward to working with you in co-development.

Kind regards,

The HIF team

Rt Hon Philip Hammond MP
Chancellor of the Exchequer
HM Treasury
Horse Guards Road
London
SW1A 2HQ

Peter Marland
Leader
Milton Keynes Council

Our Ref:

Your Ref:

Reply To:

Direct Line: (01908) 252442

peter.marland@milton-keynes.gov.uk

23 November 2017

Dear Chancellor

Autumn Budget 2017 – Helping the Cambridge, Milton Keynes and Oxford Corridor reach its potential

Milton Keynes is Different by Design. We are the most successful purposely planned city in the UK. Since our designation fifty years ago, we have developed into a model of rapid and high quality urban expansion, with a fast-growing economy and increasing specialisms in the high tech, transport and smart city sectors that are so important to the UK's future.

Much of the success of Milton Keynes has been based on the investment made in the timely delivery of high quality infrastructure, a commitment to good quality housing, green space and a focus on employment and jobs, but we cannot stand still if we want to continue our success over the next fifty years and more.

I welcome the backing in your Budget 2017 speech for the National Infrastructure Commission's (NIC) vision for the Cambridge-Milton Keynes-Oxford corridor and your commitment to building up to 1 million new homes by 2050. The NIC's report on the corridor suggested that Milton Keynes could once again become a growth location of national significance and grow to at least 500,000 people by 2050.

Milton Keynes has strong aspirations for large-scale growth. This was articulated in the work of the MK Futures 2050 Commission that created a long-term vision for the future development of Milton Keynes that was supported unanimously cross-party by MK Council. I strongly endorse the view in the NIC report that Milton Keynes represents "an immediate opportunity for growth". I believe that with our track record for delivery and existing infrastructure, together with new provisions as envisaged by the NIC, the city and its immediate hinterland could contribute a large and early share of growth, up to 10% of the 1 million new homes, needed in the corridor.

Milton Keynes has been presented with the chance to take future growth in our own hands, and the opportunity to shape that growth around the type of city we want to be, rather than applying a one size fits all planning approach to our unique environment.

But I am very clear that going forward our residents want to see high quality infrastructure; investment in our transport links and capacity; assurances that schools, health services and community amenities will be delivered as growth takes place rather than straining existing facilities; that the council is able to properly and sustainably fund the extra services we will need to provide; that our commitment to high quality green space is respected and continued; and that housing is delivered for the benefit of all in the City, with a mix that everyone can afford. Unless we can show the people of Milton Keynes the benefits of growth, it will be hard to convince them that it should take place at the pace and scale envisaged.

I therefore strongly support the NIC's recommendation that to enable growth we need certainty about infrastructure delivery, timing and how it will be funded and welcome the NIC proposal for a deal with the area that will see powers and resources devolved no later than April 2020.

Your vision for the corridor recognises that in order to enable the corridor to meet its full economic potential there needs to be an integrated approach to the planning and delivery of infrastructure, homes and business growth. Milton Keynes will therefore work actively with the Government and our neighbours on how we can best meet the challenge of delivering significant extra growth across the corridor while meeting the expectations and aspirations of local people. Existing collaborations with neighbouring councils provide a strong foundation for future growth governance but we are flexible and pragmatic and will seek the optimal arrangements to allow Milton Keynes to make an early and major contribution to the region reaching its full potential.

I would be grateful if you could identify a lead official in the Treasury to work with my officers to determine the best next steps to progress our shared ambition.

Yours sincerely


Cllr Peter Marland
Leader, Milton Keynes Council

cc. Rt Hon Sajid Javid MP
Lord Andrew Adonis

Technical Note

Project:	Milton Keynes Model Update	Job No:	60516496
Subject:	Revised Reference Case		
Prepared by:	Alistair Shepherd	Date:	19 April 2018
Checked by:	Mark Chadwick	Date:	23 April 2018
Approved by:	Jon Forni	Date:	24 April 2018

Introduction

After the initial reporting on the 2031 Reference Case [reported in the Milton Keynes Multi-Modal Nodel (MKMMM) Traffic Forecasting Report] there have been some updates to new road schemes included in the 2031 forecast models. One significant addition is improvements at Kelly's Kitchen Roundabout on the A5 which have been approved by Highway's England.

In addition new information came to light regarding the A421 dualling scheme west of M1 Junction 13, specifically the A421 roundabout at M1 J13. It was originally understood that this would include a bypass lane to allow A421 westbound traffic to avoid the roundabout. However due to the location of a side road it would not be possible to have enough separation distance after the merge and hence this lane has been excluded from the scheme.

This first part of this note details the above changes and also some minor edits included to improve network accuracy given the opportunity had arisen to also include these. The latter part of this note gives a brief overview of the impacts of the changes made in terms of flow, delay and volume of capacity (V/C) ratios compared to the previous Reference Case model outcomes.

Network Amendments

A revised Reference Case Scenario was produced by applying the changes outlined in this section and then re-running the demand model with the original Reference Case input demand.

Kelly's Kitchen Roundabout

Since the Reference Case model was created, Highways England has approved the scheme design for Kelly's kitchen roundabout, which was submitted to them by developer of the Eaton Leys site. The design is for a Hamburger junction with the length of the A4146 between the junction and the Eaton Leys access dualled, with signals at this access. The proposed layouts are presented in Figure 1 and Figure 2.

Signal timings were provided in a LINSIG model. These models were produced on behalf of the developer but not based on flows from the updated MKMMM. For the AM peak it was possible to make use of the timings with minor adjustments to reduce delay. For the PM peak the LINSIG model was updated with flows from the existing PM MKMMM Reference Case model and the timings re-optimised. These timings were then coded into the revised Reference Case. For the inter-peak in the absence of LINSIG timings the PM timings were used and appear to work satisfactorily with the inter-peak flows in the MKMMM assignments.

It has been noted that according to the lane markings southbound traffic on the A5 is only permitted to use a single lane on the approach to the junction, this resulted in large delays when tested in the PM

Technical Note

peak and it was also noted that in the LINSIG model the movement is permitted in two lanes. Therefore two A5 to A5 lanes (lanes 1 and 2) have also been coded in the revised MKMMM Reference Case.

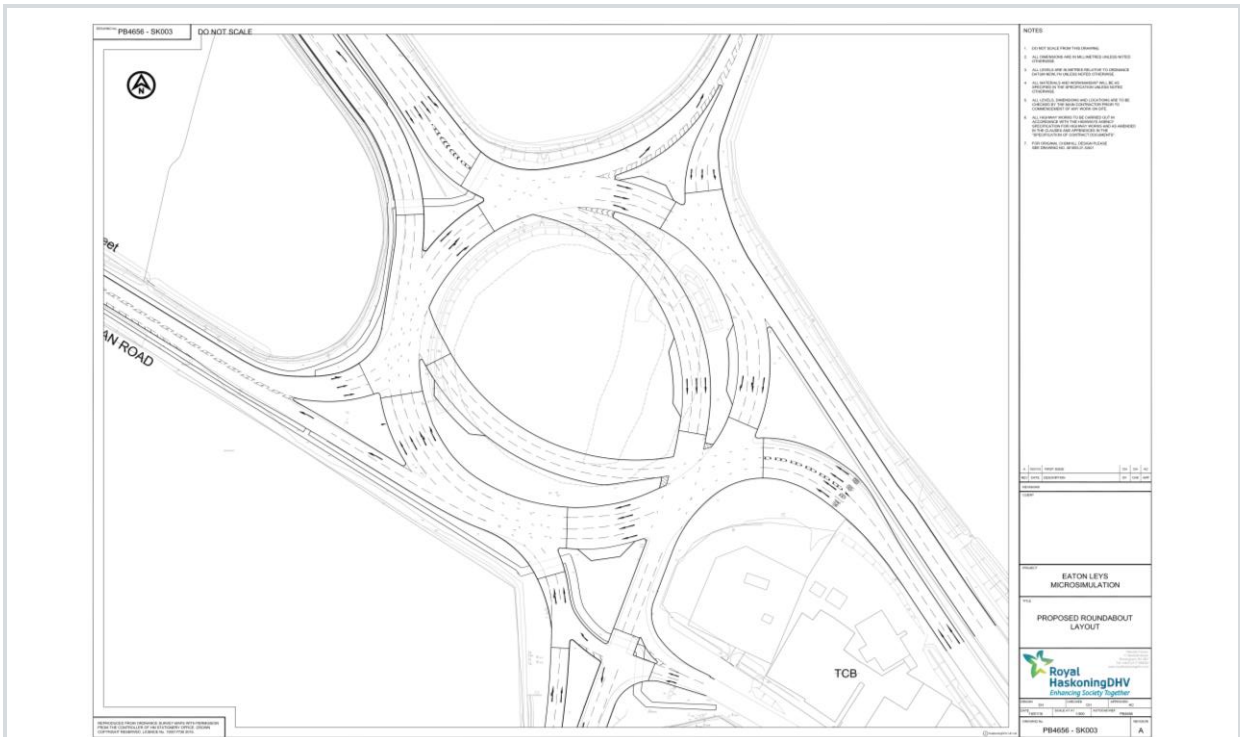


Figure 1. Kelly's Kitchen Proposed Layout (with single A5 north to south lane)



Figure 2. Proposed Eaton Leys Access

Technical Note

A421 dualling Scheme

When the Reference Case networks were originally coded we were informed by the scheme consultants that there would be a left turn bypass lane south of the A421 roundabout which would allow westbound traffic to bypass the roundabout. However it was subsequently brought to our attention that the scheme stops short of this roundabout with no interventions included at the junction. This is shown in Figure 3.

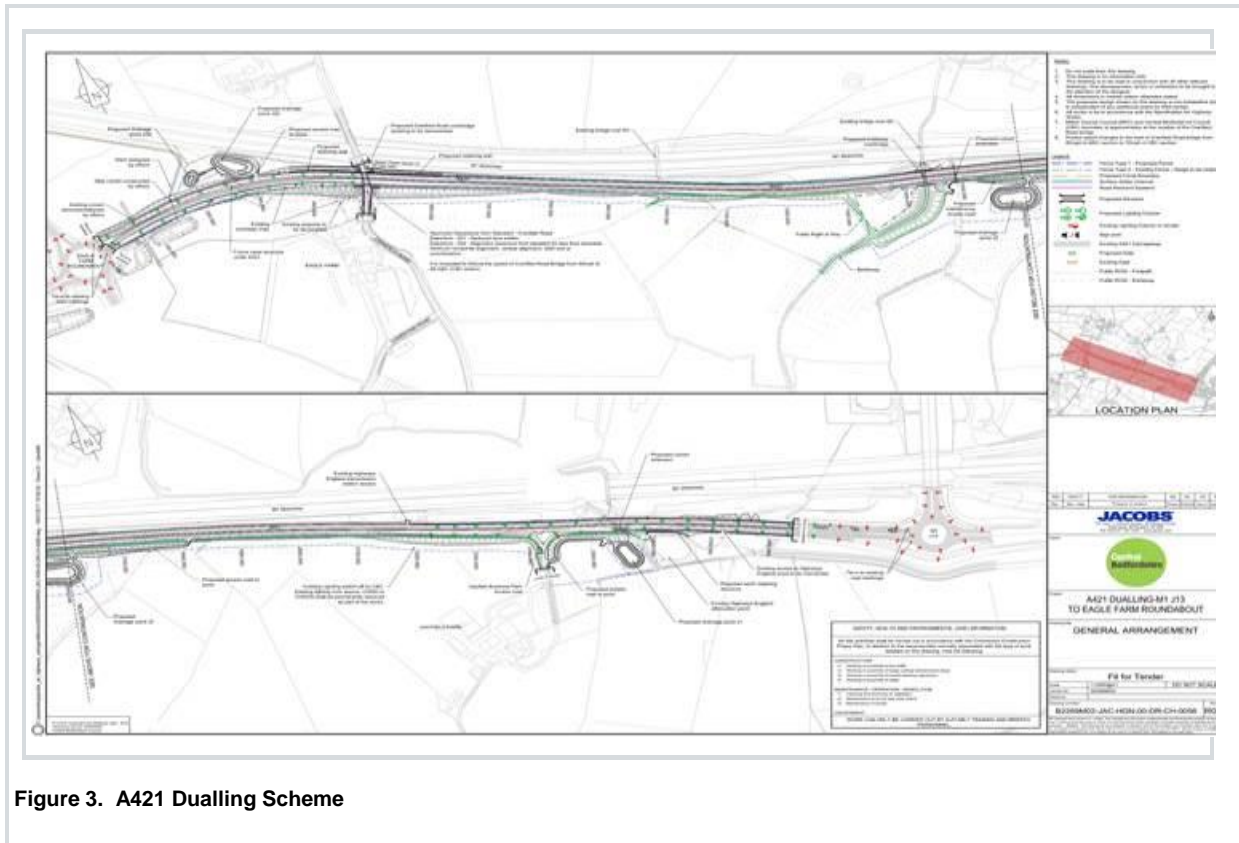


Figure 3. A421 Dualling Scheme

H6/V10 Roundabout

The H6 Childs Way approaches were modelled with 3 lanes at the give way line. This was corrected to two lanes at the give way line.

Salford Road / Bedford Road Junction

The junction is now modelled by a single signal node. Additional model detail was added on Bedford Road between the M1 J13 northern roundabout and Salford Road to model the hatched separation between the ahead and right turn lanes with long queues forming in the right turn lane leading to traffic blocking back.

Cranfield University loading point

Cranfield University in the original Reference Case had a single loading point whereas there are multiple exits onto the road network. In the PM peak in the 2031 forecast scenarios there was a large delay caused by the restrictive zone loading and forecast growth in trips. The give-way turns from the spigot have been amended to have a saturation flow of 9999 to help the traffic exit. This has significantly reduced delay although there is still a small amount of queue on the spigot and at nearby junctions.

Technical Note

Open University Loading points

Zone 1094 representing the Open University, originally just loaded onto V10 Brickhill Street. In the Revised Reference Case it now also loads onto H9 Groveway.

The loading for zone 1024 directly south of zone 1094 was also amended as it was noted that this had two loading points in the model, it would be more realistically represented by a single loading point onto V10 Brickhill Street. This is because the access onto Groveway is a minor one and appears to be barrier controlled. The existing zone connectors are shown in Figure 4 and the revised zone connectors are shown in Figure 5.

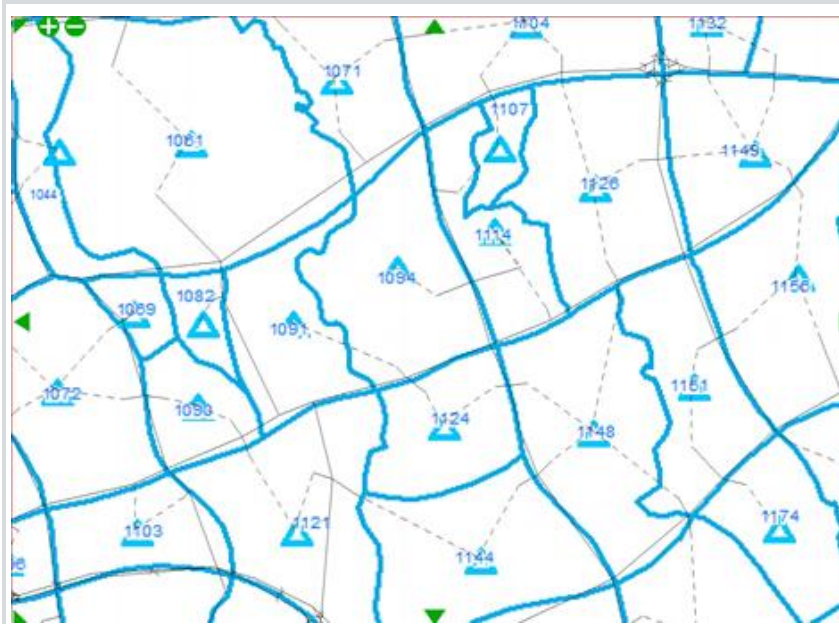


Figure 4. Existing Zone connections

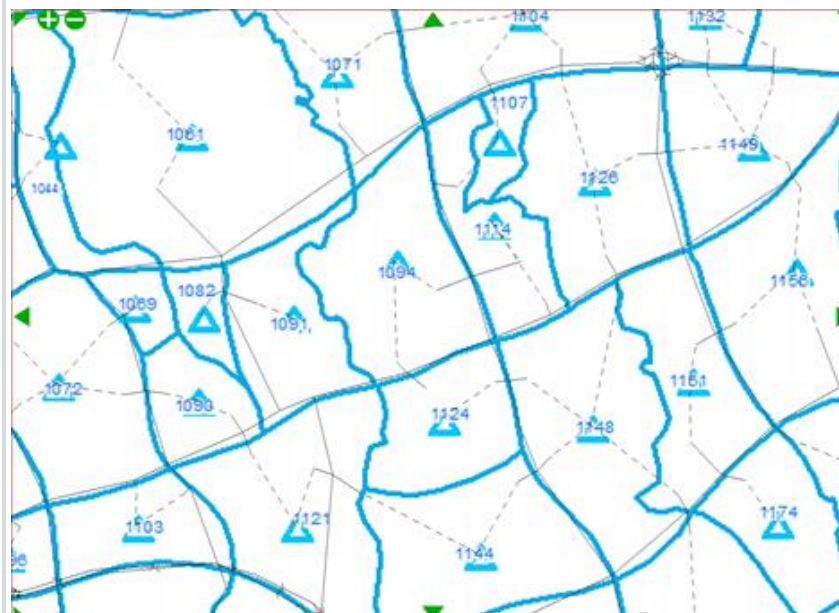


Figure 5. Revised Zone connections

Technical Note

Impact on Modelled Traffic Flow

Flow comparison plots are presented in **Error! Reference source not found.** to Figure 8.

Kelly's Kitchen Roundabout

The largest impact of the new layout is in the AM Peak in which the northbound flow on A5 immediately north of the junction is over 900 PCUs (Passenger Car Units) higher than without the improvement. This is mostly due to traffic re-assigning from other routes and using the A5 and also reductions in queued traffic at Kelly's Kitchen. These other roads include Brickhill Street with less traffic north of Station Road.

A421 Dualling Scheme

There is a small reduction in westbound flow on A421 in all three time periods of around 50 to 100 PCUs.

There is now more traffic in the model using the south roundabout at M1 J13 and joining the A421 north eastbound using the on slip north of this roundabout.

H6/V10 roundabout

This has a notable impact in the AM Reference Case; there is a 300 PCU reduction on H6 between V11 and V10 with an increase on the parallel sections of H5 and H4. There is little impact in the IP and PM periods.

Salford Road / Bedford Road Junction

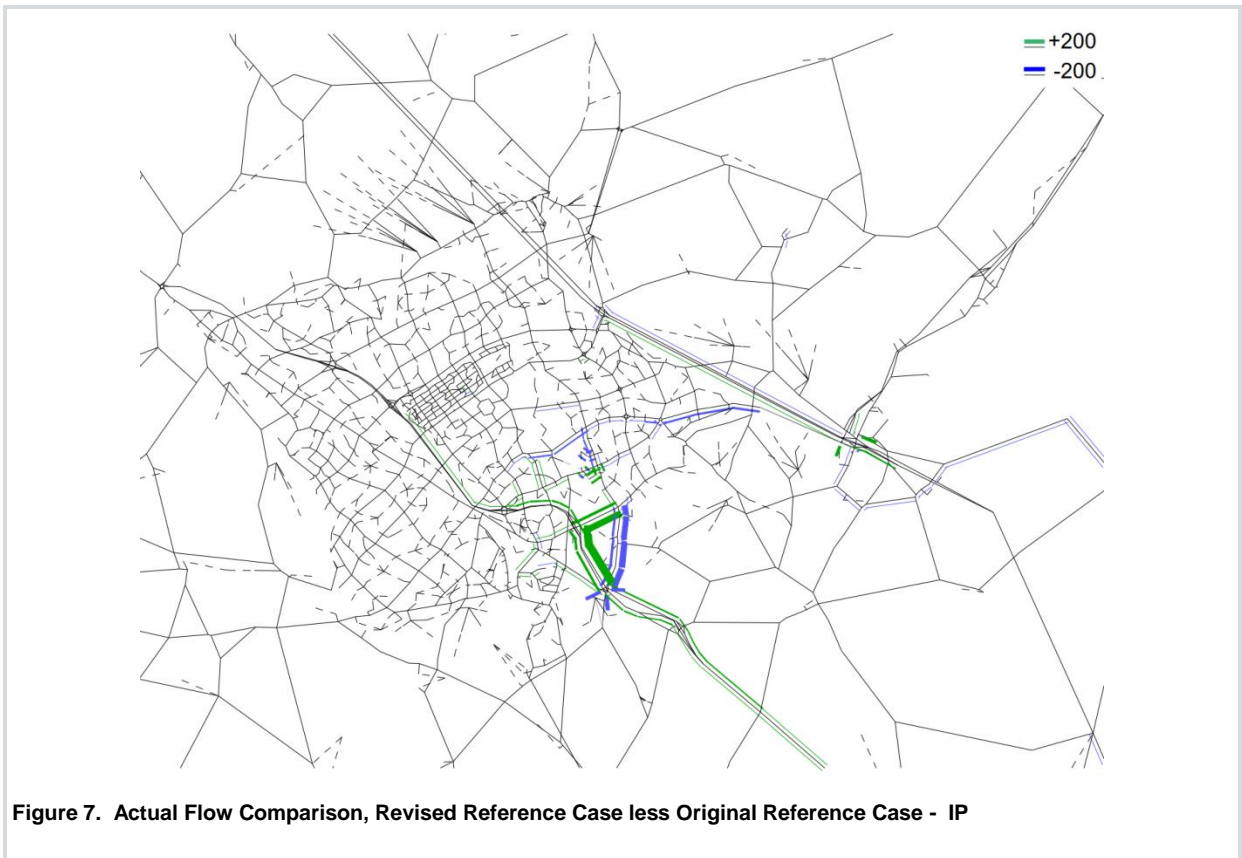
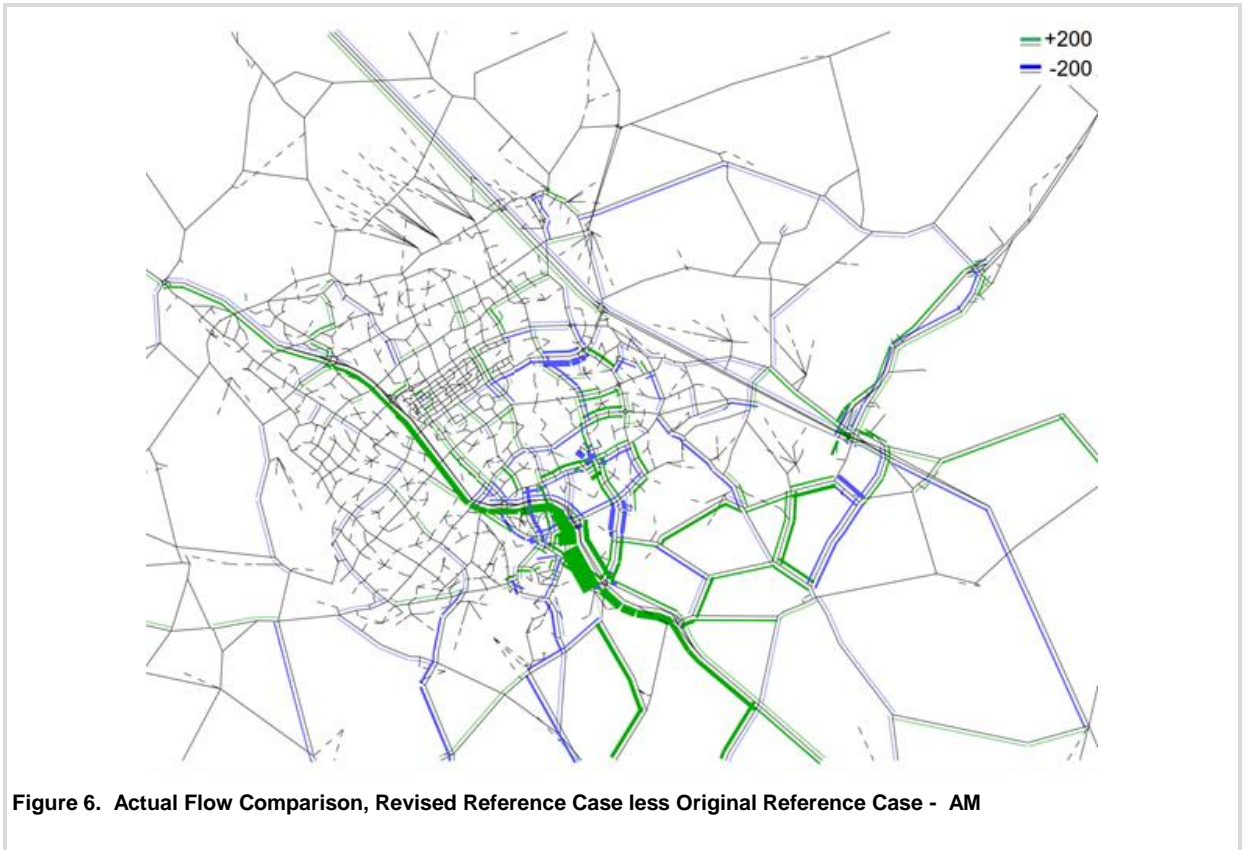
The impact is relatively small in terms of flow, the biggest impact being in the AM with a reduction of 59 PCU travelling northbound towards Brogborough. In the PM peak there is a small increase of 79 PCUs travelling towards Brogborough but this could be an effect of removing the A421 junction bypass lane.

Cranfield zone loading point

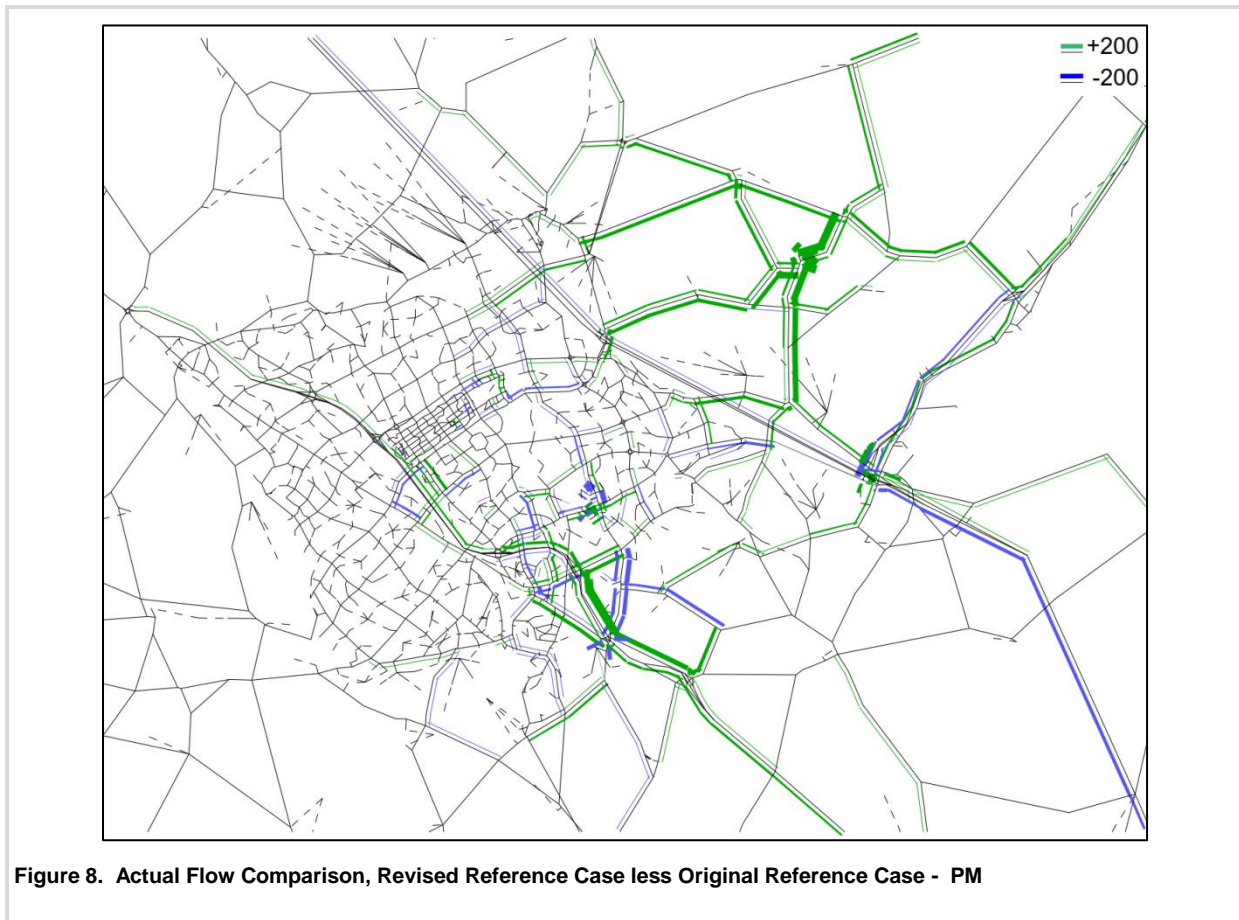
This has only impacted modelled traffic in the PM peak. More so in the full demand model run where there is a combined total of around 400 additional PCUs heading across the M1 towards MK on Newport Rd, Broughton Rd and the Wavendon Road.

Open University loading point

This only has a localised impact around the Brickhill St. / Groveway roundabout



Technical Note



Impact on Delays

Plots showing the change in total delay as a result of the amendments are presented in Figure 9 to Figure 11. As to be expected the improvements at Kelly's Kitchen Roundabout reduce the overall delay at that junction. At the A421 junction, with the left bypass lane removed, there is an increase in delay on the westbound approach to the roundabout.

As a result of the large increase in traffic through Kelly's Kitchen Roundabout in the AM peak there is an increase in delay on a number of roads to the south of Milton Keynes. Most notably delays have increased on the northbound A4146 approach to the junction with Galley Lane, and on the A5 northbound approach to the junction with Woburn Road and Sheep Lane. In the inter-peak there is minimal impact in terms of delay. Although there are slight increases in delay to the south of Milton Keynes in the PM peak these are to a lesser degree than in the AM Peak. The most notable impact in the PM peak is to the east of the M1, around Cranfield where the blocked trips have been released onto the network. This has increased delay at the junction Newport Road with the A509 just north of J14 by over half a minute.

Technical Note

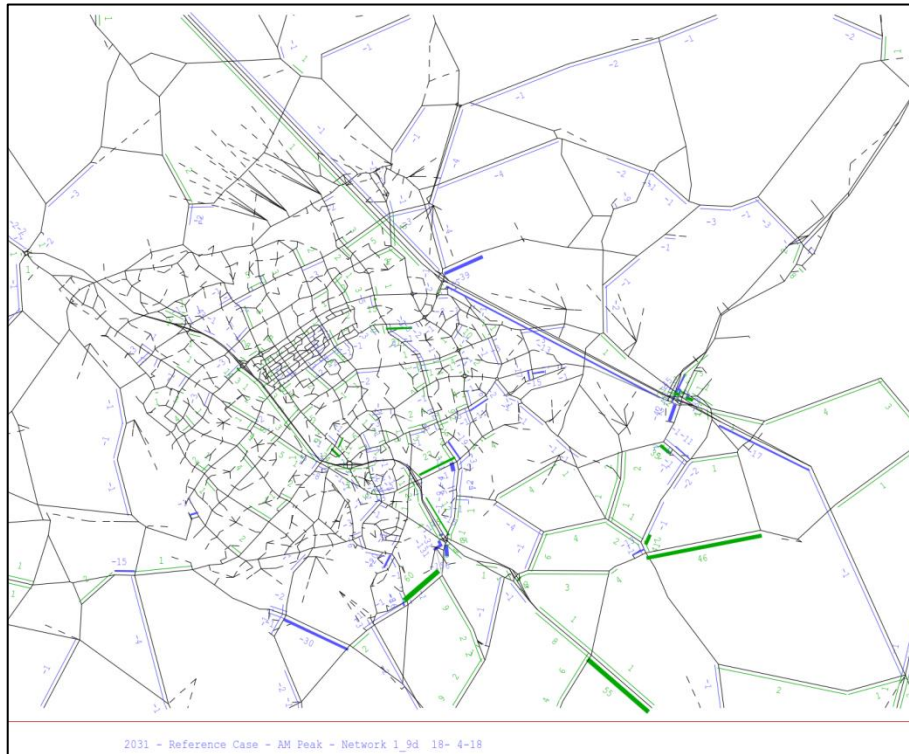


Figure 9. Delay Comparison, Revised Reference Case less Original Reference Case - AM

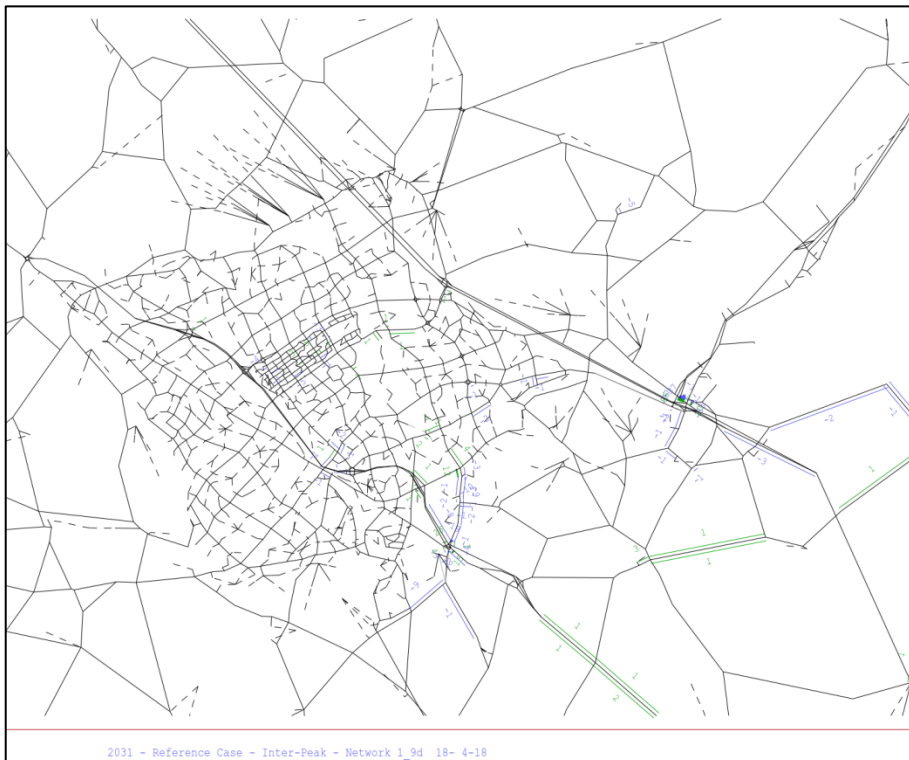


Figure 10. Delay Comparison, Revised Reference Case less Original Reference Case - IP

Technical Note

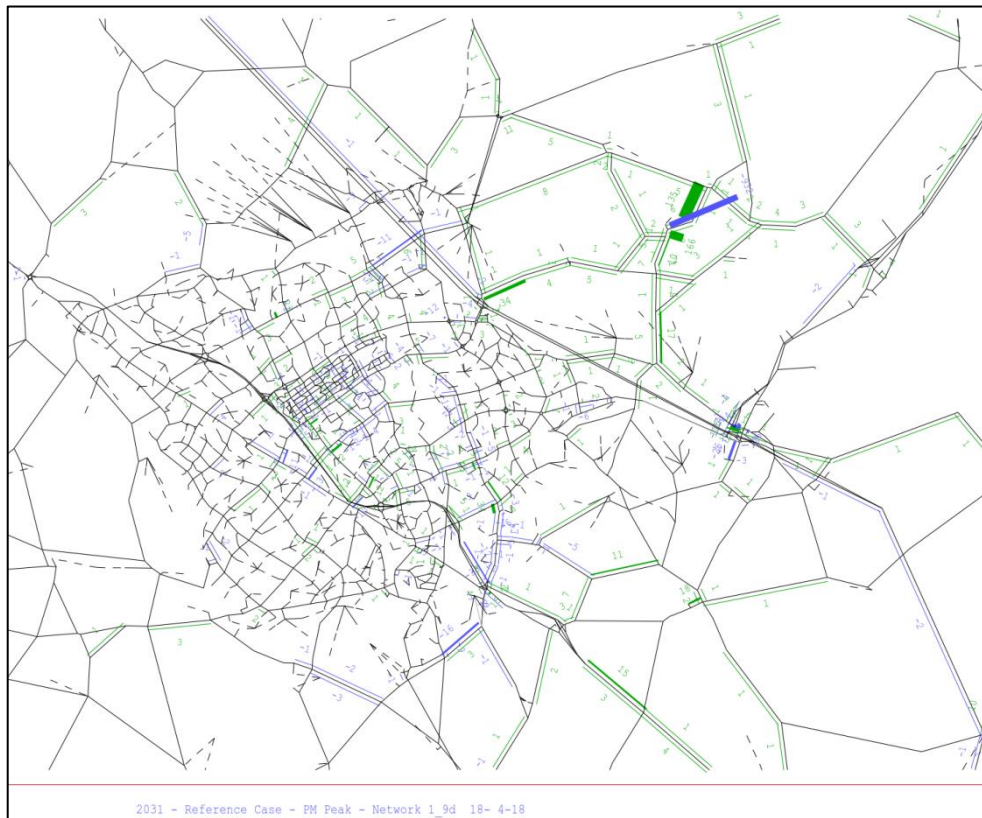
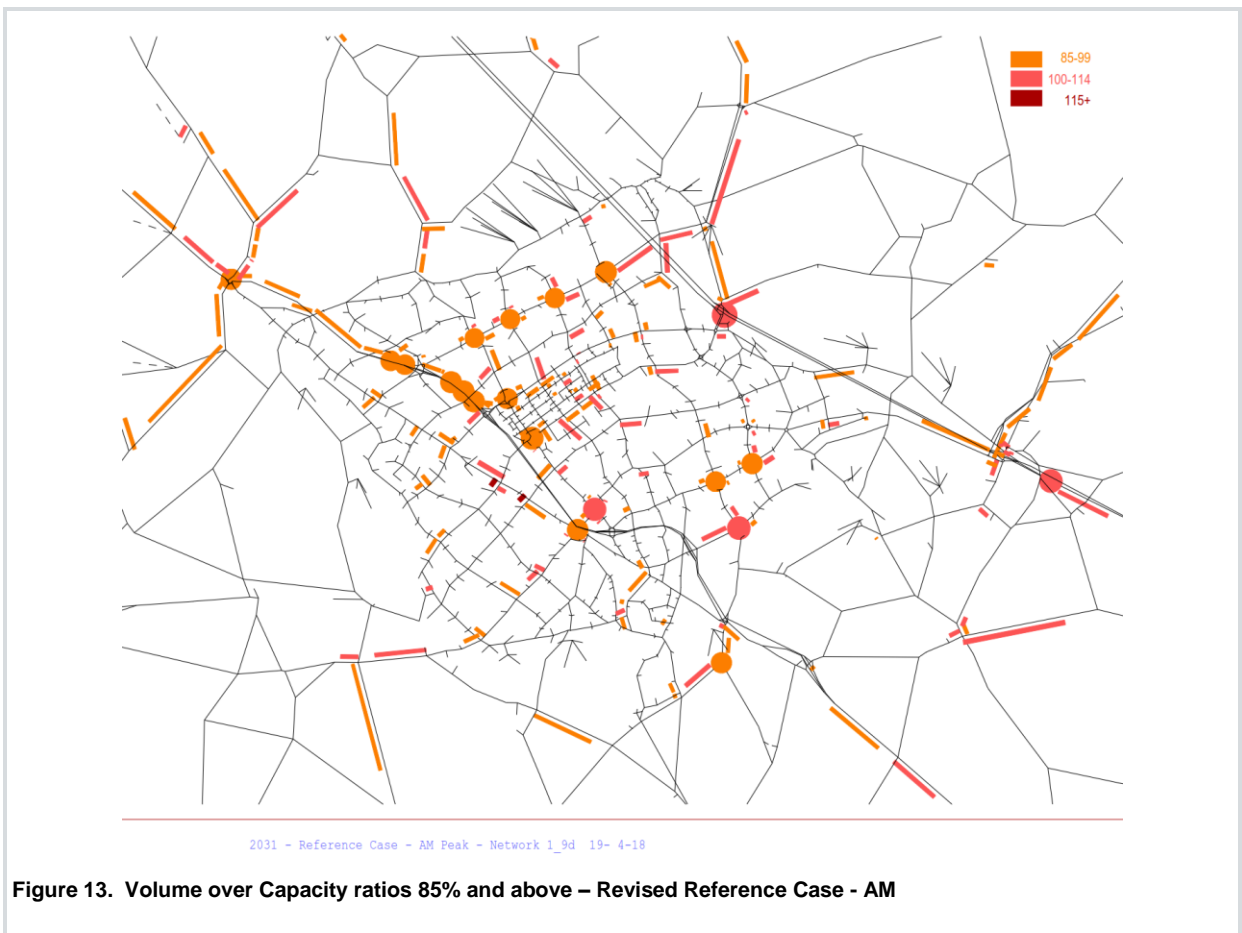
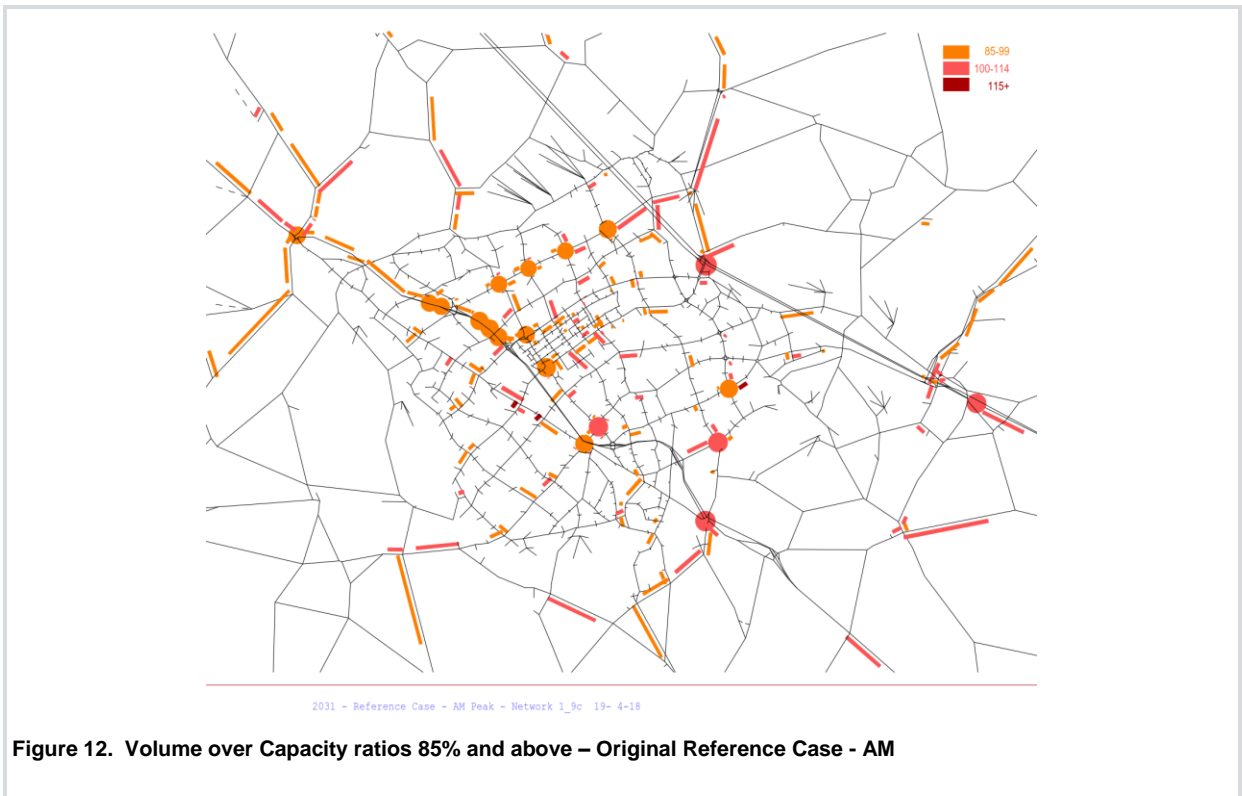


Figure 11. Delay Comparison, Revised Reference Case less Original Reference Case - PM

Volume over Capacity Ratios

There is a clear reduction of average node V/C between the revised Reference Case and the original Reference Case in the AM peak. However comparing V/C ratios between versions shows very little change and no notable changes. Although in the PM it appears the eastbound approach to the A421 roundabout is worse, this is not the case. In the original version there is a short link on the approach to the junction because of the bypass lane which has a V/C of 112% now the short link is removed the high V/C is simply more noticeable on the plot.

Plots showing the volume over capacity (V/C) ratios over 85% for the AM and PM peak for the original Reference Case and Revised Reference Case are presented in Figure 12 to Figure 15.



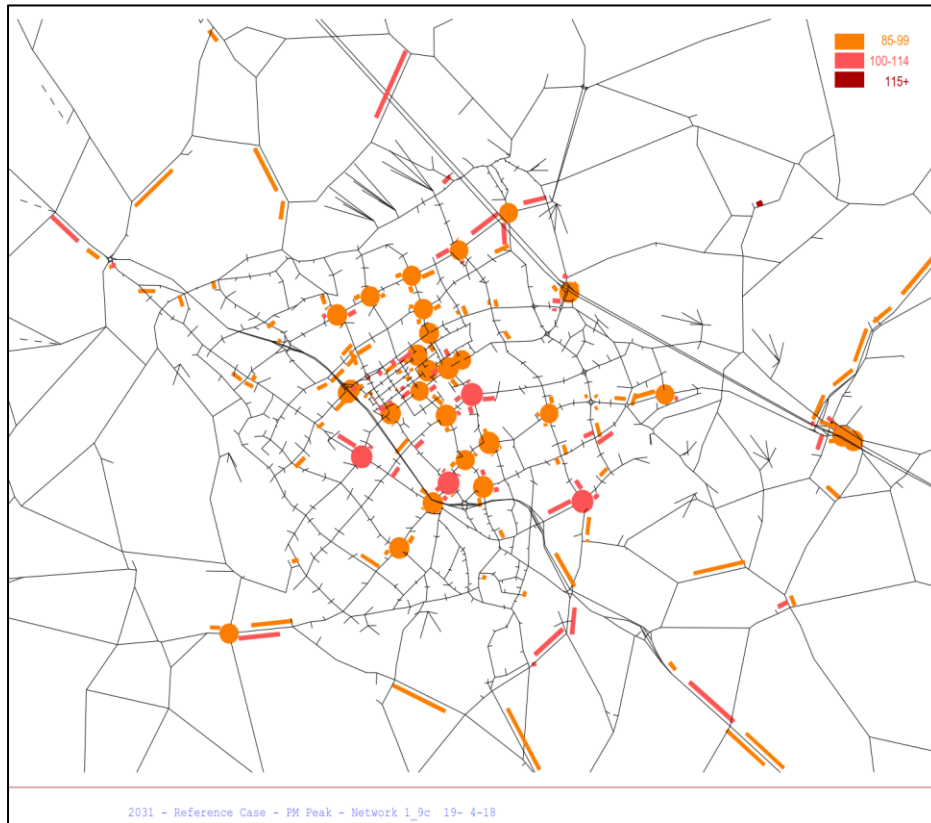


Figure 14. Volume over Capacity ratios 85% and above – Original Reference Case - PM

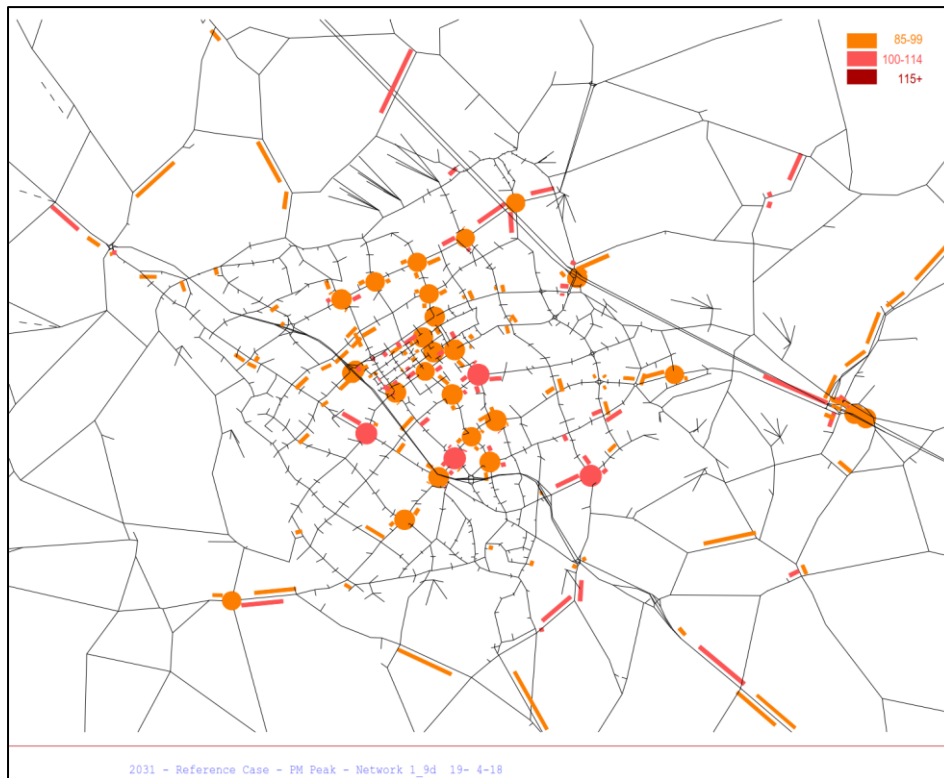


Figure 15. Volume over Capacity ratios 85% and above – Revised Reference Case - PM

Technical Note

Conclusions

The biggest impact of the Kelly's Kitchen scheme is shown in the AM peak, with a large increase in flow northbound through the junction along the A5, which is making use of the additional capacity. It is possible that with further refinement of signal timings in the PM peak and inter-peak, more capacity could be more created here and therefore re-assignment to the junction. There are however some V/C ratios over 85% on links for the revised junction due to this large increase in flow. However these are still less severe than with the original layout.

In the AM peak there is some re-assignment to parallel routes particularly to the south of Childs way as a result of correcting the H6 approaches to H6/V10 roundabout. The largest impact in the PM is around Cranfield University but on the whole the impact has dissipated on the eastern outskirts of Milton Keynes. There is however a worsening of delay on the Newport Road junction with the A509 immediately north of M1 J14.

In terms of congestion issues across the network, with the exception of the Kelly's Kitchen Roundabout improvements the changes made in the revised Reference Case have had little impact on the locations of modelled congestion within Milton Keynes reported in the Traffic Forecasting Report.

Project:	Milton Keynes Model Update	Job No:	60516496
Subject:	Plan:MK East of M1 Mitigation Testing		
Prepared by:	Alistair Shepherd	Date:	20 April 2018
Checked by:	Mark Chadwick	Date:	24 April 2018
Approved by:	Jon Forni	Date:	24 April 2018

Introduction

The primary purpose of this technical note is to assess the impact of proposed mitigation measures to mitigate the impact of the East of M1 development on the wider Milton Keynes road network and to provide supporting evidence for the Highway Infrastructure Funding (HIF) bid.

Milton Keynes Council (MKC) is looking into a number of growth options for Plan:MK which outlines development growth to 2031. The East of M1 site is considered as part of Scenario 2. The starting point to assess Plan:MK is by defining and assessing what is termed the Reference Case which incorporates currently committed growth across Milton Keynes to 2031. The Reference Case is described in detail in the MKMMM Traffic Forecasting Report while more recent updates to the Reference Case are described in Technical Note TN20.

The Milton Keynes Multi-Modal Model has been used to assess the proposed developments including those in the 'East of M1' area. This assessment has focussed on the 2031 AM (0800-0900) and PM (1700-1800) peaks but some output from the Inter-peak period (average hour of 1000-1600) model is also included.

As outlined in TN20 Revised Reference Case, a number of amendments have been made to the Reference case network, primarily the new layout for Kelly's Kitchen Roundabout and the removal of the left bypass lane for westbound traffic at the A421 roundabout adjacent to M1 junction 13. As such a revised Scenario2b has been produced incorporating these same amendments. Although there was reduced delay at Kelly's kitchen Roundabout and some redistribution of traffic in the vicinity accordingly, overall the modelled congestion issues highlighted in the original Reference Case (reported in the MKMMM Traffic Forecasting Report) remain unchanged.

This note provides a brief overview of the impacts of the Reference Case amendments when applied to Scenario 2b before assessing the mitigation measures.

Plan MK Scenario 2b Growth

The dwellings growth above the Reference Case is plotted in Figure 2 with the jobs growth above the Reference Case plotted in Figure 2. Scenario 2b includes all the Scenario 2 growth, which is an additional 10,674 dwellings and 11,502 jobs on top of the Reference Case. In addition a further 2,000 dwellings have been included in the East of M1 development taking the total to 5,000 dwellings for this site. Although planned after the Plan:MK 2031 horizon year these additional dwellings have been included to better measure the impacts on the road network and mitigation measures in this area.

As well as the 5,000 dwellings and 6,330 jobs east of M1, Scenario 2b includes:

- 918 jobs in Central Milton Keynes as part of the University Campus site;
- 1,500 dwellings of the Gallagher's development site near Bow Brickhill ;and
- A further 500 dwellings as part of the O&H site in South East MK.

This growth of 2,000 dwellings is split evenly across the two zones north of Bow Brickhill. Figure 1 shows this growth as well as the 2031 Scenario 1 growth above that for the Reference Case.

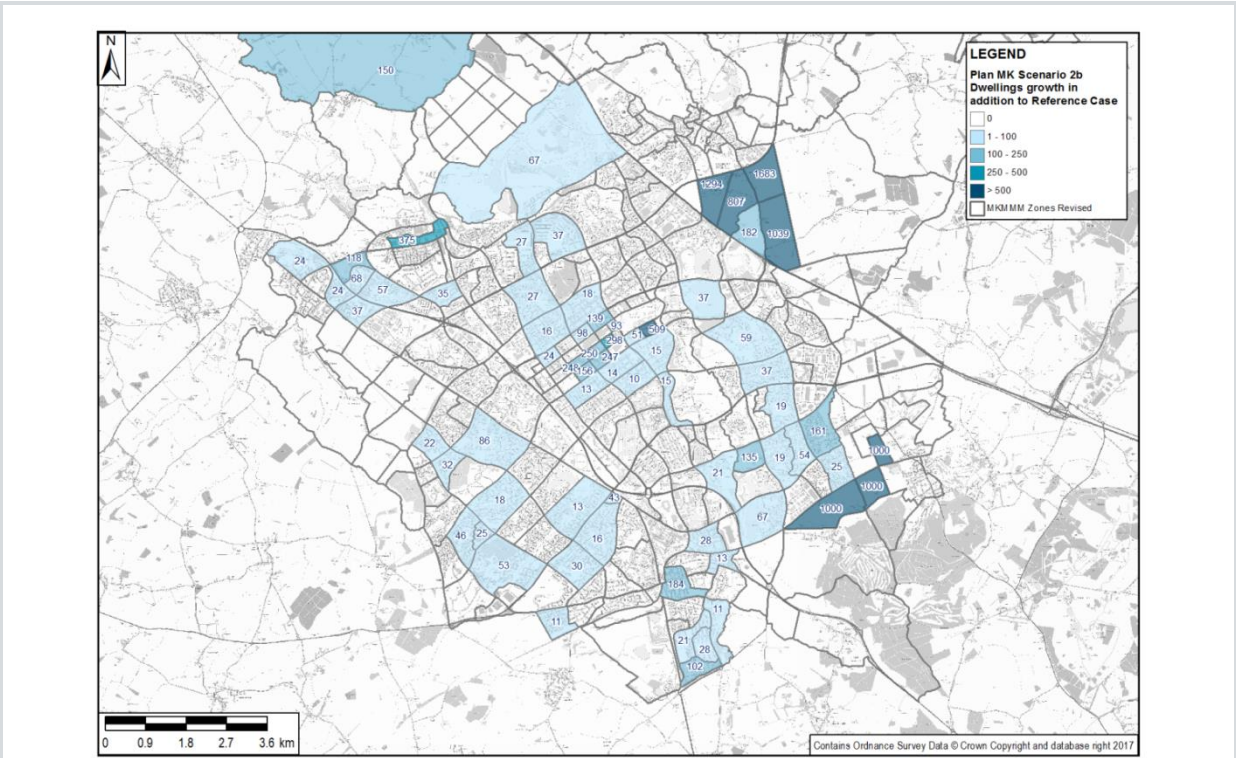


Figure 1. Plan:MK Scenario 1 and 2b Additional Dwellings Growth to 2031

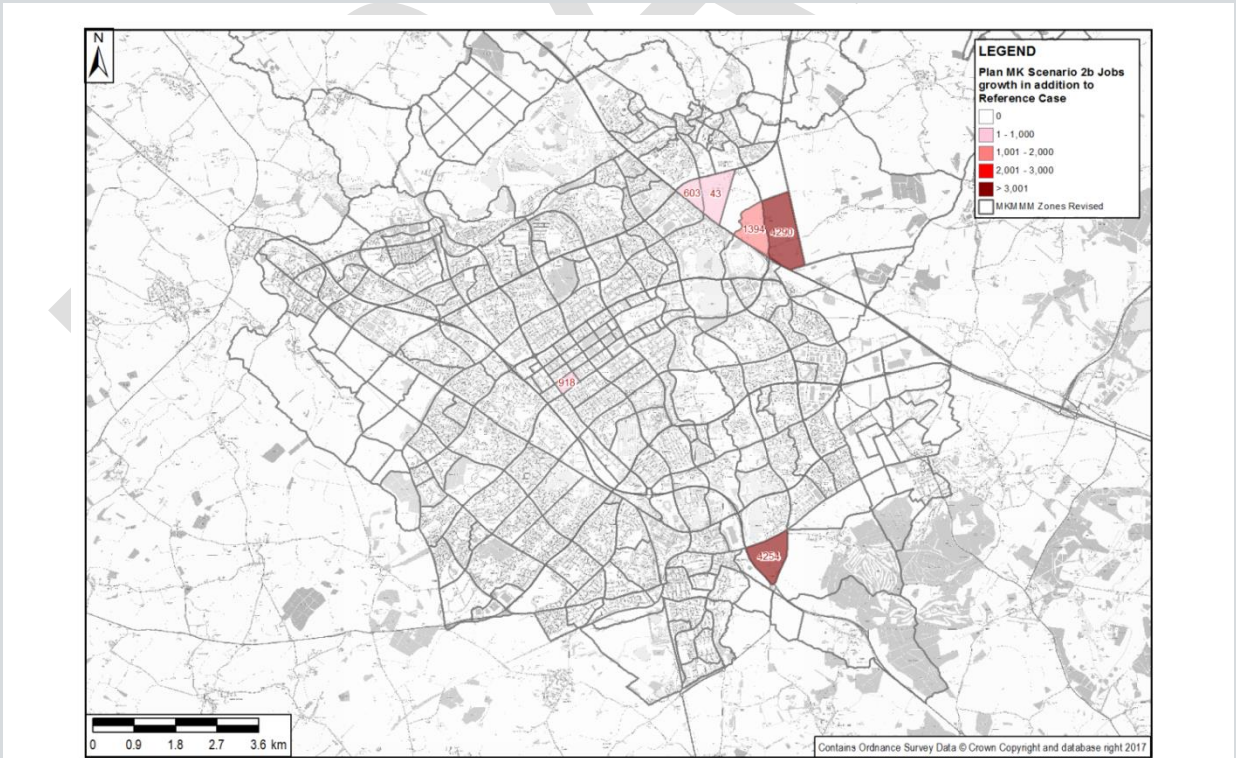


Figure 2. Plan:MK Scenario 1 and 2b Additional Jobs Growth to 2031

Scenario 2b Additional Highway Network

Additional road network is proposed to facilitate the two main development sites in Scenario 2b. Details of which are outlines in this section. For the purposes of the mitigation testing this additional network is assumed to be in place.

East of M1

To facilitate the East of M1 growth a revised road layout is proposed as shown in Figure 3. This includes a new primary route between the dualled A509 to the south of Interchange Park through to M1 J14. A new route from Renny Lodge roundabout bridging the motorway and connecting to Tongwell Street, with the existing A509 between these new routes remaining as access to the development. In addition there is an east-west link between the two routes to the north of the site with an east-west route linking Willen Road through to a re-aligned Newport Road. Signal timings have not been provided for the new signalised junctions and hence these have been estimated based on forecast flow ratios. It has been assumed the three entry lanes on the A509 southbound approach to M1 J14 will remain.

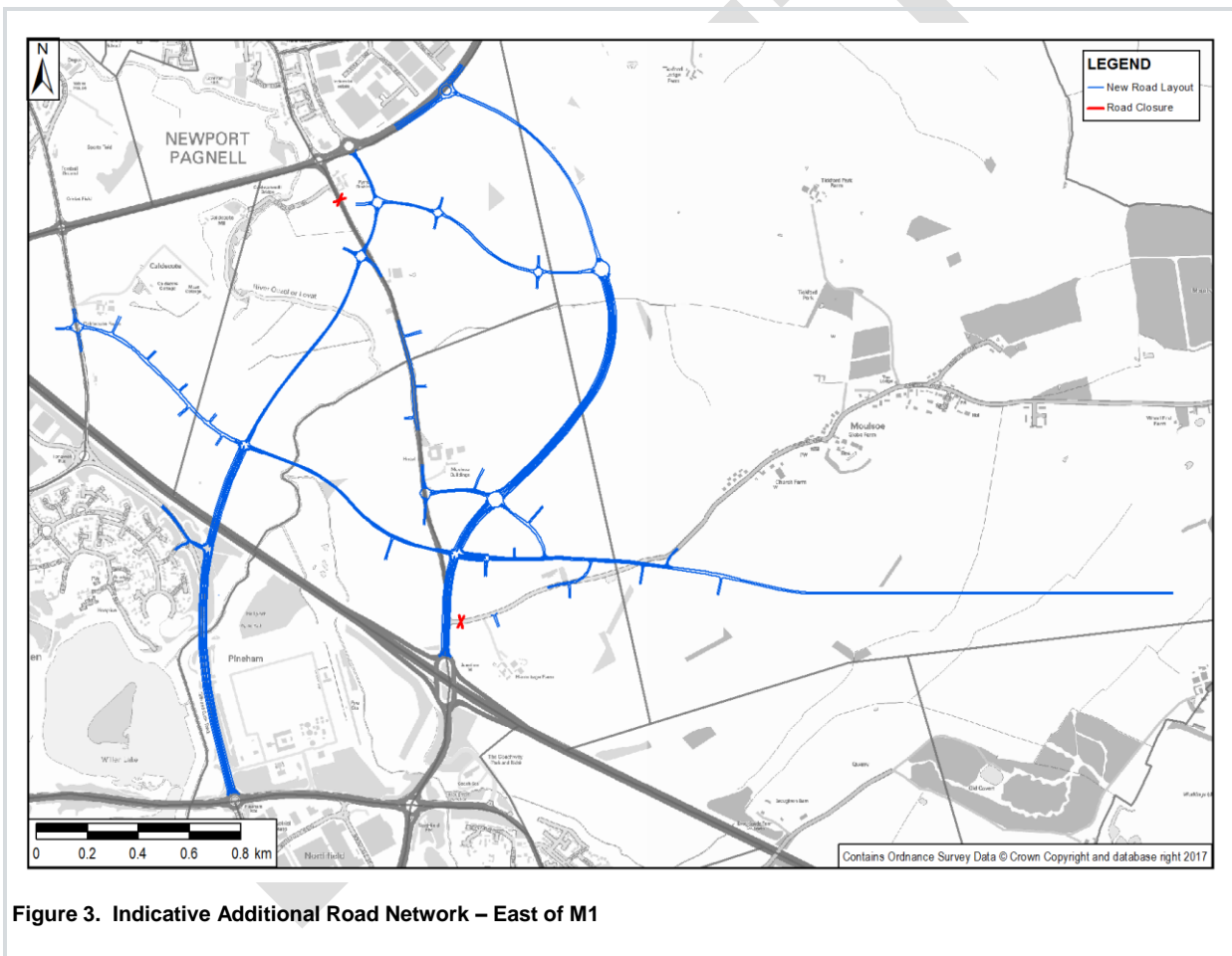


Figure 3. Indicative Additional Road Network – East of M1

South East Milton Keynes

Within Scenario 2b, in addition to the new road network east of M1, it is proposed that the South East Milton Keynes Site 2 (SEMK2) north of Bow Brickhill is served by additional road network as shown in Figure 4. This includes extending H10 as a single carriageway across to the A5130 Newport Road. There is also a connection included between the A5130 Newport Road and Bow Brickhill Road, which intersects the H10 extension and bridges the railway line. In addition there is a development spine road to the south of the railway line through SEMK2.

Following further discussion the junction arrangement on Brickhill Street north of the railway crossing was modified such that the only revision was the addition of a fourth arm at the Caldecotte Lake Drive roundabout.

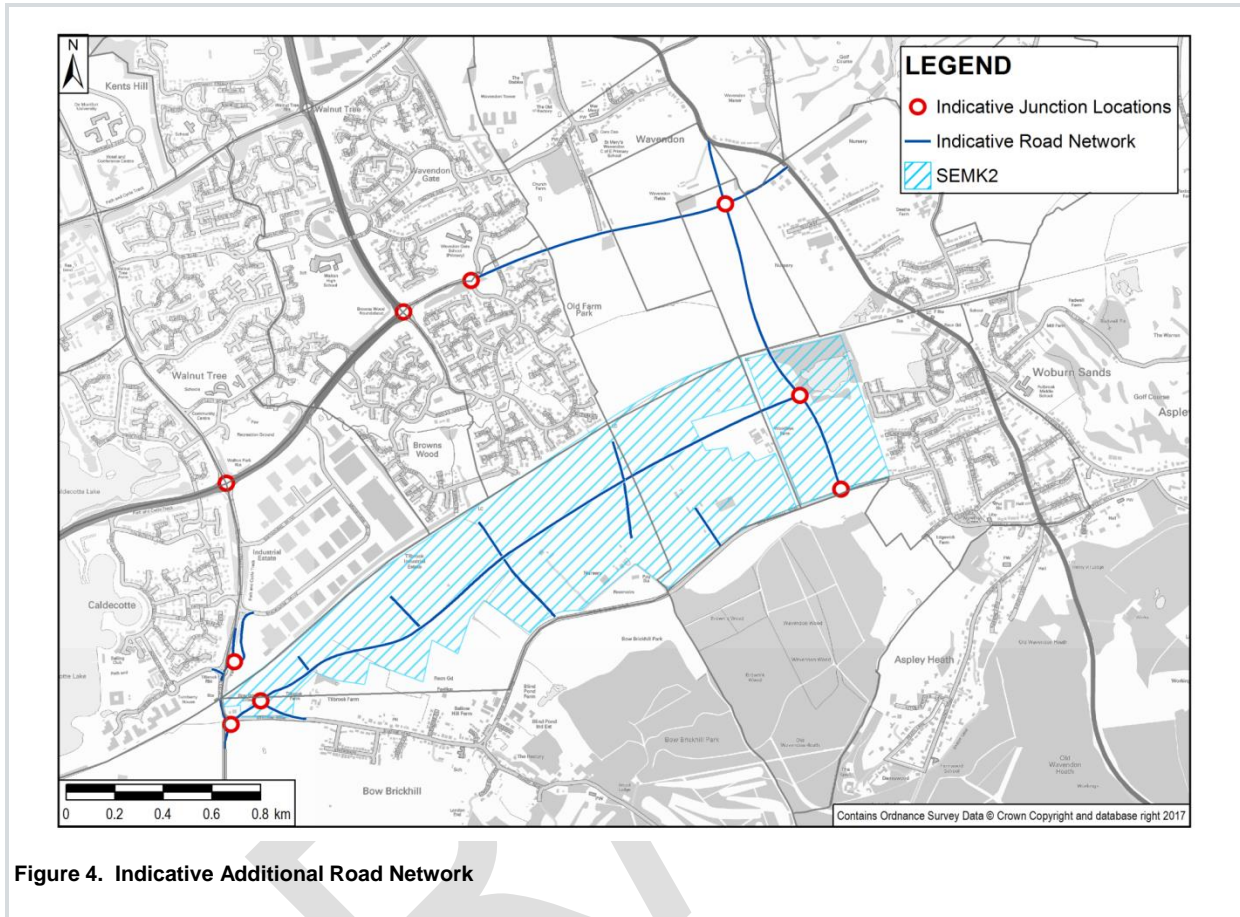


Figure 4. Indicative Additional Road Network

Public Transport

A park and ride site has been proposed as part of the East of M1 development. However in its current form it is not possible to model park and ride explicitly within the MKMMM. Due to time constraints and to give a worse case highways impact no changes to public transport have been made compared to the Reference Case. No amendments have been made to the public transport model as part of the mitigation testing.

Impacts of the Reference Case amendments to Scenario 2b

The amendments made in the Revised Reference Case have been applied to Plan:MK Scenario 2b to create Plan:MK Scenario 2bv2. This section compares the Plan:MK Scenario 2bv2 flows with Plan:MK 2b. The flow difference is plotted as bandwidths to the left side of each link by direction, with an increase in actual flow between the Reference Case and Scenario 2b shown in green and a decrease in blue. It is also important to note that where new links have been added no comparison is shown.

The flow comparisons are presented in Figure 5 to Figure 7. The modelled impact to the roads through the East of M1 development is minimal. In the PM peak there is an increase in flow along the Newport Road / Cranfield between Cranfield and the A509 immediately north of Junction 14. This is due to the release traffic from Cranfield University. The impact of this additional traffic appears minimal west of the M1.

The most notable changes are in the AM peak with a large increase in traffic northbound along the A5. There is also some reassignment of westbound traffic from Childs Way to alternative parallel routes to the south.

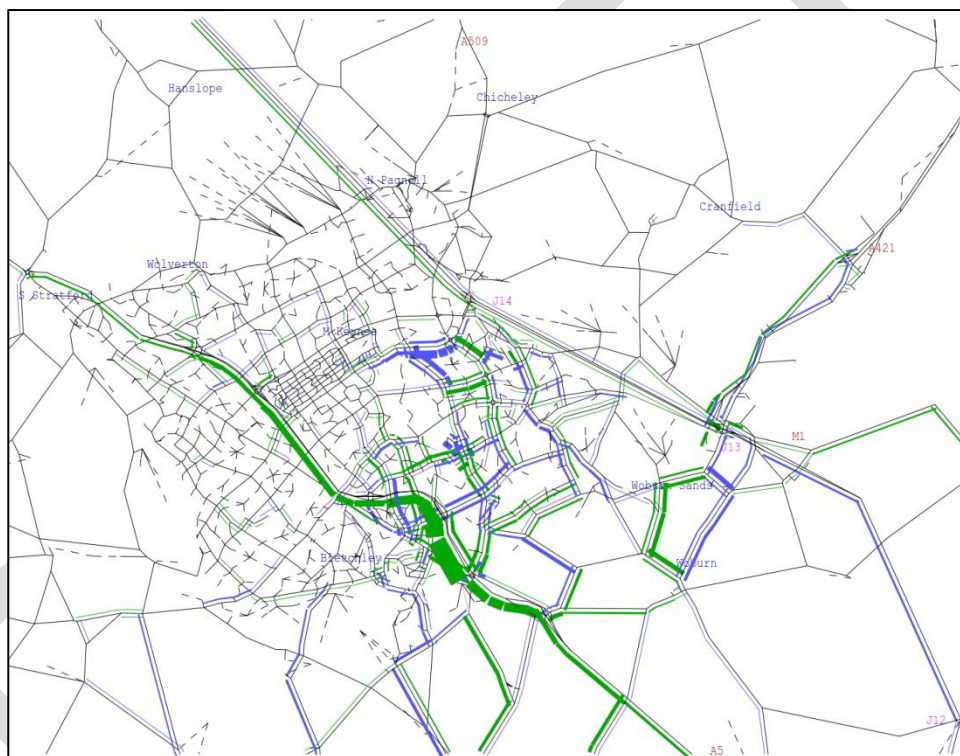


Figure 5. Change in modelled flow MK, Scenario 2b v2 less Scenario 2b AM

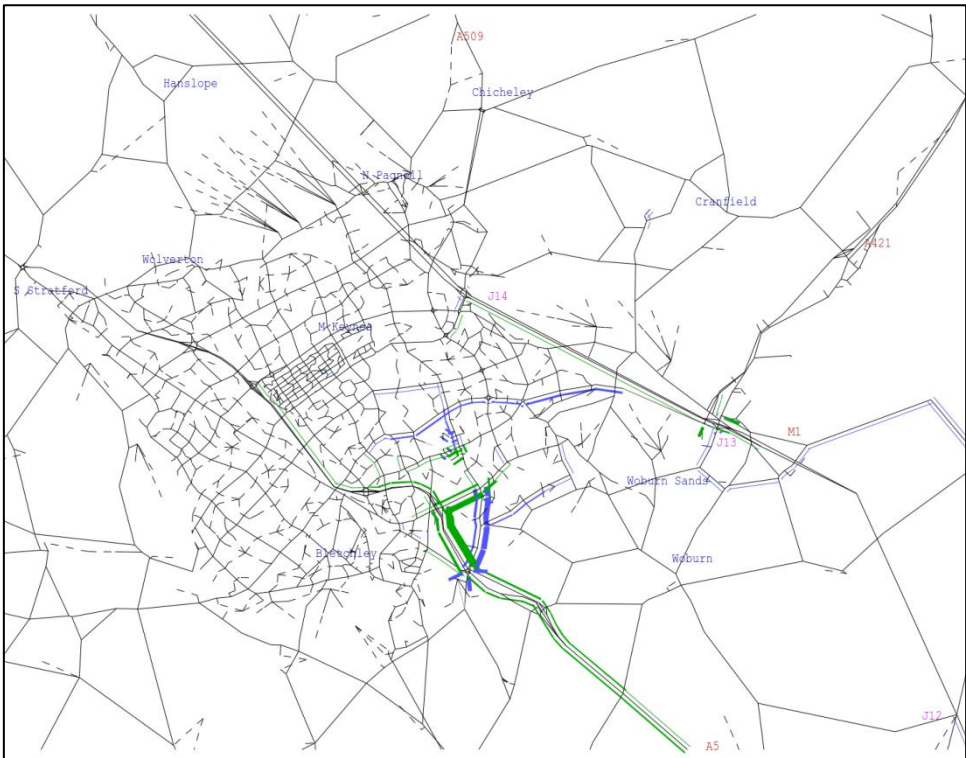


Figure 6. Change in modelled flow MK, Scenario 2b v2 less Scenario 2b Inter-peak

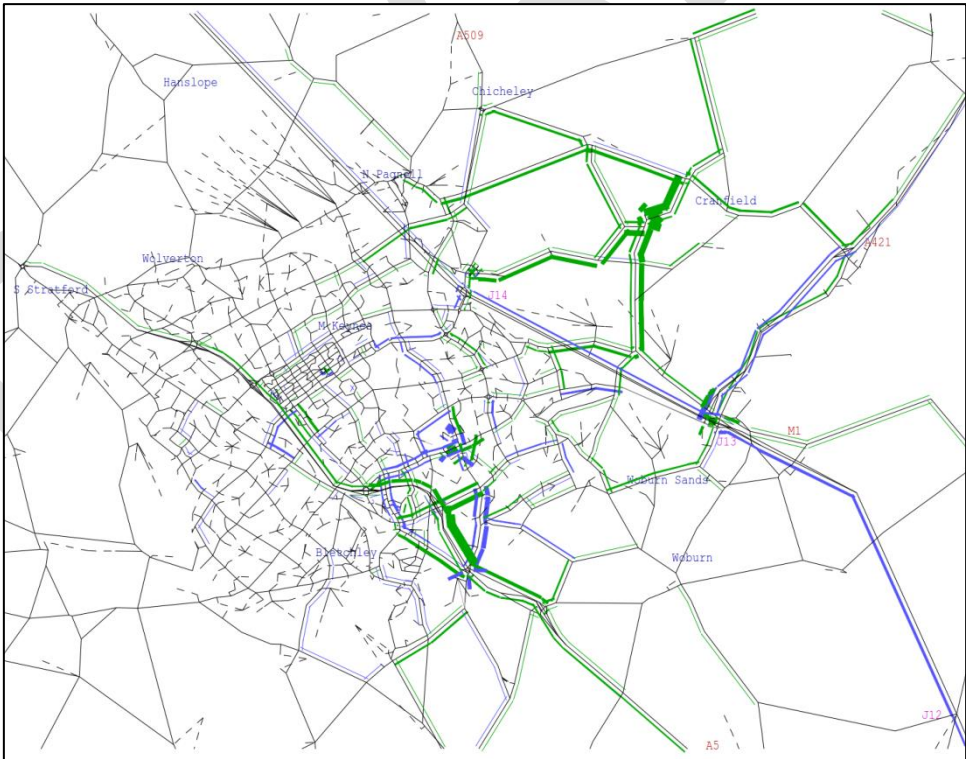


Figure 7. Change in modelled flow MK, Scenario 2b v2 less Scenario 2b PM

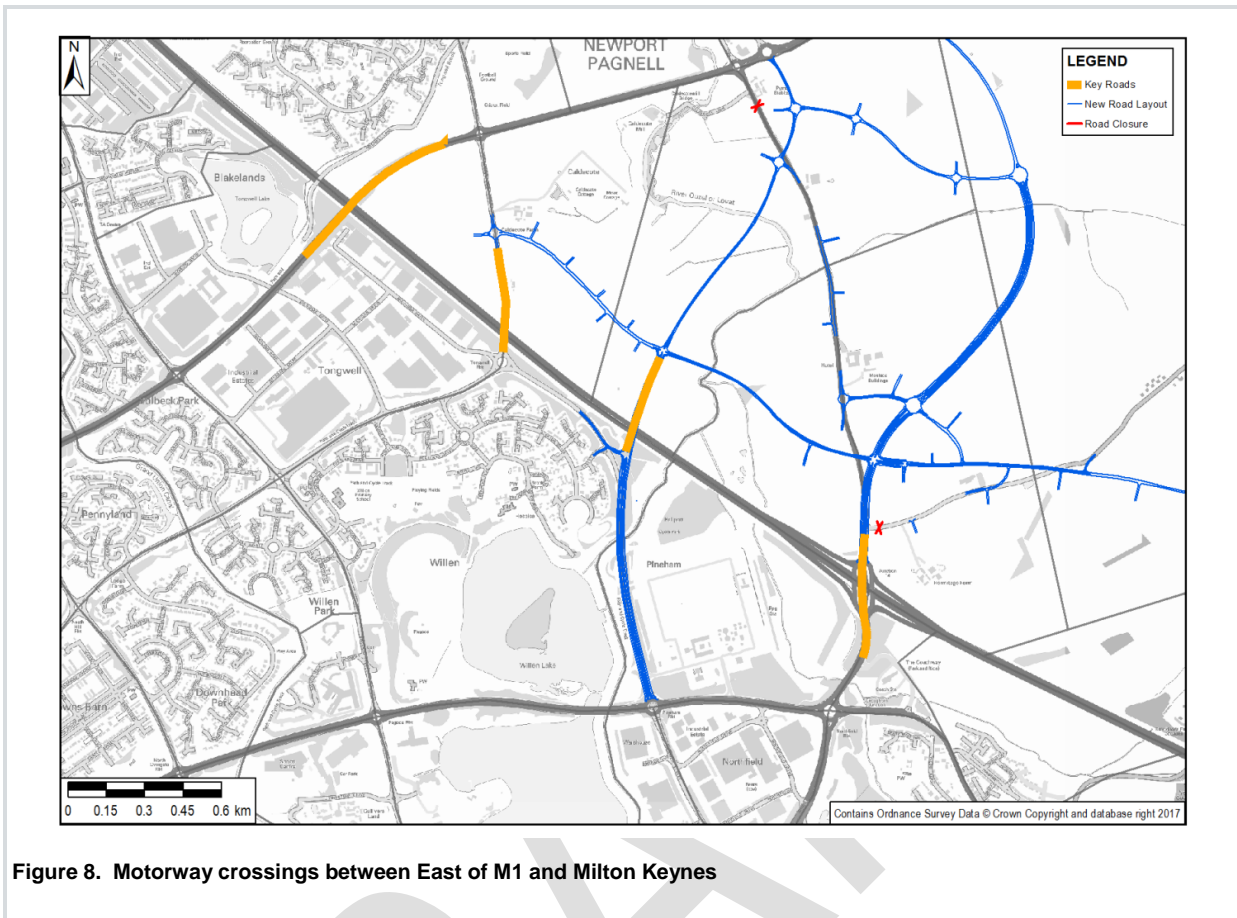


Figure 8. Motorway crossings between East of M1 and Milton Keynes

Comparing traffic flows across the M1 using the roads highlighted in Figure 17 shows little change between version 2 and the original Scenario 2b models. There is little change in the AM in total traffic crossing the M1. In the PM there is a more notable change. In the PM peak towards Milton Keynes, there is an increase of 124PCU crossing the M1, an increase of just 4%. Conversely towards the east of M1, there is a reduction of 121 PCU, predominantly on the A422.

Table 1. Comparison of flows from East of M1 towards MK (PCU)

Time Period	Scenario	A422	Willen Road	New Bridge	J14 through Traffic	Total
AM	Scenario 2b	1110	1576	1666	1445	5797
	Scenario 2b v2	1102	1567	1665	1433	5767
	Difference	-8	-9	-1	-12	-30
PM	Scenario 2b	1210	467	856	802	3335
	Scenario 2b v2	1226	469	924	840	3459
	Difference	16	2	68	38	124

Table 2, Comparison of flows from MK towards East of M1 (PCU)

Time Period	Scenario	A422	Willen Road	New Bridge	J14 through Traffic	Total
AM	Scenario 2b	977	343	593	323	2236
	Scenario 2b v2	978	345	602	320	2245
	Difference	1	2	9	-3	9
PM	Scenario 2b	1790	985	1545	62	4382
	Scenario 2b v2	1694	958	1555	54	4261
	Difference	-96	-27	10	-8	-121

Comparisons showing the difference in delay between Scenario 2b v2 and Scenario 2 are presented in Figure 9 to Figure 11. In the AM peak there is an increase in delay at the H6 Childs Way / Brickhill Street junction and on the westbound approach to the signalised cross roads to the north of the new M1 crossing. Optimising the signal timings based on the revised flows could reduce this delay. The impacts in the IP and PM are to a lesser degree. There is little change in the inter-peak and in the PM the change is focussed around Cranfield University.

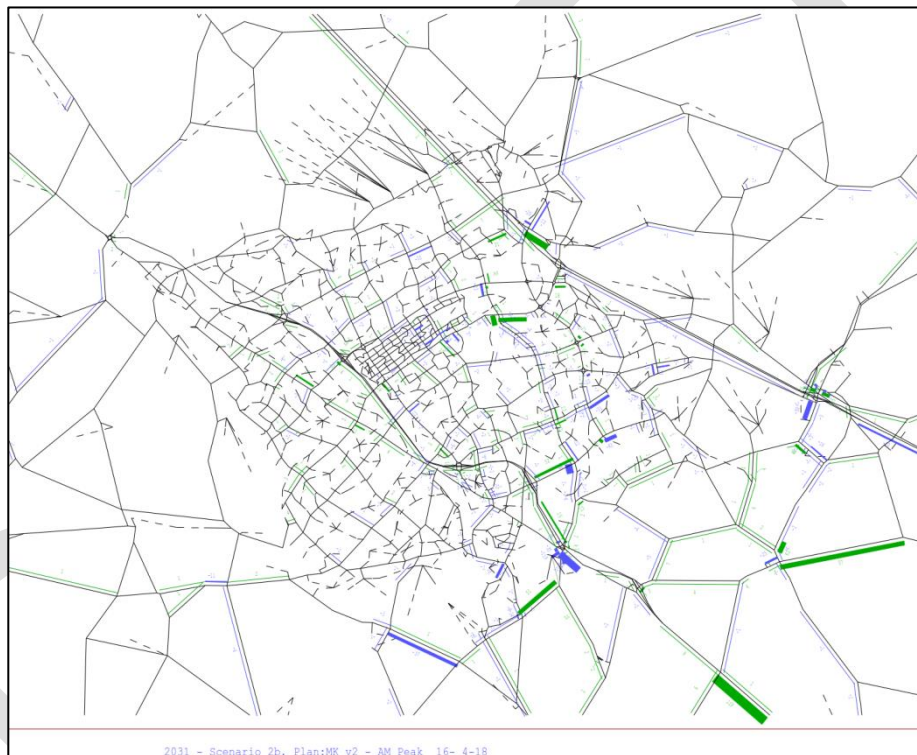


Figure 9. Change in modelled delay MK, Scenario 2b v2 less Scenario 2b AM

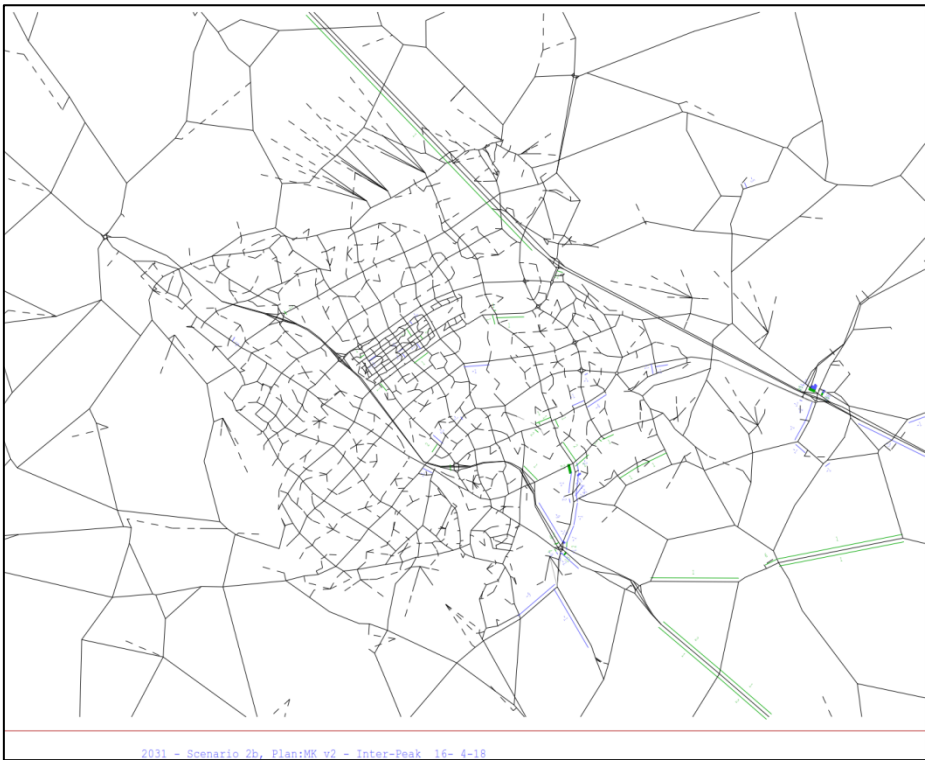


Figure 10. Change in modelled delay MK, Scenario 2b v2 less Scenario 2b Inter-peak

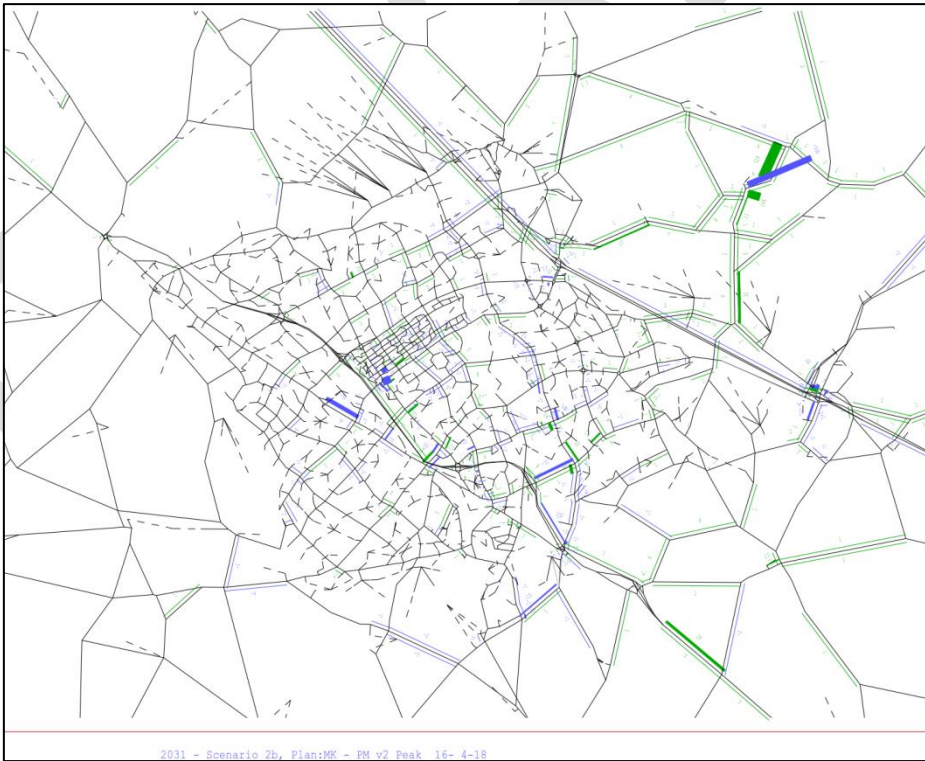


Figure 11. Change in modelled delay MK, Scenario 2b v2 less Scenario 2b PM

Propose Mitigation Measures

Following on from TN16 Impacts of Plan:MK Scenario 2b_v2 the transport consultants working for the East of M1 site developers have proposed mitigation measures for junctions in the vicinity of the development as shown in Figure 12. Flow, queue and delay data for the Reference Case Scenario and Scenario 2b+1 was provided to the consultants.

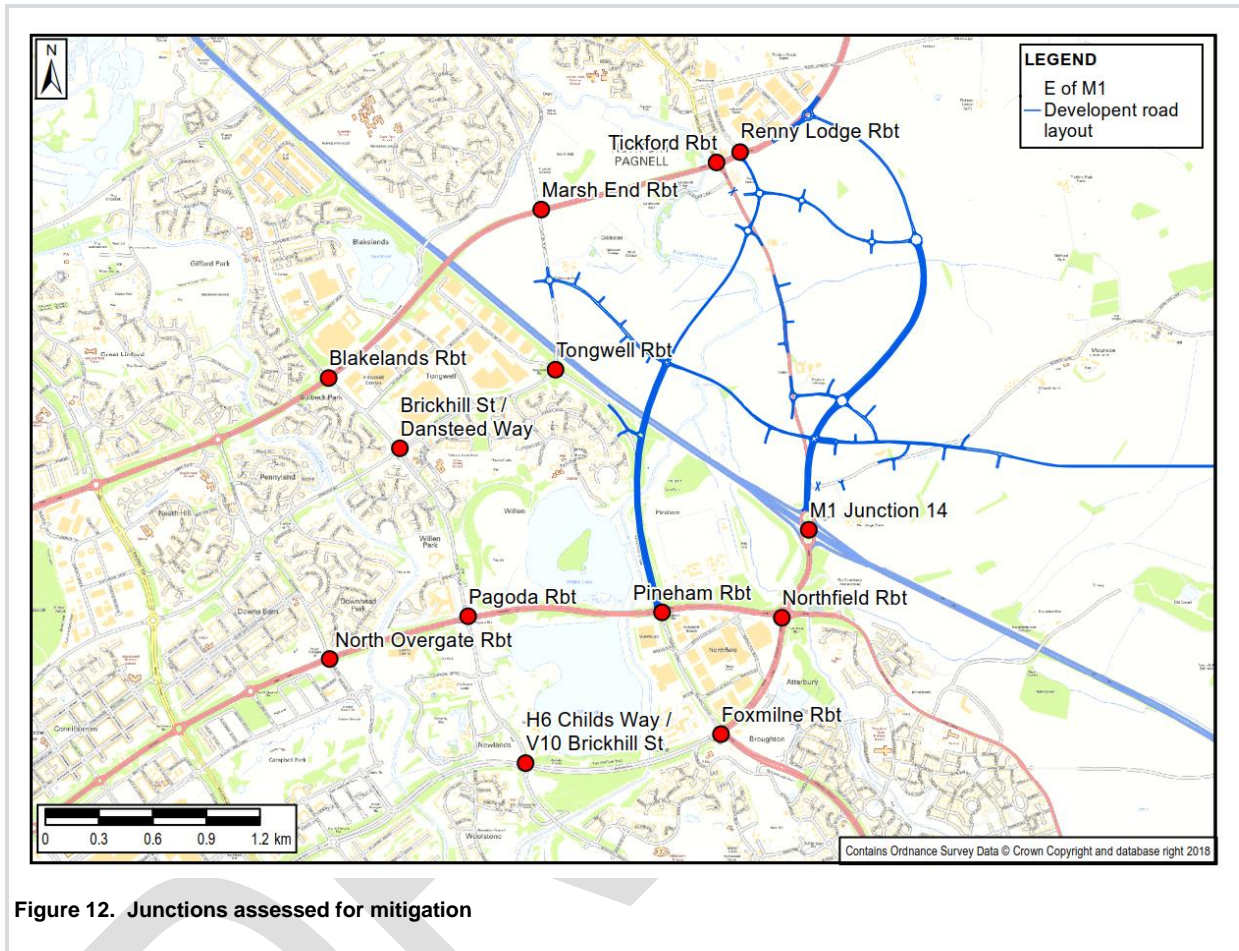


Figure 12. Junctions assessed for mitigation

The measures proposed are summarised in Table 3. These measures are in addition to the proposed improvements at M1 J14 which have also been included in this test. Layouts have been provided for non-signalised junction improvements. At this stage in the process, plans have not been drawn up for signal schemes. For these the LINSIG models have been provided and used to code up the lane markings.

¹ Scenario 2b+ was an interim scenario which is as Scenario 2b but includes the proposed M1 J14 scheme. The demand from Scenario 2b was assigned to the Scenario 2+ network without re-running the demand model, to allow the impacts of this junction improvement to be accounted for in the design of the mitigation schemes.

Table 3

Junction	Identified Impact	Mitigation	Comments
H6 Childs Way / V10 Brickhill St. Woodstone Roundabout)	Impact on all approaches	Provision of extended flares and entry widths to roundabout	Changes can be modelled
Blakelands	Impact upon southern, western and northern approach	Provision of increased flares on Brickhill St (S) and Monks Way (W) and change of road markings on Brickhill (N)	Changes too minor to model in SATURN
Fox Milne	Impact on western and northern approach	Propose full signalisation of the existing junction	Changes can be modelled
Marsh End	No negative impact	-	-
Northfield	Impact upon northern approach and internal queueing	Additional exit lane provided on Childs Way (S) and Portway (W) alongside change of road markings	Changes can be modelled
Pagoda	Impact upon all approaches to the junction	Increased flares to improve arms affected by development	Northbound approach changes can be modelled, Changes on eastbound approach too minor to model in SATURN
Pineham	Impact on northern and western approaches	Partial signalisation (Partial signalisation provided on Tongwell Road (N).	Changes can be modelled
Tongwell	No negative impact	-	-
Willen	Impact on western and eastern approaches	Flare increased on western approach. Two lane exit provided on western exit.	Changes too minor to model in SATURN
Renny Lodge	No negative impact	-	-
Tickford	No negative impact	-	-
North Overgate Roundabout	No negative impact	-	-

Where possible the mitigation measures have been coded into SATURN to create a ‘Do Something’ (DS) network. This Do Something scenario was then run through the demand model pivoting off the costs of the Scenario 2b v2 Do Minimum model.

Traffic Flow Changes

This section compares the Plan:MK Scenario 2b v2 Do Something flows with those of the Do Minimum. The flow difference is plotted as bandwidths to the left side of each link by direction, with an increase in actual flow between the Reference Case and Scenario 2b shown in green and a decrease in blue. It is also important to note that where new links have been added no comparison is shown.

As shown by Figure 13 to Figure 16, there is a large increase in flow on Childs Way between Childs Way / Tongwell St roundabout and the Childs Way / Brickhill Street Roundabout. This is mirrored to a lesser extent in the PM peak in the opposite direction. In the PM peak the main flow increase is parallel on A509.

There is also an increase in northbound flow on the M1 between J13 and J14 in both AM and PM peaks, with an increase of over 200PCU modelled in the PM peak north of J14 also.

In both peaks there is a reduction in flow along V11, Tongwell Street between Childs Way and A421.

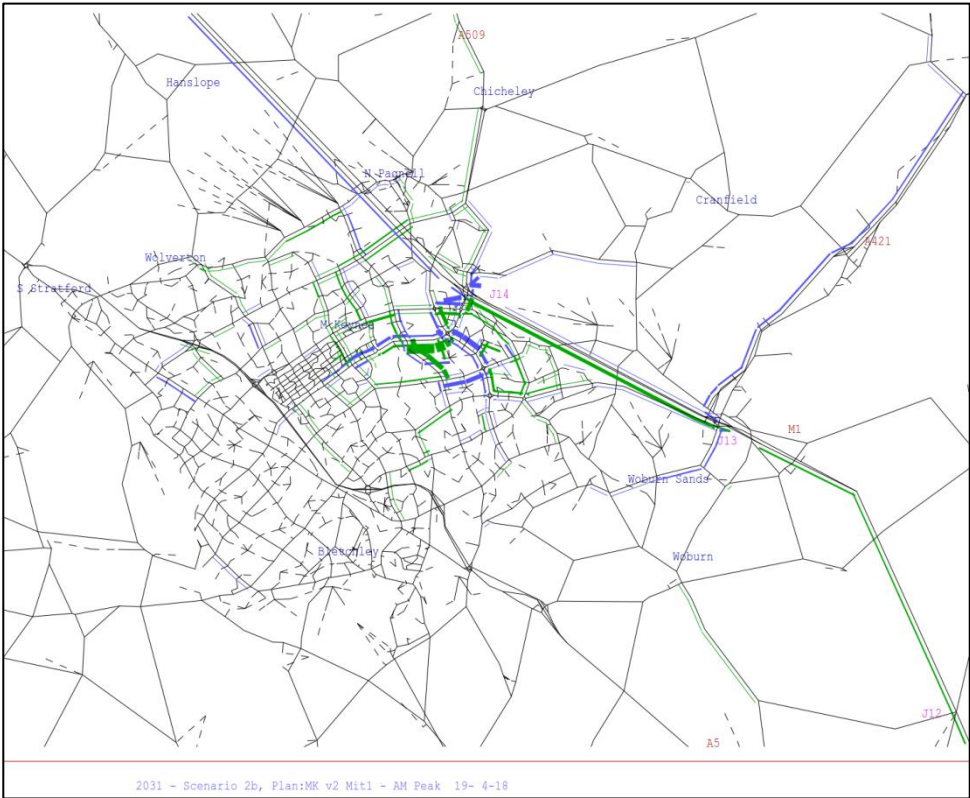


Figure 13. Change in modelled flow, Scenario 2b DS less DM AM

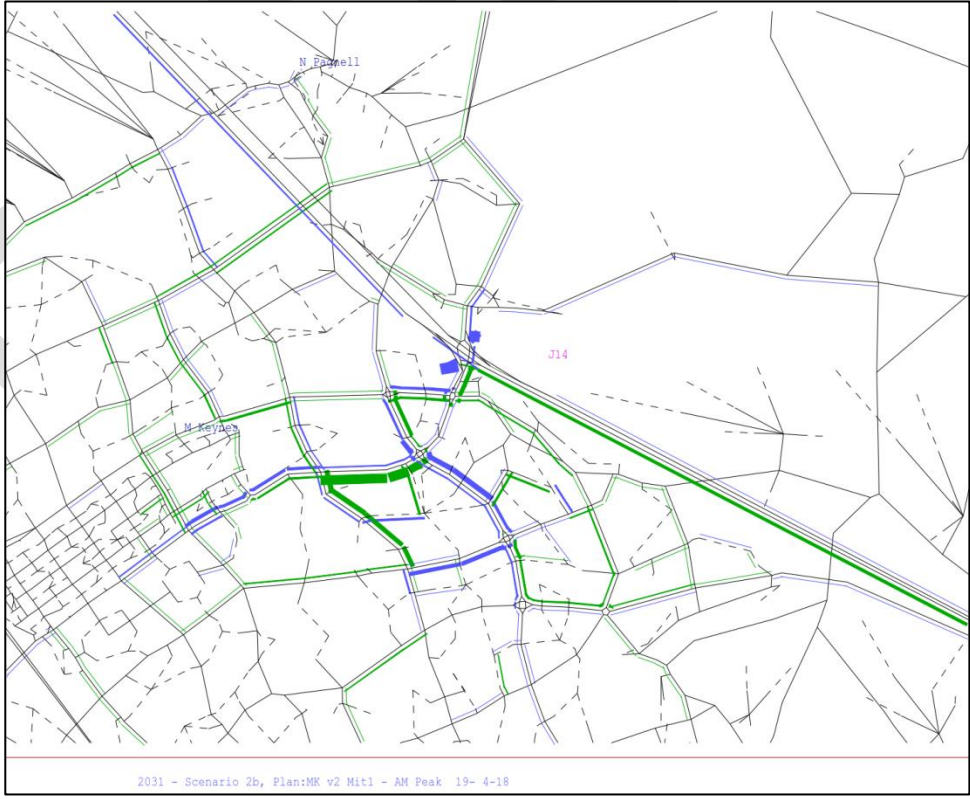


Figure 14. Change in modelled flow East of M1, DS less DM AM

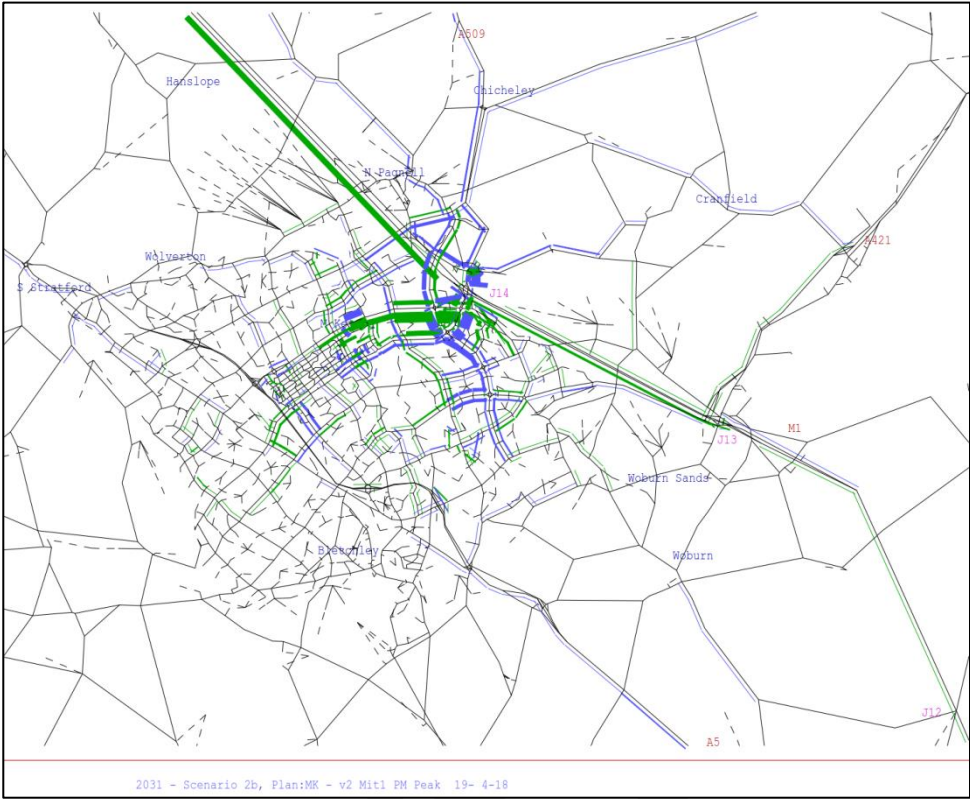


Figure 15. Change in modelled flow, Scenario 2b DS less DM PM

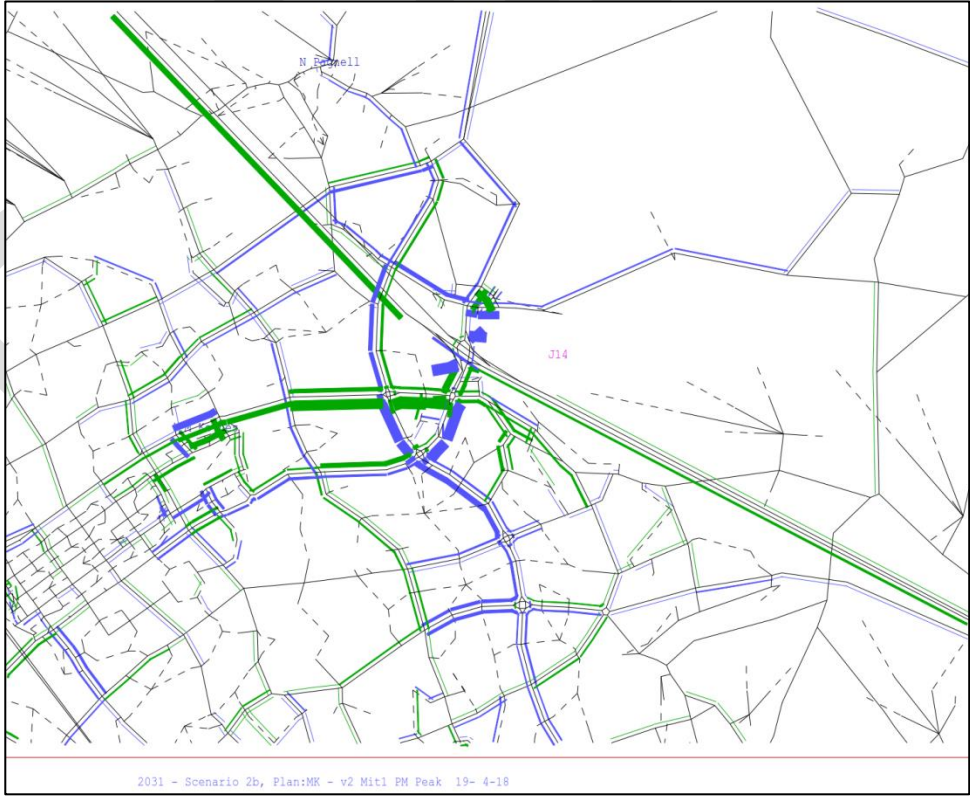


Figure 16. Change in modelled flow East of M1, DS less DM PM

A comparison of flows on the roads which cross the M1 motorway between the A422 and M1 J14 inclusive, as shown in Figure 17, are presented in Table 4 and Table 5.

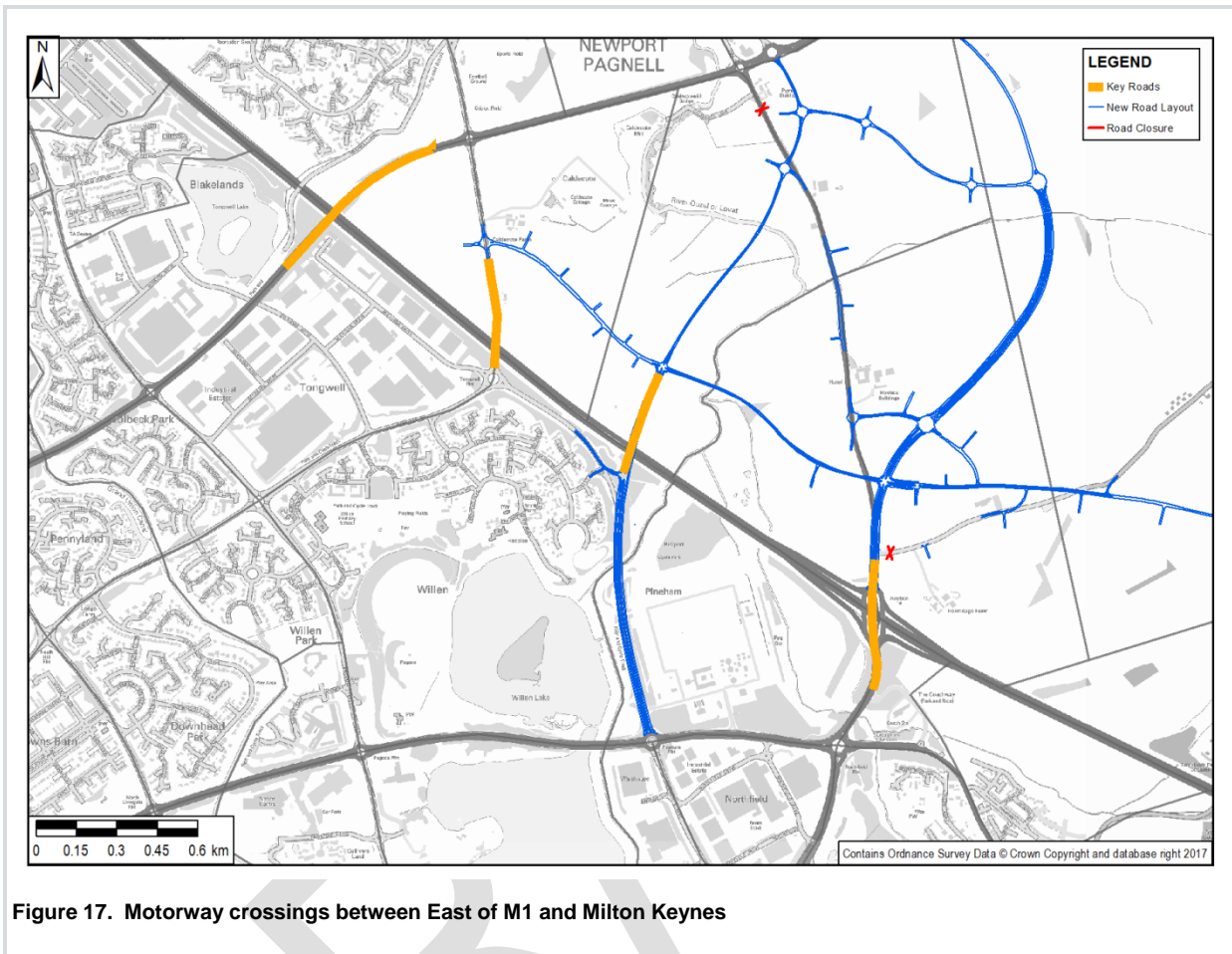


Figure 17. Motorway crossings between East of M1 and Milton Keynes

The mitigation measures have minimal impact on modelled traffic crossing the M1 motorway. Overall there is slightly less traffic crossing the M1, the largest reduction is towards to the East of M1 from Milton Keynes in the PM peak, but the reduction is only 70 PCUs (Passenger Car Units).

Table 4. Comparison of flows with and without mitigation from East of M1 towards MK (PCU)

Time Period	Scenario	A422	Willen Road	New Bridge	J14 through Traffic	Total
AM	Scenario 2b DM	1102	1567	1665	1433	5767
	Scenario 2b DS	1145	1551	1652	1359	5707
	Difference	43	-16	-13	-74	-60
PM	Scenario 2b DM	1226	469	924	840	3459
	Scenario 2b DS	1194	481	985	788	3448
	Difference	-32	12	61	-52	-11

Table 5, Comparison of flows with and without mitigation from MK towards East of M1 (PCU)

Time Period	Scenario	A422	Willen Road	New Bridge	J14 through Traffic	Total
AM	Scenario 2b DM	978	345	602	320	2245
	Scenario 2b DS	1025	338	585	317	2265
	Difference	47	-7	-17	-3	20
PM	Scenario 2b DM	1694	958	1555	54	4261
	Scenario 2b DS	1785	967	1350	89	4191
	Difference	91	9	-205	35	-70

Delays

The difference in delay between the DS (with the mitigation) and DM (without the mitigation) in the AM and PM peaks is presented in Figure 18 and Figure 19 respectively, with the total delay in Scenario 2b presented in Figure 20 and Figure 21 to add some context.

In the AM there is a large reduction in delay on the M1 northbound off slip at junction 14. There is also reduction in delay at the H6 / V10 roundabout going towards central Milton Keynes. There has also been a reduction in delay at Brinklow and Monkston with traffic routing away from the parallel west east routes through them to Childs Way.

However there is a noticeable increase in delay at the westbound approaches to the junctions with V9 Overstreet as the traffic is no longer held back upstream.

In the PM peak there is a reduction in delay on the northbound A509 approach to junction 14. However delays at other junctions have increased,

In both AM and PM peaks the northbound approach to Pagoda roundabout has a notable increase in delay

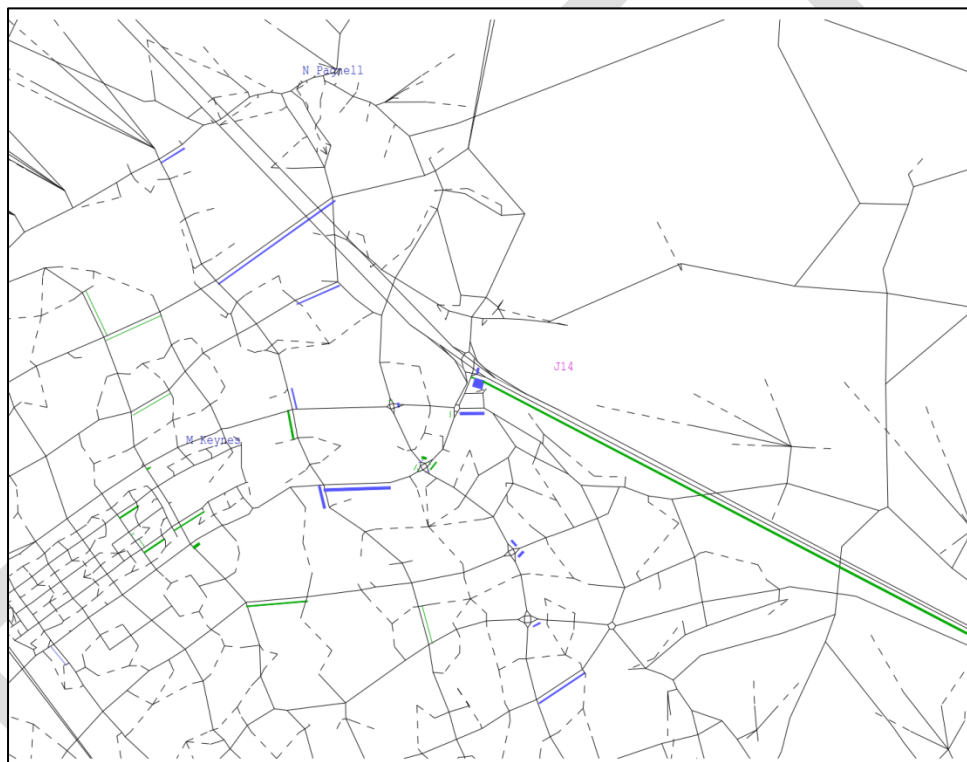


Figure 18. Change in Average Delay (seconds), Scenario 2, DS less DM, AM

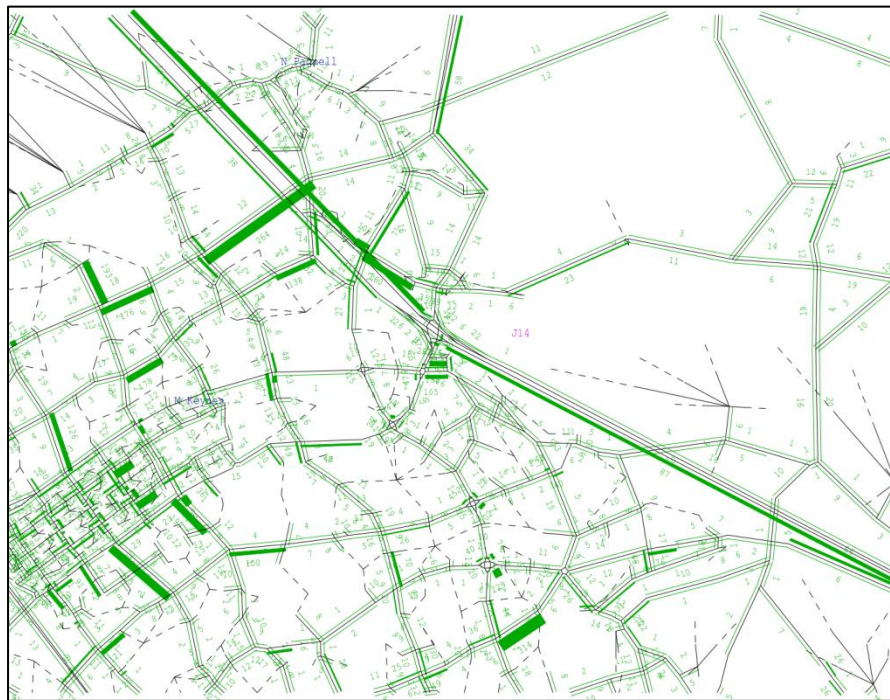


Figure 19. Average Delay (seconds), Scenario 2b DS AM

In the PM peak there is a notable reduction in delay on the A422 and also on the eastbound approach to Northfield roundabout. However this delay has moved downstream to the southwest part of the J14 circulatory. There is also a 17 second increase in delay on the southbound off slip approach to the junction, and a 28 second increase in delay at the end of the southbound on-slip the latter due to additional traffic joining the motorway.

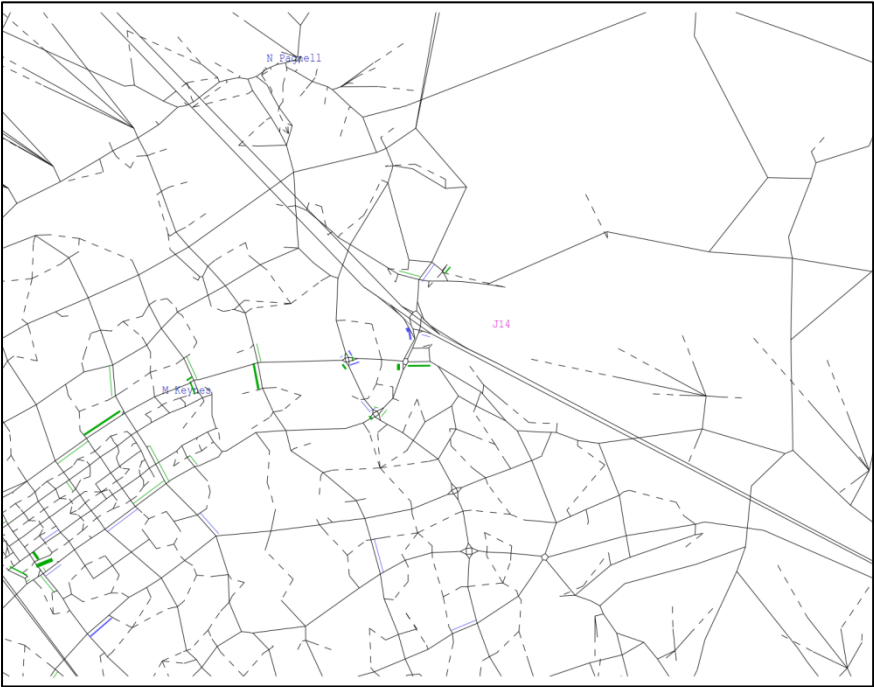


Figure 20 Change in Average Delay (seconds), Scenario 2, DS less DM, PM

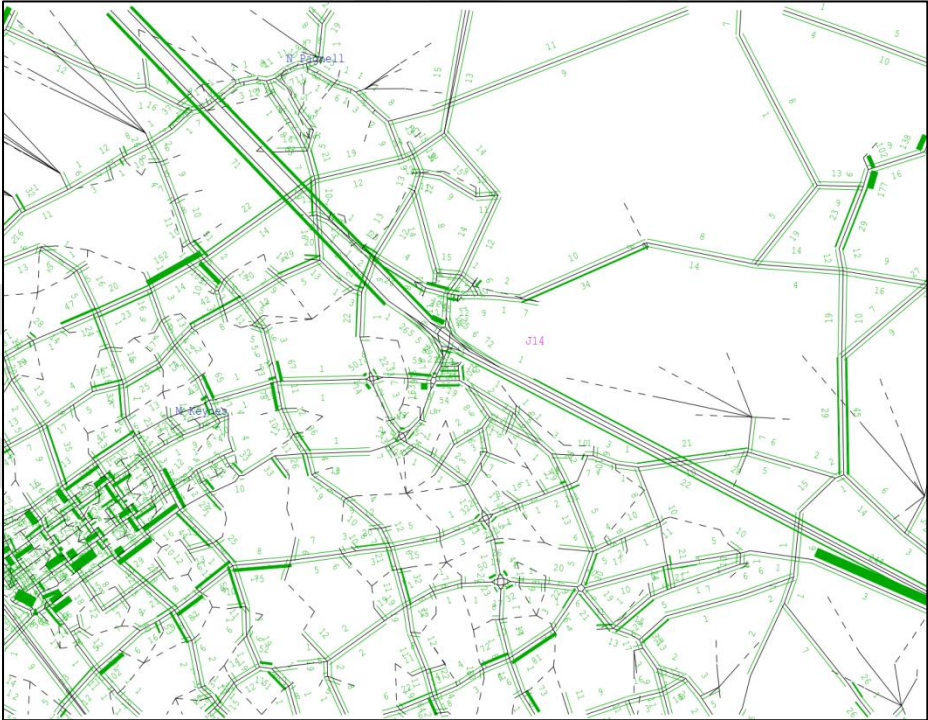


Figure 21. Average Delay (seconds), Scenario 2b DS, PM

Mitigation Scheme Assessment

Junction	Max Ref Case Delay	issue in Reference Case	Max Scenario 2 delay	Issue in Sc2	Source of Delay	Performance of mitigation	Notes
J14	AM peak, 3.5 minutes both northbound and southbound off-slips PM peak 1.min 47s circulatory to northbound on-slip	High	AM Peak, northbound off slip 1min 42s delay, 1min 42s delay on circulatory PM Peak 1min 21s delay circulatory to NB on slip	High	Primarily Reference Case issue but increased delay on sb on and off slips and A509 nb approach to junction and circulatory on approach to nb on-slip	Delays for A509 sb traffic are reduced on the circulatory and the delays on the nb off slip PM Peak, delays from A509 northbound to the northbound on slip are greatly reduced, whilst facilitating an increase of nearly 300PCU to join M1 northbound.	There is still a notable amount of delay at the northbound diverge on M1 which could be mitigated with a tiger tail diverge. This however may not be feasible using the land available.
H6 Childs Way / V10 Brickhill St. (Woodstone Roundabout)	AM Peak, Westbound approach 40s delay Northbound approach 30s delay	Moderate	AM Peak, Westbound approach 1m 58s delay Northbound approach 1min 40s delay	High	Delays primarily caused by Scenario 2b	delays reduced in both AM by 1min 12s on westbound approach in AM, and 53s on northbound approach	Delay reduction on westbound approach despite increase in traffic of 482PCU
Fox Milne	15-25s delay on both approach and circulatory and Tongwell street approach signals	Low	PM Peak 17- 27s delay on circulatory at SB Tongwell St approach	Low	Primarily Reference Case Issue	Reduced delays on north and south parts circulatory, increased on east and west circulatory	The mitigation measures at Northfield and Pineham roundabouts has reduced the flow through this junction notably.
Northfield	PM Peak, 3min 26s delay on eastbound approach, 2 minutes 42 second delay northbound approach	High	PM Peak, 49s on eastbound approach, 1min 34s delay on northbound approach	Moderate	Primarily Reference Case issue	Increased delay of 1min 29s on nb approach in PM, delay reduced on sb approach by 8s,	The junction is handling more traffic, particularly in the PM, but further optimisation of signal timings required to reduce delay on northbound approach

Pagoda	AM Peak, 1 min 16s delay eastbound approach, 58s delay northbound approach	Moderate	AM Peak, 3min 10s eastbound approach, 51s nb approach and 69 s sb approach	High	Primarily East of M1 development on Eastbound approach but Impact on all approaches,	negligible impact in terms of delay, though northbound approach now increase in delay of 45s	westbound approach traffic in PM 526 PCU higher with mitigation, reassignment of traffic from Childs Way to A509
Pineham	AM Peak, 29s delay on east circulatory PM peak, 1 min 3s delay eastbound approach	Moderate	AM Peak, 61s delay on east circulatory PM Peak 1min 9s eastbound approach	Moderate	Scenario 2b impact on northbound and southbound approaches and east circulatory	AM Peak, east circulatory delay reduced by 45s but increase of 23s on north circulatory. But delays are more balanced around the junction PM Peak, reduced delays on all approaches except northbound approach in PM	PM mitigation works well in prioritising east-west traffic, despite large flow increases westbound through the junction. This increase does cause more delay on the northbound approach to the junction in PM. The junction may perform better in the AM peak with adjusted signal timings, with greater green time for the eastbound traffic through the junction.

DRAFT

Conclusions

The mitigation measures cannot be looked at solely on a junction by junction basis. The grid structure of Milton Keynes road network widens the impact of the mitigation measures. Increased capacity at one junction attracts traffic off parallel routes, with the additional traffic reducing the benefit at that particular junction in terms of delay although the benefits are gained on the parallel routes.

In the AM peak the mitigation at the H6 Childs Way / Brickhill St. roundabout has the most notable impact in terms of re-assignment. This measure is forecast to attract traffic from parallel routes, such as the A421, which has also helped reduce congestion at Brinklow and Monkston roundabouts. In the PM peak the combination of measures has caused traffic to re-assign to the A509 from Childs Way.

There is also a relationship between increasing east-west flows causing delays on north-south routes. In both peaks there is a reduction in traffic on Tongwell Street (V11) as a result of the increase in traffic volume of the conflicting east west flows. With exception of the northbound approach to Pagoda roundabout this does not appear to cause notable additional modelled delays on alternative north-south routes.

The measures generally help reduce the delays for traffic travelling between the M1 and central Milton Keynes, particularly in the AM Peak. However the increased capacity at the mitigated junctions has, in the AM peak, caused an uplift in delay on the approaches to Over Street (V9) as the traffic is no longer blocked upstream of this junction. Further signal optimisation in the PM Peak could help reduce delays further.

Although there is an increase in traffic travelling to and from the M1, there is little impact in flow crossing the motorway between A422 and J14.