

**Cambridge Local Plan and South Cambridgeshire Local Plan**

**Matter 7: Transport**

**Update on Transport Modelling – Revised Phase 3 Model Run**

**Introduction**

1. Following the Matter 7 Transport Hearing on 18 February 2015, the Councils were asked to provide additional information on the Transport Modelling that was undertaken during the preparation of the Local Plans, using the Cambridge Sub Regional Model (CSRM). A statement was published (M7CCC&SCDC – Supplement 2) which provided information on:
  - The Validation Report for the CCRM Model
  - Assumptions used in the model runs referred to in the CSRM Modelling Report (CSRM Modelling Summary Report for Cambridge and South Cambridgeshire Local Plans – July 2013 RD/Strat/160)
  - How the Cambridge Western Orbital was applied in the CSRM Model run referenced in the Modelling Report.
2. The Statement identified some inconsistencies between the Proposed Submission Local Plans with the housing trajectories used in the Phase 3 modelling. This phase of modelling was used to test the development scenario of the Cambridge and South Cambridgeshire Proposed Submission Local Plans. The Councils have stated that they would commission a rerun of the Phase 3 modelling with the inputs corrected for consistency with the proposed submission plans and put the results of this rerun before the examination as soon as possible.
3. This work has now been completed, and this supplementary statement provides this information. It is being shared with other participants at the Hearing with a view to further discussion taking place to produce a statement of common ground.

**Inputs to the revised phase 3 model run**

4. The Cambridge Sub-Regional Model (CSRM) phase 3 has been rerun. The only changes made to the Phase 3 modelling described in the CSRM Summary Report are to the housing assumptions to reflect the trajectories. In summary, these changes were as follows:
  - Cambridge – the total dwellings modelled has been revised to reflect the Proposed Submission Local Plan trajectory figure of 14,191 dwellings (rather than 14,288), with the distribution reflecting the trajectory accompanying in the Proposed Submission Local Plan.

- South Cambridgeshire – the total dwellings modelled has been revised to reflect the Proposed Submission Local Plan trajectory figure of 22,189 dwellings (rather than 18,663), with the distribution reflecting the trajectory printed in the Proposed Submission Local Plan. The differences were largely the inclusion of 2,900 windfalls, and one year of completions (for 2011-2012 at 696 dwellings).
5. The additional model run has been added as a row in the table entitled Assumptions for CSRMs runs for the City and South Cambs Local Plan Analysis, that was included in M7CCC&SCDC – Supplement 2 (table 3.1), attached to Appendix 1 of this Statement.
  6. As was done with the original Phase 3, the model was run twice with these revised figures, a ‘do nothing run’ which identifies the transport impacts without mitigation measures, and a ‘do-something run’, which includes the mitigation measures as detailed in Appendix B of the Modelling Report.

### **Technical Note**

7. Atkins and WSP, on behalf of Cambridgeshire County Council, have produced a Technical note describing the revised model runs, and commentary on the differences between the original Phase 3 model run and the revised Phase 3 model run. This is included as Appendix 2 to this Statement.

### **The CSRMs Modelling Summary Report for Cambridge and South Cambridgeshire Local Plans**

8. In order to reflect the revised Phase 3 model runs, a revised version of the Modelling Report has been produced. This has been added to the Reference Documents library, as ‘CSRMs Modelling Summary Report for Cambridge and South Cambridgeshire Local Plans – July 2013 UPDATE MARCH 2015 (RD/Strat/161)’.
9. Where there are changes as a result of the new model runs, these are highlighted, with the new text underlined and the deleted text crossed through. It should be noted that the revisions change a number of the figures in the report, and a number of the tables and graphs have been revised, but as anticipated the majority of the report remains unchanged.
10. The report is a summary of the modelling work undertaken for the Local Plans (it is not a summary of a longer ‘Full’ report, as is clear from paragraph 1.1 of the CSRMs Modelling Summary Report (RD/Strat/160) and as was made clear at the examination hearing on day 14).

### **Outcomes**

11. Cambridgeshire County Council, reflecting the advice of Atkins / WSP, concludes that although a number of figures change, these changes are modest. None of the changes is such as to lead to a need to revise the conclusions within the

Modelling Summary Report nor do these changes undermine the appropriateness of the development strategy contained in the submitted local plans.

12. Cambridge City Council and South Cambridgeshire District Council consider that the development strategy contained within the Submitted Plans remains sound.

# Appendix 1: Note to accompany CSRM Phase 3 Rerun

Note prepared by Atkins and WSP | Parsons Brinckerhoff on behalf of Cambridgeshire County Council  
27<sup>th</sup> March 2015

## 1 Introduction

### 1.1 Purpose of note

- 1.1.1 This note provides an overview of two additional runs of the Cambridge Sub Regional Model (CSRM), carried out by WSP and Atkins in March 2015. The purpose of the note is to:
- Confirm the changes made to the inputs into the model runs, in comparison to the original 'Phase 3' model outputs reported in July 2013;
  - Identify and comment on the model results and any changes in the outputs, particularly with reference to the charts and information contained in the published Modelling Summary Report (an update for which has been supplied separately) and to identify any implications for the Local Plans.

### 1.2 Background

- 1.2.1 In 2013, CSRM runs were carried out by WSP and Atkins in support of the development of Local Plans for Cambridge City Council (CCiC) and South Cambridgeshire District Council (SCDC), and incorporating testing of the then emerging Transport Strategy for Cambridge and South Cambridgeshire (TSCSC) prepared by Cambridgeshire County Council (CCC).
- 1.2.2 The final 'Phase 3' model tests were undertaken and reported in July 2013, and were summarised in the Modelling Summary Report<sup>1</sup> for the Cambridge and South Cambridgeshire Local Plans – July 2013. The inputs into the Phase 3 model run were intended to reflect the emerging Proposed Submission Local Plans.
- 1.2.3 As stated in the accompanying covering note, the Councils have identified certain inconsistencies in the Phase 3 model run inputs and a further model run to correct these inconsistencies has been carried out.

### 1.3 Structure of Note

- 1.3.1 This note is structured as follows:
- Section 2: Information received concerning inputs for model rerun.
  - Section 3: Commentary on revised model rerun results, and comparisons with previous phase 3 model run.

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<sup>1</sup> RD/Strat/160

## 2 Revised CSRM Run Inputs

### 2.1 Overview

- 2.1.1 The model reruns were undertaken on a 'like for like' basis with those previously reported for Phase 3 work in July 2013, with the exception of inputs concerning the dwelling growth assumptions and distribution to accurately reflect the Proposed Submission Local Plans.
- 2.1.2 This means in particular that the inputs relating to the following remained fixed in comparison to the previous model runs: all highway infrastructure, public transport, walk and cycle infrastructure, employment locations and totals, assumed commuting rates. In addition all housing assumptions related to East Cambridgeshire and Huntingdonshire were as in previous runs.
- 2.1.3 As previously, the identical development assumptions were used in two separate transport scenarios: with/without the inclusion of the transport improvement schemes proposed for the TSCSC.

### 2.2 Model Rerun Dwelling Assumptions

- 2.2.1 The revised dwelling assumptions were supplied by SCDC and CCiC between 10<sup>th</sup> and 13<sup>th</sup> March 2015. The final allocations used for the model rerun were confirmed to SCDC and CCiC by WSP in our spreadsheet 'SCDC and CCiC ScenK2 Dwells Confirmation 130315.xlsx' (issued 13<sup>th</sup> March 2015)<sup>2</sup>.
- 2.2.2 The table at Appendix 1 summarises the total dwelling development from 2011 to 2031 assumed in the model.

The Councils' supplement 2 statement (M7/CCC & SCDC – Supplement 2) identified at paragraph 7 that for Cambridge a site to the west of Trumpington Road had been included in the original phase 3 modelling inputs even though this site was not an allocation in the then emerging Proposed Submission Cambridge Local Plan. However, while undertaking the phase 3 rerun, it has been confirmed that in fact this site not included in the original phase 3 model run inputs and the dwellings previously attributed to this site were, within the original phase 3 model run, distributed around the city. However, this late change to the original phase 3 model inputs was wrongly not captured in the record of the inputs to phase 3 as included in table 3.1 of the supplement 2 statement hence the explanation given in paragraph 7 of that statement.

- 2.2.3 The principal changes to the rerun model inputs are in summary as follows:
- For South Cambridgeshire, the total number of dwellings has risen from 18,663 in the original phase 3 modelling to 22,189 in the re-run. This is due to additional windfall growth being assumed and a further year of house completions since the earlier runs. The specific model zone has been attributed to 1,000 dwellings (within the original 18,663) which were, in the original phase 3 model input, more generally distributed on a non site specific basis across the district. This change to the inputs more accurately reflects information as the location of committed sites within the housing trajectory. There remain 383 dwellings on small sites which have not been allocated to specific model zones and are treated as windfall (to which see below);
  - For Cambridge City, the total number of homes has reduced from 14,288 to 14,191. Moreover, the number of windfalls within the overall total of 14,191 has increased from 1,550 to 1,850. An alteration to the distribution of dwellings to reflect the proposed submission plan has also been input into the model re-run .
- 2.2.4 As part of the model rerun exercise, WSP also reviewed with CCiC and SCDC the methodology for assigning windfall developments to model zones. In the original model runs it had been assumed that these should be allocated pro rata based on the 2011-2031 development in each zone (i.e. zones with no proposed development would receive no windfall). For the revised run, windfall sites were allocated proportionate to the number of existing dwellings in 2011 in each zone.

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<sup>2</sup> Following feedback from CCiC, 95 dwellings at 379-381 Milton Road were shifted from CSRM Transport Zone 78 to 26.

### 3 Commentary on Results

- 3.1.1 WSP and Atkins analysed the model rerun results using the same approach to that used in 2013. Checks were carried out to ensure that the rerun results were logical and consistent with the changes to the inputs.
- 3.1.2 The results were reflected within a revision to the CSRM Modelling Summary Report, and its accompanying appendices.
- 3.1.3 It is clear from the track changes to the Modelling Summary Report that there are a limited number of changes arising from the phase 3 model rerun. Moreover, it is clear that the changes are not significant in terms of their effect. In general the changes are of a minor nature with a number of figures changing by only 1 or 2 percentage points. The level of change for graphs showing traffic growth and congestion, and car trips to/from Cambridge show a relatively greater change from the published modelling summary report. However, this change is not at a level that leads to a need to change the commentary or conclusions within the report.
- 3.1.4 The modest scale of the changes and their effect are considered to be reasonable given the limited extent of alterations to model inputs. The extent of the change in the modelling results is largely explained by the fact that employment growth assumptions are identical in each run. As each job in the area requires a worker to fill it, the total number of employment related trips is constrained. With more housing in the study area, there is a consequential reduction in the number of in-commuting trips into the study area and some in-commuting trips within the original phase 3 model results are now replaced by local trips, as a result of the increase in housing input into the model rerun.
- 3.1.5 It is considered that none of these modest changes to the model result are such as to lead to a change the overall conclusions set out in the modelling summary report.

Appendix 1: Assumptions for CSRM runs for the City and South Cambs Local Plan Analysis UPDATE

Phase	Scenario	Name	Dwellings					Jobs				Transport Tests	
				Cambridge	S. Cambs	Hunts	E. Cambs	Cambridge	S. Cambs	Hunts	E. Cambs	Without Mitigation	With Mitigation
Phase 1	B *	Committed		10512	14219	9952	1594	14900	22400	15100	7900	Chesterton Station 2016, WOTC link 2013, A14 Complementary PT services	n/a
	C *	Within Cambridge Urban area	As B plus	2098	0	5641	7105	14900	22400	15100	7900	As B	n/a
	D1 *	Waterbeach New Settlement	As C plus		4500			14900	22400	15100	7900	As B	n/a
	D2 *	Bourn Airfield New Settlement	As C plus		3500			14900	22400	15100	7900	As B	n/a
	E *	Village extensions	As C plus		6130			14900	22400	15100	7900	As B	n/a
	F *	Cambridge Fringe	As C plus		1678			14900	22400	15100	7900	As B	n/a
	F+ *	Cambridge Fringe higher level	As C plus		3654	348			14900	22400	15100	7900	As B
G	Combination Test (D2, E and F)	As C plus		1678	9630			14900	22400	15100	7900	As B	n/a
Phase 2	1 *	Village Based	As F, plus		5363			15000	22810	15100	7900	A14 scheme from 2019	All schemes in Appendix B except A10dualling
	2 *	Waterbeach New Town	As F, plus		14273			15000	22810	15100	7900	As Above	All schemes in Appendix B
	3 *	Bourn Airfield New Settlement	As F, plus		6713			15000	22810	15100	7900	As Above	All schemes in Appendix B
Phase 3		Preferred Option		14288	18663	15593	8699	22100	22506	15100	7900	As Above	All schemes in Appendix B except A10 dualling
<b>Phase 3 Re-Run March 2015</b>		<u>Preferred Option (corrected)</u>		<u>14191</u>	<u>22189</u>	<u>15593</u>	<u>8699</u>	<u>22100</u>	<u>22506</u>	<u>15100</u>	<u>7900</u>	<u>As Above</u>	<u>All schemes in Appendix B except A10 dualling</u>

- \* Phase 1 - B Includes: Cambridge Fringe sites committed in existing plans, and Cambourne (950) and Northstowe (7500)
- \* Phase 1 - C Identified SHLAA sites within Cambridge (1258), and windfall allowance (840)
- \* Phase 1 - D1 Waterbeach new settlement (4500)
- \* Phase 1 - D2 Bourn Airfield (3500)
- \* Phase 1 - E All villages Sites identified in South Cambridgeshire Issues and Options 2012 (including Cambourne West)
- \* Phase 1 - F Additional sites on Cambridge Fringe - Land West of Trumpington Road (1106), Worts Causeway (495) , Fulbourn Road South (77)
- \* Phase 1 – F+ Additional sites on Cambridge Fringe (higher level) – As F plus additional locations on the Cambridge fringe (see below)
  
- \* Phase 2 - 1 NIAB3 (130) Cambourne West (1000), Waterbeach (Barracks Built Area Only) (1090) Northstowe Reserve (900), Village sites focusing on Rural Centres and Minor Rural Centres (2243)
- \* Phase 2 - 2 NIAB3 (130) Waterbeach New Town (10,000), Cambourne West (1000), Northstowe Reserve (900), Village sites at Rural Centres and Minor Rural Centres (2243)
- \* Phase 2 - 3 Bourn Airfield New Village (3500) Waterbeach (Barracks Built Area Only) (1090), Northstowe Reserve (900), Villages sites at Rural Centres and Minor Rural Centres (1223)
  
- \* Phase 3 Sites reflecting Cambridge and South Cambridgeshire Proposed Submission Local Plans, with completions anticipated at 2031.
  
- \* Phase 3 Re-Run March 2015 Sites reflecting Cambridge and South Cambridgeshire Proposed Submission Local Plans, with completions anticipated at 2031 (Higher figures reflect inclusion of windfall allowance, and completions 2011 to 2012.

Note: Phase 1 F+ was used to test a Cambridge Fringe focused strategy as a comparator. Dwellings were distributed around a range of Green Belt broad locations to deliver around 4000 dwellings, rather than reflecting specific site proposals. These are described by reference to the Broad Locations identified in each Councils' Issues and Options report 2012 (South Cambridge Issue 12 and Figure 4, pages 41 and 42 and Cambridge Issues and Options 2012 Issues 10 to 19, pages 48 to 74):

- Broad Location 1 – Land to the north and south of Barton Road (39)
- Broad Location 3 – Land West of Trumpington Road (424)
- Broad Location 5 – Land South of Addenbrooke's Road (1,502)
- Broad Location 7 – Land between Babraham Road and Fulbourn Road (1,212)
- Broad Location 8 – Land East of Gazelle Way (754)