Non - Technical Forecasting Report - FINALv2a

Review of Yeovil Eco-Urban Extension

SOMERSET COUNTY COUNCIL

February 2011

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WHT285333DE/2/2

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1 INTRODUCTION

1.1 Project Details

1.1.1 South Somerset District Council (SSDC) has identified the need for an Urban Extension to be built in Yeovil within their Core Strategy Preferred Option report (dated October 2010). It is anticipated that this development will comprise:

- 3,719 dwellings
- 23 hectares of employment land
- Primary and secondary schools[1]

1.1.2 Six potential strategic locations for the Urban Extension have been identified by SSDC, of which three were presented within the Core Strategy as "Growth Options": The specific location of the built form at each option has been based on working assumptions made by SSDC as necessary to undertake the traffic modelling process. These locations have not yet been finalised and are subject to a continuing refinement process in light of ongoing District consultation.

Option 1 – Lufton West (Strategic site)

Option 2 – Combe Street Lane (Strategic site)

Option 3 – East Yeovil and Over Compton (Strategic site)

Option 4 – East Coker, Keyford and Barwick (Core Strategy Growth Option location)

Option 5 – Brympton and Coker (Core Strategy Growth Option location)

Option 6 – East Coker and Keyford

1.1.3 Figure 1-1 below presents the indicative locations for the options described above.

1.1.4 It is intended that the Urban Extension would be built in accordance with Eco Development guidelines[2] which sets a target for 50% of all journeys generated to be made by other modes of transport than the car, such as public transport, walking or cycling.

1.1.5 Parsons Brinckerhoff Ltd has been appointed by Somerset County Council (SCC) to assess the likely transport impacts of the six potential development sites on the road network in and around Yeovil. Work undertaken has included a brief qualitative analysis of the suitability of the sites to meet eco development targets for transport, SATURN modelling of the sites and an initial assessment of associated infrastructure requirements.

1.1.6 Further details are available within the Technical Report located in Appendix 1.

[1] Policy YV2

[2] 'Planning Policy Statement 1 eco towns, a supplement to PPS1' dated July 2009

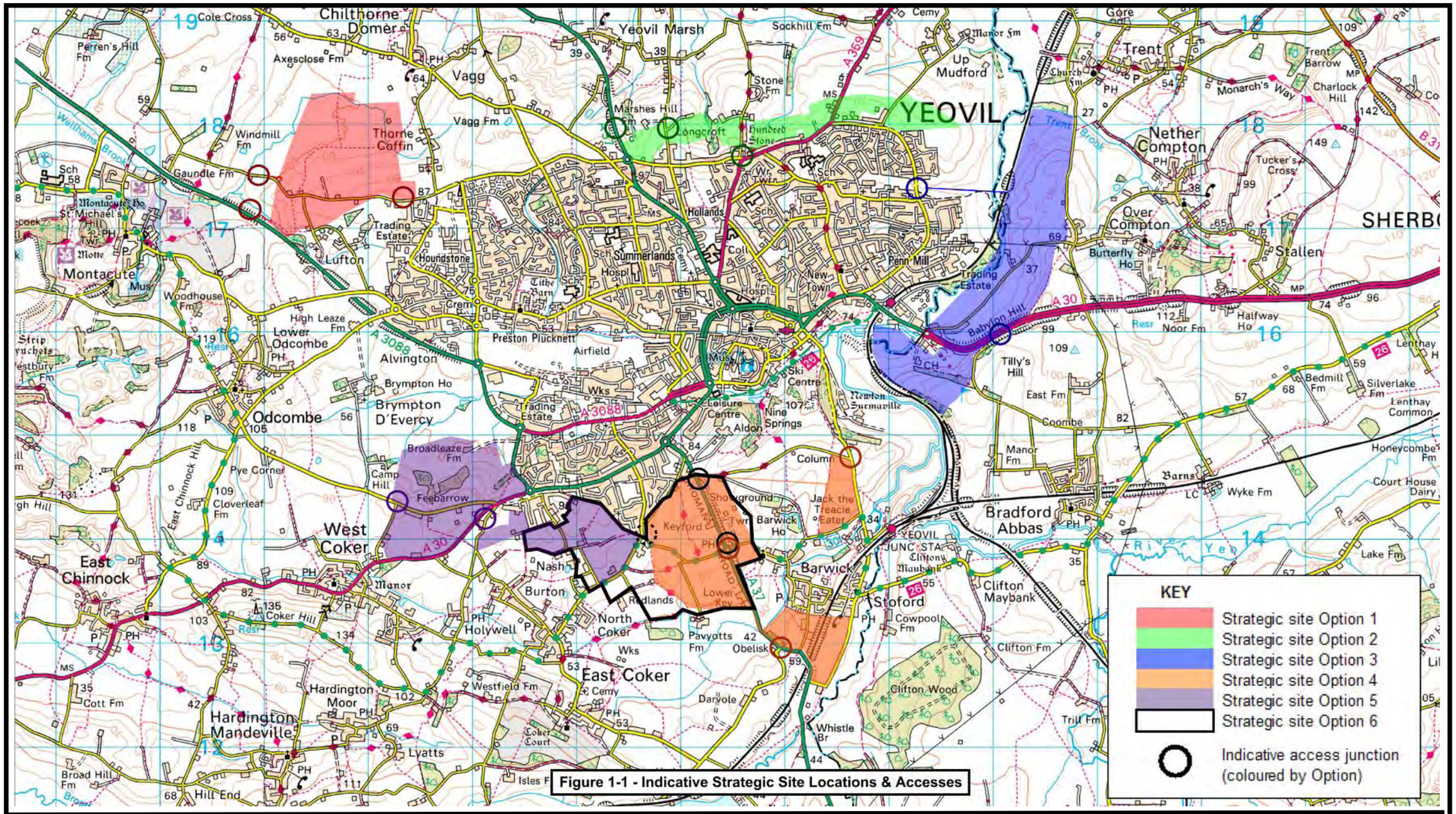

Figure 1-1 - Indicative Strategic Site Locations & Accesses

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Figure 1– Indicative Strategic Site Locations & Accesses

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Figure 1.1

2 IMPACTS ON THE ROAD NETWORK

2.1 Methodology for Modelling Impacts

2.1.1 SCC's SATURN model of Yeovil was used to test the impacts of introducing an Urban Extension in 2026 in the morning and afternoon peak hours and also during the mid day interpeak hour. The following planned improvements to the road system were assumed to have been built by this date, based on information provided by SCC:

- A30 Reckleford/Market St – Conversion to full signalised junction
- Reckleford Gyratory – Provision of two-way traffic flow on A30 Reckleford
- A30 Sherborne Rd/Lyde Rd – Conversion to signalised junction with puffin crossings
- Combe St Lane/Mudford Rd – Conversion of priority junction to roundabout
- Thorne Lane/Western Ave – Change of priority to benefit main flow of traffic (this includes removal of the Thorne Road link between Western Avenue and Larkhill Road).
- Copse Rd/Western Ave – Conversion from priority junction to roundabout
- Western Way/Preston Rd – Enlarged roundabout
- ASDA Access – Modified signals
- Westland's (Cartgate/Bunford) – Enlarged roundabout
- Lysander Rd/Watercombe Ln – Enlarged roundabout

2.1.2 Also included in the network changes were the Brimsmore Distributor Road and new access to the Lyde Road development site. Limited access improvements were also made to enable the delivery of the new Urban Extension sites where appropriate, and as summarised in Table 2-1. Indicative construction costs associated with each of the access proposals has also been included within Table 2-1, but having made a number of assumptions[3].

2.1.3 It is important to note that the access arrangements (described in the table below) have been chosen to ensure that all traffic successfully enters onto the local road network within the model, thereby allowing the traffic impacts of the development on the wider network to be established. Further refinement will however be necessary at the detailed access design stage.

2.1.4 Indicative locations of the access junctions are also shown in Figure 1-1 above.

[3] **Assumptions:** Arms to roundabout 50m, roundabout diameter 50m. Construction cost estimates: **Included**: Timber post and rail fencing to boundaries, topsoiling and grass seeding, capping, high friction surfacing on approaches, footways, road signs, road lighting, traffic management. **Excluded**: Traffic signals, planting, vehicle restraint systems, demolitions, VAT, land costs, future changes in costs.

Option 1 – Lufton West (North West Yeovil)			Total Construction Cost (Estimate)
New 3 arm roundabout on A3088 – **£674,100**	New 3 arm roundabout on Ball's Hill - **£674,100**	New 3 arm roundabout on Thorne Lane - **£674,100**	**£2,022,300**
Option 2 – Combe Street Lane (North Yeovil)			
Convert existing junction at Mudford Rd/Lyde Rd to 4 arm roundabout – **£865,200**	Convert existing junction at Stone Lane to 3 arm roundabout – **£765,975**	New 3 arm roundabout on A37 Ilchester Road – **£674,100**	**£2,305,275**
Option 3 – East Yeovil and Over Compton (East Yeovil)			
New 4 arm roundabout on A30 Babylon Hill – **£771,750**	New 3 arm roundabout on Lyde Road – **£674,100**		**£1,445,850**
Option 4 – East Coker, Keyford and Barwick (South Yeovil)			
Additional arm onto A37 Dorchester Road roundabout (5 arm total) – **£123,900**	Conversion of existing priority junction on A37 Dorchester Road to 4 arm roundabout – **£865,200**	Conversion of existing Newton Rd/Two Tower Lane to 3 arm roundabout – **£765,975**	**£1,755,075**
Option 5 – Brympton and Coker (South West Yeovil)			
Conversion of existing Gooseacre Lane/Camp Road to 4 arm roundabout – **£865,200**	Creation of new 3 arm roundabout on Camp Road – **£674,100**		**£1,539,300**
Option 6 – East Coker and Keyford (South Yeovil)			
Conversion of existing A37/ Little Tarrat Lane and A37/Two Tower Lane to 5 arm roundabout – **£964,425**	Additional arm onto A37 Dorchester Road roundabout (5 arms in total) – **£123,900**	Conversion of existing Placket Lane/Yeovil Road to 4 arm roundabout – **£865,200**	**£1,953,525**

Table 2-1 – Option access arrangement assumptions and construction cost estimates

2.1.5 With regards to the construction cost estimates provided, Table 2-1 suggests that the access junctions for Option 2 are likely to be most expensive at approximately £2.3 million, whereas Options 3 (at £1.45 million) and 5 (at £1.54 million) are shown to be the least expensive.

2.1.6 It can also be concluded that the access arrangements adopted for the sites located to the north of Yeovil (Options 1 and 2) are likely to incur slightly higher construction costs than those to the south of Yeovil (Options 4, 5 and 6).

2.2 Urban Extension Traffic Scenarios

2.2.1 For the Growth Option locations it was necessary to consider how the traffic impacts might differ from conventional patterns, if the site was developed as an eco urban extension. Three different traffic scenarios were therefore considered when testing the Growth Option locations (4-6), as follows:

Non-eco traffic (Scenario A) – The strategic site completely fails to meet eco development targets. As such, people are assumed to follow conventional travel demand patterns for Yeovil (i.e. high car usage).

Partial eco success (Scenario B) – The strategic site development fails to meet the eco development standard, but high levels of sustainable travel are achieved, albeit at a level lower than a true 'eco development'.

Eco success (Scenario C) – The strategic site development meets the eco development target, with 50% of all journeys made by non-car modes.

2.2.2 Table 2-2 below summarises the different options tested using the SATURN modelling software.

OPTION REFERENCE	LOCATION	TRAFFIC SCENARIO
2026 Reference Case	N/A	Non-eco traffic
OPTION 1	LUFTON WEST	Non-eco traffic
OPTION 2	COMBE STREET LANE	Non-eco traffic
OPTION 3	E. YEOVIL & OVER COMPTON	Non-eco traffic
OPTION 4a	EAST COKER, KEYFORD AND BARWICK	Non-eco traffic
OPTION 4b		Partial eco success
OPTION 4c		Eco success
OPTION 5a	BRYMPTON AND COKER	Non-eco traffic
OPTION 5b		Partial eco success
OPTION 5c		Eco success
OPTION 6a	EAST COKER AND KEYFORD	Non-eco traffic
OPTION 6b		Partial eco success
OPTION 6c		Eco success

Table 2-2 – Summary of SATURN Option tests

2.2.3 The Option '2026 Reference Case' relates to the Yeovil road network in 2026 without the Urban Extension, and provides a baseline scenario against which the different options can be compared. A brief overview of the assumptions made for the development scenarios is given below. For the full assumptions made for each scenario, please refer to the Technical Report in Appendix 1.

3 SUITABILITY OF OPTION SITES TO MEET ECO DEVELOPMENT TARGETS

3.1.1 It is considered that a range of interventions will be required in order to encourage residents of Yeovil to change the way they travel and thus to achieve a true Eco Urban Extension development. Table 3-1 identifies the types of measures likely to be required.

Travel Mode	Possible measures required to achieve eco development (Scenario C)
Walk, Cycle	Comprehensive direct networks for walking and cycling, with routes for motorised vehicles taking a lower priority. May include additional routes for sustainable modes. Networks to serve all the key services and land uses within and beyond the EUE. Providing sustainable modes with such a 'permeable' network can give them an advantage over car users and so reduce the tendency for people to drive. Cycle shelters and other storage facilities to be provided, as should pedestrian facilities (e.g. pedestrianised areas, widened pavements and crossing facilities). Programs like Smarter Choices to be implemented to encourage sustainable behaviour, using a combination of intelligent, personalised travel planning and provision of information (e.g. walking routes).
Bus/Coach	Five buses an hour to serve the EUE at the busiest time of the day (likely the AM peak). Additional bus stops would also be required so that they are within short walking distances of key amenities and services, making them easily accessible. Bus routes to offer frequent services, and serve the parts of town for which there is demand. The internal site layout should provide for access by buses. The bus service quality provided should also be sufficient to encourage above average patronage (such as providing bus shelters with live update information, high quality branded services and potentially bus priority measures if required). Smarter Choices or similar programs should be used to encourage patronage.
Rail	A negligible increase in rail travel is assumed due to the lack of rail services available within walking or cycling distances of the possible site locations.
Car	Urban form (both road and highly connected pedestrian network layouts) and creative parking design should encourage people to think about when they need to drive. Potential for car share or hire-a-car facilities should be considered.
Home Working	Telephone and broadband infrastructure should be provided in all homes. Appropriate working spaces will also need to be provided. Uptake will still be dependent upon flexibility of the employers and the job type. Additional retail and leisure trips may occur from the home workers; therefore local facilities will be important to prevent additional external trips.

Table 3-1 – Possible measures required to achieve true Eco status

3.1.2 The Department for Transport, *'Building Sustainable Transport into New Developments'*, April 2008 and *Smarter Choices – Changing the Way We Travel*, July 2004 provides further details on the measures outlined in Table 3-1.

3.1.3 The effects of the measures identified in Table 3-1 cannot be modelled explicitly by the current SCC SATURN model of Yeovil. However, SCC has previously attempted to assess the impact of such transport measures that cannot be easily represented using conventional traffic modelling techniques, within their "Second Yeovil Transport Strategy Review, Non Modellable Interventions" (Draft, dated 1 October 2009). 'Smarter Choice' programs already introduced in towns such as Peterborough, Worcester and Darlington have been used as case studies and examples of good practice.

3.1.4 The analysis in SCC's report is based upon the assumption that the impact of such initiatives can be measured in terms of the reductions in car usage that they facilitate. However, it is also recognised that there is potential for even the most successful measures to be offset by induced traffic, which involves new journeys on the network being made as a direct result of the freeing up of capacity.

3.1.5 Nevertheless, SCC state that the intervention types outlined in Table 3-1 can be expected to reduce car driver journeys by year 2026 by the following amounts:

- Personalised Travel Planning – 0.5% in the morning, evening and interpeak hours
- Workplace Travel Plans – 1.2% in the morning peak hour and 1% in the evening peak hour
- School Travel Plans – 1.3% in the morning peak hour
- Public Transport Improvements – 2.6% in the morning, evening and interpeaks
- Cycling Improvements – 3% in the morning, evening and interpeak hours
- Walking Improvements – 1% in the morning, evening and interpeak hours
- Teleworking – 2.6% in the morning peak hour and 2% in the evening peak hour

3.1.6 Furthermore, SCC concluded that a full 'Smarter Choices' program, as described in Table 3-1 above, has potential to generate the following reductions in car journeys by year 2026:

- 13.5% in the morning peak hour
- 11.4% in the evening peak hour
- 9% in the interpeak hour

3.1.7 It is considered that to achieve the total reductions in car journeys set out in 3.1.5 and the Eco Success (Scenario C), will require rigorous application of a full programme of 'Smarter Choices' and rest on the assumption that 'sufficient supportive measures will be put into place'.

3.1.8 Table 3-2 below offers an initial view on which scenarios might be achievable for each option, and the reasoning for this.

Strategic Site Option	Best Achievable Traffic Scenario			Reasons
	A – Non Eco	B – Partial Success	C – Eco Success	
1 – Lufton West	✓			Likely to increase car based travel due to it being located approx 6km from the town centre. No bus routes near or adjacent to site currently and it is poorly connected to walking and cycling infrastructure.
2 – Combe Street Lane	✓			Site offers reasonable opportunities for non car based travel presently, but is hampered by gradients and distance from key services/amenities. Also has a fragmented site layout which is unlikely to encourage internal non-car trip making.
3 – East Yeovil and Over Compton	✓			Access to northern most part of the site difficult due to presence of the railway line. The southern part of the site is within reasonable distance of the town centre, but also has good access for car travel.
4 – East Coker, Keyford and Barwick		✓		The east and southern pockets of development are in remote locations and are detached from the main plot. As such, access is likely to be via cars as public transport access may be limited. Main plot is reasonably close to town centre at approx 2km.
5 – Brympton and Coker			✓	Potential to provide realistic opportunities for non car based travel, especially to nearby employment sites. Relatively flat terrain within the site will help to encourage cycling/walking. Also dependant upon a full 'Smarter Choices' program being successfully introduced to Yeovil town.
6 – East Coker and Keyford			✓	Potential to provide realistic opportunities for non car based travel. Reasonably close to town centre at approx 2km. Relatively flat terrain will help to encourage cycling/walking. Also dependant upon a full 'Smarter Choices' program being successfully introduced to Yeovil town.

Table 3-2 – Strategic development site locations and best achievable scenario

3.1.9 The information contained within Table 3-2 can be cross referenced to SCC's Transport Background Paper on 'Yeovil SHLAA and Strategic Housing Options', (draft, dated October 2009). SCC qualitatively assessed a total of six potential strategic housing sites and three strategic growth options in terms of likely transport implications. The following similarities between the sites assessed by SCC and those discussed in this report have been observed:

- SCC Site 4 – West Lufton and SCC Strategic Option 2 - North West similar to current Option 1 – Lufton West
- SCC Strategic Option 3 – North East similar to current Option 3 – East Yeovil and Over Compton
- SCC Site 5 – Marshes Hill similar to current Option 2 – Combe Street Lane
- SCC Site 6 – East Coker, SCC Site 3 – West Coker and SCC Strategic Option 1 – South similar to current Options 4 – Barwick, 5 – Bunford and 6 – Keyford

3.1.10 The SCC report concluded that if a single location was to be pursued, it should be strategic growth Option 1 (South) for the reasons that the south western fringes of the town are less constrained by congestion and existing development than other areas. Furthermore, the southern region has been considered to have realistic opportunities for modal choice owing to reasonable existing transport infrastructure, relatively flat terrains and short distances to the town centre.

3.1.11 Table 3-2 generally aligns with the SCC conclusion above given that, in general terms, the southern options are considered to have better potential for Eco Success (Scenario C) than those located to the north of Yeovil. Just two of the six possible options, both of which are located in south Yeovil (Options 5 – Bunford and 6 - Keyford) appear to have the potential to operate successfully as an true eco development in the future in transport terms. However, as outlined previously, full achievement of the Eco Success scenario is likely to require a full 'Smarter Choices' program being successfully introduced in the Yeovil area.

4 HIGHWAY IMPACTS

4.1 Journey Times

4.1.1 In order to understand the effects that the strategic development sites are likely to have on the existing roads and junctions in Yeovil in year 2026, a series of travel routes were selected for analysis. The total amount of time to travel each route (in both directions) by car has been assessed.

4.1.2 The results for all options are presented relative to the 2026 Reference Case, and the chosen routes are highlighted on a plan in Appendix 4. Routes are as follows:

- Route A – Mudford to Fiveways roundabout
- Route B – Sherborne to Hospital roundabout
- Route C – Yeovil Marsh to Fiveways roundabout
- Route D – Montacute to Horsey roundabout
- Route E – Barwick to Hospital roundabout

4.1.3 Table 4-1 and Table 4-2 below summarise the *change* in journey times relative to the 2026 Reference Case for each of the key routes selected. The full results for each route can also be viewed in Appendix 4.

Key	
A	Journey time decrease of over 30 seconds, relative to Reference Case
A	Journey time decrease or increase of under 30 seconds, relative to Reference Case
A	Journey time increase of between 30 & 60 seconds, relative to Reference Case
A	Journey time increase of over 60 seconds, relative to Reference Case

4.1.4 Given that the total journey times for the routes are on average 7 to 8 minutes, it is thought that 30 seconds is proportionally a fairly significant increase in journey time that would be noticed by travellers.

4.1.5 A full discussion of the results may be found in the Technical Report in Appendix 1. However, the journey time impacts are also summarised below.

Option	Morning Peak Hour				
	Journey Times (secs) - Route IN TO Yeovil				
	Route A	Route B	Route C	Route D	Route E
1	16	5	0	-2	27
2	57	-17	94	25	22
3	-2	53	-3	3	25
4a	13	4	26	20	46
5a	4	-8	18	34	9
6a	27	0	29	24	32
4b	18	7	5	12	31
5b	12	-11	23	21	-1
6b	18	-7	15	17	34
4c	14	16	11	20	17
5c	2	11	-3	25	16
6c	15	2	17	12	28
Interpeak Hour					
1	0	-9	1	1	0
2	19	-1	15	-3	6
3	6	34	0	-1	-5
4a	2	1	2	0	15
5a	1	-1	0	5	-17
6a	3	-17	2	4	8
4b	2	-15	2	1	-15
5b	1	-17	0	5	-16
6b	2	-16	1	4	10
4c	2	-13	2	1	1
5c	1	0	0	1	3
6c	2	-8	2	2	-14
Evening Peak Hour					
1	-1	-3	1	16	0
2	31	-4	16	-1	-3
3	9	81	-1	-2	10
4a	-2	-10	-1	-2	57
5a	-3	-7	-2	1	16
6a	-2	0	-1	0	58
4b	-2	-9	-1	-1	45
5b	-3	-5	-1	1	13
6b	-2	3	-1	0	50
4c	-2	-4	-1	0	38
5c	-2	-6	-2	1	11
6c	-2	2	5	0	42

Table 4-1 – Inbound Journey Times Summary

Option	Morning Peak Hour				
	Journey Times (secs) - Route OUT OF Yeovil				
	Route A	Route B	Route C	Route D	Route E
1	-4	-3	1	-18	-7
2	25	-3	10	-7	-30
3	37	90	-1	-2	-3
4a	0	-8	-1	-3	49
5a	-1	-3	0	-3	7
6a	1	-11	-1	-3	54
4b	-2	-4	-1	-2	31
5b	-1	5	0	-4	16
6b	2	-7	0	-2	45
4c	0	-2	0	-2	28
5c	2	5	0	-3	16
6c	-3	-2	0	-2	36
Interpeak Hour					
1	0	5	0	-31	14
2	15	3	11	-1	9
3	1	55	0	1	1
4a	1	-1	0	6	22
5a	0	1	0	3	9
6a	1	-1	1	5	28
4b	0	1	1	9	8
5b	0	1	0	4	8
6b	1	0	1	5	24
4c	1	1	0	6	15
5c	0	2	0	3	-1
6c	1	3	0	7	24
Evening Peak Hour					
1	3	0	1	-62	4
2	31	4	14	-3	-7
3	14	43	-2	-1	-21
4a	1	-2	0	5	28
5a	0	-4	-6	2	6
6a	2	-8	0	6	40
4b	1	-6	1	5	25
5b	0	-6	-6	2	16
6b	1	-4	-1	5	31
4c	1	-5	1	3	21
5c	0	-5	-5	3	13
6c	1	-2	-1	3	30

Table 4-2 – Outbound Journey Times Summary

4.2 Journey Time Summary

4.2.1 In the morning peak most routes travelling inbound to Yeovil town centre are more congested than those travelling outbound for all options tested. In the evening peak most outbound routes are more congested than the inbound. This is likely to be due to the level of commuting traffic wanting to access Yeovil town centre in the morning and returning home in the evening.

4.2.2 Options 5 and 6 located in the south of Yeovil tend to suffer slightly more congested routes than Option 4, possibly due to the more limited number of potential routes available for travelling by car into Yeovil town centre. In terms of journey time impacts on the 5 key routes, Option 1 and Option 5c initially appear to have lower journey times.

4.2.3 The worst delays on the selected routes are likely to be associated with congestion at key junctions. It is suggested that addressing the issues at these junctions will help to mitigate most of the journey time increases caused by the Urban Extension traffic.

4.3 Key Junction Performance

4.3.1 Junction operation has been analysed for 9 key junctions, as requested by SCC. The locations of the key junctions are given in Figure 4-2 below.

4.3.2 The following colour scales have been utilised in the tables below to represent levels of junction operation or 'junction status':

Green	Operating satisfactorily (no congestion)
Amber	Operating close to capacity (some congestion)
Red	Operating at or over capacity (severe congestion)

4.3.3 Table 4-3 below gives the status of the key junctions in 2026.

Option	Morning Peak Hour			Interpeak Hour			Evening Peak Hour		
	Green	Amber	Red	Green	Amber	Red	Green	Amber	Red
2026 RC	3	1	5	6	1	2	5	0	4
1	1	3	5	5	2	2	4	1	4
2	1	2	6	5	2	2	4	1	4
3	3	0	6	5	1	3	5	0	4
4a	2	2	5	6	1	2	5	0	4
5a	1	3	5	5	2	2	4	1	4
6a	2	1	6	5	2	2	4	1	4
4b	2	1	6	6	1	2	5	0	4
5b	2	2	5	5	2	2	4	1	4
6b	2	1	6	5	2	2	5	0	4
4c	2	1	6	6	1	2	5	0	4
5c	2	2	5	5	2	2	4	1	4
6c	2	1	6	5	2	2	5	0	4

Table 4-3 – Number of Key Junctions operating at 'Green', 'Amber' and 'Red' Junction Status (change attributed to most congested arm)

Note: Highlighted cells indicate that the scenario has more junctions approaching or exceeding capacity than the Reference Case.

KEY

1 – Cartgate roundabout
2 – Westlands roundabout
3 – Preston Road roundabout
4 – Bunford Hollow roundabout
5 – Horsey roundabout
6 – Hospital roundabout
7 – Fiveways roundabout
8 – Lyde Road Mini roundabout
9 – Combe Street Lane Junction

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Figure 2: Key Junction Locations

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Figure 4.1

4.3.4 The following graphs summarise the changes in capacity and key junction status between the 2026 Reference Case and Options 1 to 6c. It should be remembered that the changes in junction status as indicated in the following figures are defined as follows:

- Green to Red = No congestion to Severe congestion
- Amber to Red = Some congestion to Severe congestion
- Green to Amber = No congestion to Some congestion

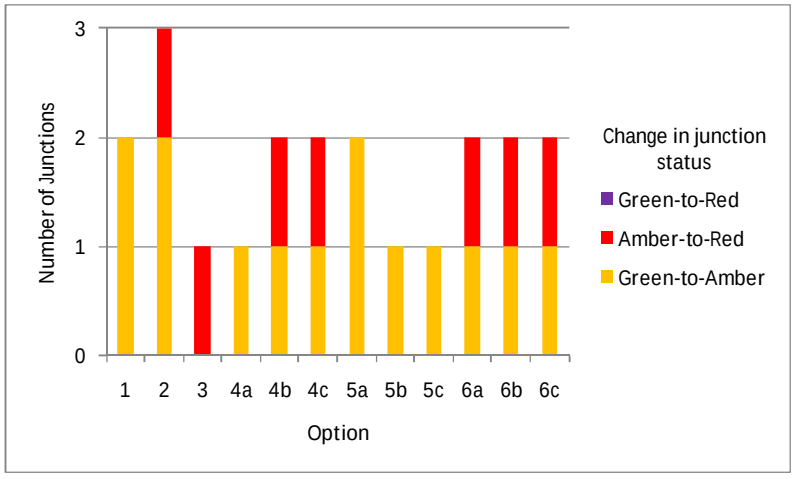

Figure 3: Morning Peak Hour Changes in Key Junction Status

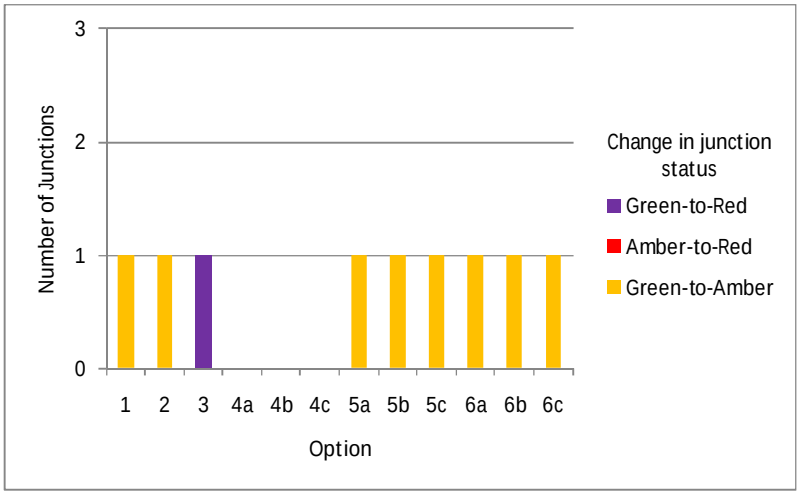

Figure 4: Interpeak Hour Changes in Key Junction Status

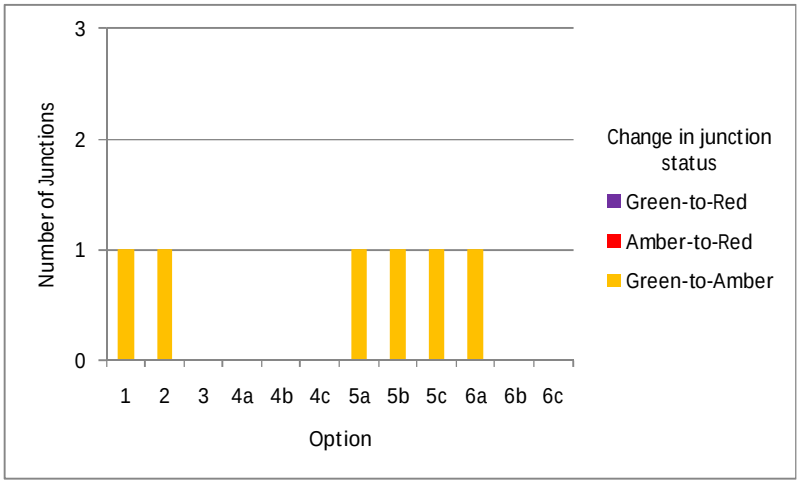

Figure 5: Evening Peak Hour Changes in Key Junction Status

4.3.5 There is only a single instance of a junction that is uncongested in the Reference Case exhibiting severe congestion as a result of the development options (highlighted purple in Figure 4). This relates to the Lyde Road mini roundabout, which is only seen to be severely congested in Option 3.

4.3.6 In general, the small changes in junction status between options indicates that the impacts of the developments are generally small (although this does not necessarily imply insignificance, because the existing congestion may already be severe).

4.3.7 However, the results do not give a clear idea of how large the effects of the development are on junction operation, particularly for those junctions already suffering from significant levels of congestion in the Reference Case. Usually the changes in junction status occurred for junctions (and arms of junctions) which were already on the borderline of congested / very congested junction performance.

4.3.8 To give an idea of the scale of the effects of each development option, Table 4-4 to Table 4-6 below present the *change* in levels of congestion on each arm of the key junctions, as a percentage. As before, change is reported relative to the 2026 Reference Case.

4.3.9 Full summary results are found in Appendix 1, which also detail absolute congestion on every arm of the key junctions for completeness. The text below refers to the information in Appendix 1 as well as the abbreviated results presented in this report. A full discussion of these results is given in Appendix 1.

Morning Peak Hour													
Arm	Option												
	2026 Reference Case	1	2	3	4a	4b	4c	5a	5b	5c	6a	6b	6c
	A303 / A3088 (Cartgate roundabout)												
A303 (W)	102%	0%	1%	0%	0%	0%	0%	1%	0%	1%	0%	0%	0%
A303 (E)	102%	2%	-2%	0%	2%	2%	1%	2%	2%	1%	2%	2%	1%
A3088	70%	-3%	-1%	0%	-1%	0%	0%	-2%	-1%	-1%	-1%	-1%	0%
A3088 / Bunford Lane / Relief Road (Westlands roundabout)													
A3088	85%	5%	1%	0%	2%	1%	1%	2%	1%	1%	2%	1%	1%
Bunford Ln (N)	82%	**9%**	-7%	0%	5%	4%	3%	**6%**	5%	5%	**6%**	**5%**	3%
Bunford Ln (E)	18%	4%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Western Relief Rd	65%	**9%**	0%	0%	2%	2%	2%	0%	-1%	0%	2%	2%	2%
Preston Road / Lufton Way / Bunford Lane (Preston Road roundabout)													
Lufton Way	29%	2%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Western Ave	79%	4%	**17%**	-2%	4%	3%	3%	**6%**	**5%**	4%	3%	3%	3%
Preston Rd	74%	**6%**	-14%	-2%	2%	2%	2%	**7%**	**6%**	4%	2%	2%	2%
Bunford Ln	84%	5%	5%	-1%	0%	0%	1%	2%	1%	1%	0%	0%	1%
Relief Road / Lysander Road / Watercombe Lane (Bunford Hollow roundabout)													
Western Relief Rd	80%	0%	-4%	0%	1%	1%	1%	1%	1%	0%	1%	1%	1%
Watercombe Ln	35%	-1%	1%	1%	**6%**	**5%**	4%	**6%**	**6%**	**5%**	**6%**	**5%**	4%
A3088 Lysander Rd	57%	4%	1%	-2%	-1%	-1%	-1%	0%	0%	1%	-1%	-1%	-1%
Watercombe Ln	76%	**7%**	**9%**	-4%	4%	4%	4%	2%	1%	1%	4%	3%	4%
Lysander Road / Queensway / Brunswick Street / Hendford Hill (Horsey roundabout)													
A3088 Lysander Rd	47%	-3%	1%	0%	3%	2%	3%	0%	1%	1%	2%	3%	2%
Queensway	101%	0%	-4%	0%	1%	1%	1%	0%	1%	1%	2%	1%	1%
Brunswick St	57%	2%	**8%**	-2%	2%	1%	1%	1%	0%	0%	3%	2%	2%
Hendford Hill	107%	0%	0%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%
Reckleford / Queensway / Kingston (Hospital roundabout)													
A30 Queensway	46%	0%	-5%	2%	-1%	-1%	0%	1%	0%	-1%	-2%	-1%	0%
A37 Kingston	100%	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	0%
A30 Reckleford	103%	0%	-1%	-1%	0%	0%	0%	0%	0%	0%	-1%	-2%	-1%
Park Rd	8%	3%	3%	-3%	2%	0%	0%	2%	1%	-1%	1%	3%	0%
Preston Road / Ilchester Road / Mudford Road / Kingston (Fiveways roundabout)													
Preston Rd	92%	0%	-7%	0%	2%	2%	2%	-1%	0%	0%	2%	2%	1%
Ilchester Rd	102%	0%	4%	0%	1%	0%	1%	1%	1%	0%	2%	1%	1%
A359 Mudford Rd	104%	0%	1%	-1%	0%	0%	0%	0%	0%	0%	1%	0%	0%
A37 Kingston	75%	1%	**6%**	0%	1%	1%	1%	0%	1%	1%	1%	1%	1%
A30 Sherborne Road / Lyde Road Mini roundabout													
Sherborne Rd (W)	79%	0%	-3%	3%	-1%	0%	0%	0%	0%	0%	-1%	-1%	0%
Sherborne Rd (E)	75%	1%	**6%**	4%	1%	1%	0%	0%	0%	1%	1%	1%	1%
Lyde Rd	106%	0%	2%	**5%**	0%	0%	0%	-1%	-1%	0%	0%	0%	0%
Mudford Road / Combe Street Lane (Priority Junction but Mini roundabout in 2026)													
Combe St Ln	72%	-1%	**10%**	-4%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Stone Ln	12%	-1%	**23%**	-2%	0%	0%	0%	0%	0%	1%	0%	1%	0%
Mudford Rd (E)	98%	1%	3%	2%	1%	2%	2%	1%	1%	1%	2%	2%	2%
Mudford Rd (S)	54%	2%	5%	-3%	1%	1%	1%	1%	1%	0%	0%	0%	1%

Keys				
	Green	Operating well	Red	Congestion increase of 5% or more
	Amber	Moderate congestion	Orange	Congestion increase of between 0 and 5%
	Red	Severe congestion	Black	No congestion increase or decrease
			Blue	Congestion decrease

Table 4-4 – Change in Congestion relative to 2026 Reference Case (Morning peak hour)

Interpeak Hour													
Arm	Option												
	2026 Reference Case	1	2	3	4a	4b	4c	5a	5b	5c	6a	6b	6c
	A303 / A3088 (Cartgate roundabout)												
A303 (W)	78%	2%	1%	1%	1%	1%	1%	2%	2%	2%	1%	1%	1%
A303 (E)	70%	2%	2%	1%	2%	2%	2%	2%	2%	2%	3%	2%	2%
A3088	80%	2%	1%	1%	1%	1%	1%	2%	1%	1%	1%	1%	1%
A3088 / Bunford Lane / Relief Road (Westlands roundabout)													
A3088	51%	4%	0%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Bunford Ln (N)	34%	**6%**	0%	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Bunford Ln (E)	22%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Western Relief Rd	69%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Preston Road / Lufton Way / Bunford Lane (Preston Road roundabout)													
Lufton Way	50%	0%	0%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Western Ave	39%	3%	0%	-1%	1%	0%	0%	2%	1%	1%	0%	0%	0%
Preston Rd	37%	4%	0%	1%	2%	2%	2%	3%	3%	3%	2%	2%	1%
Bunford Ln	60%	2%	1%	0%	1%	1%	1%	2%	2%	1%	1%	1%	1%
Relief Road / Lysander Road / Watercombe Lane (Bunford Hollow roundabout)													
Western Relief Rd	61%	3%	0%	0%	2%	1%	1%	2%	2%	1%	2%	2%	1%
Watercombe Ln	36%	-1%	0%	0%	0%	0%	0%	0%	1%	0%	0%	1%	0%
A3088 Lysander Rd	57%	1%	0%	0%	0%	1%	0%	3%	3%	2%	1%	1%	1%
Watercombe Ln	34%	1%	1%	1%	3%	3%	3%	4%	3%	3%	4%	4%	3%
Lysander Road / Queensway / Brunswick Street / Hendford Hill (Horsey roundabout)													
A3088 Lysander Rd	58%	1%	2%	2%	2%	2%	2%	2%	2%	2%	3%	3%	3%
Queensway	100%	1%	1%	0%	1%	0%	1%	1%	1%	1%	1%	1%	1%
Brunswick St	100%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Hendford Hill	104%	0%	1%	0%	0%	-1%	0%	-1%	-1%	0%	0%	0%	-2%
Reckleford / Queensway / Kingston (Hospital roundabout)													
A30 Queensway	43%	2%	1%	3%	1%	2%	2%	2%	3%	2%	2%	2%	1%
A37 Kingston	95%	-1%	1%	0%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%	-1%
A30 Reckleford	102%	0%	0%	0%	0%	-1%	0%	0%	-1%	0%	-1%	-1%	0%
Park Rd	31%	0%	4%	**5%**	0%	1%	1%	0%	1%	-1%	0%	0%	-1%
Preston Road / Ilchester Road / Mudford Road / Kingston (Fiveways roundabout)													
Preston Rd	82%	1%	4%	1%	2%	3%	2%	1%	1%	1%	3%	3%	3%
Ilchester Rd	79%	1%	3%	0%	2%	2%	2%	0%	0%	0%	2%	2%	2%
A359 Mudford Rd	90%	0%	2%	2%	1%	1%	1%	0%	0%	0%	1%	1%	1%
A37 Kingston	85%	2%	2%	1%	2%	2%	2%	1%	1%	2%	2%	2%	2%
A30 Sherborne Road / Lyde Road Mini roundabout													
Sherborne Rd (W)	79%	0%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sherborne Rd (E)	61%	0%	**5%**	0%	1%	1%	1%	0%	1%	1%	1%	1%	1%
Lyde Rd	85%	1%	2%	**16%**	0%	0%	0%	1%	1%	1%	1%	1%	1%
Mudford Road / Combe Street Lane (Priority Junction but Mini roundabout in 2026)													
Combe St Ln	50%	2%	**6%**	2%	0%	0%	1%	0%	0%	0%	0%	1%	0%
Stone Ln	1%	0%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mudford Rd (E)	52%	0%	4%	2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mudford Rd (S)	40%	1%	4%	0%	1%	0%	1%	0%	1%	0%	1%	1%	0%

Keys

Green	Operating well
Amber	Moderate congestion
Red	Severe congestion

Red	Congestion increase of 5% or more
Orange	Congestion increase of between 0 and 5%
Black	No congestion increase or decrease
Blue	Congestion decrease

Table 4-5 – Change in Congestion relative to 2026 Reference Case (Interpeak hour)

Evening Peak Hour													
Movement	Option												
	2026 Reference Case	1	2	3	4a	4b	4c	5a	5b	5c	6a	6b	6c
	A303 / A3088 (Cartgate Roundabout)												
A303 (W)	66%	2%	0%	-1%	0%	0%	0%	1%	1%	0%	0%	0%	0%
A303 (E)	83%	2%	3%	2%	1%	1%	1%	1%	1%	1%	1%	1%	1%
A3088	103%	1%	1%	0%	1%	1%	1%	0%	0%	0%	1%	1%	1%
A3088 / Bunford Lane / Relief Road (Westlands Roundabout)													
A3088	42%	**9%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Bunford Ln (N)	39%	**9%**	0%	-1%	1%	1%	1%	0%	0%	0%	1%	1%	1%
Bunford Ln (E)	49%	1%	0%	0%	0%	0%	0%	-1%	0%	0%	0%	0%	0%
Western Relief Rd	81%	4%	0%	0%	4%	3%	2%	2%	2%	2%	4%	3%	2%
Preston Road / Lufton Way / Bunford Lane (Preston Road Roundabout)													
Lufton Way	85%	**9%**	1%	-1%	0%	0%	0%	4%	3%	3%	1%	0%	0%
Western Ave	59%	**7%**	3%	-1%	0%	-1%	0%	3%	3%	2%	0%	0%	0%
Preston Rd	60%	3%	2%	1%	1%	1%	1%	3%	3%	3%	1%	1%	1%
Bunford Ln	78%	**7%**	1%	-1%	2%	1%	1%	4%	4%	3%	2%	1%	1%
Relief Road / Lysander Road / Watercombe Lane (Bunford Hollow Roundabout)													
Western Relief Rd	72%	**7%**	0%	0%	3%	3%	3%	1%	1%	1%	3%	3%	3%
Watercombe Ln	70%	-2%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A3088 Lysander Rd	67%	2%	0%	0%	-2%	-1%	-1%	1%	1%	1%	-2%	-2%	-1%
Watercombe Ln	21%	3%	0%	1%	**8%**	**7%**	**6%**	**9%**	**8%**	**7%**	**9%**	**8%**	**6%**
Lysander Road / Queensway / Brunswick Street / Hendford Hill (Horsey Roundabout)													
A3088 Lysander Rd	76%	1%	-1%	2%	**13%**	**10%**	**8%**	**7%**	**6%**	**5%**	**11%**	**11%**	**9%**
Queensway	107%	0%	-1%	-2%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Brunswick St	64%	-1%	-1%	0%	-3%	-3%	-3%	-5%	-4%	-4%	-2%	-2%	-2%
Hendford Hill	96%	0%	-1%	0%	4%	3%	2%	3%	3%	2%	**5%**	4%	4%
	Reckleford / Queensway / Kingston (Hospital Roundabout)												
A30 Queensway	67%	-1%	-3%	0%	0%	0%	0%	1%	1%	1%	-1%	-1%	-1%
A37 Kingston	76%	-4%	0%	-3%	-4%	-4%	-4%	-5%	-5%	-5%	-4%	-4%	-4%
A30 Reckleford	85%	-7%	-5%	-6%	-5%	-5%	-6%	-7%	-7%	-6%	-8%	-8%	-8%
Park Rd	15%	1%	1%	0%	0%	0%	0%	1%	1%	1%	0%	0%	0%
Preston Road / Ilchester Road / Mudford Road / Kingston (Fiveways Roundabout)													
Preston Rd	98%	2%	2%	1%	0%	-1%	0%	0%	0%	0%	0%	0%	0%
Ilchester Rd	79%	1%	2%	-2%	-2%	-2%	-2%	-3%	-2%	-3%	-2%	-2%	-2%
A359 Mudford Rd	83%	-1%	**7%**	1%	-2%	-2%	-2%	-3%	-2%	-2%	-2%	-2%	-2%
A37 Kingston	102%	-1%	-1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
A30 Sherborne Road / Lyde Road Mini Roundabout													
Sherborne Rd (W)	87%	0%	1%	3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Sherborne Rd (E)	63%	0%	**8%**	**8%**	-1%	-1%	0%	0%	1%	0%	0%	1%	1%
Lyde Rd	103%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mudford Road / Combe Street Lane (Priority Junction but Mini Roundabout in 2026)													
Combe St Ln	57%	2%	**7%**	-3%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Stone Ln	1%	0%	**8%**	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mudford Rd (E)	58%	0%	**13%**	**6%**	0%	0%	0%	0%	0%	0%	0%	0%	0%
Mudford Rd (S)	52%	0%	**13%**	3%	0%	0%	0%	-1%	-1%	-1%	0%	0%	-1%

Keys		
	Green	Operating well
	Amber	Moderate congestion
	Red	Severe congestion

Red	Congestion increase of 5% or more
Orange	Congestion increase of between 0 and 5%
Black	No congestion increase or decrease
Blue	Congestion decrease

Table 4-6 – Change in Congestion relative to 2026 Reference Case (Evening peak hour)

4.4 Key Junction Performance Summary

4.4.1 The main junctions identified as requiring attention due to high levels of congestion are:

- Cartgate roundabout – all arms
- Horsey roundabout - northern, eastern and southern arms
- Hospital roundabout - northern and eastern arms of should be monitored, if not mitigated, due to the high levels of congestion existing on these arms
- Fiveways roundabout – all arms
- Lyde Road Mini roundabout – eastern arm
- Combe Street Lane Mini roundabout – eastern arm

4.4.2 Options 1 and 2 cause marginally more congestion at the Preston Road roundabout (and to a lesser extent, the Fiveways roundabout) than the other sites. Options 5a to 5c also cause slightly more congestion than other options at the Preston Road roundabout; and Options 4 to 6 tend to worsen congestion levels at the Horsey roundabout than the others. Option 3 may cause slightly less congestion at the Cartgate roundabout and the Horsey roundabout than other development options, however, as described in Table 3-2, it should be noted that there are access issues associated with the northern element of the site.

4.4.3 Overall impacts of the options on the key junctions are generally small, although it should be noted that these may still be significant if the baseline (2026 Reference Case) congestion at these locations is high (i.e. as with both the Hospital roundabout and Fiveways roundabout).

4.5 Network Results

4.5.1 Figure 6 to Figure 8 on the following page presents graphs of the main network summary statistics compiled in Appendix 3. The statistics presented are average delay per vehicle, which can be defined as the delay an average driver might experience driving in the Yeovil area at a given time of day, average vehicle speed and finally the total number of vehicles in over-capacity queues for the modelled hour.

4.5.2 An example of an ‘over-capacity queue’ would be traffic queuing at a set of red signals. When the signals turn green for the queuing arm(s), not all the queued traffic will be able to clear the junction before the signals turn red again (unlike transient queues, which will clear in a single green signal phase). These queues usually indicate that the roads in question are over capacity, and therefore are highly congested.

4.5.3 In the figures below, ‘RC’ denotes the 2026 Reference Case scenario.

4.5.4 A summary referring to both the graphs below and the full set of statistics presented in Appendix 3 is presented below in section 4.6.

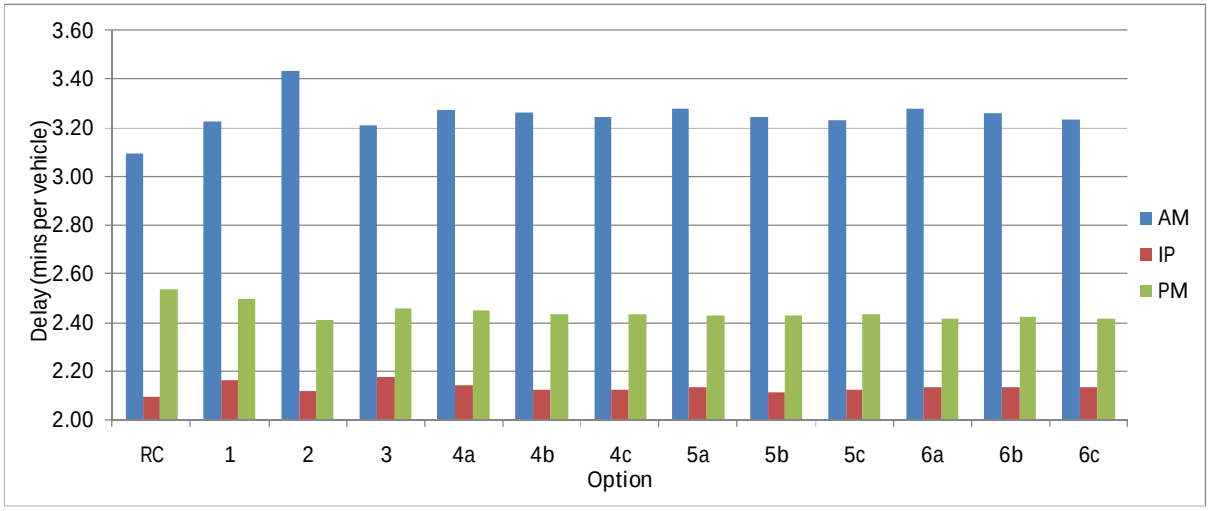

Figure 6: Average Delay per Vehicle (all time periods)

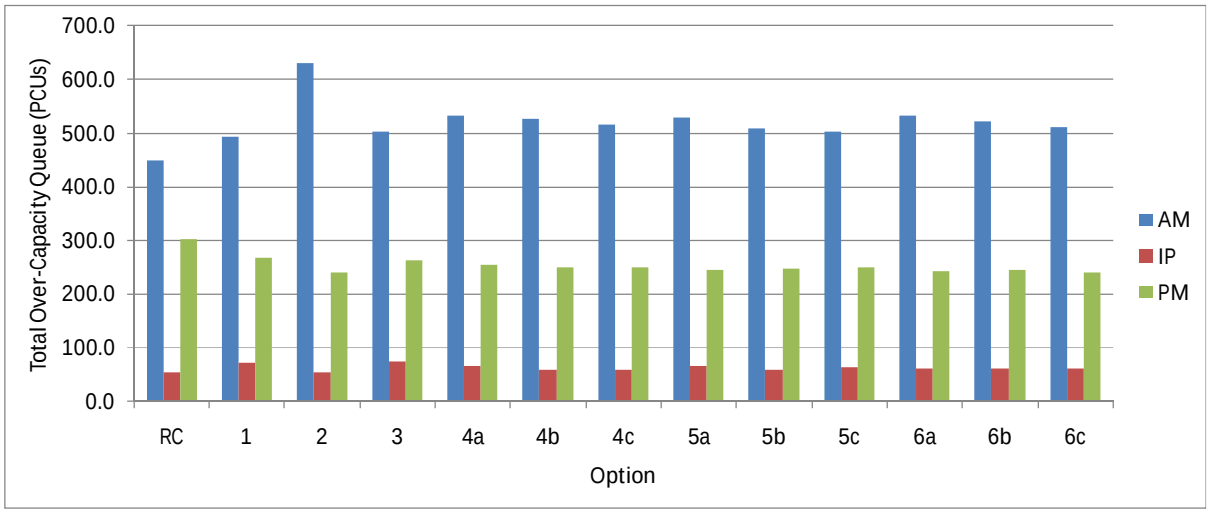

Figure 7: Total Over-Capacity Queues (all time periods)

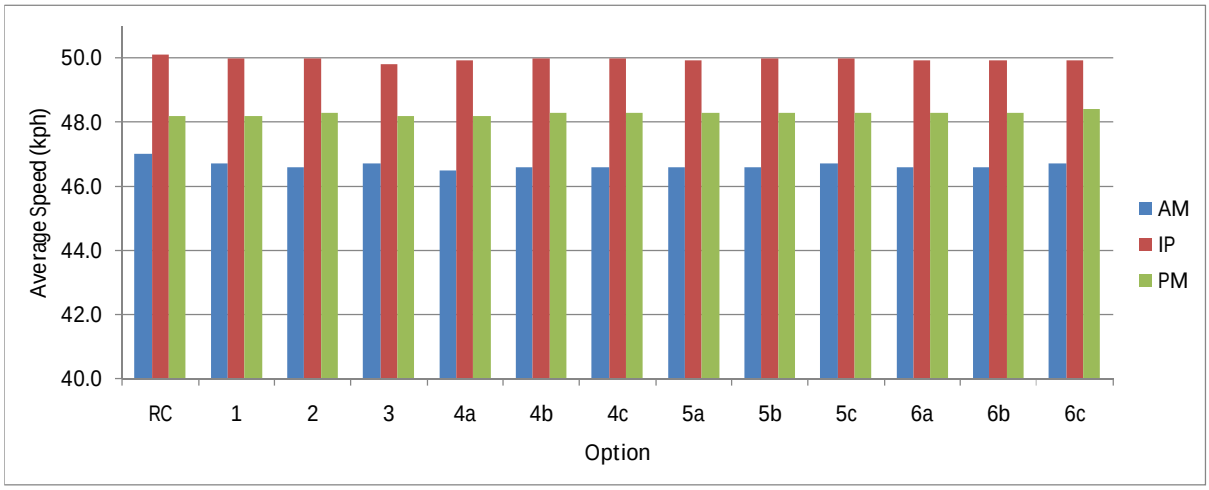

Figure 8: Average Speed (all time periods)

4.6 Network Results Summary

4.6.1 The graphs show that the reduced development traffic in the eco success scenario visibly decreases the overall number of over-capacity queues relative to the non-eco traffic scenario, but increases average vehicle speeds and reduces average delays per vehicle for all time periods.

4.6.2 However, in absolute terms these improvements are small. All Options 4 to 6 show only minor differences in *overall* network queues between the eco success scenario and the non-eco traffic scenario (a reduction of less than 30 vehicles in any time period). Average network speeds are almost identical for the eco success, partial eco success and non-eco traffic scenarios, and average delay per vehicle improves at most by approximately 5 seconds.

4.6.3 Since the statistics used are averages over the whole network, this does not account for instances of more localised development impacts. The reduction in traffic levels in the eco success scenario is shown in some cases to sufficiently reduce the congestion caused by the development traffic to Reference Case levels, however this is not the case for all of the key junctions assessed.

4.6.4 In all, the existing baseline congestion is such that even the relatively small impacts of the eco success development will likely require some form of mitigation of the network for delivery.

4.7 Additional Infrastructure Requirements

4.7.1 In addition to the assumed access arrangements for each option, it is likely that additional modifications to the existing highway infrastructure in the town centre will be required, regardless of which option is pursued. A number of locations where attention is likely to be required are discussed in the following section.

4.7.2 For each option consideration has been given to costs that may be incurred to deliver the identified infrastructure. These costs are preliminary estimates based on a brief site inspection, initial estimates of quantities and unit costs against each item. The cost figures provided can be used to determine order of magnitude of costs and ranking of options and will require further refinement at a later date. Further details of the items included can be found at Appendix 6.

4.7.3 Option 1 (Lufton West) – Two of the development accesses feed onto Ball's Hill (becoming Thorne Lane nearer Yeovil), which is a narrow, single lane country road and is likely to require infrastructure improvement to deliver this development. Other schemes that may be required include providing new highway to connect the site access to the existing highway, additional cycle and pedestrian facilities and modifying the Western Ave / Thorne Hill junction. It is estimated that the cost associated with these works is £4.83 million. This brings the total cost for access to the site to £6.85 million.

4.7.4 This option may also impact upon Cartgate roundabout. It is has not been possible to develop an estimate for the cost of a scheme at this junction. However, SCC has highlighted potential cost issues with the Cartgate link and roundabout due to the proximity of this development option to the A303 which is part of the Highways Agency (HA) network. The HA has a duty to manage traffic impacts on its network and has indicated that any development option which causes significant additional traffic to route through Cartgate roundabout may therefore be required to fund suitable mitigation for the roundabout (which may involve upgrading the junction).

4.7.5 Option 2 (Combe Street Lane) – One of the development accesses is modelled as being off Stone Lane, a single lane residential street which may also require some infrastructure improvement to deliver this development. This might require property acquisition which has not been included in the cost estimate.

4.7.6 Other schemes would include provision of connections from the site access to the A37, earthworks to facilitate this link and additional walk and cycle infrastructure.

4.7.7 Widening of Marsh Lane may also be required, but this would require property acquisition and has not been included in a cost estimate.

4.7.8 The items that have a cost estimate provided total £0.97 million. The total cost of infrastructure for this option is £3.28 million although significant costs would be added due to property acquisition.

4.7.9 Option 3 (East Yeovil and Over Compton) – Two areas of the development site are currently modelled to access the Yeovil road network via the dual carriageway (A30 Babylon Hill). No infrastructure improvements are likely to be needed to improve capacity of this link. Although, providing a suitable junction with the dual carriageway should be considered further.

4.7.10 Providing the access north of Penn Mill will require crossing the railway line, and therefore a bridge. The link to this structure would also need earthworks to bring the carriageway to a suitable level. This scheme has a cost estimate of £2.64 million. The total cost associated with infrastructure for this option is £4.08 million.

4.7.11 Option 4 (East Coker, Keyford and Barwick) – One access uses the large existing Dorchester Road / Payotts Lane / Church Lane roundabout junction. This is unlikely to cause capacity issues but it may be impractical to add another entry to the 5-arm roundabout.

4.7.12 The second access is currently modelled to use the junction between Two Tower Lane / Newton Road. Newton Road is two-lane but narrow with poor road markings, reducing to one lane north of this junction. To modify this route to a full 7.3m carriageway with associated footways and construct structures over the leisure park access and undertake earthworks through Newton Copse is estimated to cost £3.75 million.

4.7.13 An alternative would be to access via a 4 arm roundabout with the A37 which would incorporate Tarrat Lane. This option has not been modelled. The cost of this option is estimated at £3.29 million.

4.7.14 The final access junction is between an unnamed road and the A37 Dorchester Road west of Fairhouse Road. This road is 2-lane but winding and the junction is fairly close to the Fairhouse Road junction, so it is therefore uncertain whether infrastructure improvement would be required for this road to deliver the development.

4.7.15 The total cost for access for this option is £5.51 million assuming the greater cost option above.

4.7.16 Option 5 (Brympton and Coker) – Two of the development areas access Camp Road, which is a narrow single lane country road and would require upgrading to deliver the development. To bring this route to standard would require £1.2 million including preliminaries.

4.7.17 The second access also uses Primrose Hill near the A30 / West Coker Road / Camp Road priority junction. Primrose Hill is of similar quality to Camp Road but with

reduced visibility (due to high hedgerows and being windier) with a sub-standard surface. There are also small farm-access type junctions along the unnamed road, so this would also require upgrading. However, the length requiring modification is much shorter and the cost is estimated at £0.24 million including 20% preliminaries.

4.7.18 The total cost for the access to this option is £2.78 million.

4.7.19 Option 6 (East Coker and Keyford) – As for Option 4, one access uses the Dorchester Road / Payotts Lane / Church Lane roundabout. This does not have any cost implications above those described in Table 2-1 above.

4.7.20 The second access is on a staggered junction between Placket Lane and Yeovil Road, both of which are single lane country roads south and east of the existing junction. Yeovil Road is reasonably wide north of the junction and whilst widening would be necessary to deliver a full 7.3m carriageway this is not possible due to the level difference implied for properties along Yeovil Road.

4.7.21 A cost has not been provided for this scheme as it is considered undeliverable. Alternative access has been considered to provide a different route to the A37 and this has a cost associated of £1.1 million.

4.7.22 Further options would include additional work to Placket Lane to access the A30 or Nash Lane. Neither of these alternatives has been modelled nor have costs been estimated. However, an allowance of at least £1.1 million can be made based on the above figure.

4.7.23 The final access uses the junction between Two Tower Lane and the A37 Dorchester Road, which looks able to accommodate higher traffic levels and therefore should not require upgrading to cater for the development traffic.

4.7.24 The overall cost of providing infrastructure for this option is £3.0 million.

4.8 General Schemes

4.8.1 As noted in the Technical Note of Appendix 1, several junctions additional to the key junctions have been identified as potential problem locations. It should be noted that the majority of these junctions are on the edge of the study area (where the modelling is less detailed and therefore less reliable) or were linked to the congestion at the key junctions.

4.8.2 However, in Option 4 the A37 Dorchester / A30 W Coker roundabout is seen to exhibit congestion due to the development traffic, and in all options parts of the Reckleford Gyratory are seen to exhibit moderate to severe congestion (the latter in spite of the improvements assumed in the 2026 Reference Case).

4.8.3 None of the development options appears to have a significant impact on any A303 junctions other than Cartgate, with Tintinhull, Ilchester and Sparkford all operating within capacity in each test.

4.8.4 Finally, it is noted that the above observations and costs are indicative only. More detailed investigations into access arrangements and infrastructure implications for the development sites will need to be undertaken at a later date.

5 CONCLUSIONS

5.1 Eco Success vs. Eco Failure

5.1.1 Table 3-2 presents the best-case scenario for the various options purely in transportation terms. Of the 6 sites, only Options 5 and 6 (the "Brympton and Coker" and "East Coker and Keyford" locations south of Yeovil) were thought to be suitable for locating a successful eco development. Option 4 has the potential to be partly successful whilst Options 1 to 3 are thought to be too remote from Yeovil town centre or likely to make driving too attractive.

5.1.2 On the basis of the network statistics, the eco success scenario visibly improves the road network conditions by reducing the overall number of queues, increasing average vehicle speeds, and reducing average delays per vehicle relative to the eco failure scenario. As Eco-success is deemed more likely for Option 5 or Option 6 these are the favoured options in transport terms.

5.1.3 However, in absolute terms these improvements are small, and it is recognised that the existing baseline congestion is such that even the relatively small impacts of the eco success development will likely require some form of mitigation.

5.2 Impacts on A3088 / A303 Cartgate Roundabout

5.2.1 In the 2026 Reference Case this junction suffers severe congestion along the A303 arms in the morning peak hour, and the A3088 in the evening peak hour. Impacts on the Cartgate roundabout junction are similar for most of the development options, although noticeably less for Options 3 and 5c. Thus, Option 5 with Eco-success becomes the forerunner.

5.2.2 However, it should be emphasised that the model is not very detailed in this area, and it is recommended that detailed junction testing be undertaken at the Cartgate roundabout for any of the development options being progressed especially for Option 1 which has the most significant impact.

5.3 Associated Infrastructure Requirements

5.3.1 It is likely that additional modifications to the existing highway infrastructure will be required, regardless of which option is pursued. Within this report cost estimates related to access infrastructure have been developed on the basis of generic junction layouts.

5.3.2 Cost estimations for other schemes have also been developed where possible but more detailed assessment will be required to determine the true extent and scale of any associated network modifications. Therefore, cost estimates in this report should be considered as minimum figures at this stage.

5.3.3 In terms of order of magnitude of costs, Option 1 is likely to be most expensive to deliver and Option 5 least expensive. However, Option 6 is similar in quantum to Option 5 so should not be excluded on the basis of cost. The range of costs is such that Option 1 is more than twice as expensive as Option 5.

5.3.4 The development options above generally lead to small increases in congestion on the Yeovil road network in 2026. However, due to the high levels of baseline congestion modelled for some of the key routes and junctions in the 2026 Reference Case, even these small impacts are likely to lead to a requirement for junction

mitigation. This includes the Horsey roundabout, Hospital roundabout, Fiveways roundabout, Lyde Road mini roundabout and Combe Street Lane mini roundabout.

5.3.5 This is the case for all the traffic scenarios, because even when eco success is achieved, congestion is often still greater than that of the Reference Case scenario on some of the key local junctions.

6 RECOMMENDATIONS

6.1.1 It is recommended that Option 5 be taken forward as the most favoured site in transportation terms given it has the greatest potential for eco-success and the lowest infrastructure costs. However, as outlined previously, full achievement of the Eco Success scenario is likely to require a full 'Smarter Choices' program being successfully introduced in the Yeovil area.

6.1.2 This recommendation is supported by the transport modelling results, the suitability of development for achieving true eco development and the estimated cost of access arrangements which has been estimated at approximately £1.54 million, the least costly of the Eco-Urban Extension alternatives.

6.1.3 It is suggested that the effects of the Eco Urban Extension be tested in more detail for Options 5a to 5c. This could potentially include impacts of the development on the additional problematic junctions previously identified.

6.1.4 Furthermore, our work suggests that the impacts of the predicted congestion on people's travel habits and patterns could also be important. For instance, a very congested road might persuade people to travel using a different route or at a different time of the day, when the congestion is less severe. It might also persuade people to use a mode of transport less affected by the congestion (e.g. walking or train), or even dissuade them from making their journey at all. Therefore, when further transport strategy development is undertaken consideration should be given to how these impacts can be addressed by refining the modelling approach.

6.1.5 It is also suggested that a more detailed assessment be undertaken to determine the true extent of the infrastructure and access design requirements to deliver the option being taken forward.