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1 Introduction

1.1 Overview

- 1.1.1 The following Technical Note sets out Ashford Borough Council's (ABC) response to Highway England's (HE) representations on the draft Local Plan to 2030 from August 2016. Following a meeting between HE and ABC on 5th August 2016, it was agreed that ABC would provide a detailed narrative to set out the differences in the principal housing, employment and other major traffic generating uses between the Core Strategy 2008 and the emerging Local Plan; and their likely impacts on the Strategic Road Network (SRN).
- 1.1.2 Since August 2016, the need for further changes to the emerging Plan have arisen primarily from a re-calculation of the 'objectively assessed housing' figure for the borough because of the revised 2014-based national household projections. This has resulted in ABC needing to allocate more land for housing in the new Local Plan to address these needs and so it is only now that it is possible to fully assess the potential impact on the SRN.
- 1.1.3 This note expands on the information previously provided by ABC to HE to examine in more detail the traffic impacts of both the previous Core Strategy and new Local Plan. A comparison of the broad traffic generation of both scenarios will be provided and the potential impacts on the SRN within the study area considered.

1.2 Background

- 1.2.1 In 2003, Ashford was designated one of 4 'growth areas' in South East England in the Government's Sustainable Communities Plan. Through the subsequent Greater Ashford Development Framework (GADF), the intention was that the town of Ashford and its immediate surroundings would identify land for up to 31,000 new houses and 28,000 new jobs over a thirty-year period from 2001-31.
- 1.2.2 Much transport and traffic modelling went into supporting the GADF and the subsequent Core Strategy which specifically considered the period from 2006-21. This included the identification of necessary transport infrastructure improvements to support these levels of development. Principally amongst these were the delivery of a new Junction 10a on the M20 and improvements to Junction 9 and the nearby A28/A20 Drivers roundabout.

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- 1.2.3 The Junction 9 and Drover's roundabout scheme has since been delivered through Regional Infrastructure Funding from the HCA, whilst Junction 10a is now being delivered through a Development Consent Order which is currently at examination stage. If the DCO is granted, it is anticipated that construction would commence in 2018 with the new junction completed and open to traffic in mid-2019. It is acknowledged that without Junction 10a, neither the Core Strategy nor the emerging Local Plan to 2030 would be deliverable and a fundamentally different solution would be needed.
- 1.2.4 In comparing relative scales of new development based on the Core Strategy and the new Local Plan, it is also relevant to also compare the phasing and rate of development anticipated as this would have been taken into consideration in the modelling that underpinned the GADF / Core Strategy assumptions. Since the adoption of the CS in 2008, development rates in the Ashford Growth Area have been significantly below those envisaged at the time for a range of reasons and this may be relevant in establishing capacity on the SRN over the course of the new Local Plan to 2030.

2 Core Strategy 2008 vs Local Plan to 2030

2.1 Core Strategy 2008

- 2.1.1 In headline terms, policy CS2 of the Core Strategy required the provision of 16,770 dwellings and 16,700 new jobs (ignoring any contingency allowances) over the period 2006-21. The Core Strategy sets out specific targets for Ashford Town Centre and the rest of the urban area over this period. It also set out (in policy CS5) targets for housing and jobs at the two major urban extensions in the Plan – at Chilmington Green and Cheeseman’s Green/Waterbrook both for the period up to 2021 but also indicated capacity post 2021 too, taking account of the GADF work. Furthermore, policy CS5 required the council to subsequently identify a third growth area around the town with its own housing and jobs targets pre-and post-2021.
- 2.1.2 The consequence of policy CS5 is that delivery of at least a further 7,850 houses and 1,400 jobs post 2021 from the urban extensions alone was committed. This creates an overall commitment from the Core Strategy to 24,550 houses and 18,100 new jobs in the Ashford area from 2006.
- 2.1.3 The broad distribution of this scale of development is set out in the Core Strategy with more site-specific detail that followed in the subsequent ‘daughter’ DPDs for the Town Centre (2010), Urban Sites (2012) and Chilmington Green (2013). Phasing assumptions were made initially in the Housing Trajectory which is set out at appendix 4 to the Core Strategy.
- 2.1.4 Table 2-1 below sets out the site capacities on the main sites and phasing derived from the Core Strategy.

Site	Housing to 2021	Jobs to 2021	Housing/jobs post 20-21
Cheeseman's Green/ Waterbrook	4,300	1475 jobs	2,200 homes & 750 jobs
Chilmington Green/ Discovery Park	3,350	600 jobs	3,650 homes & 400 jobs
3 rd urban extension	1,500	200 jobs	2,000 homes & 250 jobs
Town centre sites	2,500	8,000 jobs	
Newtown Works	928	-	
Kennington	605	-	
Eureka / Bockhanger Wood	800	46 hectares	
Warren	323 & P&R	-	
WHH/ Willesborough Lees	250	Hospital expansion	
Barracks	1,250	-	
Park Farm	780	-	
Sevington	-	165,000 sqm B1-8 overall to 2030	

Table 2-1: Core Strategy – Development Projections

- 2.1.5 Of the sites listed above, a broad assessment of implementation shows that relatively little of the above has yet been constructed.
- 2.1.6 In respect of housing, development at Cheeseman's Green (Finberry) has commenced and to April 2017, around 200 dwellings had been completed. Development is only just commencing at Chilmington Green with no completions expected until 2018. Elsewhere, in the town centre, the only major new housing scheme completed is the conversion of Charter House providing circa 250 flats although circa 80 new dwellings are under construction at Godinton Way and some office to residential conversions through PD rights have also occurred. At Newtown Works, 108 units have been completed. At the Warren, 67 dwellings, a care home plus a John Lewis at Home retail store have been completed. Finally, the Barracks and Park Farm sites have developed consistently over the last few years and these are delivering out as predicted.

- 2.1.7 In respect of new jobs, the expansion to the County Square Shopping centre provided some additional employment in the town centre and a first phase of the Commercial quarter is under construction but no other town centre jobs have come forward. Elsewhere, there has been some limited take up of space at Eureka and Orbital Park on either side of the town but most space at Eureka remains vacant at the present time.

2.2 Local Plan to 2030

- 2.2.1 Although planning to a different end date to the Core Strategy, the emerging Local Plan relies on several the existing 'commitments' from the Core Strategy and its related set of DPDs, although in some cases, the new Plan reflects a considerable lower scale of proposed development to 2030 than the Core Strategy did.
- 2.2.2 Notably, the context for the Plan is markedly different from that which underpinned the Core Strategy. The revocation of the South-East Plan and the demise of regional-tier planning coupled with the emergence of the NPPF has changed the basis upon which Local Plan housing targets are to be determined. Although the 'Duty to Co-operate' has also been introduced, no representations have been received from any other District seeking accommodation of any of their unmet housing need and recent Local Plan examinations at Canterbury, Swale and Maidstone have all progressed on the basis of those districts meeting their own objectively assessed housing needs.
- 2.2.3 Based on the proposed revisions due to be considered by the cabinet in June 2017, the headline target for housing in the borough over the remainder of the Plan period (2017-30) is 12,750 dwellings. Of this figure, approximately 10,500 dwellings are proposed to be accommodated on allocated or committed sites in or around Ashford.
- 2.2.4 The following table sets out the principal allocations (as proposed to be revised in June 2017) and expected phasing of commitments to 2030:

Site	Houses to 2030	Jobs to 2030
Cheeseman’s Green	1,400 (1,100 committed + 300 additional)	8,500 sqm B1
Waterbrook	350	20 ha commercial space + 300 space lorry park
Chilmington Green	2,500 completions	600 jobs
Court Lodge	950	-
South of Kingsnorth	550	-
Town centre	1400	55,000 sqm B1
Newtown Works	350	?
Kennington (two sites)	870	-
Park Farm extensions	425	-
Eureka	375	20 ha commercial
A20 corridor sites	300	-

Table 2-2: Local Plan – Development Projections

2.3 Principal Differences to 2030

2.3.1 Behind the differences in overall development quantum and delivery rates to 2030 identified above, changes to some key overall commitments have also occurred.

2.3.2 At Chilmington Green, the subsequent adopted Area Action Plan and outline planning permission has set the overall quantum of housing development at 5,750 dwellings, which is 1,250 units less than the Core Strategy assumption of 7,000 units. By 2030, only 2,500 units are predicted to be completed compared with nearly 7,000 in previous assessments - a reduction of 4,500 units at that stage.

2.3.3 At Cheeseman’s Green, the proposed re-allocation of the ‘nib’ land from B1 to residential use in the new Local Plan means a significant reduction from the commitment in the outline planning permission of circa 70,000 sqm of B1 space at the site. More generally, the overall figure proposed for the Cheeseman’s Green and Waterbrook areas is 1,750 dwellings, which is 4,750 dwellings less than the overall figure promoted for that area in the Core Strategy.

2.3.4 For the '3rd growth area' assumption in the Core Strategy, the sites at Court Lodge and south of Kingsnorth act as a proxy in the new Local Plan. These sites would deliver 1,500 units by 2030 compared to 3,500 units assumed in the Core Strategy – a reduction of 2,000 units.

2.3.5 A comparison of all main sites/areas between the two plans is shown in the table below:

Site	+/- houses to 2030	+/- jobs to 2030
Cheeseman's Green/ Waterbrook	-4,750	-70,000 sqm B1
Chilmington Green	-4,500	-400 jobs
3 rd urban extension	-2,000	-450 jobs
Town centre	-1,100	-2,500 jobs
Newtown Works	-578	?
Kennington	+265	No change
Eureka / Bockhanger Wood	-425	-26ha
Warren	-c.160	John Lewis at Home No Park & Ride
Willesborough Lees	-50	No change
Barracks	No change	No change
Park Farm	+425	No change
Sevington	No change	No change
A20 corridor	+300	No change
Total	-12,573	-

Table 2-3: Difference in Development Projections

2.3.6 Therefore, at this broad level, this shows that a net figure of around 12,500 fewer dwellings on these sites are now expected to be delivered by 2030 within the Local Plan scenario. For jobs, the comparison is less straightforward but significantly less floor space is now expected to be delivered by 2030 than was expected to be the case in 2008.

3 Traffic Impact

3.1 Trip Generation

3.1.1 To provide an indication of the traffic impacts of both scenarios appropriate trip rates have been applied to the residential development quanta to derive a comparison of the likely total trip generation between the Core Strategy and new Local Plan. It is intended to undertake this exercise on the residential elements of the developments only as these are considered to represent the main generators of new trips on the network.

3.1.2 It is acknowledged that at the time of the assessment work for the Core Strategy there were proposals for significant sustainable transport improvements in Ashford in the form of the SMARTLINK bus system, which is no longer being proposed. As such the trip rates used within the Core Strategy assessments were lower than those agreed for more recent determined application sites. It is therefore considered reasonable and robust to apply alternative trip rates to the Core Strategy and Local Plan scenarios to reflect the prevailing context of sustainable transport proposals at the time.

3.1.3 Residential trip rates have been taken from determined sites within Ashford at Chilmington Green and Conningbrook. As a benchmark Amey derived a current residential trip rate from TRICS, which sat in the middle of the two agreed trip rates for the above sites in Ashford. The trip rates are detailed in Table 3-1 below:

Residential Trip Rates	AM Peak			PM Peak		
	Arr	Dep	Total	Arr	Dep	Total
Suburban Sites (TRICS)	0.146	0.35	0.496	0.308	0.2	0.508
Chilmington Green TA	0.15	0.29	0.44	0.27	0.16	0.43
Conningbrook TA	0.145	0.412	0.557	0.402	0.221	0.623

Table 3-1: Residential Trip Rates

3.1.4 To provide a comparison of the traffic generation of both scenarios the lowest trip rates (Chilmington Green) has been applied to the Core Strategy development quanta while the highest trip rates (Conningbrook) have been applied to the Local Plan developments. A comparison of the resulting trip generation for both scenarios is providing the Table 3-2 below:



Table 3-2: Residential Trip Generation Comparison

Site	Local Plan Residential			Core Strategy Residential		
	Dwellings to 2030	AM Peak Trip Generation	PM Peak Trip Generation	Dwellings to 2030	AM Peak Trip Generation	PM Peak Trip Generation
Cheeseman's Green	1,400	780	872	6,500	2,860	2,795
Waterbrook	350	195	218			
Chilmington Green	2,500	1393	1558	7,000	3,080	3,010
Court Lodge	950	529	592			
South of Kingsnorth	550	306	343			
Town centre	1,400	780	872	2,500	1,100	1,075
Newtown Works	350	195	218	928	408	399
Kennington (two sites)	870	485	542	605	266	260
Park Farm extensions	425	237	265	780	343	335
Eureka	375	209	234	800	352	344
A20 corridor sites	300	167	187			
3rd Urban Extension				3,500	1,540	1,505
Warren				323	142	139
Willesborough Lees				250	110	108
Barracks				1250	550	538
Windfall/permissions	1,030	574	642	114	50	49
Total	10,500	5,849	6,542	24,550	10,802	10,557

- 3.1.5 The above exercise suggests that, at worst, the Local Plan residential sites would generate 4,954 less trips in total than the Core Strategy in the AM peak, and 4,015 less in the PM peak.

3.2 SRN Impacts

- 3.2.1 While it can be inferred from the above exercise that the Local Plan would have significantly less impact on the SRN when compared with the previously assessed Core Strategy, the following section considers the specific impacts on the SRN within the study area further.
- 3.2.2 The main considerations for the SRN within Ashford Borough are junctions 9, 10 and the proposed junction 10a on the M20. In addition, it has been requested that the potential traffic impacts at Drovers, adjacent to M20 Junction 9, are also considered.
- 3.2.3 With regards to the proposed M20 Junction 10a, the scheme has been designed and modelled by consultants on behalf of HE to provide relief to the existing Junction 10 and to provide sufficient capacity to cater for anticipated growth in the area. The Traffic Forecasting Report and Uncertainty Log has been provided by HE's consultants and reviewed to determine whether the current Local Plan proposals have been sufficiently accounted for within the development of the Junction 10a scheme.
- 3.2.4 Table 3-3 overleaf provides a comparison between the proposed Local Plan residential development and that included within the 'Realistic Scenario' modelled as part of the J10a scheme development.
- 3.2.5 The comparison shows that the Realistic Scenario modelling has incorporated a very similar quantum of development as is currently proposed by the Local Plan. As such, and given that the purpose of the Junction 10a improvements is to provide sufficient future capacity and to relieve Junction 10, it is considered that the likely traffic impacts of the Local Plan at Junctions 10 and proposed Junction 10a have been catered for.

Site	Local Plan Dwellings to 2030	J10a Model 'Realistic Scenario'
Cheeseman's Green	1,400	1,100
Waterbrook	350	
Chilmington Green	2,500	3,200
Court Lodge	950	
South of Kingsnorth	550	
Town centre	1,400	856
Newtown Works	350	425
Kennington (two sites)	870	
Park Farm extensions	425	
Eureka	375	
A20 corridor sites	300	
Conningbrook		300
Jemmett Road		154
3rd Urban Extension/Post 2017		3,000
Repton Park		650
Willesborough Lees		260
Charter House		344
Windfalls/Permissions	1,030	300
Total	10,500	10,589

Table 3-3: Residential Trip Generation Comparison

- 3.2.6 With regards to Junction 9 and the Drivers roundabout more detailed junction assessments using TRANSYT (version 13.0) has been conducted to provide a comparison of forecast traffic conditions for both junctions for the Core Strategy & Local Plan scenarios.
- 3.2.7 The Local Plan scenario assessments flows have been obtained from the '2033 Realistic Scenario' of the M20 Junction 10a Model, whilst the Core Strategy used comparable forecast flows from the associated Ashford Highway and Traffic Study (AHTS) SATURN model with adjusted TEMPRO growth factors applied as appropriate.

4 Junction Impact Assessment

4.1 Overview

4.1.1 This section of the technical note details the impact assessment of the junctions considered as part of the Ashford Local Plan projected growth and draws conclusions on the ability of each of the junction to meet the forecast traffic demands. The two signal controlled junctions considered in this assessment are bullet below with the M20 junction 9 and A20/A28 Drovers Roundabout layout is illustrated in Figure 4.1.as follows:

- M20 junction 9; and
- A20/A28 Drovers Roundabout.

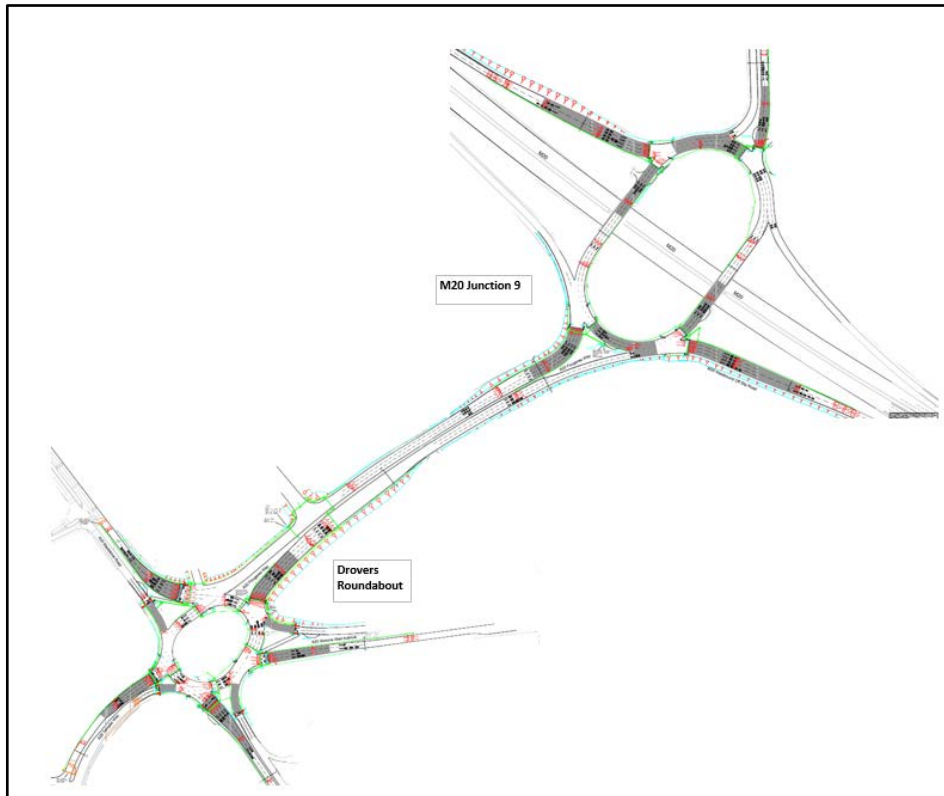


Figure 4.1: M20 Junction 9 and A20/A28 Drovers Roundabout

4.2 Information Provided

Ashford Borough Council (ABC) provided the Local Plan Scenario for 2033 AM and PM forecast demand flows for each turning movements.

4.2.1 WSP on behalf of Highways England have provided the forecast demand flows from the Ashford Highway and Traffic Study (AHTS) SATURN Strategic model for the 2031 AM and PM Core Strategy Scenario.

4.2.2 An existing TRANSYT network model has been provided by Kent County Council (KCC) to undertake junction impact assessment.

4.3 2031 Core Strategy Demand Flow

4.3.1 The 2031 Core Strategy future year forecast demand flows have also been extracted from the AHTS SATURN Strategic model each turning movements. Table 4-1 to 4-4 shows the demand flows for the two junctions, both AM and PM peak hour.

M20 Junction 9		2031 AM Demand (PCU) - Core Strategy				
		Destination Link				
		A251 Trinity Road	M20 Jct 9 (EB Onslip)	A20 Fougères Way	M20 Jct9 (WB Onslip)	Total Access Flows (pcu)
Origin Link	A251 Trinity Road	0	363	960	111	1434
	M20 Jct 9 (WB Offslip)	160	0	769	0	929
	A20 Fougères Way	928	683	0	817	2428
	M20 Jct 9 (EB Offslip)	714	0	1219	0	1933
	Total Egress Flows	1802	1046	2948	929	6724

Table 4-1: 2031 AM Core Strategy – M20 Junction 9

All data output included in Table 4-1 are extracted from APPENDIX A – 2031 AM Link Flow_Core Strategy

Drover Roundabout		2031 AM Demand (PCU)- Core Strategy					
		Destination Link					
		A20 NE of Roundabout	A28 East of Roundabout	A292	A28 South of Roundabout	A20 NW of Roundabout	Total Access Flows (pcu)
Origin Link	A20 NE of Roundabout	0	279	360	1359	521	2519
	A28 East of Roundabout	192	0	0	147	70	411
	A292	300	20	0	0	118	438
	A28 South of Roundabout	1486	241	2	0	292	2021
	A20 NW of Roundabout	339	98	139	214	0	790
	Total Egress Flows	2317	638	501	1720	1001	6179

Table 4-2: 2031 AM Core Strategy – Drivers Roundabout

All data output included in Table 4-2 are extracted from APPENDIX A – 2031 AM Link Flow_Core Strategy



M20 Junction 9		2031 PM Demand (PCU) - Core Strategy				
		Destination Link				
		A251 Trinity Road	M20 Jct 9 (EB Onslip)	A20 Fougères Way	M20 Jct9 (WB Onslip)	Total Access Flows (pcu)
Origin Link	A251 Trinity Road	0	746	951	168	1865
	M20 Jct 9 (WB Offslip)	136	0	818	0	954
	A20 Fougères Way	858	833	0	555	2246
	M20 Jct 9 (Eastbound Off slip)	405	0	1021	0	1426
	Total Egress Flows	1399	1579	2790	723	6491

Table 4-3: 2031 PM Core Strategy – M20 Junction 9

All data output included in Table 4-3 are extracted from APPENDIX B – 2031 PM Link Flow_Core Strategy

Drovers Roundabout		2031 PM Demand (PCU) - Core Strategy					
		Destination Link					
		A20 NE of Roundabout	A28 East of Roundabout	A292	A28 South of Roundabout	A20 NW of Roundabout	Total Access Flows (pcu)
Origin Link	A20 NE of Roundabout	0	431	412	1544	307	2694
	A28 East of Roundabout	188	0	10	137	148	483
	A292	226	0	3	0	72	301
	A28 South of Roundabout	1046	454	15	0	193	1708
	A20 NW of Roundabout	392	252	204	240	0	1088
	Total Egress Flows	1852	1137	644	1921	720	6291

Table 4-4: 2031 PM Core Strategy – Drovers Roundabout

All data output included in Table 4-4 are extracted from APPENDIX B – 2031 PM Link Flow_Core Strategy

- 4.3.2 In the **2031 AM – Core Strategy** scenario the cumulative trips entering M20 Junction 9 are 6724 and the trips entering Drovers Roundabout are 6179. The total cumulative trips in the morning are 12903. In the **2033 AM – New Local Plan** scenario the cumulative trips entering M20 Junction 9 are 5749 and the trips entering Drovers Roundabout are 5480. The total cumulative trips in the morning are 11229. The **2033 AM New Local Plan** TRANSYT models have been tested considering a reduction of - 1674 trips compared to the Core Strategy. All trips data can be found in APPENDIX A – 2031 AM Link Flow_Core Strategy and APPENDIX C - 2033AM Link Flow_Local Plan.
- 4.3.3 In the **2031 PM – Core Strategy** scenario the cumulative trips entering M20 Junction 9 are 6491 and the trips entering Drovers Roundabout are 6291. The total cumulative trips in the morning are 12782. In the **2033 PM – New Local Plan** scenario the cumulative trips entering M20 Junction 9 are 5892 and the trips entering Drovers Roundabout are 5709. The total cumulative trips in the morning are 11601. The **2033 PM New Local Plan** TRANSYT models have been tested considering a reduction of - 1181 trips compared to the Core Strategy. All trips data can be found in APPENDIX B – 2031 PM Link Flow_Core Strategy and APPENDIX D - 2033AM Link Flow_Local Plan.



4.4 2033 New Local Plan Demand Flow

4.4.1 The 2033 Local Plan future year forecast demand flows have also been extracted from the AHTS SATURN Strategic model each turning movements. Table 4-5 to 4-8 shows the demand flows for the two junctions, both AM and PM peak hour.

M20 Junction 9		2033 AM Demand (PCU) – New Local Plan				
		Destination Link				
		A251 Trinity Road	M20 Jct 9 (EB Onslip)	A20 Fougères Way	M20 Jct9 (WB Onslip)	Total Access Flows (pcu)
Origin Link	A251 Trinity Road	0	480	628	277	1385
	M20 Jct 9 (WB Offslip)	542	0	705	0	1247
	A20 Fougères Way	659	554	0	939	2152
	M20 Jct 9 (Eastbound Off slip)	272	0	693	0	965
	Total Egress Flows	1473	1034	2026	1216	5749

Table 4-5: 2033 AM New Local Plan – M20 Junction 9

All data output included in Table 4-5 are extracted from APPENDIX C – 2033 AM Link Flow_Local Plan

Drovers Roundabout		2033 AM Demand – New Local Plan					
		Destination Link					
		A20 NE of Roundabout	A28 East of Roundabout	A292	A28 South of Roundabout	A20 NW of Roundabout	Total Access Flows (pcu)
Origin Link	A20 NE of Roundabout	0	170	560	775	522	2027
	A28 East of Roundabout	200	0	11	87	95	382
	A292	65	0	0	0	6	71
	A28 South of Roundabout	1265	42	7	0	375	1689
	A20 NW of Roundabout	620	164	252	275	0	1311
	Total Egress Flows	2150	376	830	1137	998	5480

Table 4-6: 2033 AM New Local Plan – Drovers Roundabout

All data output included in Table 4-6 are extracted from APPENDIX C – 2033 AM Link Flow_Local Plan

M20 Junction 9		2033 PM Demand (PCU) – New Local Plan				
		Destination Link				
		A251 Trinity Road	M20 Jct 9 (EB Onslip)	A20 Fougères Way	M20 Jct9 (WB Onslip)	Total Access Flows (pcu)
Origin Link	A251 Trinity Road	0	729	691	238	1658
	M20 Jct 9 (WB Offslip)	230	0	1169	0	1399
	A20 Fougères Way	641	638	0	648	1927
	M20 Jct 9 (Eastbound Offslip)	431	0	477	0	908
	Total Egress Flows	1302	1367	2337	886	5892

Table 4-7: 2033 PM New Local Plan – M20 Junction 9

All data output included in Table 4-7 are extracted from APPENDIX D – 2033 PM Link Flow_Local Plan

Drovers Roundabout		2033 PM Demand (PCU) - Local Plan					
		Destination Link					
		A20 NE of Roundabout	A28 East of Roundabout	A292	A28 South of Roundabout	A20 NW of Roundabout	Total Access Flows (pcu)
Origin Link	A20 NE of Roundabout	0	292	305	1016	706	2319
	A28 East of Roundabout	230	0	0	31	152	413
	A292	329	0	0	0	114	443
	A28 South of Roundabout	758	42	4	0	375	1179
	A20 NW of Roundabout	610	186	265	294	0	1355
	Total Egress Flows	1927	520	574	1341	1347	5709

Table 4-8: 2033 PM New Local Plan – Drovers Roundabout

All data output included in Table 4-8 are extracted from APPENDIX D – 2033 PM Link Flow_Local Plan

- 4.4.2 The **2031 Core Strategy** future year forecast includes a Total Flow of 6724 vehicles at Junction 9 and 6179 vehicles at Drovers Roundabout – AM period. In the afternoon period the Total Flow is 6491 vehicles at Junction 9 and 6291 vehicles at Drovers Roundabout. All trips data can be found in APPENDIX A – 2031 AM Link Flow_Core Strategy and APPENDIX B – 2031PM Link Flow_Local Plan.
- 4.4.3 In the 2031 Core Strategy forecast the busiest arms, both in the morning and afternoon period, are the *M20 Jct9 WestBound offslip* arm at Junction 9 and the *A20 North-East of Roundabout* arm at Drovers junction.
- 4.4.4 The **2033 New Local Plan** future year forecast includes a Total Flow of 5749 vehicles at Junction 9 and 5480 vehicles at Drovers Roundabout – AM period. In the afternoon period the Total Flow is 5892 vehicles at Junction 9 and 5709 vehicles at Drovers Roundabout. All trips data can be found in APPENDIX C - 2033AM Link Flow_Local Plan and APPENDIX D - 2033PM Link Flow_Local Plan.
- 4.4.5 In the 2033 New Local Plan forecast the busiest arms, both in the morning and afternoon period, are *A20 Fougères way* arm at Junction 9 and *A20 North-East of Roundabout* arm at Drovers junction.
- 4.4.6 Junction 9 Total Flow has been calculated as the sum of the flows entering the junction from M20 London Bound (Westbound off slip), A251 Faversham, M20 Dover Bound (Eastbound off slip) and A20 Fougères Way (northbound) approaching arms. Drovers Roundabout Total Flow has been calculated as the sum of the flows entering the roundabout from A20 Fugeres Way (southbound), A28 to Canterbury, A292 to Ashford, A28 Templar Way to Tent, A20 Maidstone approaching arms. Please see Appendices for the network diagrams and trips data.

4.5 AM Modelling Results

- 4.5.1 The 2031 Core Strategy and 2033 new Local Plan (both AM and PM Peak) demand flows have been tested in the TRANSYT model for the existing M20 junction 9 and A20/A28 Drovers Roundabout.

- 4.5.2 Four of the nine junctions modelled in TRANSYT for the **2031 AM – Core Strategy** scenario have a degree of saturation value of/over 90% in the morning. The highest DoS showed is 95% with a queue of 10 Passage Car Unit (PCU) on M20 Junction 9 Eastbound off slip arm. On the Drivers Roundabout 91% Degree of Saturation and 10 PCU queue can be seen on the A292 arm. The TRANSYT models for the **2033 AM – New Local Plan** scenario present only one arm operating at capacity: the A28 South of Roundabout arm at Drover Roundabout shows 95% DoS and queue of 23 PCU.
- 4.5.3 Comparing results from the TRANSYT models for the **2031 Core Strategy** and the **2033 New Local Plan** scenarios, the DoS values show a reduction on most of the approaching arms except for A20 North-East of Roundabout, A28 East of Roundabout and A28 South Roundabout arms of Drivers Roundabout.
- 4.5.4 The Overall Network Performance Index (£ per hr) is 1868.48 in the **2031 AM – Core Strategy** model, and 1402.62 in the **2033 AM – New Local Plan** model showing a PI reduction of -25%. Overall Network Average Speed (kph) increases in the **2033 AM – New Local Plan** by 9%.
- 4.5.5 Total Network Delay (pcu-hr / hr) decreases significantly in the **2033 AM – New Local Plan** model: the value is 79.00, 38% less than the **2031 AM – Core Strategy** overall delay. The comparative results from the model for AM peak are shown in Table 4-9.

Results			2031 AM - Core Strategy		2033 AM – New Local Plan		Difference
Junction	Arm	Approach	Degree of Sat. (%)	Mean Max Queue (pcu)	Degree of Sat. (%)	Mean Max Queue (pcu)	Mean Max Queue (pcu)
M20 Junction 9	A	A251 Trinity Road	93	15	75	9	-6
	B	M20 Junction 9 (Westbound off slip)	85	9	77	7	-2
	C	A20 Fougères Way	85	17	55	12	-5
	D	M20 Junction 9 (Eastbound off slip)	95	17	86	10	-7
Drivers Roundabout	A	A20 NE of Roundabout	85	18	86	17	-1
	B	A28 East of Roundabout	59	4	61	5	-1
	C	A292	91	10	20	1	-9
	D	A28 South of Roundabout	84	14	96	23	+9
	E	A20 NW of Roundabout	90	8	75	9	+1
Overall Network Performance Index (£ per hr)			1868.48		1402.62		



Overall Network Average Speed (kph)	16.15		17.68		
Total Network Delay (pcu-hr / hr)	206.24		79.00		

Table 4-9: 2031/2033 AM Comparison Results

4.6 PM Modelling Results

- 4.6.1 Two of the nine junctions modelled in TRANSYT for the **2031 PM – Core Strategy** scenario have a degree of saturation value of/over 90% in the morning. The highest DoS value showed is 96% with a queue of 18 Passage Car Units (PCU) on M20 Junction 9 Eastbound off-slip arm. A 93% DoS is showed on A20 North-East arm of Drovers Roundabout with a queue of 28 PCU. The TRANSYT models for the **2033 PM – New Local Plan** scenario present only one arm operating at capacity: A28 South arm of Drover Roundabout shows 95% DoS and a queue of 18 PCU.
- 4.6.2 Comparing results from the TRANSYT models for the **2031 Core Strategy** and the **2033 New Local Plan** scenarios, the DoS values show a reduction on most of the approaching arms except for A251 Trinity Road arm on Junction 9, and three Drovers Roundabout arms: A28 East of the roundabout, A292 and A28 South of the roundabout.
- 4.6.3 The Overall Network Performance Index (£ per hr) is 2896.02 in the **2031 PM – Core Strategy** model, and 2018.84 in the **2033 PM – New Local Plan** model showing a PI reduction of -70%. Overall Network Average Speed (kph) increases in the **2033 PM – New Local Plan** by 6%.
- 4.6.4 Total Network Delay (pcu-hr / hr) decreases significantly in the **2033 PM – New Local Plan** model: the value is 110.98.00, 35% less than the **2031 PM – Core Strategy** overall delay. The comparative results from the model for PM peak are shown in Table 4-10.

Results			2031 PM - Core Strategy		2033 PM – New Local Plan		Difference
Junction	Arm	Approach	Degree of Sat. (%)	Mean Max Queue (pcu)	Degree of Sat. (%)	Mean Max Queue (pcu)	Mean Max Queue (pcu)
M20 Junction 9	A	A251 Trinity Road	76	12	82	13	+1
	B	M20 Junction 9 (Westbound off slip)	80	9	78	11	-2
	C	A20 Fougères Way	86	35	76	30	-5



Results			2031 PM - Core Strategy		2033 PM – New Local Plan		Difference
	D	M20 Junction 9 (Eastbound off slip)	96	18	78	6	-12
Drivers Roundabout	A	A20 NE of Roundabout	93	28	86	16	-12
	B	A28 East of Roundabout	64	5	78	6	+1
	C	A292	76	6	87	9	+3
	D	A28 South of Roundabout	86	15	95	18	+3
	E	A20 NW of Roundabout	82	10	76	9	-1
Overall Network Performance Index (£ per hr)			2896.02		2018.84		
Overall Network Average Speed (kph)			15.69		16.69		
Total Network Delay (pcu-hr / hr)			110.98		71.71		

Table 4-10: 2031/2033 PM Comparison Results

5 Conclusion

- 5.1.1 This Technical Note has been prepared to provide an overview of the development situation in Ashford and the resultant levels of trip generation which aims to provide comfort to HE that levels of anticipated growth from new development on the SRN are significantly lower than had been previously been modelled and planned for.
- 5.1.2 It is accepted that reasonable assumptions about trip generation may not be comparable given the emphasis on the potential modal shift effects of the proposed 'Smartlink' bus service that fed into the Core Strategy development assessment; however, this has been addressed by applying alternative trip rates to both scenarios. Furthermore, it is reasonable to still expect some, albeit more limited, modal shift arising from improved public transport links being developed in the town through S106 and operator investment plus an increase in the popularity of cycling and walking.
- 5.1.3 An exercise to compare the likely residential trip generations of the previously adopted Core Strategy and the new Local Plan has indicated a significant reduction in the levels of peak hour traffic on the network associated with the reduced quanta of development in the Local Plan.
- 5.1.4 The scheme development work associated with the M20 Junction 10a proposals and the forecast operation of the adjacent Junction 10 have taken into account the level and similar broad locations of development being proposed within the Local Plan. It is therefore considered that these junctions will have sufficient capacity at 2030 to cater for the new Local Plan.
- 5.1.1 ABC and KCC have worked with HE and obtained forecast traffic flows to enable comparative assessments of M20 Junction 9 and Drovers roundabout. Due to the reduced level of development within the Local Plan when compared to the Core strategy a reduced impact on the M20 Junction 9 and Drovers roundabout can be seen.