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TRANSPORT ASSESSMENT AND TRAVEL PLAN
PROPOSED McDONALD'S RESTAURANT
LARCHWOOD AVENUE
HAVANT

VOLUME 1

McDonalds Restaurants Ltd
11-59 High Road
East Finchley
London
N2 8AW

ADL/AJM/2256/05A

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1.0 INTRODUCTION

1.1 Purpose of Report

1.1.1 ADL Traffic Engineering have been appointed by McDonald's Restaurants Ltd to prepare this Transport Assessment in support of the planning application for a proposed 462sqm gfa drive thru, McDonald's Restaurant with drive thru facilities, Larchwood Avenue, Havant.

1.2 McDonald's Planning History

1.2.1 Planning permission was refused on 24/05/2002 for a McDonald's drive thru restaurant on land south of Purbrook Way and Larchwood Avenue (application № 01/54731/01D). A copy of the decision notice is included as Appendix 1.1.

1.2.2 The highways reasons for refusal were as follows:

> ***"1) On the basis of the information available it has not been demonstrated that the development can be undertaken so as to protect the safe and free flow of traffic on the A3(M). The proposal is therefore contrary to Policy T6 of the Hampshire County Structure Plan Review, Policy T1 (Part 1) of the Havant Borough Local Plan and Policy T14 of the Havant Borough District Wide Local Plan.***
>
> ***2) The roads leading to and from the site are of inadequate capacity to accommodate the additional traffic which the proposed development will generate. The proposal is therefore contrary to Policy T6 of the Hampshire County Structure Plan Review, Policy T1 (Part 1) of the Havant Borough Local Plan and Policy T14 of the Havant Borough District Wide Local Plan.***
>
> ***3) The proposal involves development that cannot be reconciled with national planning policy guidance in PPG13 in that it would be inappropriately located on the edge of an existing urban areas and would thus depend on the private car for access and transport purposes. This would result in an unacceptable increase in the number and length of car journeys to the detriment of the environment and the locality. The proposal therefore conflicts with the Strategy of the Hampshire County Structure Plan Review particularly Policies T1 to T5 and with Policy T13 of the Havant Borough District Wide Local Plan."***

1.3 Discussions with Havant Borough Council and Hampshire County Council

1.3.1 ADL Traffic Engineering met with planning and highways officers from Havant Borough Council and Hampshire County Council on 23 November 2010. A copy of the note of meeting is included as Appendix 1.2.

1.3.2 The scope of study was presented to Council Officers at the meeting and the agreed scope of study is included as Appendix 1.3.

1.4 Scope of Study

1.4.1 The scope of this report has been agreed with Havant Borough Council (see Appendices 1.2 and 1.3). The Chapters included in Volume 1 of this Transport Assessment are summarised below.

1.4.2 Chapter 2.0 describes the site and surrounding area and provides an assessment of the highway safety situation in the vicinity of the site. This Chapter also assesses the proximity of the site to other existing fast food restaurants in the Havant district.

1.4.3 Chapter 3.0 assesses the accessibility of the site by walking, cycling and public transport.

1.4.4 Chapter 4.0 outlines the base line traffic data including the 2010 survey data and committed development. This Chapter explains the calculation of the 2011 base flows.

1.4.5 Chapter 5.0 describes the development proposals and provides an assessment of the access arrangements, parking provision and servicing/refuse collection facilities.

1.4.6 Chapter 6.0 summarises the findings of Volume 1 of this Transport Assessment.

2.0 DESCRIPTION OF SITE AND SURROUNDING AREA

2.1 Site Location and Surrounding Road Network

2.1.1 The site is located immediately to the north of the Asda superstore and to the south of the Asda pfs. The site is located; 2km to the northwest of Havant town centre, 500m east of Junction 4 of the A3(M) and 1.5km east of Purbrook, as shown on the plan in Appendix 2.1.

2.1.2 Larchwood Avenue forms the eastern site boundaries as shown on the plan in Appendix 2.2. Larchwood Avenue (north) is a dual carriageway road which provides access to Asda. Larchwood Avenue (north) is subject to a 20mph speed limit and has street lighting facilities. There is a footway on the eastern side of the road.

2.1.3 Larchwood Avenue (north) meets Purbrook Way and Hulbert Road (B2150) at a five-arm roundabout 300m north of the site (referred to in this report as the Purbrook Roundabout). Purbrook Way runs east-west and links the site to Purbrook and Junction 4 of the A3(M) to the west and Hulbert Road links the site to Havant town centre.

2.1.4 Purbrook Way is a single carriageway road which is subject to a 30mph speed limit and street lighting facilities. There is a shared footpath and cycleway on the northern side of Purbrook Way.

2.2 Existing and Permitted Uses of the Site

Existing Uses

2.2.1 The site is currently used for car parking for airport transfer mini-buses and vehicles for sale.

2.2.2 The main access to the site is from Larchwood Avenue (west) and there is an access/egress northbound onto Larchwood Avenue (north), which is currently gated, as shown in Figure 2A below.

Figure 2A Accesses onto Larchwood Avenue



Permitted Uses

2.2.3 The site currently has permission for the use of a motorcycle training school and for the storage of containers. The application details are summarised below:

APP/10/00139
28/10/2010
Car Park adjacent to, Stantons Yard, Larchwood Avenue, Havant
Renewal of temporary Planning Permission 07/70403/001 for change of use of car park to Motorcycle Compulsory Basic Training School and stationing of container.
Status: Pending

07/70403/001
27/03/2007
Car Park adjacent to Stantons Yard, Larchwood Avenue, Havant
Renewal of temporary Planning Permission 05/70403/000 for change of use of car park to motorcycle compulsory basic training school and stationing of container.
Status: Grant Temporary Permission

2.3 Accident Analysis

2.3.1 ADL Traffic Engineering have obtained personal injury traffic accident data from Hampshire County Council and Hampshire Constabulary for the three-year period from 01/07/2007 and 30/06/2010 for the area shown on the plan in Appendix 3.1.

2.3.2 A plan showing the location of the accidents recorded is included as Appendix 3.1 and the details are included as Appendix 3.2. The results are summarised in Table 2A below.

Table 2A Accident Summary

	Slight	Serious	Fatal	Total
2007	1	1	0	2
2008	1	0	0	1
2009	5	1	0	6
2010	0	0	0	0
Total	7	2	0	9

2.3.3 Table 2A demonstrates that there were 9 personal injury accidents which occurred within the 36-month study period of which 7 were slight injury accidents and 2 were serious injury accidents.

2.3.4 The details of the accidents are summarised in Table 2B below.

Table 2B Summary of Accident Details

Location	No.	Severity	Details
Purbrook Way (West of Roundabout)	1	Serious	Pedestrian stepped into oncoming traffic
	5	Slight	Pedestrian stepped into oncoming traffic
Purbrook Way (East of Roundabout)	2	Slight	V2 stopped at stationary traffic lights. V2 failed to stop resulting in rear end shunt
	8	Slight	V1 failed to stop at red light for pelican crossing and hit pedestrian
Larchwood Avenue	3	Slight	Car pulled out onto roundabout in front of a moped causing the moped to brake sharply and skid
	7	Serious	V1 lost control at roundabout and collided with V2 waiting to enter roundabout
Purbrook Way/ Hulbert Rd Roundabout	4	Slight	V1 waiting at roundabout, V2 failed to stop resulting in rear end shunt
	6	Slight	V1 waiting at roundabout, V2 failed to stop resulting in a rear end shunt
	9	Slight	V1 waiting at roundabout, V2 failed to stop resulting in a rear end shut

2.3.5 Table 2B demonstrates that there have been two personal injury accidents (one slight, one serious injury), which have occurred on Purbrook Way (west) which have both involved pedestrians stepping out into on-coming traffic. A new toucan crossing has been implemented on Purbrook Way 42m to the west of Purbrook Roundabout, which provides a pedestrian/cycle link between B&Q and the site across Purbrook Way.

2.3.6 Two accidents (both slight injury) occurred on Purbrook Way (east), which both occurred due to a vehicles failing to stop for red traffic signals.

2.3.7 Two accidents (one slight injury and one serious injury) occurred at the Larchwood Avenue roundabout due to vehicles losing control at the roundabout.

2.3.8 Three accidents (all slight injury) occurred at the Purbrook Way/Hulbert Road roundabout due to vehicles failing to stop at the roundabout resulting in rear end shunts.

2.4 Locations of Fast Food Restaurants within the Havant District

2.4.1 ADL have obtained information on the locations of McDonald's Restaurants and other fast food establishments within Havant, Purbrook, Waterlooville and Cosham. These are shown on the plan in Appendix 4.0.

2.4.2 Details of the McDonald's restaurants are summarised in Table 2C below.

Table 2C McDonald's Restaurants with the Havant District

1	Address	314/318 London Road, Waterlooville Town Centre PO7 7DU
	Distance from Site	1.3 miles (2.0km)
	Drive Thru Facilities	No
	Parking Spaces	0
2	Address	31/33 West Street, Havant, PO9 1ER
	Distance from Site	1.85 miles (2.9km)
	Drive Thru Facilities	No
	Parking Spaces	0
3	Address	Portsmouth Road, Cosham, PO6 2SW
	Distance from Site	2.98 miles (4.7km)
	Drive Thru Facilities	Yes
	Parking Spaces	34
4	Address	Ocean Park, Portsmouth, PO3 5NP
	Distance from Site	3.49 miles (5.6km)
	Drive Thru Facilities	Yes
	Parking Spaces	Shared with Retail Park

2.4.3 Table 2C demonstrates that the nearest McDonald's to the site with drive thru facilities are located 4.7km and 5.6km from the site in Cosham and Portsmouth respectively. There are also existing restaurants in Waterlooville and Havant. The proposed restaurant is therefore not expected to attract trips from these centres.

2.4.4 Details of KFC restaurants in the Havant district are summarised in Table 2D below.

Table 2D KFC Restaurants with the Havant District

5	Address	2 Parkway, Havant, PO9 1HH
	Distance from Site	1.4 miles (2.2km)
	Drive Thru Facilities	Yes
	Parking Spaces	Shared parking with retail park
6	Address	208 Havant Road, Drayton, PO6 2EH
	Distance from Site	1.9 miles (3.0km)
	Drive Thru Facilities	No
	Parking Spaces	0
7	Address	149 London Road, Waterlooville, PO8 8ER
	Distance from Site	2.5 miles (4km)
	Drive Thru Facilities	No
	Parking Spaces	4

2.4.5 Details of other fast food chain restaurants in the Havant district are summarised in Table 2E below.

Table 2E Other Fast Food Restaurants with the Havant District

8	Brand	Burger King
	Address	26 Park Road, South Havant, PO9 1HB
	Distance from Site	1.9 miles (3.0km)
	Drive Thru Facilities	Yes
	No. of Parking Spaces	26
9	Brand	Pizza Hut
	Address	Solent Road, Havant, PO9 1TR
	Distance from Site	2.7 miles (4.3km)
	Drive Thru Facilities	No
	No. of Parking Spaces	41
10	Brand	Pizza Hut
	Address	151 Milton Road, Waterlooville, PO8 8RE
	Distance from Site	2.9 miles (4.6km)
	Drive Thru Facilities	No
	No. of Parking Spaces	0

2.4.6 Tables 2D and 2E show that there are existing fast food restaurants in Havant and Waterlooville, therefore again the proposal is not expected to attract trips from these centres specifically for the purpose of obtaining fast food.

3.0 ACCESSIBILITY

3.1 Pedestrians and Cyclists

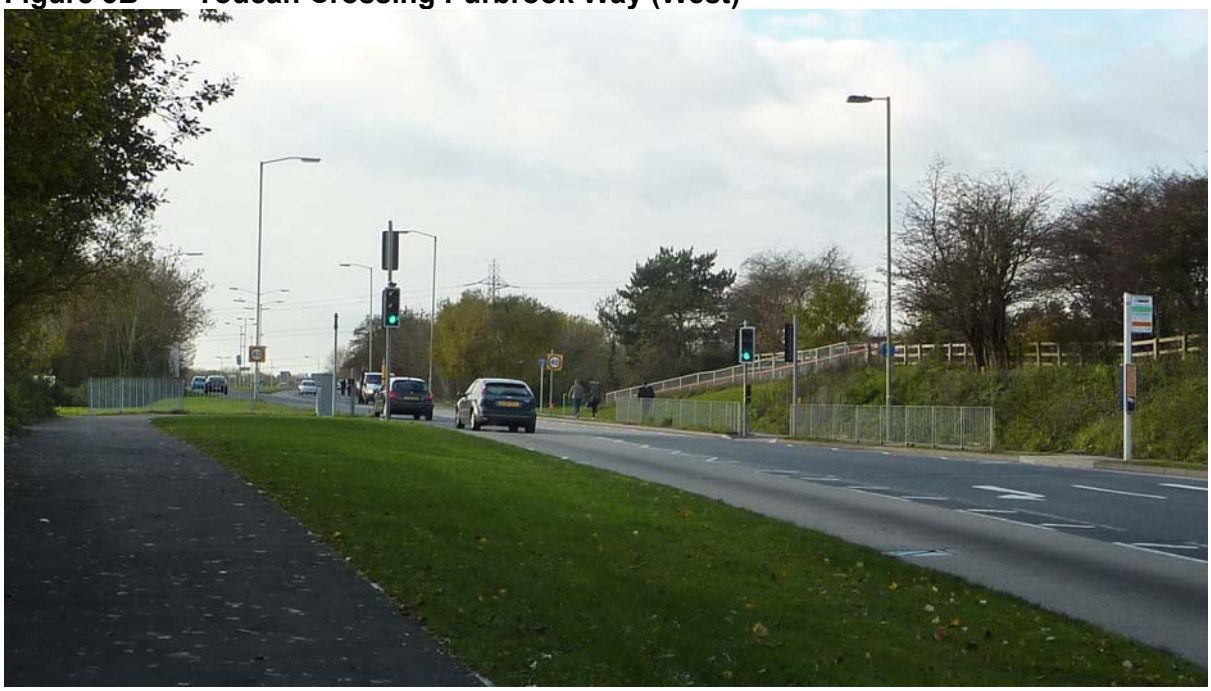
3.1.1 There is a 2.0m wide footway on the eastern side of Larchwood Avenue. There is a zebra crossing with tactile paving located on Larchwood Avenue directly opposite the site, as shown in Figure 3A below.

Figure 3A Zebra Crossing Larchwood Avenue



3.1.2 There is a shared footway and cycle lane on the northern side of Purbrook Way. A new toucan crossing has been implemented on Purbrook Way to the west of the Purbrook Roundabout, which provides a pedestrian/cycle link between the site and B&Q, as shown in Figure 3B below.

Figure 3B Toucan Crossing Purbrook Way (West)



3.1.3 There are drop kerbs and tactile paving pedestrian facilities across all five arms of the Hulbert Road/Purbrook Way/Larchwood Avenue Roundabout, which provide pedestrian links from the site to the bus stops on Purbrook Way and Hulbert Road.

3.1.4 A plan showing the cycle routes in the vicinity of the site is included as Appendix 5.1. The shared footway and cycle lane on the northern side of Purbrook Way provides a link to College Road and South Downs College from the site. To the east of the Hulbert Road/Purbeck Way/Larchwood Avenue junction Purbrook Way is marked as a convenient link for cyclists although there are no on road/off road facilities.

3.1.5 It is considered that there are reasonable existing facilities available for cyclists in the vicinity of the site, however the Hulbert Road/Purbrook Way/Larchwood Avenue Roundabout and Junction 4 (A3M)/B&Q Access/Purbrook Way Roundabouts are marked as difficult junctions for cyclists to negotiate.

3.2 Public Transport

3.2.1 There are bus stops on Purbrook Way to the west of the Purbrook Way/Hulbert Road/Larchwood Avenue Roundabout, 210m and 150m from the site eastbound and westbound respectively. The eastbound bus stop is post only, whereas the westbound bus stop benefits from a shelter. These bus stops are served by service numbers 20, 37 and 39.

3.2.2 Service number 63 can be accessed from the bus stops on Hulbert Road (south) and Purbrook Way (east). These bus stops are 260m and 350m from the site respectively. Both of these bus stops benefit from shelters.

3.2.3 Service number 36 can be accessed from bus stops within the Asda car park 270 from the site.

3.2.4 A plan showing the bus routes is included in Appendix 5.2. The pedestrian links from the proposed McDonald's site to the bus stops are shown on the plan in Appendix 5.3. Details of the bus services accessible from the site are summarised in Table 3A below.

Table 3A Bus Services

Service No.	Operator	Route	Frequency		
			Mon-Fri	Sat	Sun
20	Stagecoach	Havent-West Leigh-Asda-QE Hospital-Portsmouth	2/hr (09:21-16:21)	2/hr (09:21-16:21)	-
36	Emsworth & District	Southbourne-Westbourne-Emsworth-Havant-Asda	3 services	-	-
39	Stagecoach	Havant-Asda-Waterlooville-Wecock Farm	4/hr (09:06-16:06)	4/hr (09:06-16:06)	1/hr
63	First	Havent-Leigh Park-Asda-Fareham	1/hr (08:43-17:56)	4 services	-
37	Stagecoach	Havant-Petersfield	1/hr (08:52-17:22)	1/hr (08:53-17:22	-

3.2.5 Table 3A demonstrates that within 500m of the site there are 8 services per hour accessible Monday to Friday with 7 services per hour on Saturday and 1 service per hour on a Sunday. These services provide frequent links to Havant, Waterlooville, Portsmouth, Southbourne, Fareham and Petersfield.

3.2.6 Asda also run a number of free bus services from the store to and from the following locations:

- Monday
  - A1 – Eastley, Baltins, Anchorage Park (1 trip)
  - A2 – Milton, Southsea, Kingston (1 trip)
- Tuesday
  - A3 – Porchester, Paulsgrove (1 trip)
  - A4 – Petersfield (1 trip)
- Wednesday
  - A4 – Hayling Island (2 trips)
- Thursday
  - A7 – Denmead, Wecock Farm (1 trip)
  - A8 – Clanfield (1 trip)
- Friday
  - A9 – Southbourne (1 trip)
  - A10 – Westbourne Rowlands Castle (1 trip)

3.2.7 The site is therefore considered to be reasonably accessible by public transport.

3.3 Comparison of Accessibility of McDonald's Site and Asda

3.3.1 A plan showing the pedestrian links to the bus stops from Asda is included as Appendix 5.4. The distances are summarised in Table 3B below.

Table 3B Comparison of Walking Distances to Bus Stops

Bus Stop		Walking Distance		
		McDonald's	Asda	Difference (McDonald's-Asda)
Purbrook Way West	Eastbound	210m	380m	-170m
	Westbound	150m	350m	-200m
Purbrook Way East	Eastbound	350m	540m	-190m
Hulbert Rd South	Southbound	260m	445m	-185m

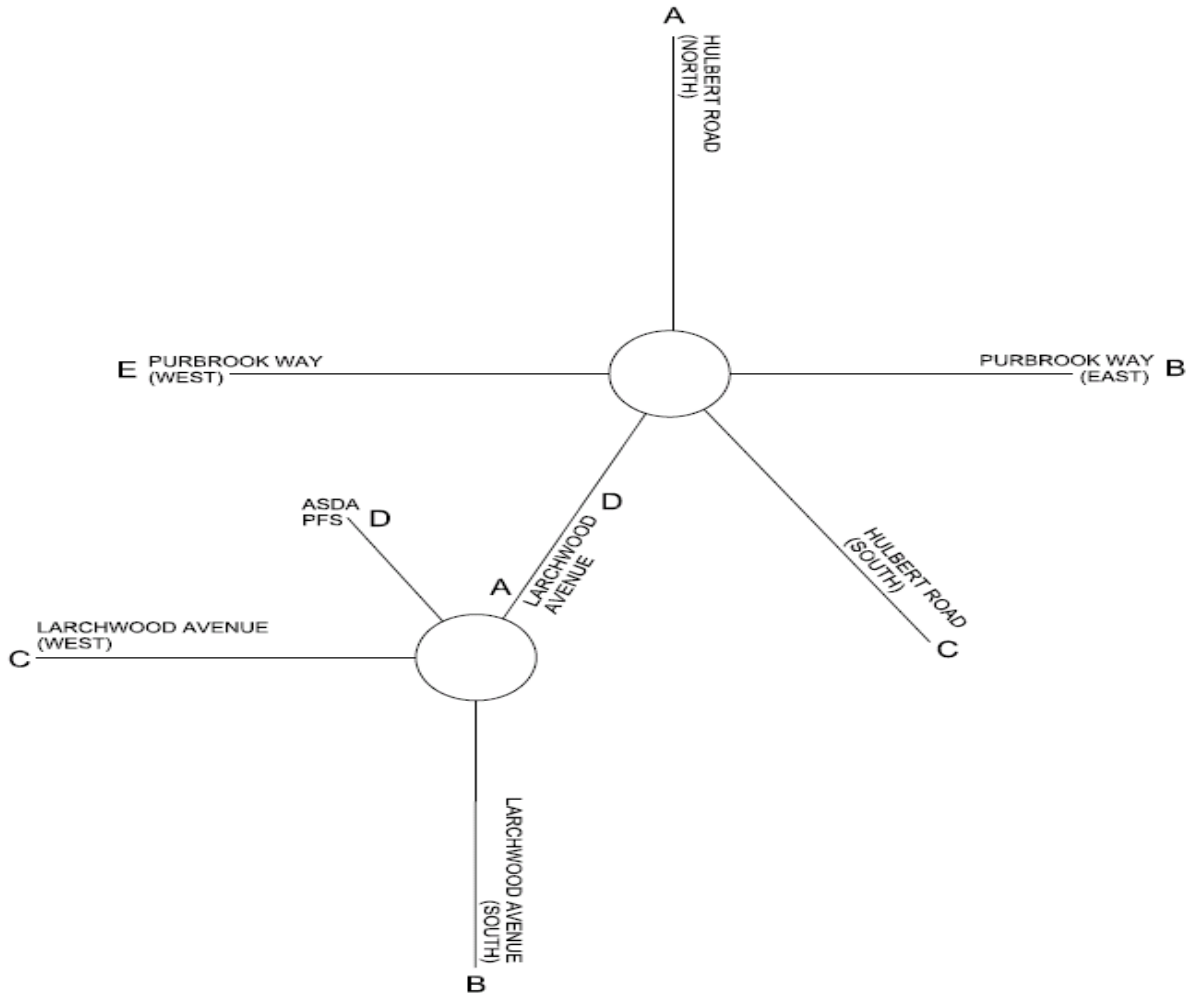
3.3.2 Table 3B demonstrates that compared to the existing Asda the proposed McDonald's site is 170m – 200m closer to the bus stops on Purbrook Way West, 190m closer to the bus stop on Purbrook Way. The proposed McDonald's site is therefore considered to be more accessible by public transport than the permitted Asda foodstore, which is a major generator of travel.

4.0 BASELINE TRAFFIC DATA

4.1 2010 Survey Data: Havant

Traffic Counts

4.1.1 ADL Traffic Engineering commissioned Axiom Traffic Ltd to undertake manual traffic counts and queue surveys at the Larchwood Avenue and Purbrook Roundabouts, as illustrated in Figure 4.1 below.



4.1.2 The surveys were undertaken on:

- Friday 26th November 2010 16:00 – 20:00 hours
- Saturday 27th November 2010 11:00 – 15:00 hours

4.1.3 A copy of the Friday and Saturday survey data is included in Appendices 6.1 and 6.2 respectively.

4.1.4 The results for the Purbrook Roundabout are summarised in Tables 4A and 4B below.

Table 4A Peak Hour Assessment Purbrook Roundabout: Friday

From Arm	Hulbert Road (N) Arm A				Purbrook Way (E) Arm B				Hulbert Road (S) Arm C				Larchwood Ave Arm D				Purbrook Way (W) Arm E				Total
To Arm	**B**	**C**	**D**	**E**	**C**	**D**	**E**	**A**	**D**	**E**	**A**	**B**	**E**	**A**	**B**	**C**	**A**	**B**	**C**	**D**	
16:00-17:00	**300**	**67**	**114**	**160**	**30**	**252**	**357**	**294**	**159**	**97**	**78**	**96**	**338**	**220**	**260**	**104**	**97**	**457**	**176**	**310**	**3966**
17:00-18:00	331	66	130	155	25	246	308	280	139	66	69	90	334	203	282	86	67	477	148	301	3804
18:00-19:00	278	47	104	154	42	231	363	247	114	81	56	77	342	175	246	76	76	443	131	292	3575
19:00-20:00	195	40	79	117	48	185	288	207	75	62	47	64	266	152	205	67	77	344	112	229	2859
Total	1104	220	427	586	145	914	1317	1028	487	306	250	327	1280	750	993	333	317	1721	567	1132	14204

Table 4B Peak Hour Assessment Purbrook Roundabout: Saturday

From Arm	Hulbert Road (N) Arm A				Purbrook Way (E) Arm B				Hulbert Road (S) Arm C				Larchwood Ave Arm D				Purbrook Way (W) Arm E				Total
To Arm	**B**	**C**	**D**	**E**	**C**	**D**	**E**	**A**	**D**	**E**	**A**	**B**	**E**	**A**	**B**	**C**	**A**	**B**	**C**	**D**	
11:00-12:00	263	66	201	179	29	293	278	224	157	84	69	73	388	223	239	96	104	369	141	429	3905
12:00-13:00	**237**	**58**	**182**	**205**	**24**	**267**	**313**	**222**	**187**	**109**	**81**	**82**	**400**	**262**	**266**	**101**	**130**	**388**	**148**	**443**	**4105**
13:00-14:00	219	57	166	169	23	288	312	214	156	90	61	68	412	262	295	112	111	375	147	437	3974
14:00-15:00	222	58	188	184	22	261	266	219	138	91	72	76	402	282	298	106	120	359	129	411	3904
Total	941	239	737	737	98	1109	1169	879	638	374	283	299	1602	1029	1098	415	465	1491	565	1720	15888

4.1.5 The Friday and Saturday results for the Larchwood Avenue Roundabout are summarised in Tables 4C and 4D below:

Table 4C Peak Hour Assessment Larchwood Avenue Roundabout: Friday

From Arm	Larchwood Ave (N) Arm A			Larchwood Ave (S) Arm B			Larchwood Ave (W) Arm C			Asda pfs Arm D			Total
To Arm	**B**	**C**	**D**	**C**	**D**	**A**	**D**	**A**	**B**	**A**	**B**	**C**	
16:00-17:00	**743**	**8**	**95**	**1**	**113**	**701**	**2**	**19**	**2**	**0**	**0**	**0**	**1684**
17:00-18:00	710	8	104	0	99	713	1	10	2	0	0	0	1647
18:00-19:00	642	4	93	0	103	621	1	6	1	0	0	0	1471
19:00-20:00	487	0	85	1	110	508	0	2	0	0	0	0	1193
Total	2582	20	377	2	425	2543	4	37	5	0	0	0	5995

Table 4D Peak Hour Assessment Larchwood Avenue Roundabout: Saturday

From Arm	Larchwood Ave (N) Arm A			Larchwood Ave (S) Arm B			Larchwood Ave (W) Arm C			Asda pfs Arm D			Total
To Arm	**B**	**C**	**D**	**C**	**D**	**A**	**D**	**A**	**B**	**A**	**B**	**C**	
11:00-12:00	931	11	130	5	121	675	3	24	3	**0**	**0**	**0**	1903
12:00-13:00	942	12	125	5	118	762	1	24	5	0	0	0	1994
13:00-14:00	937	12	121	2	145	794	1	12	2	0	0	0	2026
14:00-15:00	888	9	108	2	158	839	0	11	0	0	0	0	2015
Total	3698	44	484	14	542	3070	5	71	10	0	0	0	7938

4.1.6 The peak hours on the network has been calculated in Tables 4E and 4F below.

Table 4E Network Peak Hour Assessment: Friday

Time	Total Traffic Flows		Total Network
	Purbrook Rdbt	Larchwood Ave Rdbt	
16:00 – 17:00	**3966**	**1684**	**5650**
17:00 – 18:00	3804	1647	5451
18:00 – 19:00	2575	1471	5046
19:00 – 20:00	2859	1193	5046
Total	14,204	5995	20,199

Table 4F Network Peak Hour Assessment: Saturday

Time	Total Traffic Flows		Total Network
	Purbrook Rdbt	Larchwood Ave Rdbt	
11:00 – 12:00	3905	1903	5808
12:00 – 13:00	4105	1994	6099
13:00 – 14:00	3974	2026	6000
14:00 – 15:00	3904	2015	5919
Total	15,888	7938	23,826

4.1.7 Tables 4E and 4F demonstrate that the network peak hours are:

- Friday 16:00 – 17:00 hours 5650 vehicles
- Saturday 12:00 – 13:00 hours 6099 vehicles

4.1.8 The 2010 surveyed traffic flows for the Friday and Saturday peak hours are shown on the diagrams included in Appendices 7.1 and 7.2 respectively.

Queue Surveys

4.1.9 Queue surveys were undertaken at the Purbrook Way and Larchwood Avenue Roundabouts and recorded the maximum queue by lane on each arm of the roundabouts in 5-minute intervals.

4.1.10 The data is included in Appendices 6.3 and 6.4 for the Friday and Saturday surveys respectively.

4.1.11 The results from the Purbrook Roundabout during the network peak hours on a Friday (16:00 – 17:00 hours) are summarised in Table 4G below.

Table 4G Queue Survey Analysis Purbrook Roundabout Friday Peak 16:00-17:00

	Hulbert Rd North			Purbrook Way East			Hulbert Rod South			Larchwood Avenue			Purbrook Way West		
	1	2	Total	1	2	Total	1	2	Total	1	2	Total	1	2	Total
16:00	0	0	0	60	5	65	8	3	11	2	9	11	35	20	55
16:05	2	0	2	50	6	56	12	5	17	15	12	27	29	20	49
16:10	4	0	4	45	4	49	10	2	12	15	10	25	30	20	50
16:15	4	1	5	50	7	57	14	1	15	15	8	23	28	17	45
16:20	5	0	5	25	4	29	11	1	12	15	15	30	43	22	65
16:25	4	0	4	20	2	22	12	2	14	15	8	23	39	30	69
16:30	3	4	7	20	0	20	9	3	12	15	4	19	55	43	98
16:35	20	0	20	15	3	18	6	1	7	9	2	11	72	30	102
16:40	25	0	25	10	2	12	8	2	10	6	2	8	30	35	65
16:45	20	0	20	5	2	7	5	1	6	9	4	13	60	46	106
16:50	9	4	13	10	1	11	14	3	17	8	8	16	70	22	92
16:55	10	0	10	8	1	9	7	2	9	15	3	18	55	30	85
Average	**9**	**1**	**10**	**27**	**3**	**30**	**10**	**2**	**12**	**12**	**7**	**19**	**46**	**28**	**74**

4.1.12 The results in Table 4G demonstrate that the maximum queues at the Purbrook Roundabout on a Friday range between:

- Hulbert Road North (Arm A) 0 – 25 vehicles
- Purbrook Way East (Arm B) 9 – 65 vehicles
- Hulbert Road South (Arm C) 6 – 17 vehicles
- Larchwood Avenue (Arm D) 11 – 27 vehicles
- Purbrook Way West (Arm E) 45 – 106 vehicles

4.1.13 The results in Table 4G demonstrate that the average queue at the Purbrook Roundabout during the Friday peak hour are:

- Hulbert Road North (Arm A) 10 vehicles
- Purbrook Way East (Arm B) 30 vehicles
- Hulbert Road South (Arm C) 12 vehicles

- Larchwood Avenue (Arm D) 19 vehicles
- Purbrook Way West (Arm E) 74 vehicles

4.1.14 The queue survey results from the Purbrook Roundabout during the network peak hours on a Saturday (12:00 – 13:00 hours) are summarised in Table 4H below.

Table 4H Queue Survey Analysis Purbrook Roundabout Saturday Peak 12:00-13:00

	Hulbert Rd North			Purbrook Way East			Hulbert Rod South			Larchwood Avenue			Purbrook Way West		
	1	2	Total	1	2	Total	1	2	Total	1	2	Total	1	2	Total
12:00	0	5	5	32	5	37	12	4	16	15	3	18	4	4	8
12:05	0	3	3	32	5	37	14	3	17	15	10	25	7	10	17
12:10	3	2	5	35	3	38	14	4	18	15	8	23	10	4	14
12:15	9	7	16	32	2	34	18	3	21	15	4	19	8	32	40
12:20	10	6	16	33	3	36	15	4	19	12	6	18	20	35	55
12:25	5	3	8	30	4	34	14	2	16	15	8	23	11	28	39
12:30	1	9	10	33	7	40	12	3	15	15	5	20	8	14	22
12:35	4	6	10	38	8	46	5	5	10	15	5	20	23	25	48
12:40	0	0	0	36	5	41	14	5	19	9	3	12	12	12	24
12:45	0	7	7	32	10	42	17	4	21	8	4	12	1	17	18
12:50	1	5	6	27	4	31	13	4	17	15	4	19	8	30	38
12:55	0	0	0	20	5	25	15	4	19	11	8	19	14	32	46
Average	**3**	**4**	**7**	**32**	**5**	**37**	**14**	**4**	**18**	**13**	**6**	**19**	**10**	**20**	**40**

4.1.15 The results in Table 4H demonstrate that the queues at the Purbrook Roundabout on a Saturday range between:

- Hulbert Road North (Arm A) 20 – 38 vehicles
- Purbrook Way East (Arm B) 25 – 46 vehicles
- Hulbert Road South (Arm C) 10 – 21 vehicles
- Larchwood Avenue (Arm D) 12 – 25 vehicles
- Purbrook Way West (Arm E) 8 – 55 vehicles

4.1.16 The results in Table 4H demonstrate that the average queues at the Purbrook Roundabout during the Saturday peak hour are:

- Hulbert Road North (Arm A) 7 vehicles
- Purbrook Way East (Arm B) 37 vehicles
- Hulbert Road South (Arm C) 18 vehicles
- Larchwood Avenue (Arm D) 19 vehicles
- Purbrook Way West (Arm E) 40 vehicles

4.1.17 The results from the queue surveys at the Larchwood Avenue Roundabout during the Friday network peak hour (16:00-17:00 hours) are summarised in Table 4I below.

Table 4I Queue Survey Analysis Larchwood Ave Roundabout Friday Peak Hour 16:00 – 17:00 Hours

Arm	Larchwood Avenue (N)			Larchwood Avenue (S)			Larchwood Avenue (W)			Asda pfs
Lane	**1**	**2**	**Total**	**1**	**2**	**Total**	**1**	**2**	**Total**	**1**
16:00	0	0	0	0	0	0	0	0	0	0
16:05	0	0	0	3	0	3	0	0	0	0
16:10	0	0	0	10	0	10	0	0	0	0
16:15	0	0	0	11	0	11	0	0	0	0
16:20	0	0	0	7	0	7	0	0	0	0
16:25	0	0	0	17	0	17	0	0	0	0
16:30	0	0	0	17	0	17	0	0	0	0
16:35	0	0	0	17	0	17	0	0	0	0
16:40	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0
16:50	0	0	0	0	0	0	0	0	0	0
16:55	0	0	0	5	0	5	0	0	0	0
Average	**0**	**0**	**0**	**7**	**0**	**7**	**0**	**0**	**0**	**0**

4.1.18 Table 4I demonstrates that the average queues during the Friday network peak hour at the Larchwood Avenue Roundabout are:

- Larchwood Avenue North (Arm A) 0 vehicles
- Larchwood Avenue South (Arm B) 7 vehicles
- Larchwood Avenue West (Arm C) 0 vehicles
- Asda pfs (Arm D) 0 vehicles

4.1.19 The results from the queue survey at the Larchwood Avenue Roundabout during the Saturday peak hour (12:00 – 13:00 hours) are summarised in Table 4J below.

Table 4J Queue Survey Analysis Larchwood Ave Roundabout Saturday Peak Hour 12:00 – 13:00 Hours

Arm	Larchwood Avenue (N)			Larchwood Avenue (S)			Larchwood Avenue (W)			Asda pfs
Lane	**1**	**2**	**Total**	**1**	**2**	**Total**	**1**	**2**	**Total**	**1**
12:00	0	0	0	16	0	16	0	0	0	0
12:05	0	0	0	20	0	20	0	0	0	0
12:10	0	0	0	20	0	20	0	0	0	0
12:15	0	0	0	20	0	20	0	0	0	0
12:20	0	0	0	19	0	19	0	0	0	0
12:25	0	0	0	5	0	5	0	0	0	0
12:30	0	0	0	11	0	11	0	0	0	0
12:35	0	0	0	5	0	5	0	0	0	0
12:40	0	0	0	2	0	2	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0
12:50	0	0	0	20	0	20	0	0	0	0
12:55	0	0	0	0	0	0	0	0	0	0
Average	**0**	**0**	**0**	**12**	**0**	**12**	**0**	**0**	**0**	**0**

4.1.20 Table 4J demonstrates that the average queues at the Larchwood Avenue Roundabout during the Saturday network peak hour are:

- Larchwood Avenue North (Arm A) 0 vehicles
- Larchwood Avenue South (Arm B) 12 vehicles
- Larchwood Avenue West (Arm C) 0 vehicles
- Asda pfs (Arm D) 0 vehicles

4.2 Committed Development

4.2.1 The Granger Development site, located on land west of London Road, Waterlooville (application no. 06/40002/000) for 1550 residential dwellings, 12.5 hectares of employment land, 85 live work units, 7.19 hectares of commercial use and land for community uses. Planning permission was granted on 4th January 2008.

4.2.2 It was agreed with Mr B Clifton (Highways Officer) of Havant Borough Council at the meeting of 23rd November 2010, that the traffic implications of this application should be considered as committed development.

4.2.3 The location of the Granger Development site in relation to the proposed McDonald's site is shown on the plan included as Appendix 8.1.

4.2.4 A Transport Assessment (July 2006) was prepared by Mayer Brown Ltd and submitted as Appendix 5 of the Environmental Statement.

4.2.5 The Mayer Brown TA (2006) included an assessment of the impact at the Purbrook Way/Hulbert Road Roundabout during the weekday am peak (08:00 – 09:00 hours) and pm peak (17:00 – 18:00 hours). For the purposes of this report only the Friday pm peak has been considered.

4.2.6 The following traffic flows have been taken from the Mayer Brown Transport Assessment:

- Drawing no. GTWVilleTF1004(PL01)
  2011 Base Traffic Flows pm peak hour 17:00 – 18:00 hours
- Drawing no. GTWVilleTF1006(PL01)
  2011 Base & Development Traffic Flows pm peak hour 17:00 18:00 hours

The above drawings are included in this report as Appendices 8.2 and 8.3 respectively and the traffic flows at the Purbrook Roundabout and are summarised in Table 4K below.

Table 4K Committed Development Flows: Purbrook Roundabout Friday Pm Peak 17:00 – 18:00 Hours

From Arm	Hulbert Rd (N) Arm A				Purbrook Way (E) Arm B				Hulbert Rd (S) Arm C				Larchwood Ave Arm D				Purbrook Way (N) Arm E				Total
To Arm	**B**	**C**	**D**	**E**	**C**	**D**	**E**	**A**	**D**	**E**	**A**	**B**	**E**	**A**	**B**	**C**	**A**	**B**	**C**	**D**	
2011 Base Flows *[1]	110	1	380	4	5	30	297	555	2	146	240	0	550	29	55	7	19	921	108	310	3769
2011 Base+ Development Flows *[2]	92	1	378	4	12	30	292	595	2	152	254	0	520	31	54	35	13	976	134	312	3888
Difference (Committed Development Traffic)	-18	0	-2	0	+7	0	-4	+40	0	+6	+14	0	-30	+2	-1	+28	-6	+55	+26	+2	+119

Note: *[1] From drawing GTWVille TF1004 (PL01)
*[2] From drawing GTWVille TF1006 (PL01)

4.2.7 The committed development traffic flows at the Purbrook Roundabout during the pm peak period (17:00 – 18:00 hours) are shown on the diagram included as Appendix 8.4.

4.2.8 The 2011 base plus committed development traffic flows at the Purbrook Roundabout from the Mayer Brown Transport Assessment (2006) have been compared to the results of the 2010 surveyed traffic flows (see Table 4A). The results are shown in Table 4L below.

Table 4L Comparison of 2011 Base Plus Committed Development Traffic at Purbrook Roundabout and 2010 Surveyed Traffic: Friday Pm Peak

	Hulbert Rd (N) Arm A	Purbrook Way (E) Arm B	Hulbert Rd (S) Arm C	Larchwood Ave Arm D	Purbrook Way (W) Arm E	Total
2011 Base plus committed development flows (Mayer Brown TA) *3	475	930	408	640	1435	3888
2010 Surveyed flows *2	641	933	430	922	1040	3966
Difference	+166	+3	+22	+282	-395	+78
% Difference	+35%	+0.3%	+5%	+44%	-28%	+2%

Note: *1 From drawing GTWVille TF1004(PL01) see Table 4K
*2 From ADL 2010 Survey see Table 4A 16:00 – 17:00 hours
*3 From drawing GTWVille TF1006(PL01) See Table 4K

4.2.9 The Mayer Brown Transport Assessment (2006) included proposals to increase capacity on the Purbrook Way West arm (Arm E) of the Purbrook Roundabout. To provide this additional capacity it was proposed that the two entry lanes on Purbrook Way West are extended and the entry defection is improved, as shown on drawing no. GTWVille RD/1301 (PR05). A copy of this drawing is included as Appendix 8.5 of this report.

4.2.10 Table 4M below summarised the capacity analysis at the Purbrook Roundabout with and without the proposed highway improvements included as Table 8.8 (P54) of the Mayer Brown (2006) Transport Assessment.

Table 4M Capacity Analysis Purbrook Roundabout

	Pm Peak Hour (17:00 – 18:00)	
	Rfc *[1]	Queue *[1]
2011 Base (from Mayer Brown TA 2006)		
Purbrook Way (West)	0.954	16
Hulbert Road (North)	0.713	2
Purbrook Way (East)	0.757	3
Hulbert Road (South)	0.483	1
Asda Access	0.623	2
2011 With Committed Development		
Purbrook Way (West)	1.049	82
Hulbert Road (North)	0.712	2
Purbrook Way (East)	0.809	4
Hulbert Road (South)	0.517	1
Asda Access	0.645	2
2011 With Committed Development and Junction Improvement		
Purbrook Way (West)	0.876	7
Hulbert Road (North)	0.758	3
Purbrook Way (East)	0.818	4
Hulbert Road (South)	0.522	1
Asda Access	0.645	2

Source: *[1] Table 8.8 Junction 13 improvement analysis (Mayer Brown TA 2006)

4.2.11 The observed queues at the Purbrook Roundabout from the 2010 survey on a Friday (see Section 4.1, Table 4G) are summarised below:

	Range	Average
• Purbrook Way (west)	45-106	74 vehicles
• Hulbert Road (north)	0-25	10 vehicles
• Purbrook Way (east)	9-65	30 vehicles
• Hulbert Road (south)	6-17	12 vehicles
• Larchwood Avenue	11-27	19 vehicles

4.2.12 The results from the queue surveys suggests that the Meyer Brown 2006 Transport Assessment underestimated the impact of the Granger Development traffic at the Purbrook Roundabout for the 2011 base situation compared to the 2010 survey observations.

4.3 2011 Base Flows

4.3.1 ADL have obtained 2010-2011 NRTF data and TEMPRO (for Havant District 2010 – 2011 for the Friday evening and Saturday peak periods). The growth factor calculations are included in Appendix 9.0 and the results are summarised in Table 4N below.

Table 4N Growth Factors 2010 – 2011 Based on (TEMPRO and NRTF)

		NRTF		
		Low	**Medium**	**High**
Friday pm peak	TEMPRO Average	1.017	1.012	1.015
Saturday peak	TEMPRO Average	1.017	1.012	1.015

4.3.2 Table 4N demonstrates that the growth on the network has been based on NRTF/TEMPRO been predicted at typically 1%.

4.3.3 Table 4L (section 4.2) demonstrated that the committed development would result in a 2% increase in flows at the Purbrook Roundabout.

4.3.4 Given that the Granger Development site is already included within TEMPRO, it is considered that the most appropriate strategy is simply to add the 2010 surveyed Friday peak hour flows to the committed development flows, to form the 2011 base flows on a Friday, as summarised in Figure 4.2 below.

Figure 4.2 Calculation of 2011 Base Flows: Friday Peak Hour

2010 Surveyed Flows
Friday Network Peak Hour 16:00 – 17:00 hours

+

Committed Development Flows
Development Peak Hour 17:00 – 18:00 Hours

=

2011 Base Traffic Flows
Friday Assessment Peak Hour 16:00 – 17:00 Hours

4.3.5 On a Saturday the 2011 base flows has been calculated using the TEMPRO/NRTF (med growth) growth factor. The methodology is summarised in Figure 4.3 below:

Figure 4.3 Calculation of 2011 Base Flows: Saturday Peak Hour

2010 Surveyed Flows
Saturday Network Peak Hour 12:00 – 13:00 hours

x

NRTF/TEMPRO
Growth Factor 1.012

=

2011 Base Traffic Flows
Saturday Assessment Peak Hour 12:00 – 13:00 Hours

4.3.6 The 2011 base traffic flows for the Friday and Saturday peak hours are shown on the diagrams included in Appendices 10.1 and 10.2 respectively.

5.0 DEVELOPMENT PROPOSALS

5.1 Design Layout

5.1.1 The development proposal is for a 462sqm gfa McDonald's Restaurant with drive thru facilities. The dining area would be 128sqm.

5.1.2 It is proposed to provide 35 car parking spaces which would comprise of 30 customer spaces, 2 grill bays and 3 disabled spaces. There would be 2 motorcycle parking spaces.

5.1.3 The proposal would have a cycle parking provision of 8 spaces for staff and customers.

5.1.4 A pedestrian access would be provided into the site close to the zebra crossing on Larchwood Avenue to provide a convenient pedestrian link into the site.

5.1.5 It is considered that the restaurant would employ a total of 70 staff, it is expected that 35 staff would be on-site in any one day.

5.1.6 The architect's site layout is included as Appendix 11.0.

5.2 Access Arrangements

5.2.1 The site would be accessed via a 6.0m wide access road which forms a priority junction with Larchwood Avenue (west).

5.2.2 The proposed access junction would have a visibility splay of 2.4m x 43m to the right. To the left Larchwood Avenue is a no through route which provides access to currently vacant land, therefore no visibility splay is necessary.

5.2.3 The proposed access arrangements are shown in detail on the plan included as Appendix 12.0.

5.2.4 The existing (currently gated) egress onto Larchwood Avenue (north) would be closed.

5.3 Year of Opening

5.3.1 The proposed year of opening is 2011.

5.4 Parking Provision

Car Parking

5.4.1 It is proposed to provide 35 car parking spaces of which 3 would be disabled spaces located close to the restaurant entrance.

5.4.2 At the meeting of 23rd November 2010, Havant Borough Council Officers indicated that the proposed level of parking was acceptable subject to an assessment of the proposed level of parking demand and accumulation of vehicles on site (see Appendix 1.2). Volume II of this Transport Assessment will provide an assessment of the operational requirements and level of parking demand for the proposed McDonald's Restaurant.

5.4.3 The parking standards state that parking for disabled persons should account for *"5% of the total allocation."* It is proposed to provide 3 spaces for disabled customers which is equivalent to 9% of the total provision and therefore accords with the Council's standards.

Motorcycle Parking

5.4.4 The Hampshire parking standards require that one motorcycle parking space is provided for every 25 car parking spaces. Therefore, 2 motorcycle parking spaces are required for the development. It is proposed to provide 2 motorcycle spaces in accordance with the Councils standards.

Cycle Parking

5.4.5 The County Council's Parking Strategy and Standards (2002) also sets out the minimum cycle parking standards for new development as shown in Table 5A below.

Table 5A Cycle Parking Provision: Restaurant Use

Parking Standard		Proposed Development	Parking Requirement	
Long Stay	Short Stay		Long Stay	Short Stay
1 space per 6 staff or 1 space per 40sqm GEA*	1 stand per 20sqm GEA	462sqm	12 spaces	23 stands
		35 staff/day	7 spaces	

* Note: whichever requires the greater provision

5.4.6 Table 5A demonstrates that the proposed restaurant would require a cycle parking provision of 12 long stay spaces and 23 short stay Sheffield type stands (46 spaces). The total cycle parking requirement would be 58 spaces.

5.4.7 It is proposed to provide 8 cycle parking spaces for the new development, which is considered more than adequate to accommodate the sites operational requirements.

5.4.8 Staff would be provided with lockers and changing area, which would benefit those staff that cycle to work.

5.5 Servicing/Refuse Provision

5.5.1 Keystone are McDonald's sole distributor for all its products and have a fleet of 150 vehicles. Keystone utilise multi-temperature vehicles which allows all of the restaurants requirements for; frozen, chilled and ambient products to be delivered in one visit. This therefore reduces the number of deliveries each restaurant received.

5.5.2 Restaurants typically receive three deliveries per week. Servicing McDonald's restaurants whilst they are open is a common practice and does not present any operational difficulties. Keystone use a sophisticated computerized planning tool (Paragon), which enables requirements of delivery destinations to be set and ensures they are complied with on every occasion the delivery is planned. The restaurant is allocated a 2-hour delivery slot and the delivery will be planned within this. Notification of the planned delivery is emailed to the restaurant two days before delivery. On the day of the delivery the GPS system linked to Paragon will automatically email the restaurant 30-minutes prior to the vehicles arrival.

5.5.3 The goods are delivered by articulated lorry, between 13.5m to 16.5m in length. This is typically parked for between 15 - 46 minutes. The duration of the stay depends upon the range and quantity of products to be delivered.

5.5.4 The deliveries would be scheduled to arrive at quiet trading periods. Deliveries during lunchtime (12:00 – 14:00 hours) are avoided to help minimise any delays in deliveries. When a delivery occurs, restaurant staff help to unload the delivery cages and store the food.

5.5.5 It is proposed that servicing will be undertaken from the customer car park.

5.5.6 A representative from Keystone will visit the site prior to any new restaurant opening and assess the designated delivery area. Any special requirements (although there are none anticipated in this instance) will be communicated to their transport and scheduling department.

5.5.7 A TRACK analysis is presented in Appendix 13.0. The analysis demonstrates that a delivery vehicle can enter, manoeuvre around the car park to unload and exit the site.

5.6 Drive Thru Lane

5.6.1 A TRACK analysis is presented in Appendix 13.0 which demonstrates that a vehicle can circulate the drive thru lane.

6.0 SUMMARY

6.1 Introduction and Planning History

6.1.1 ADL Traffic Engineering have been appointed by McDonald's Restaurants Ltd to prepare this Transport Assessment in support of the planning application for a proposed 462sqm gfa drive thru, McDonald's Restaurant, Larchwood Avenue, Havant.

6.1.2 Planning permission was refused on 24/05/2002 for a McDonald's drive thru restaurant on land south of Purbrook Way and Larchwood Avenue (application № 01/54731/01D). The highways reasons for refusal were as follows:

> ***"1) On the basis of the information available it has not been demonstrated that the development can be undertaken so as to protect the safe and free flow of traffic on the A3(M).***
>
> ***2) The roads leading to and from the site are of inadequate capacity to accommodate the additional traffic which the proposed development will generate.***
>
> ***3) The proposal involves development that cannot be reconciled with national planning policy guidance in PPG13 in that it would be inappropriately located on the edge of an existing urban areas and would thus depend on the private car for access and transport purposes".***

6.2 Baseline Transport Data

6.2.1 The site is located 2km to the northwest of Havant town centre and 500m east of Junction 4 of the A3(M). The site is accessed from Larchwood Avenue which provides access to an Asda foodstore.

6.2.2 The site is currently used for car parking for airport transfer mini-buses and vehicles for sale and has permission to be used as a motorcycle training school and for the storage of containers.

6.2.3 Accident analysis has demonstrated that 9 personal injury accidents occurred in the last 3-years in the vicinity of the site, of which 7 were slight injury accidents and 2 were serious injury accidents.

6.2.4 The nearest existing McDonald's drive thru restaurants to the site are located 4.7km and 5.6km from the site in Cosham and Portsmouth respectively. There are also existing restaurants in Havant and Waterlooville, therefore the proposed restaurant is not expected to attract trips from these centres.

6.2.5 The site is reasonably accessible by walking and cycling. There are bus stops within 400m of the site on Hulbert Road and Purbrook Way, which are served by 8 buses per hour Monday to Friday, providing services to Havant, Waterlooville, Portsmouth, Southbourne, Fareham and Petersfield.

6.2.6 The site is considered to be in a more accessible location by public transport than the existing Asda foodstore.

6.2.7 The peak hours on the network have been identified as:

- Friday 16:00 – 17:00 hours 5650 vehicles
- Saturday 12:00 – 13:00 hours 6099 vehicles

6.2.8 The average queues (№ of vehicles) at the Purbrook Roundabout during the peak hours are as follows:

	Friday	Saturday
• Hulbert Road North (Arm A)	10	7
• Purbrook Way East (Arm B)	30	37
• Hulbert Road South (Arm C)	12	18
• Larchwood Avenue (Arm D)	19	19
• Purbrook Way West (Arm E)	74	40

6.2.9 The Granger Development site (application № 06/40002/000) has been considered as committed development.

6.3 Development Proposals

6.3.1 The development proposal is for a 462sqm gfa McDonald's Restaurant with drive thru facilities. The dining area would be 128sqm. It is proposed to provide 35 car parking spaces which would comprise of 32 customer spaces and 3 disabled spaces. There would be 2 motorcycle parking spaces. The proposal would have a cycle parking provision of 8 spaces for staff and customers.

6.3.2 The site would be accessed via a 6.0m wide access road which forms a priority junction with Larchwood Avenue (west). The proposed access junction would have a visibility splay of 2.4m x 43m to the right. To the left Larchwood Avenue is a no through route which provides access to currently vacant land, therefore no visibility splay is necessary. The existing (currently gated) egress onto Larchwood Avenue (north) would be closed.

6.3.3 TRACK analysis has been provided which demonstrates that adequate provision has been made for service vehicles to access the site and for a vehicle to circulate the drive thru lane.