

4.4 Traffic Impact Assessment

The proposed development is estimated to generate the following volumes, with comparison to the existing volumes, shown in the following tables.

	Use	Units / Rooms	AM Trips	PM Trips
Building 1	Hotel	78	31	31
Building 2	Hotel	42	17	17
Building 3	Hotel	49	20	20
Entire site		169	68	68

Table 7 - Development Option 1 Traffic Generation

	Use	Units / Rooms	AM Trips	PM Trips
Building 1	Hotel	78	31	31
Building 2	Hotel	42	17	17
Building 3	Residential	31	6	5
Entire site		151	54	53

Table 8 - Development Option 2 Traffic Generation

	Use	Units / Rooms	AM Trips	PM Trips
Building 1	Hotel	78	31	31
Building 2	Residential	27	5	4
Building 3	Residential	31	6	5
Entire site		136	42	40

Table 9 - Development Option 3 Traffic Generation

	Use	Units / Rooms	AM Trips	PM Trips
Building 1	Residential	36	7	5
Building 2	Residential	27	5	4
Building 3	Residential	31	6	5
Entire site		94	18	14

Table 10 - Table 10 - Development Option 4 Traffic Generation

Given the larger traffic generation rates associated with Hotel rooms rather than residential apartments, it is evident that Option 1, which comprises 100% hotel use, results in the highest and worst-case traffic activity. Option 1 is unlikely to occur in that the development will most likely seek to balance the two uses, however this option has been applied to the intersection model in order to confirm the extent of any traffic impacts.

The data indicates that the projected peak hour generation of vehicles resulting from Option 1 will result in 68 vehicle trips during the AM and PM peak periods.

The development site is proposed on a site with potential existing uses in operation and a peak hour traffic generation of approximately 18 vehicle trips (based on the 18 existing dwellings and commercial building).

If the projected traffic generation of the proposal is compared against the existing land uses, it is evident that Option 1 could generate an additional 50 vehicle trips, while Option 4 (being entirely residential) would result in no net increase in traffic activity.

4.5 Intersection modelling

The results of this analysis are presented in Table 11 below.

Peak Period	Intersection	Level of Service	Average Delay (secs)	Degree of Saturation	95% Queue Length (m) ²
Weekday AM Peak	Stoney Creek Road / Forest Road	B	22.8	0.678	123.2
	Forest Road / Kingsland Road	A	1.4	0.160	4.0
Weekday PM Peak	Stoney Creek Road / Forest Road	C	36.3	0.963	154.4
	Forest Road / Kingsland Road	A	1.1	0.169	2.3

Table 11 - Summary of SIDRA Outputs Results (Post Development)

The results indicate that the worst-case traffic scenario (based on a development comprising entirely hotels) has a very minimal impact on the operation of both intersections, with only very slight changes to the key indicators. It is evident that the alternative options, which comprise a more likely mix of hotel rooms and apartments, will all result in less impact and can be accommodated within the existing road network.

² Resulting 95%-ile queue reported for the approach exhibiting the greatest vehicle queuing.

5 Parking Provision

5.1 Planning Policy Requirements

The parking provision for the Planning Proposal has been established based on the standard practice of reference to published data including:

- Rockdale Council Development Control Plan 2011 (RDCP2011),
- RMS Guide to Traffic Generating Developments (the RMS Guide),
- Institute of Transport Engineers (ITE) Parking Generation,
- Surrounding Council DCP requirements for comparable developments.

5.1.1 Rockdale Council Development Control Plan Requirements

The parking requirements associated with residential flat buildings are presented in Part 4.6 of the DCP as follows:

- 1 space per studio, 1 and 2 bedroom apartments,
- 2 spaces per 3 bedroom apartment,
- Visitor parking is to be provided at a rate of 1 space per 5 dwellings.

For the purposes of the Planning Proposal, it has been assumed that the apartment mix will be in the order of:

- 10% - studios and 1 bedroom apartments
- 80% - 2 bedroom apartments
- 10% - 3 bedroom apartments.

The DCP stipulates that where a parking rate has not been specified, the RMS Guide is to be used to calculate the parking requirements for the proposed development. Alternatively, a parking study may be used to determine the parking.

The table within the DCP does not specify parking rates for hotels, therefore reference is made in line with the DCP and standard engineering practice to alternate parking provision resources including:

- RMS Guide to Traffic Generating Developments,
- Institute of Transport Engineers (ITE) Parking Generation,
- Surrounding Council DCP requirements for comparable developments.

5.1.2 RTA (RMS) Guide to Traffic Generating Developments Requirements

The RMS Guide defines a motel as a building used substantially for overnight accommodation. The guide recommends the number of off-street car parking spaces as:

- 1 space for each motel room, plus
- 1 space per 2 employees.

5.1.3 Institute of Transport Engineers (ITE) Parking Generation

The ITE has published a Parking Generation Guideline, which has been developed upon surveyed information, to guide practitioners on potential parking demands for various types of developments including motels. The ITE Parking Generation guide considers a motel as a place of lodging that provides sleeping accommodation and possibly a restaurant. There is typically little or few other supporting facilities (i.e. as meeting rooms). It is considered the subject development is of similar in nature with the results of the ITE guide providing guidance for the potential parking demand required for the subject motel.

The guide concluded that for a motel:

- The average peak parking demand was 0.71 vehicles per occupied room,
- The 85th percentile peak parking demand of 0.85 vehicles per occupied room.

Based upon this results it can be seen that parking utilisation for motel facilities could be less than the RMS rate of 1 space per room, particularly also giving consideration of the overall utilisation of the motel occupancy which may not be always at 100%.

5.2 Parking Provision Requirements

Application of the parking requirement rates to the development options is summarised in the following Table:

Table 12 - Development Option 1 Parking Requirements

	Use	Units / Rooms	DCP / RMS Rate	Spaces	ITE Rate	Spaces
Building 1	Hotel	78	1	78	0.85	66
Building 2	Hotel	42	1	42	0.85	36
Building 3	Hotel	49	1	49	0.85	42
Entire site		169		169		144

Table 13 - Development Option 2 Parking Requirements

	Use	Units / Rooms	DCP / RMS Rate	Spaces	ITE Rate	Spaces
Building 1	Hotel	78	1	78	0.85	66
Building 2	Hotel	42	1	42	0.85	36
Building 3	Residential					
	1 bed	3	1	3		3
	2 bed	25	1	25		25
	3 bed	3	2	6		6
	Visitors	31	0.2	6		6
Entire site		151		160		142

Table 14 - Development Option 3 Parking Requirements

	Use	Units / Rooms	DCP / RMS Rate	Spaces	ITE Rate	Spaces
Building 1	Hotel	78	1	78	0.85	66
Building 2	Residential					
	1 bed	3	1	3		3
	2 bed	21	1	21		21
	3 bed	3	2	6		6
	Visitors	27	0.2	5		5
Building 3	Residential					
	1 bed	3	1	3		3
	2 bed	25	1	25		25
	3 bed	3	2	6		6
	Visitors	31	0.2	6		6
Entire site		136		153		141

Table 15 - Development Option 4 Parking Requirements

	Use	Units / Rooms	DCP / RMS Rate	Spaces
Building 1	Residential			
	1 bed	4	1	4
	2 bed	28	1	28
	3 bed	4	2	8
	Visitors	36	0.2	7
Building 2	Residential			
	1 bed	3	1	3
	2 bed	21	1	21
	3 bed	3	2	6
	Visitors	27	0.2	5
Building 3	Residential			
	1 bed	3	1	3
	2 bed	25	1	25
	3 bed	3	2	6
	Visitors	31	0.2	6
Entire site		94		122

6 Vehicular Access

The site currently comprised of 18 properties, most having access from the road frontages of Stoney Creek Road, Kingsland Road South and Abercorn Street. This totals 14 driveways, including the Forest Inn car park.

The consolidation of the properties which is likely to happen as a result of this planning proposal will form two sites plus the existing Forest Inn motel. This provides the opportunity to reduce the number of access driveways, which in turn, improves traffic flow of the road frontages, through reduced friction, and also improved pedestrian amenity through limited interaction across the footpaths.

There are several opportunities to provide vehicle access to future consolidated sites;

- Site 1 is likely to remain as the Forest Inn Motel, retaining the existing driveway access from Kingsland Road South.
- Site 2 has a frontage only to Kingsland Road South. The likely consolidation of these three properties will restrict access to this frontage, replacing several existing driveways,
- Site 3 has frontages to Abercorn Street and Stoney Creek Road. Stoney Creek Road is classified as a State Road and under the SEPP Infrastructure new development it is required to access alternative frontages where feasible. In this regard access to Site 3 would be considered appropriate from Abercorn Street, with secondary access from Stoney Creek Road to minimise the impact on Abercorn Street, i.e. to distribute the movements evenly across the network.

Access arrangements will enable access to basements and at-grade parking as well as service areas for larger vehicles. Indicative potential access locations are shown in Figure 13.

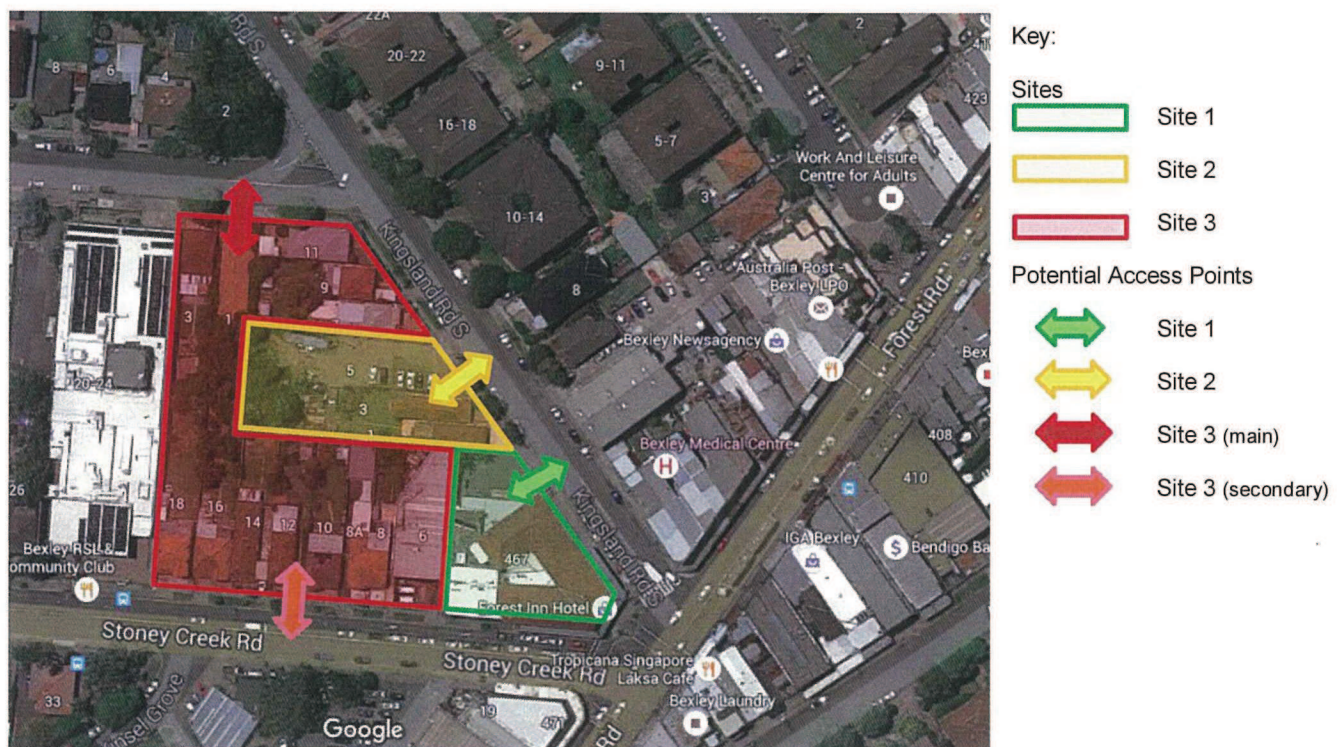


Figure 13 – Indicative Potential Access to Site

7 Conclusion

This assessment has concluded that the Planning Proposal which has the potential to facilitate a maximum development outcome of up to 169 hotel rooms will have minimal impact on the local road network and that a parking provision of up to 169 spaces could be required. Although data from comparable sources indicates that the maximum parking provision could be 144 spaces.

The proposed planning control changes of the properties would enable the development of multiple buildings providing a mix of residential apartments and hotel rooms. The Planning Proposal does not propose a particular mix, however this report presents 4 potential development outcomes ranging from a worst-case scenario of an entire hotel development to a low impact option being entirely residential.

The hotel represents the worst-case in terms of traffic impact and parking requirements as the traffic generation data and parking provision requirements are the highest of the two possible land uses. This assessment has concluded that the surrounding intersections provide sufficient capacity during the AM and PM peak to accommodate the additional traffic activity.

The maximum requirement for parking would be 169 parking spaces based on the hotel option and by applying the RMS requirements (although alternative data subjects this is a high provision). At approximately 32m² per car space, this would require a total area of 5,400m² within the future proposed development. This could clearly be provided and accommodated through a mix of at-grade and basement parking within a single level.