1.3 Instructions on use of the Manual

Example Calculation

The following example considers a planned residential building in Al Ain CBD with a total of 100 apartments. Within the residential building, the breakdown of apartments is:

- 30 no. 1 bedroom apartments
- 30 no. 2 bedroom apartments; and
- 40 no. 3 bedroom apartments.

The expected number of trips to be generated by this residential development in the weekday AM peak hour is estimated as follows:

Step 1: The residential development falls under the following land use classification:

- Land use Group: Residential (300)
- Land use Category: Apartments (310)
- Land use Class: 1 bedroom, 2 bedrooms and 3 or more bedrooms (311,312 and 313)

Step 2: the proposed development is located in the Al Ain CBD area, thus the sub-classifications for the 1 bedroom apartments, 2 bedroom apartments and 3 bedroom apartments will be 311C, 312C and 313C respectively.

Step 3: the independent variable used for these Land use Classes is number of Units.

Step 4: in the weekday AM peak hour period, the vehicle trip generation rate for the 1 bedroom apartments, 2 bedroom apartments and 3 bedroom apartments are 0.38, 0.75 and 1.02 respectively.

Step 5: The total trip generation is calculated as follows:

Total vehicle trips = (0.38 x 30) + (0.75 x 30) + (1.02 x 40)

= (11.4) + (22.5) + (40.8)

= 74.7 two-way vehicle trips

= 75 (rounded to nearest integer)

The split of inbound/outbound trips in the AM Peak for the 1 bedroom apartments, 2 bedroom apartments and 3 bedroom apartments are as follows:

Total inbound trips = (11.4 vehicle trips x 29%) + (22.5 vehicle trips x 35%) + (40.8 vehicle trips x 29%)

= 23.01 vehicle trips

= 23 (rounded to nearest integer)

Total outbound trips = (11.4 vehicle trips x 71%) + (22.5 vehicle trips x 65%) + (40.8 vehicle trips x 71%)

= 51.7 vehicle trips

= 52 (rounded to nearest integer)