

Gosport Household Waste Recycling Centre Grange Road, Gosport

Traffic Statement

Modelling and Analysis of likely queue lengths for the redeveloped HWRC site on Grange Road

1.0 Purpose of the analysis

The purpose of this analysis is to determine the likely traffic queue lengths that would occur following the extension to the existing HWRC.

2.0 Capacity of existing site

- 2.1 The average duration of a customer on site is assumed to be 6 minutes (from May 2007 Alton HWRC customer survey).

(On the assumption that all spaces are full at the start of the hour and take 6 minutes to empty, that the disabled bays are excluded from the calculation and that traffic is free flowing).

- 2.2 The existing site has 18 parking spaces, therefore theoretical capacity of the site is $54/6 \times 18 = 162$ vehicles per hour.

3.0 Traffic counts for existing site

- 3.1 A traffic assessment carried out in 2007 indicated that the busiest hours of the year at Gosport HWRC are on Sundays in August between the hours of 12 and 1pm when approximately 170 vehicles per hour were counted using the site. It is likely that demand was greater than this but as the capacity of the site had been reached this would have manifested itself as queues on the access road and eventually onto Grange Road. The survey showed that the worst queues formed when the soil and rubble bins on the upper area were serviced and customers were thus prevented from entering the site. Otherwise the site coped well with the number of visitors.
- 3.2 A subsequent traffic survey was carried out from 8am on Monday 15th June to 7pm on Sunday 21st June 2009. In this survey, Monday was the busiest day for both customer use of the site and servicing of bins. A maximum of 167 vehicles per hour occurred on the Monday between 10.15am and 11.15am. This was also the maximum number of vehicles per hour counted in the week and is not dissimilar to the maximum noted in the previous survey (170 v/h - see above). The worst case of queuing was reported on the

Monday between 13.23pm and 13.38pm when a total of 19 cars were stacked along the access road and a further 18 cars were queued on Grange Road. Once again, it was reported that the worst queues formed during servicing of the soil and rubble bins on the upper area.

- 3.3 At present there is room on the site and the access road for 19 vehicles to stack before queuing will occur on Grange Road. Therefore, once the demand for the site exceeds $170+19=189$ vehicles per hour (or the traffic flow is disrupted to an equivalent level) traffic will start to queue on Grange Road.

4.0 Estimated traffic counts for the proposed extended site

- 4.1 The proposed layout, shown on drawing number RJ509031/GA01B, provides 20 car parking spaces (2 of which are disabled) and stacking room for 35 cars before queues will extend out onto Grange Road. This is effectively an 84% increase ($35/19$) in the stacking capacity over that of the original layout. Hence, following implementation of the proposals a traffic demand exceeding $(170+35)=205$ vehicles per hour would have to be produced before queues began to form on Grange Road. This is equivalent to an traffic increase in the busiest hour traffic count of 20% ($205/170$).
- 4.2 With the new dedicated customer vehicle entrance and exit lanes there will no longer be the issue of conflict between the servicing vehicles and customers exiting the site from the lower area, therefore improving health and safety at the site and removing the problem of exit queues.
- 4.3 The need to temporarily stop the customer traffic flow during servicing of the soil and rubble bins will no longer be a problem as they will be situated on the new upper storage areas at 1.1m high and will always be serviced from the lower servicing area.

5.0 Vehicle swept path tracking for proposed extended site

- 5.1 The proposed new public entrance road, stacking lane and turning circle have been analysed using Autotrack for the following vehicles:

7.5t box van
Large private car with 3m trailer attached

These vehicles are able to negotiate the bend in the entrance road and the turning circle.

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