

# **Proposed Campervan Facility North Kessock, Inverness**

## **Traffic Overview**

24<sup>th</sup> February 2020



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**Sam Shortt Consulting Ltd., 42 Westerlea Drive, Bridge of Allan, FK9 4DQ**

**Tel. 07765 277 668**



## **1 Introduction**

- 1.1 The Highland Council proposes to re-develop parts of the existing North Kessock A9(T) westbound service area that is located just west of the Kessock bridge. The proposal consists of providing more formal overnight stay facilities for campervans in the form of 30 serviced pitches. The service area already contains parking, toilet, picnic and café/bakery facilities and attracts a range of vehicle types including cars, caravans, campervans, light and heavy goods vehicles.
- 1.2 The existing and proposed site plans are shown in Figure 1.1 and it can be seen that there will be no change to the service area A9(T) entry and exit arrangements nor the existing toilet and refreshment facilities. The only material change will be to the existing east and west picnic and parking areas consisting of improved hard standings and the provision of caravan/campervan pitch service points. It is intended that these facilities are used for short term overnight stop overs and not for long stay holidays.
- 1.3 This Briefing Note considers the adequacy of the existing exit arrangements as requested by Transport Scotland (Development Management).

## 2 Existing Service Area Traffic Flows

- 2.1 Automatic Traffic Counter surveys were undertaken at the service area entry and exist junctions from 24<sup>th</sup> January to 30<sup>th</sup> January 2020. The detailed results of this survey exercise will be presented under separate cover. It was observed that queuing vehicles on the exit resulted in the ATC recording very slightly more traffic than at the entrance junction (424 vehicles as opposed to 409 vehicles, 24 hr. virtual day) and therefore the inbound data (409 vehicles) has been used in the following calculations.
- 2.2 Data from the National Traffic Data System (NTDS) was used to determine a factor to apply to the above January ATC to arrive at an Annual Average Daily Traffic (AADT) equivalent. The NTDS data was collected east of the service facility in an eastbound and westbound direction at the location shown in Figure 3.1.

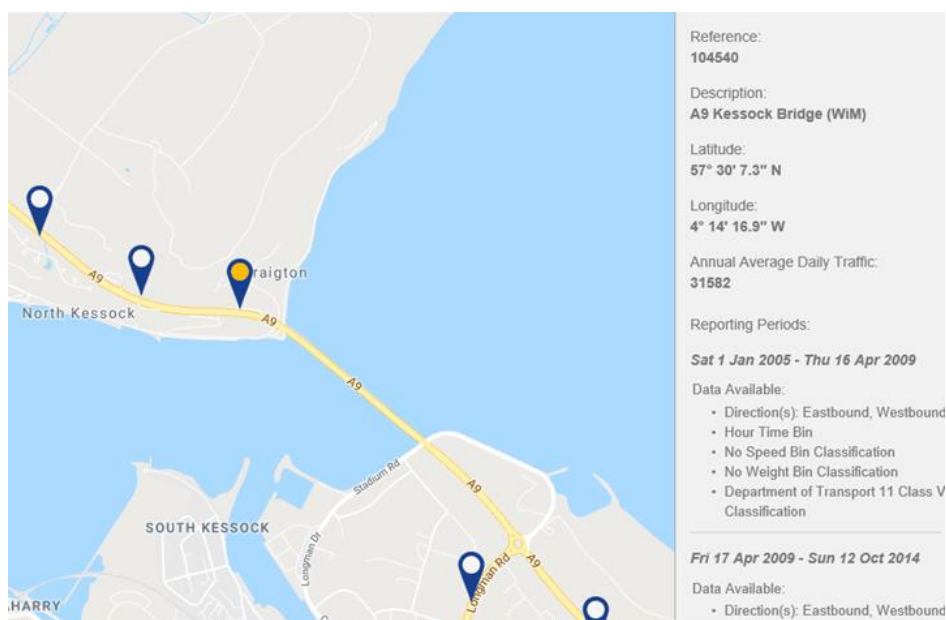


Figure 3.1: NTDS Survey Location

- 2.3 Inspection of the data revealed that the January to AADT factor for the A9(T) at this location is 1.11.
- 2.4 It was then assumed that the seasonal variation of inbound service area traffic would reflect the same variation as the mainline A9(T) flow and therefore the inbound AADT is 454 vehicles (409 x 1.11).



#### 4 Future Development Traffic

- 4.1 The proposal constitutes an improvement of an existing service facility and will deliver 30 higher standard pitches when compared to the existing arrangements. The facility provides the opportunity for existing users to stay overnight if they chose to do so.
- 4.2 Users are likely to access the facilities in the evening and leave in the morning over say a 1 – 2 hour period. Based on the above provision of 30 spaces, this is unlikely to result in material change in the operation of the entry and exit junctions for the following reasons.
- 4.3 Reference has been made to Visit Scotland's Scottish Accommodation Occupancy Survey Annual Report 2018. Table 11 in the report shows how the annual average pitch occupancy in the Highlands was 27.37%. When this factor is applied to the proposed 30 spaces, the average occupancy throughout the year equates to 8 spaces. This is considered to be very much a worst case and would only occur if all trips are "new" trips which is considered to be unlikely. If all "new", the additional trips would only add 2% to the existing inbound traffic flow (454 AADT) – this is not considered to represent a material change.



## 5 Transport Scotland Observations

- 5.1 TS have advised that one concern would be the intensification of use of the northbound exit onto the A9(T), particularly by caravans and such, given there is no existing merging taper.
- 5.2 TS have noted that caravans and campervans, as well as HGVs, already use the rest area and historically there is no history of accidents at either the entry or exit to the existing layby. TS have stated that they need to be satisfied that a merging taper is not required if there is a material intensification of use.
- 5.3 TS has advised that the DMRB standards for rest areas are set out in CD169, although this essentially refers you to either CD 123 (priority) or CD 122 (grade separated) for the junction forms.
- 5.4 CD 123 (priority junctions) advises (para. 5.23 etc.) that for merging tapers:
- Merging tapers shall only be used where the major road is a dual carriageway;
  - Where the major road is a dual carriageway with a design speed of 85 kph or above, merging tapers shall be provided where:
    - 1) the volume of left turning traffic in the design year exceeds 600 vehicles AADT;
    - 2) the volume of left turning traffic in the design year exceeds 450 vehicles AADT and the percentage of HGVs exceeds 20%; or
    - 3) the volume of left turning traffic in the design year exceeds 450 vehicles AADT and the merging taper is for an up-gradient of greater than 4%.
  - Merge tapers may be provided at dual carriageway priority junctions with lesser flows and/or lesser HGV percentages. NOTE Merge tapers can be particularly useful where there is expected to be a high seasonal use by large or slow moving vehicles.
- 5.5 The A9(T) at North Kessock is a dual carriageway with a design speed of 85kph and so these conditions are met.
- 5.6 The other remaining criteria are considered as follows.

“The volume of left turning traffic in the design year exceeds 600 vehicles AADT”

- 5.7 It has been shown earlier that the forecast demand will only be  $454 + 8 = 462$  vehicles AADT worst case and assumes all campervan usage are based on new trips and not derived from existing demands.

“The volume of left turning traffic in the design year exceeds 450 vehicles AADT and the percentage of HGVs exceeds 20%”

- 5.8 The volume of left turning traffic (462, unlikely worst case scenario) will only just exceed 450 vehicles, i.e. by 3%. The January survey results indicate 85 HGVs and therefore the equivalent AADT is 94 HGVs ( $85 \times 1.11$ ), i.e. 21% of the total inbound AADT flow (454 vehicles).

“The volume of left turning traffic in the design year exceeds 450 vehicles AADT and the merging taper is for an up-gradient of greater than 4%”.

- 5.9 As noted above, left turning traffic will only just exceed 450 vehicles (462 vehicles AADT). It is understood that the gradient is less than 4% given that the following shows how the A9(T) runs parallel to the 30m. contour as shown in Figure 5.1 below.

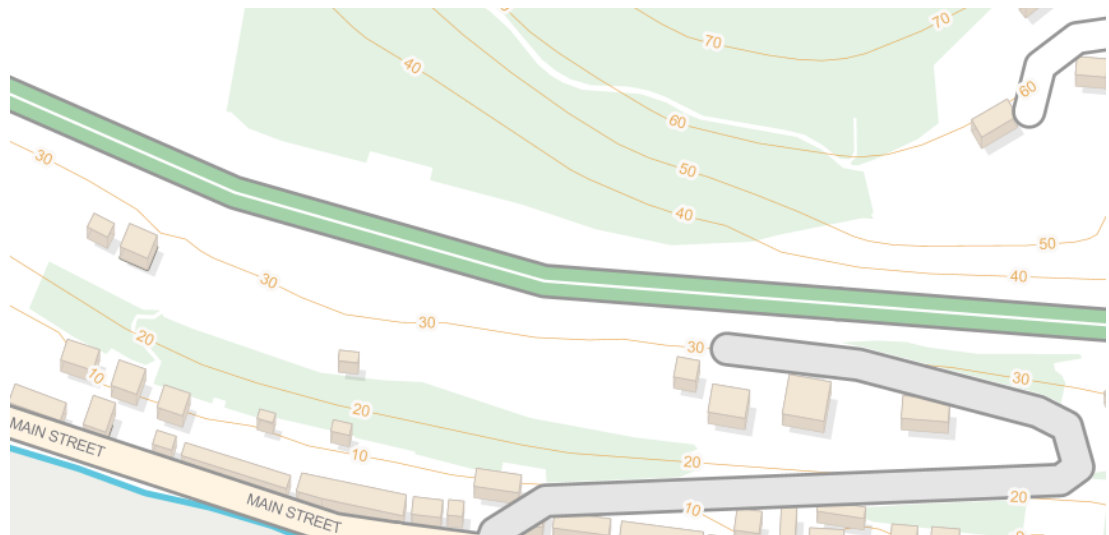


Figure 5.1: A9(T) Gradient



- 5.10 Whilst some of the above threshold criteria for the provision of a merge have been exceeded this is only by a very small margin i.e. by 3% as far as overall traffic volumes are concerned and 1% as far as HGV content is concerned. The 3% increase assume all future campervan demand is new and not derived from the existing movements. This is not considered to be a material difference sufficient enough to warrant the provision of a merge slip.
- 5.11 Transport Scotland has also advised previously that there is no history of accidents at either the entry of exit to the existing layby. It is therefore suggested that a “leave well enough alone” strategy should then be adopted given that the outcomes of any change are not always 100% predictable.