Memo - Notification 11 April 2024

To: Vanessa Leddra, Policy Planner

From: Martin Peake, Director, Progressive Transport Solutions Limited

Subject: Notice of Requirement for a Designation of Land, NZ Transport Agency Waka Kotahi, Bombay Commercial Vehicle Safety Centre, 253 Mill Road, Bombay Auckland

1.0 Introduction

1.1 I have undertaken a preliminary assessment of the information supplied in relation to traffic and transport effects for the Notice of Requirement for a designation of land at 253 Mill Road, Bombay for a Commercial Vehicle Safety Centre (**CVSC**) lodged by NZ Transport Agency Waka Kotahi (**NZTA**).

1.2 In writing this memo, I have reviewed the following documents:

a) Traffic Impact Assessment, WSP New Zealand Ltd, 21 August 2023

b) Assessment of Environmental Effects, WSP New Zealand Limited, 24 October 2023

1.3 In addition to the above documents, Section 92 Requests for Further Information were made dated 30 November 2023 and 29 February 2024 and responses were received on 26 January 2024 and 18 March 2024, respectively. This additional information has been reviewed and a meeting was held with the Requiring Authority and their consultants on 27 March 2024. Following that meeting, additional information was received by email on 4 April 2024 to answer queries arising out of the responses to the Section 92 Requests for Further Information.

1.4 This memo sets out the preliminary assessment of the information received and consideration of effects in order for the Report Planner to make a decision on notification of the Notice of Requirement application.

2.0 Overview of Proposal

2.1 The site is located at 253 Mill Road and is proposed to be accessed from Great South Road. Neither Great South Road nor Mill Road are classified as Arterial roads in the Auckland Unitary Plan (**AUP**).

2.2 The site is to be used as a Commercial Vehicle Safety Centre (**CVSC**). The purpose of the CVSC is for the police to undertake inspections of heavy commercial vehicles (**HCVs**) to check safety and compliance with relevant standards, including weight limits, security of loads and general safety of vehicles.

2.3 Vehicles would be directed from State Highway 1 (**SH1**) - Southern Motorway by way of electronic signage via either the northbound or southbound motorway exit ramps. They would travel via the Mill Road / Great South Road roundabout and enter via Great South Road. Vehicles would generally exit back onto the motorway. Vehicles would be selected for inspection by using automatic weigh-in-motion detection on the motorway coupled with Automatic Number Plate Recognition (**ANPR**) which would identify the details of the vehicle and display the registration number on a variable message sign directing them to the CVSC.

2.4 It is understood that the site would accommodate up to six HCVs vehicles at any one time.

2.5 Access to the site would be provided via two vehicle crossings on Great South Road. The northern vehicle crossing would be used for entry and the southern vehicle crossing would be used for exiting.

2.6 Flush median markings are proposed to be installed on Great South Road to allow trucks to wait out of the through flow of traffic on Great South Road. No Stopping At All Times restrictions (broken yellow lines) are proposed on both sides of Great South Road to improve visibility along the frontage of the site from the vehicle crossings and to ensure there is no conflict with vehicles turning to and from the site.

2.7 There is an existing vehicle crossing that serves the site which provides access to buildings on the eastern side of the site. This vehicle crossing is to be relocated to the north along the proposed northern boundary of the CVSC site.

3.0 Preliminary Assessment

3.1 Outlined below is the preliminary assessment of the traffic and transport related aspects of the proposals.

Trip Generation and Distribution

3.2 Section 4.1 of the Traffic Impact Assessment (**TIA**) states that trip generation from the site has been based on the operation of the CVSC sites in Bay or Planty and near Christchurch which identifies that around 2.5% of HCV traffic passing the site would be identified and pulled over.

3.3 The number of vehicles expected to be pulled over has been derived by applying 2.5% to the HCV traffic estimated to be travelling along SH1 past the site. This equates to 17 commercial vehicles being pulled over per hour[1].

3.4 TIA Section 4.2 states that the distribution of HCVs travelling to the site from the motorway would be split 50/50 between the north and southbound ramps.

3.5 TIA Section 4.2.1 outlines that there would be a maximum of 12 staff on site with an average of 6 to 8 staff per day with limited number of visitors. Nine staff car parks are to be provided with four visitor spaces.

Analysis

3.6 The calculation of the trip generation is considered reasonable as it is based on actual experience at other CVSC sites. I note that there would be additional vehicles associated with the operation of the site (e.g. cars for police and other operatives), however, I consider that these would be unlikely to be entering or leaving the site at the peak operational times of the site. These vehicles are most likely to be light vehicles (cars).

3.7 The distribution of the trucks from the motorway is also considered reasonable.

Traffic Modelling

3.8 TIA Section 4.3 outlines the traffic modelling approach to assessing the effects of the operation of the CVSC on the motorway interchange, with modelling assumptions and analysis in Section 6.1. The assessment concentrates on the PM peak operation of the network as this is when there is most traffic utilising the off-ramps.

3.9 Since lodgement of the application, NZTA has confirmed that the interchange will be signalised and this is expected to commence mid-2024 and be complete by the end of

[1] Refer to Section 92 Response 26 January 2024, Section 3.1 (RFI12).

2024. Traffic modelling of the proposed interchange arrangement (without the CVSC) has been provided with Section 92 responses[2].

3.10 Traffic modelling of the interchange with the CVSC has not been provided. It is understood that this is because the traffic model of the interchange was not available to the Requiring Authority's team preparing the traffic assessment. However, based on the modelling results of the signalised interchange, the applicant has undertaken a desktop assessment of the potential effects on queuing with the forecast additional traffic[3].

3.11 The traffic modelling of the signalised interchange (without the CVSC) shows that the interchange would operate over capacity on both the north and southbound off-ramps. Queues are forecast to be around 265m on the southbound off ramp and 140m on the northbound off ramp. Neither of the queues would reach the motorway main carriageway. The interchange is forecast to operate at a poor level of service.

3.12 The desktop assessment provided on the effects of the CVSC on the operation of the interchange concentrated on the queuing on the northbound off-ramp.

3.13 The assessment concluded that with an additional 9 HCV (50% of the forecast 17 HCV), that the queue would increase by 88m, The total queue was not expected to extend back onto the motorway as the northbound off-ramp is 535m long.

3.14 The analysis concluded that with the additional CVSC traffic, that this would have a minimal impact on the ramp operation.

Analysis

3.15 As the interchange is to be signalised, I consider that it is appropriate for the traffic effects of the CVSC to be assessed with the traffic signals in place rather than assess the interchange in its current form.

3.16 I concur with the approach to only assess the interchange in the PM peak period as this is when the interchange is busiest, particularly on the motorway off-ramps.

3.17 Traffic modelling of the signalised interchange with the CVSC has not been undertaken. Ideally, given the fact the interchange is over capacity and operates poorly without the CVSC, the interchange with the CVSC should also have been modelled. However, I acknowledge that the number of additional vehicles with the CVSC is relatively low on each ramp (around 9 vehicles per hour) and I accept the methodology with the desktop analysis.

3.18 I have reviewed the analysis for the northbound off-ramp. The analysis provided of queue lengths (and results summarised in paragraph 3.13) is based on the traffic modelling with the existing intersection and not with the interchange signalised. Furthermore, the assessment that was provided assumes that the length of an HCV vehicle is 15m whereas semi-trailers are typically 17.5m to 19.45m long, and HMPV trucks can be 23m in length.

3.19 I have undertaken a similar analysis as provided in the Section 92 response but based on the modelling results with the interchange signalised and using the worst case of the longer HMPV trucks. Based on 9 trucks 23m in length (and assuming a space of 2m between vehicles), this would result in a potential additional queue of 225m. Therefore, with the forecast queue length in the right turn lane on the ramp of 140m the addition to the queue with the HCV would equate to a queue length of 365m. This queue would not extend back to the motorway lane which 535m from the traffic signal limit line However, it would extend beyond where the ramp diverges into the motorway

[2] Refer to Section 92 Response 26 January 2024, Section 3.8 (RFI19).
[3] Refer to Section 92 Response 18 March 2024, Item RFI16

service station and thus impede access to the left hand lane from the ramp to Mill Road.

3.20 The analysis in paragraph 3.19 does not take into account the potential increase in queuing due to vehicles being blocked access to the left turn lane onto Mill Road. Therefore queues could extend further. Some motorists may be tempted to route through the motorway service station to travel west on Mill Road rather than wait in the queue on the ramp. The applicant has noted that some motorists may already utilise this route.

3.21 Analysis for the southbound off-ramp has not been provided. Therefore, I have assessed the southbound off-ramp in the same way as the northbound off-ramp. The left turn off-ramp queue with the interchange signalised and without the CVSC, is forecast to be 9m long. Applying the 225m of queue length with all 9 HCV equates to 234m. The ramp is 300m in length, and thus would not block to the main line. However, I note that the right turn queue is forecast to be 265m long. The ramp narrows from two lanes at the signalised limit line to a single lane. Site observations for the existing situation are that motorists queue in such a way that traffic can either queue in two lanes or vehicles can pass another queued vehicle. However, as the CVSC traffic will be large commercial vehicles, these vehicles may not always be able to pass another queued vehicle. This could result in intermittent queuing on the ramp that has the potential to block back onto the motorway main line, thus potentially causing a safety risk.

3.22 From further information provided on 4 Aril 2024, clarification has been provided around the monitoring of the ramps and the operation of the site. This indicates that monitoring would identify if there is potential risk of queues extending back onto the motorway and the diversion of HCVs from the motorway to the CVSC site could be stopped. I understand that this could be a manual or an automated process.

3.23 In summary, I agree that with the addition of the CVSC traffic, traffic queues should not extend back to the northbound motorway and create safety and operational issues. There are some circumstances where queues could extend onto the southbound motorway. However, I consider that subject to appropriate procedures and processes put in place by the Requiring Authority for the monitoring of the ramps and curtailing the diversion of HCVSs to the CVSC site before queues reach a critical point, this risk can be managed.

Site Access Arrangements

3.24 The proposed access from Great South Road will include two vehicle crossings which include an entry and exit at the northern and southern vehicle crossings, respectively.

3.25 The width of the vehicle crossings for the CSVC site exceed the maximum width permitted in the AUP. The vehicle access widths were reduced from those presented in the TIA as a result of a review based on Section 92 Request for Further Information[4].

3.26 Vehicle tracking has been provided for the site accesses and the circulation around the site and these have been used to determine the width of the vehicle crossings at the site boundary.

3.27 A right turn bay was originally proposed on Great South Road but this has been amended to a flush median so that the right turn bay does not result in potential conflicts with vehicles turning right to access the Shri Guru Ravidas Temple on the western side of Great South Road[5]. The revised arrangement aligns with the

[4] Refer to Section 92 Response 26 Janurary2024 Section 3.15 (RFI26)
[5] Refer to Section 92 Response 26 Janurary2024 Section 3.16 (RFI27)

assessment provided in TIA Section 6.3.2 with regards to the warrants for turning bays at intersections.

3.28 The existing vehicle crossing for the site is to be realigned to the north along the northern boundary of the CVSC site.

3.29 An assessment of the visibility at the vehicle crossings has been undertaken as a desktop exercise and from an assessment on site. The assessment is based on the requirements of AustRoads Standards for Approach Site Distance (**ASD**) and Safe Intersection Sight Distance (**SISD**) Details of the visibility assessment, including the visibility from the existing vehicle crossing that is to be realigned is presented as Attachment G to the 18 March 2024 s92 Response and in additional information provided by email on 4 April 2024. The assessment has taken into account the observed approach speeds and the vertical and horizontal alignment of Great South Road.

3.30 The visibility assessment concludes that visibility from all vehicle crossings meet the appropriate standards.

Analysis

3.31 Based on the revised access arrangements for the CVSC site included with the Section 92 Response dated 26 Janurary2024 as shown on drawing C-2001 Rev0B, I consider that the access is appropriate.

3.32 Notwithstanding, the visibility assessment of the realigned vehicle crossing to the northern boundary of the site shows that there is a short fall in the SISD to the north where 212m of visibility is required but only 190m is available. The ASD on the northern approach to the vehicle crossing exceeds the requirement (141m required with 190m available). Whilst there is a short fall, I do not consider that this would necessarily result in significant safety issues as the vehicle crossing is likely to be low volume and will be used by regular users who would be accustomed to the vehicle access.

3.33 I do not consider that the proposed access arrangements would have an adverse effect on other parties. The introduction of the flush median would potentially be a positive benefit for access to the Shri Guru Ravidas Temple by providing a location where motorists can wait to turn right out of the way of through vehicles.

Parking

3.34 Parking along both sides of Great South Road is to be prohibited by No Stopping At All Times (**NSAAT**) restrictions (broken yellow lines). These markings are required to provide visibility from the vehicle crossings and to ensure the safe passage of HCVs travelling to and from the site.

3.35 The TIA discusses parking in relation to the effects on the Shri Guru Ravidas Temple. It states that there is sufficient on-site capacity to accommodate visitor parking but that during events there may be some overflow parking onto Great South Road. Further analysis was provided in a Section 92 response[6] that states that based on advice from the temple on the maximum number of guests at major events, number of car parks available on the temple site and based on an assumption from the Requiring Authority's traffic engineers of the vehicle occupancy, that there are sufficient spaces available to accommodate parking demand within the Temple car park for large events.

Analysis

[6] Refer to Section 92 Response 26 Janurary2024 Section 3.11 (RFI22)

3.36 I concur that parking would need to be removed to ensure the safe passage of HCVs to the CVSC site and to ensure visibility is not impeded along Great South Road.

3.37 Based on the information provided, I consider that the introduction of the NSAAT should not impact on the operation of the temple during large events.

3.38 I note that introduction of the NSAAT will require a Traffic Resolution Report and Plan to be prepared and approved by Auckland Transport's Transport Controls Committee (**TCC**) to allow the proposed NSAAT restrictions to be legally marked and enforced. As part of this process, consultation on the introduction of the NSAAT restrictions will be required with affected parties, including the temple. This process is separate to the Resource Management Act process for the Notice of Requirement, although I note that notification during resource consent applications is often used to demonstrate consultation has been undertaken and how that feedback has been taken into account.

Safety Assessment

3.39 TIA Section 6.7 outlines an assessment of the safety of the existing intersections and roads in the vicinity of the site.

3.40 The assessment identifies right turning crash patterns at the SH1 Northbound off-ramp that may be exacerbated by the additional HCVs travelling to the site. The TIA notes the potential signalisation of the interchange which would improve this issue. The signalisation has now been confirmed by NZTA and therefore this should address this safety issue.

3.41 At the other key intersections (SH1 Southbound off-ramp, Mill Road / Great South Road roundabout) and on Mill Road and on Great South Road between the Mill Road roundabout and the CVSC site, the TIA indicates that there are no other safety issues that would be exacerbate safety concerns due to the CVSC.

Analysis

3.42 I concur with the analysis of the safety of the existing intersections and roads based on the existing crash records.

Construction Traffic

3.43 An assessment of the effects of construction traffic is presented in the Section 92 Response dated 26 Janurary2024[7]. The assessment indicates that at the height of construction there would be around 35,000 tonnes of earth to be removed from the site over a 20 week period which would equate to around 8 trips per hour (4 movements inbound and 4 movements outbound).

3.44 The TIA considers that the impact of construction traffic (trucks) would be less than minor. Temporary Traffic Management Plans would be prepared to manage the movement of trucks during the construction period and that this will be guided by the actual construction methodology.

3.45 The TIA notes that the local roads would remain open but that short term closures may be required for specific activities to be undertaken safely. It states that these would be overnight when traffic volumes are low minimising disruption to road users.

Analysis

3.46 I consider that the assessment of the construction traffic effects to be reasonable and appropriate and that the effects would be appropriately managed through established processes. I would anticipate that resource consent conditions are likely to require a Construction Traffic Management Plan due to the extent of works. The traffic management plans would need to consider the routeing of trucks and any restrictions

[7] Refer to Section 92 Response 26 Janurary2024 Section 3.12 (RFI23)

on timing of truck movements necessary to avoid operational or safety issues on the adjacent road network.

4.0 Summary of Assessment

4.1 Based on my assessment of the information lodged, Section 92 responses and supplementary information provided by email, I consider that there is sufficient information available to assess the traffic and transportation effects of the proposed Notice of Requirement.

4.2 Based on my view of the documentation, I consider that the traffic effects are generally confined to operation of the motorway interchange with the addition of heavy vehicles travelling to/from the CVSC site. The interchange is under the control of the Requiring Authority who has responsibility to manage the interchange operation and with appropriate management procedures the effects of the CVSC on the interchange.

4.3 I note that on Great South Road, No Stopping At All Times restrictions are proposed on both sides of the road adjacent to the site. These would prohibit parking on the road. I note that these restrictions would require approval by Auckland Transport's Transport Controls Committee for the markings to be legally installed and enforced. Whilst the assessment does not indicate that this would affect adjacent landowners or occupiers, as part of the Auckland Transport approval process, consultation with adjacent land owners or tenants would be required. I acknowledge that this is outside of the RMA process for the Notice of Requirement.

Martin Peake

11 April 2024