

**BEFORE A BOARD OF INQUIRY  
EAST WEST LINK PROJECT**

**UNDER**

Resource Management Act 1991

**AND**

**IN THE MATTER**

Notices of requirement for designations and resource consent applications by the New Zealand Transport Agency for the East West Link Project.

---

**EXPERT EVIDENCE OF BRYCE LAURENCE HALL ON BEHALF OF T&G  
GLOBAL LIMITED**

**TRAFFIC**

**22 MAY 2017**

---

---

**Russell  
McAugh**

B S Carruthers / S H Pilkinton  
P +64 9 367 8000  
F +64 9 367 8163  
PO Box 8  
DX CX10085  
Auckland

## TABLE OF CONTENTS

EXECUTIVE SUMMARY .....	3
1. INTRODUCTION .....	4
Experience and qualifications .....	4
2. CODE OF CONDUCT .....	5
3. SCOPE OF EVIDENCE .....	5
4. T&G SITE TRAFFIC ENVIRONMENT .....	5
Recent reconfiguration and redevelopment works .....	5
Current Site operations.....	6
5. ADVERSE TRAFFIC EFFECTS OF THE PROJECT ON INTERNAL SITE TRAFFIC ARRANGEMENTS .....	9
6. ADVERSE EFFECTS OF THE PROJECT ON SITE ACCESS .....	13
Construction Effects .....	13
Post construction effects .....	16
7. CONCLUSION.....	16

## EXECUTIVE SUMMARY

- A. This statement provides traffic planning evidence in support of T&G Global Limited's ("**T&G**") submission on the East West Link Proposal ("**Project**").
- B. The Project will have adverse effects on both the internal traffic circulation within T&G's 1 Clemow Drive and 2, 4 and 6 Monahan Road in Mount Wellington ("**Site**"), and on the Site's external access and egress arrangements.
- C. Internally, the Project will effectively render the Fruit Case Company (now trading as Viscount) bin and crate washing business and T&G's fruit fumigation and ripening plant inoperative, as the access to the rear of these facilities will be blocked. It is not possible to re-route the trucks making deliveries to these facilities because of Ministry for Primary Industry ("**MPI**") requirements to separate inbound imported produce.
- D. It is also not possible to relocate any of the facilities that will need to be demolished as a result of the Project to the remainder of the Site that is not directly affected by the Project works, without in turn seriously adversely affecting the parking and traffic circulation demands of the Site's core produce market operation.
- E. Externally, the Transport Agency's construction site access point will be adjacent to T&G's access point on Monahan Road, which is critical to the functioning of the Site. There is a high likelihood of conflicts between T&G traffic and Transport Agency construction traffic, due to the proximity of the accesses and the fact that both activities will likely generate peak traffic movements over the same periods.
- F. Overall, I consider that the Project in its current form will have significant adverse effects on the Site's internal traffic environment and will have potential significant effects on its external access / egress arrangements.

## 1. INTRODUCTION

- 1.1 My full name is Bryce Laurence Hall. I hold a New Zealand Certificate in Engineering (Civil) and a Bachelor of Engineering (Civil) from the University of Auckland. I have a Master of Business Administration from Deakin University in Australia, a Master of Traffic Engineering from Monash University in Australia, and Master of Transport Planning also from Monash University. I am a Chartered Professional Engineer, a Member of the Institute of Professional Engineers New Zealand, and a Member of the United States Institute of Transportation Engineers.
- 1.2 I am a director at Traffic Planning Consultants Limited. I have been with TPC for 22 years. Prior to this, I held roles with Auckland City Council and Mount Eden Borough Council.

### Experience

- 1.3 Some of my key relevant project experience includes:
- (a) Lead traffic engineer for the development of the New Zealand International Convention Centre, which is currently under construction.
  - (b) Lead traffic engineer for the development of the Fonterra head office in the Wynyard Quarter area.
  - (c) Lead traffic engineer for the rezoning of the Scott Point area to enable up to 3,000 houses to be developed.
  - (d) Lead traffic engineer for the redevelopment of the ASB Tennis Centre at Stanley Street.
- 1.4 In 2014, I was engaged by T&G Global Ltd ("**T&G**") to provide traffic engineering advice on a reconfiguration of T&G's site at 1 Clemow Drive and 2, 4 and 6 Monahan Road in Mount Wellington ("**Site**"). As such, I am very familiar with the internal traffic and circulation provisions and requirements for the T&G site. I am also very familiar with the Site's access and egress requirements in relation to the surrounding local roading network.

## 2. CODE OF CONDUCT

- 2.1 I confirm I have read the Code of Conduct for Expert Witnesses 2014 contained in the Environment Court Practice Note and I agree to comply with it. My qualifications as an expert are set out above. I confirm that the issues addressed in this brief of evidence are within my area of expertise, except where I state I am relying on what I have been told by another person. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

## 3. SCOPE OF EVIDENCE

- 3.1 This statement of evidence addresses the following:
- (a) The redevelopment of the Site in 2014 and its existing internal traffic environment and access / egress arrangements.
  - (b) The adverse effects of the New Zealand Transport Agency's ("**Transport Agency**") proposed East West Link ("**Project**") on the Site's internal traffic environment (which is currently fully optimised).
  - (c) The adverse effects of the construction and operation of the Project on the Site's access / egress arrangements.
  - (d) NZTA's evidence on the traffic effects of the Project.

## 4. T&G SITE TRAFFIC ENVIRONMENT

### Recent reconfiguration and redevelopment works

- 4.1 As I noted earlier, I was engaged by T&G to provide expert traffic engineering advice on the reconfiguration and redevelopment of the Site in 2014. Mr Keaney describes the redevelopment and reconfiguration works, which I do not repeat here.
- 4.2 My role in the works was to advise on the reconfiguration of the Site's internal traffic operations, including truck and customer parking areas, bearing in mind the competing needs to:

- (a) Provide for all the reconfigured / relocated operations as described by Mr Keaney. A key aspect of this was to provide for the relocation of the Fruit Case Company, now trading as Viscount<sup>1</sup>, a bin and crate washing business onto the T&G Site. The effective operation of this facility is to a large degree dependent on the efficient delivery and pick-up of bins and crates from the facility by trucks and other commercial vehicles.
  - (b) Optimise both the operational and health and safety performance of the Site. A key aspect of this was to provide for the efficient and safe separation of customer and staff car parking and pedestrian access ways, from the internal flows of trucks and other commercial vehicles within the Site.
- 4.3 The development in 2014 of the Clemow Drive access for cars was also critical for achieving a significantly improved level of operational and health and safety performance.
- 4.4 One of the key drivers of this change was the desire to separate staff traffic movement (usually cars) from truck traffic movement to simplify movement around the Site and to minimise the potential for conflict points to occur within the Site.
- 4.5 If the Clemow Drive vehicle access were to be closed, even temporarily, then it would be necessary for light vehicles to mix with heavy vehicles internally on the Site, potentially leading to Health and Safety issues that could not be easily mitigated.

### **Current Site operations**

- 4.6 The Site caters for a range of local and international produce market activities, with domestic and international produce coming into the Site being treated (where necessary) and then sold to customers through the produce market for onward distribution.

---

<sup>1</sup> I understand this facility is operated by Viscount FCC Limited, an indirect subsidiary of the Australian listed entity, Pact Group Holdings Limited trading as Viscount, which leases the building from T&G.

4.7 Mr Keaney's evidence describes the current operations and configuration at the Site. **Attached** at **Appendix A** to his evidence is a plan detailing operations at the Site and the location of its parking, loading and traffic manoeuvring areas. These facilities include:

- (a) Visitor and staff parking to service the Group Head Office operations.
- (b) Visitor and staff parking to service the Fruit World head office operations.
- (c) Customer parking for the produce market.
- (d) Separate van and truck parking for the produce market and fruit fumigation and ripening facility.
- (e) Separate loading areas for the produce market, the Viscount bin and crate washing facility, and the fruit fumigation and ripening facility.

4.8 To provide an indication of the current traffic movements to and from the Monahan Road vehicle access to the Site, I arranged for traffic counts to be carried out on Monday 15 May 2017 between 3:00am and 4:00pm. The results of these traffic counts are shown in Figure 1.

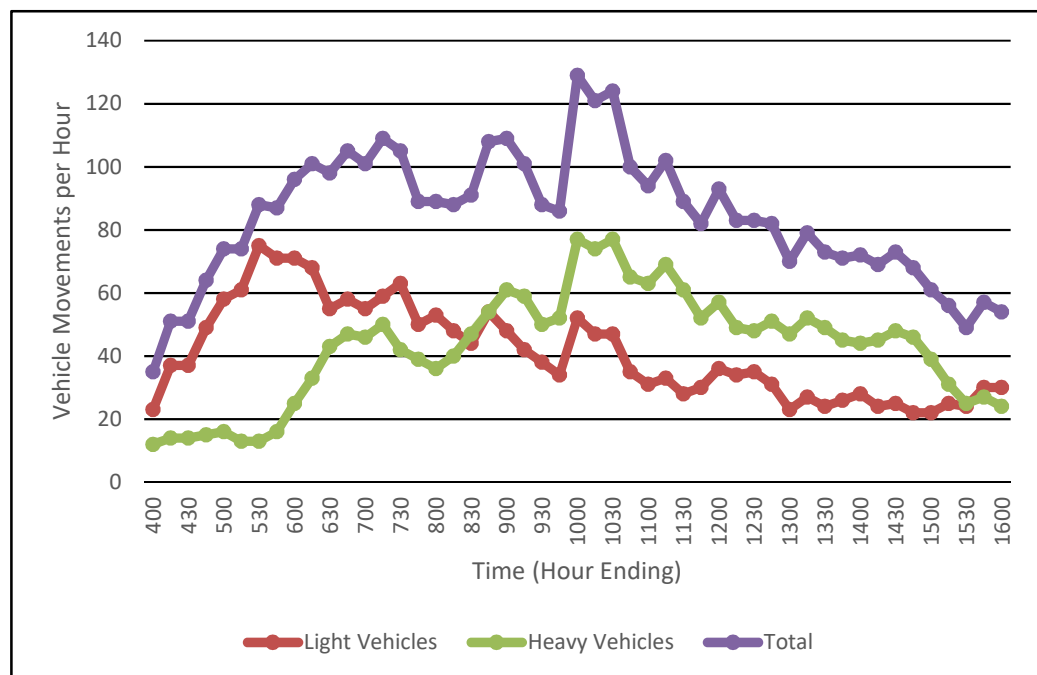


Figure 1 – T&G Monahan Road Traffic Counts

- 4.9 Traffic usage of the Monahan Road vehicle access varied between about 40 and 130 traffic movements per hour over the survey period with a peak around 10:00am.
- 4.10 Between about 6:00am and 1:30pm, traffic movements exceeded 80 traffic movements per hour. The “heavy vehicle” movements (single unit trucks and truck and trailer units) varied between about 40 and 80 truck movements per hour between 6:30am and 3:00pm.
- 4.11 Thus, over the course of the survey period there is at least 1 vehicle and up to 2 vehicles entering or exiting the Monahan Road vehicle access to the Site every minute.
- 4.12 I have depicted the movement of vehicles within the Site in Figure 2 below. I have also **attached** a larger version to my evidence as **Appendix A**.

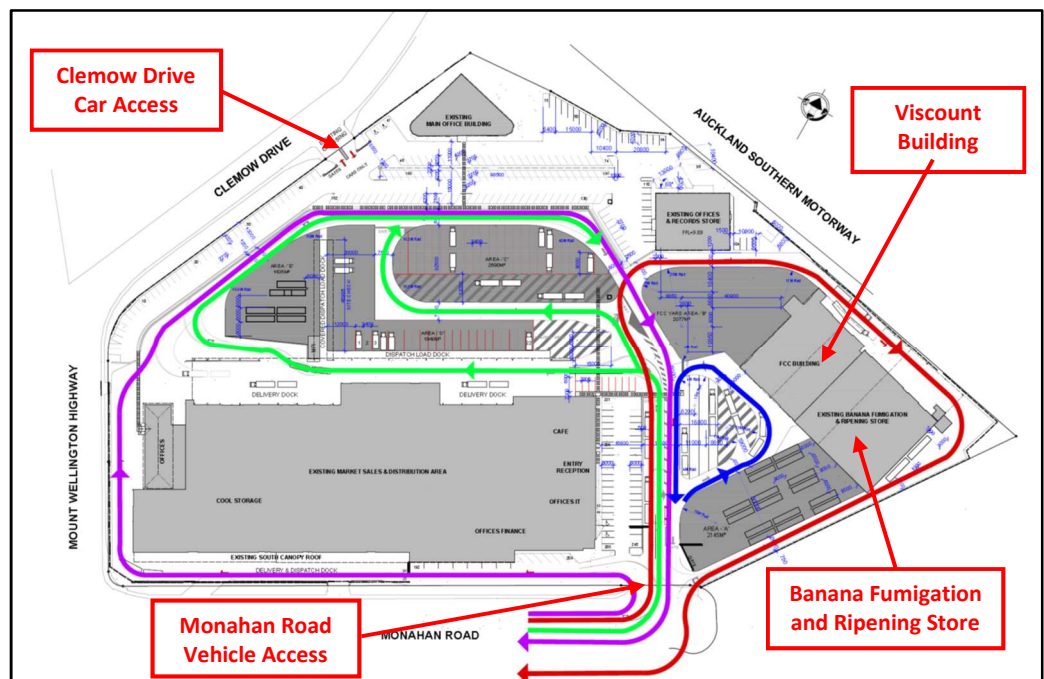


Figure 2 – T&G On-site Traffic Circulation

- 4.13 Trucks and other commercial vehicles enter and exit the Site from Monahan Road. Truck access is not permitted at the Clemow Drive access. Car access is available at both Clemow Drive and Monahan Road, with an approximate 70/30 split between the two access points.



- 4.14 To manage commercial vehicles entering and exiting the Site from Monahan Road, a mostly clockwise traffic circulation pattern has been adopted, with trucks entering the Site and then following the appropriate route through the Site depending on their destination.
- 4.15 Truck movements to and from the Viscount bin and crate washing facility (and the fruit fumigation and ripening plant) that are directly affected by the Project have two components:
- (a) delivery of inbound product and dirty bins and crates;<sup>2</sup> and
  - (b) distribution of outbound product / clean bins and crates.
- 4.16 The red line on Figure 2 shows the internal truck route for inbound deliveries. Trucks circulate around the Viscount building and fruit fumigation and ripening plant in a clockwise direction. Unloading for both facilities occurs at the rear of the building, between it and the eastern boundary of the site in the container storage area.
- 4.17 The dark blue line in Figure 2 shows the truck route for outbound distribution of clean bins and crates. Trucks circulate in an anti-clockwise direction to collect clean bins and crates.
- 4.18 Produce treated in the fruit and fumigation plant is delivered to the produce market building for sale to customers. The truck routes to pick up produce purchased from the market are shown by the purple and green lines in Figure 2.

## 5. ADVERSE TRAFFIC EFFECTS OF THE PROJECT ON INTERNAL SITE TRAFFIC ARRANGEMENTS

- 5.1 With reference to the on-site traffic circulation for the Site (indicated in Figure 2 and described above) I have shown the effect of the Project on internal site circulation in Figure 3 below (this is also **attached** to my evidence as **Appendix B**). The light blue line indicates the extent of the notice of requirement, and the orange hatching depicts my

---

<sup>2</sup> It is an MPI requirement that inbound "untreated" product be kept separate from "treated" or stored product.

understanding of the physical extent of the Transport Agency's works, once constructed.

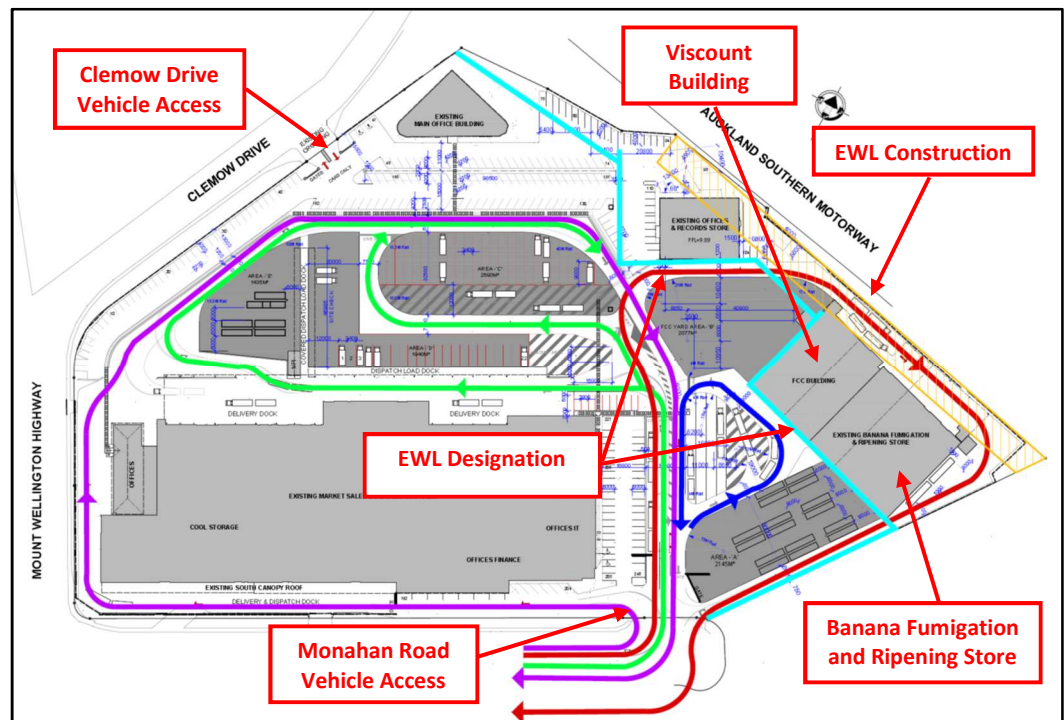


Figure 3 – Effect of Project on T&G On-site Traffic Circulation

5.2 From Figure 3, it can be seen that the Project works shown in the orange hatched area:

- (a) Will completely block access to the rear of the Viscount bin and crate washing facility and the fruit fumigation and ripening plant. I also understand that the notice of requirement includes provision for access by the Transport Agency to the Project works area along the Site's southern boundary with Monahan Road (I discuss this further below in section 6). This will similarly block access along the southern edge of the fruit fumigation and ripening plant.
- (b) Will result in the loss of approximately 33 carparks that currently service the Fruit World office building, located on that building's north-eastern and south-eastern corners. A further additional 20 carparks along the Site's north-eastern boundary, which service the Group Head Office, also fall within the orange-hatched area and will be lost as a result of the

Project works. There are currently a total 248 car parking spaces available on the Site and this loss of car parking equates to about 21% of available parking capacity.

- 5.3 It is not possible to re-route the trucks making deliveries to the Viscount building and fruit fumigation and ripening plant by, say, having these vehicles travel the “dark blue” line route on Figure 3. This is because:
- (a) It is an MPI requirement that inbound imported produce be kept separate from both treated product that has bio-security clearance and clean bins and crates that will shortly be leaving the Site.
  - (b) The way the Viscount bin and crate washing machine is laid out and how the bins and crates flow through the machine, means that inbound dirty crates need to be loaded from the rear of the existing building. The bin and crates are then cleaned via a washing plant with clean bins and crates flowing through and exiting the building, ready for pick up by customers at the other end of the building.
- 5.4 Thus, the proposed Project encroachment into the Site makes the Viscount building and fruit fumigation and ripening plant inoperative as far as these activities occurring on the site in its current location.
- 5.5 In terms of the effects on the Fruit World offices, the provision of parking for this facility is already significantly constrained. As part of the 2014 Site reconfiguration and redevelopment works, 70% of the former flower market building was demolished to provide for additional yard space for the Viscount bin and crate washing facility. There is no scope to infringe this yard space to replace the parking lost to the north as a result of the Project, without significantly constraining the operation of the bin and crate washing facility.
- 5.6 In any event, the evidence of Mr Keaney is that the fruit fumigation and ripening plant, the Viscount bin and crate washing facility, the Fruit World offices and the Group Head Office will each need to be demolished in their entirety as a direct result of the Project. This raises the issue of whether all or parts of these facilities could be relocated on

the remainder of the Site that is not directly affected by the Project works or the Transpower relocations.

- 5.7 The evidence of Mr John Latimer on behalf of T&G addresses the spatial constraints of the Site as far as relocating the demolished buildings is concerned. An equally important consideration, in my view, are the constraints provided by the need to develop acceptable internal site traffic arrangements to service both the Site's existing operations, that are not directly affected by the Project works, as well as effectively service any relocated operations.
- 5.8 The major constraint from an internal traffic perspective is the need to provide for the current activities in and around the produce market building, which form the core part of the Site's overall operation. In short:
- (a) The demand for truck and car parking associated with this operation is very peaky in nature, with on-site parking peaking in the early (3:00am to 6:00am) part of the morning, in line with the peak period for the purchase of produce at the market. This peak requires a relatively large area of the Site to be available for truck parking, with parking demand decreasing later in the morning.
  - (b) In addition, I understand T&G has entered into numerous truck parking licences with its customers, whereby key customers licence parking from T&G so that their vehicles can be left onsite and then loaded each day as required, during these peak periods.
  - (c) The current Site activities generate between 40 and 80 truck movements per hour throughout most of the day. The Site layout has been optimised to provide sufficient space to allow trucks<sup>3</sup> to circulate through the Site, to park/wait to be loaded and to be loaded. Any reduction in available Site area as a result of relocation of the facilities affected by the Project's designation and construction works will impact on these critical

---

<sup>3</sup> Including truck and trailer units (semi-trailer and B-train trucks).

elements of the Site and significantly affect the delivery of produce and its later distribution from the produce market.

- 5.9 As such, in my opinion it is not possible to relocate any of the facilities that will need to be demolished to the remainder of the Site that is not directly affected by the Project works, without in turn seriously adversely affecting the parking and traffic circulation demands of the core produce market operation. An acceptable internal traffic environment simply cannot be provided that can accommodate the relocation of both the operations that will be demolished as a result of the Project, and the existing operation of the produce market.
- 5.10 I also understand that the Project will necessitate the temporary and permanent relocation on the Site of the Transpower HEN-OTA-A (220kV) line (I have not depicted these relocations on Figure 3 above). These relocations further narrow the options for relocating the demolished facilities on the remainder of the Site (as explained by Messrs Keaney and Latimer), as buildings cannot be constructed under the relocated lines. This in turn places further significant constraints on the ability to provide an acceptable internal traffic environment for the remainder of the Site.
- 5.11 I have reviewed the expert evidence of Mr Wu (construction traffic) and Mr Murray (traffic and transportation) for the Transport Agency. Neither of these statements specifically consider the adverse effects of the Project on the internal traffic environment of the T&G site.

## **6. ADVERSE EFFECTS OF THE PROJECT ON SITE ACCESS**

### **Construction Effects**

- 6.1 The Notice of Requirement proposes to take construction site access along the eastern boundary of the T&G site from the turning head of Monahan Road.
- 6.2 The evidence of Mr Wu and Mr Nancekivell on behalf of the Transport Agency sets out both construction related traffic effects and operational traffic effects of the works.

- 6.3 The evidence of Mr Wu acknowledges that access to the construction sites will require management:<sup>4</sup>

Access to work sites will be managed on a location by location basis. Restrictions on turning movements, number of vehicles using accesses or operation of intersections with site accesses may be required. Potential issues have been identified and possible mitigation measures proposed in Sector (relevant section of TR10). Actual management of accesses will be developed as part of the SSTMPs process.

- 6.4 From the information provided there will be a construction access located at the eastern cul-de-sac end of Monahan Road which will service the construction works associated with the Project in this location. This construction vehicle access is located immediately adjacent the vehicle access to the T&G site as shown in Figure 4.

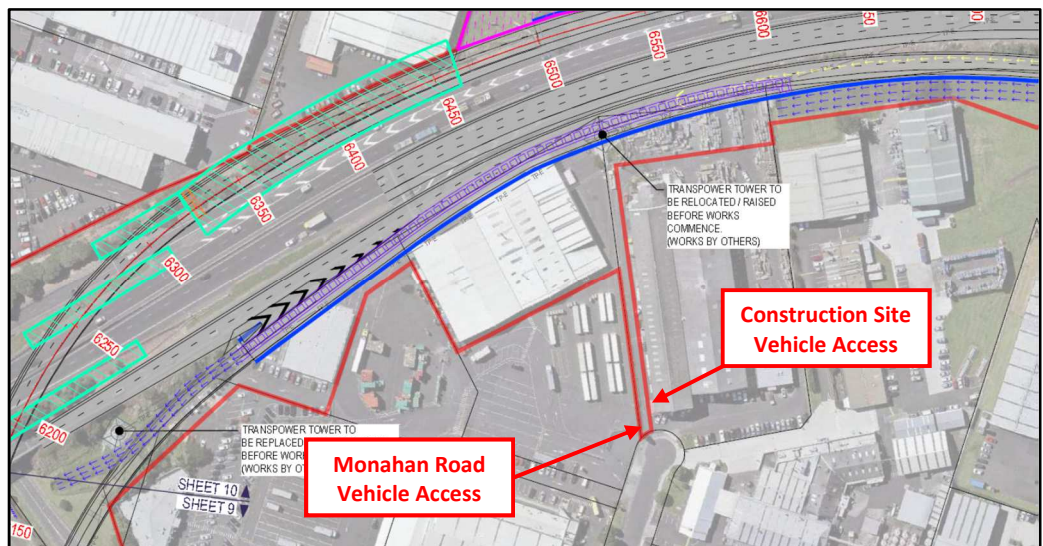


Figure 4 – Construction Site Access adjacent to T&G Site Access

- 6.5 There is no information currently provided in relation to specific construction traffic management measures at the T&G vehicle access. Technical Report 10 does itemise a range of generic measures to manage construction traffic effects associated with site access.<sup>5</sup> Some of these measures include:

- (a) Limiting site access movements / plant deliveries to off-peak periods or night time.
- (b) Avoid peak traffic flow periods where possible.

<sup>4</sup> Pg.14; Para. 8.25; Darren Wu.

<sup>5</sup> Technical Report 10 – Construction Traffic Impact Assessment

- (c) Traffic control to manage truck movements into and out of the site.
- 6.6 The measures indicated suggest avoidance of construction traffic movements during the commuter traffic flow periods and limiting site access to off-peak periods or night time. In most cases and locations, my experience is that such measures are appropriate.
- 6.7 However, given that the proposed Site access is located immediately adjacent to the T&G Site access and my surveys indicate that the T&G vehicle access is well used during the normal off-peak period,<sup>6</sup> with the T&G peaks occurring over the early morning and mid-morning to mid-afternoon period, there are limited periods of reduced traffic flow at this location.
- 6.8 The construction site access is likely to be used to import construction materials associated with building a retaining wall and fill material behind the retaining wall. The number of trucks that will use this vehicle access will vary over the course of the construction period although no indication of potential truck usage has been provided by the Transport Agency.
- 6.9 Typically, such construction activities could be expected to generate 40 to 80 truck movements per day,<sup>7</sup> depending on the stage of construction. Based on the generic traffic management measures identified above, these movements would occur in the period 9:00am to 3:30pm which is broadly the same period of time that the Monahan Road vehicle access to the T&G Site is at its busiest.
- 6.10 While the period that I surveyed is typically the busiest for T&G, the operation itself occurs 24 hours a day, 364 days of the year, and as such, traffic movements occur through the evening and early morning period. Thus, there is no time period where traffic movements are not occurring to or from the T&G Site.
- 6.11 As such the potential exists for conflict, delays and adverse traffic safety effects associated with trucks entering and exiting the T&G Site while

---

<sup>6</sup> Before 7:00am and between 9:00am and 3:30pm

<sup>7</sup> My estimate based on my experience with other construction projects.

trucks enter and exit the construction site at the same time. In my opinion, the location of the two vehicle access points immediately adjacent to each other therefore pose significant challenges for appropriately implementing construction traffic management measures in this location.

- 6.12 In particular, such construction traffic management measures will plainly impact on the ability of T&G's growers, customers and employees to satisfactorily access the Site in a safe and timely manner. It is therefore imperative that such traffic management measures for the construction site access off Monahan Road be developed in consultation with, and have the approval of, T&G.

### **Post construction effects**

- 6.13 Post construction, it is critical that the Site retain its dual vehicle access arrangements (Clemow Drive and Monahan Road) such that T&G retains some ability to provide (as best it can) an optimised internal operation of the Site on the remainder of the Site that it will be left with.
- 6.14 I note that the plans of the Project suggest no change to the vehicle access arrangements for the Site. It is important that this does not change as more detailed design work is carried out.

## **7. CONCLUSION**

- 7.1 In respect of the traffic engineering effects on the Site during the construction and longer-term operation of the Project, I make the following conclusions:
- (a) The Site was reconfigured in 2014 to improve traffic and pedestrian circulation, separate conflicting vehicle movements, and improve the Health and Safety environment of the Site.
  - (b) The T&G activity generates 40 to 130 traffic movements per hour over the course of the day including 40 to 80 truck movements per hour between 6:30am and 3:00pm.



- (c) The internal configuration of the T&G Site has been optimised to cater for the level of activity that occurs within it with limited ability to shift key elements of the site internally without significant disruption to the operational activities that occur.
- (d) Relocation of any of the demolished facilities to the remainder of the T&G Site that is not directly affected by the Project works is not possible, without in turn seriously adversely affecting the parking and traffic circulation demands of the T&G Site. An acceptable internal traffic environment simply cannot be provided to accommodate the relocation of the facilities demolished as a result of the Project and the existing operation of the produce market.
- (e) Adverse effects during construction of the Project are likely at the construction site access off Monahan Road, which is located immediately adjacent to the Monahan Road vehicle access to the T&G Site. The close proximity of the two vehicle access points are likely to result in conflicts with both activities generating peak traffic movements over the same period of time. The Monahan Road vehicle access to the Site is critical to the functioning of the Site. It is important that any traffic management measures at the Monahan Road construction site access are developed in consultation with and the approval of T&G.
- (f) Post construction of the Project it is critical to the T&G site that its current dual access arrangement (Clemow Drive and Monahan Road) is not compromised.



**Bryce Laurence Hall**

**22 May 2017**



## APPENDIX B - Effect on T&G Internal Vehicle Circulation of Project

