

**BEFORE AN INDEPENDENT HEARINGS PANEL**

**THE PROPOSED WAIKATO DISTRICT PLAN (STAGE 1)**

**UNDER** the Resource Management Act 1991 (the Act)

**IN THE MATTER OF** Hearing 13: Hampton Downs Motor Sport and Recreation Zone (Proposed Waikato District Plan) submissions and further submission

**STATEMENT OF EVIDENCE OF ROBERT SWEARS ON BEHALF OF WAKA KOTAHI  
NZ TRANSPORT AGENCY (TRANSPORT ENGINEERING)**

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**DATED 23 MARCH 2020**

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## **1 Introduction**

- 1.1 My full name is Robert Clive Swears. I am employed as a Principal Road Safety / Transport Engineer in the Hamilton Office of WSP.
- 1.2 My qualifications include a New Zealand Certificate in Engineering, a Bachelor of Engineering degree with Honours from the University of Canterbury, and a Master of Engineering Science degree (Transport) from the University of New South Wales. I am a Chartered Member of Engineering New Zealand (CENgNZ), and a Member of the Engineering New Zealand (EngNZ) Transportation Group. I am also an Independent Professional Adviser (IPA) to the NZ Transport Agency in relation to the Code of Practice for Temporary Traffic Management (CoPTTM).
- 1.3 I have been carrying out professional engineering tasks related to the investigation, design, and construction of roading and highway projects for 30 years. I have worked on a variety of transportation projects, plan changes and plan formations for developers, the NZ Transport Agency (Transport Agency) and local authorities.
- 1.4 In 2006 I presented evidence to Waikato District Council in relation to the application by GP Farms Limited for the Hampton Downs Motorsport Park (HDMP) development and land use consent. I was closely involved in the extensive and robust analysis that followed when the hearing was adjourned and the conditions of the 2006 resource consent were developed. In my opinion, the work carried out by the transport engineers for the various parties (GP Farms, Waikato District Council, Department of Corrections, and NZ Transport Agency) involved with that matter is among the best examples of expert caucusing in which I have been involved throughout my career. I have a good understanding of the processes that were followed in the caucusing and the basis on which the transport engineering (including temporary traffic management) conditions of the 2006 resource consent were developed.
- 1.5 Based on my involvement with developing consent conditions for activities at the Hampton Downs site and the different positions between the various parties involved as to what constitutes an appropriate planning framework to manage activities at the site, I consider it desirable for all affected parties to work together to develop a suite of District Plan provisions for which there is consensus.

## **2 Code of conduct**

- 2.1 Although this matter is not before the Environment Court, I have read and am familiar with the Code of Conduct for Expert Witnesses in the current Environment Court Practice Note (2014), have complied with it, and will follow the Code when presenting this evidence. I also confirm that the matters addressed in this Statement of Evidence are within my area of expertise, except where relying on the opinion or evidence of other witnesses. 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 My evidence addresses the following:

- (a) Transport engineering background to 2006 resource consent conditions.
- (b) Traffic management plans.
- (c) Screening.
- (d) Signage.

3.2 I have reviewed the Hearing 13: Hampton Downs Motor Sport and Recreation Zone, section 42A report (s42A report) dated 5 March 2020 and its recommendations in relation to the Transport Agency's submission and further submission.

3.3 My concern is that the Plan provisions described in the s42A report (including Appendix 3 of the report) dilute the effectiveness of the 2006 resource consent conditions. In this statement I acknowledge that although some of the 2006 resource consent conditions may appear to be somewhat prescriptive, they were produced to allow the consent holder to develop the Motorsport Park while at the same time managing adverse effects to within acceptable levels. In my opinion, the Plan provisions described in Appendix 3 (of the s42A report) do not provide certainty as to what is required to manage adverse effects to within acceptable levels.

### **4 Transport Engineering Background**

4.1 The transport engineering analysis that informed development of the 2006 resource consent conditions included consideration of the effects of event traffic on (inter alia):

- (a) State Highway 1 (SH1 / the Highway).
- (b) Hampton Downs interchange (the Interchange).
- (c) Hampton Downs Road.
- (d) Old Hampton Downs Road.
- (e) Travel time along Hampton Downs Road for landowners not directly involved with the Motorsport Park (for example, the Department of Corrections (Corrections) and the North Waikato Landfill (the Landfill)).

4.2 The underlying aim of the transport engineering caucusing was to develop consent conditions that would allow events to be held at Hampton Downs Motorsport Park such that the adverse effects associated with those events were managed to within acceptable bounds. That is, the focus of the caucusing was to enable events to be held at the Park.

- 4.3 The transport engineers agreed that when events are being held at the Motorsport Park there is potential for vehicle movements to and from the Park to adversely affect the performance of the Highway, the Interchange, and / or Hampton Downs Road. We also recognised that, depending on the scale of the event, vehicle movements associated with some events could adversely and significantly affect the ability of landowners (other than HDMP) conducting their day-to-day activities to travel in a relatively unimpeded manner along Hampton Downs Road past the Motorsport Park.
- 4.4 Through the caucusing to develop the 2006 resource consent conditions, the transport engineers agreed that, for larger event sizes in particular, the adverse effects associated with vehicle movements to and from the Motorsport Park could be reduced through the use of high occupancy vehicles (including, but not limited to, buses). The pre-ticketing (s42A report, Appendix 3, Rule 26.1.1.1 P5(a)(vi)) was also intended as a means to reduce delay and consequently reduce the adverse effects associated with high traffic volumes accessing the Motorsport Park.
- 4.5 The conditions also make reference to minimum deceleration lengths on the Interchange ramps and vehicle speeds along the Highway when events are being held (including the periods before and after the events). In retrospect, I recognise that some of the conditions appear to be somewhat prescriptive, however, they were produced to allow the consent holder to develop the Motorsport Park while at the same time managing adverse effects to within acceptable levels.
- 4.6 In Section 5 of this statement I make reference to traffic management plans, however, with regard to the scale of events, it is important to note that the larger the event the greater the likelihood of adverse effects on the transport network. The larger events are also most likely to adversely affect travel along Hampton Downs Road by road users not accessing the Motorsport Park.
- 4.7 I consider it important that the needs of road users and landowners (including, but not limited to those associated with the Motorsport Park) are adequately taken into account to ensure that event traffic does not unreasonably delay progress of those road users along the Highway, through the Interchange and / or along Hampton Downs Road.

## **5 Traffic Management Plans**

- 5.1 The traffic management portions of the 2006 resource consent were developed on the basis that the configuration of temporary lanes and controls on road user movements (as part of temporary traffic management for events) should be established in a manner such that the adverse effects on the function of the Interchange ramps and traffic movements along SH1 were managed to within acceptable bounds.
- 5.2 Development of the traffic management strategies (TMSs) associated with the 2006 resource consent was based on micro simulation modelling carried out by the transport engineer for Waikato District Council. This modelling was reviewed by the other transport engineers (including myself) before the agreed preliminary traffic management provisions were determined.

- 5.3 The intention of establishing the Implementation Monitoring Committee (IMC) was to have a structure in place that allowed traffic management to be reviewed and amendments made with input from the affected stakeholders and road controlling authorities. However, since the 2006 resource consent conditions were established, I have not been involved with traffic management for Hampton Downs Motorsport Park nor have I provided advice to the IMC, therefore, I cannot comment on the efficacy of the IMC process.
- 5.4 Notwithstanding the point above, it is important to recognise that the temporary traffic management required to allow events (particularly large events) at Hampton Downs Motorsport Park to function, without unacceptable adverse effects on road users, requires transport engineering analysis beyond that ordinarily involved with preparing a traffic management plan (TMP). Although the traffic management coordinators (TMCs) for Waikato District Council and the Transport Agency have responsibility for reviewing and accepting (or rejecting) the TMPs for activities at the Motorsport Park, I consider it unreasonable for the burden of determining the adequacy of that traffic management to be placed on the TMCs.
- 5.5 Further to the point above, I consider it appropriate for the traffic management provisions in the District Plan (for major and extreme events in particular) to include requirements for the TMP to be based on micro simulation modelling that has been developed taking into account the interaction of event traffic with traffic volumes on the Highway, the Interchange, and Hampton Downs Road.
- 5.6 At present, traffic management (and particularly traffic management competency) in New Zealand is going through a process of significant change (refer Transport Agency, 2019). These changes will result in TMCs being tested for their competency to fulfil their roles, however, that competency assessment does not require the TMCs to have knowledge of transport engineering and / or micro simulation modelling. My concern is that the proposed Rule (s42A report, Appendix 3, Rule 26.1.1.1 P5) does not provide adequate protection and / or control for the road controlling authorities and / or road users on SH1 and / or road users seeking to access land use activities that are not directly associated with the Motorsport Park. In that regard, I have concerns that queuing on the Interchange ramps and congestion along Hampton Downs Road have significant potential to adversely affect the safety and efficiency of SH1, the Interchange and / or of Hampton Downs Road. I also question whether TMPs developed in accordance with the proposed Rule will incorporate adequate contingency measures to allow adequate access (particularly emergency access) to land use activities beyond the Motorsport Park.
- 5.7 Noting that the matter will be discussed at a subsequent hearing, I have concerns that vehicle movements, which may be associated with the proposed development of the Reid Investment Trust property, have significant potential to adversely affect the transport network. Notwithstanding my concerns regarding the potential for vehicle movements associated with large-scale (Major and Extreme) events to rapidly result in unacceptable levels of traffic congestion, the Motorsport Park presently has control over property access along the critically affected portion of Hampton Downs Road and can therefore open and / or close accesses as necessary. The Motorsport Park is unlikely to have

a similar level of control over vehicle movements associated with development of the Reid Investment Trust property, therefore, design, implementation, and operation of the TMPs would need to accommodate the congestion that may arise.

- 5.8 The traffic management measures to which reference is made in the 2006 resource consent were to be developed based on a range of vehicle occupancy and traffic survey data along with input from the IMC. While in retrospect there was scope for the resource consent to be worded more tightly, the subjective wording (such as “suitable provision”) was linked to the data and review processes described in the consent conditions.
- 5.9 In my view, removing the IMC foundation for development of the traffic management plans and reducing traffic management performance criteria (refer s42A report, paragraph 259, struck out Rule 26.2.7 C2) to non-specific phrases such as “suitable provision”, “provision for” and “appropriate traffic management contingency measures” (refer s42A report, Appendix 3, Rule 26.1.1.1 P5) will not ensure the traffic management associated with large-scale events does not result in the types of adverse effects that were considered through development of the 2006 resource consent.
- 5.10 I consider it appropriate to retain many, if not all, of the 26.2.7 conditions (s42A report, paragraph 259), that the s42A author proposes are removed.

## **6 Screening**

- 6.1 Activities at the Motorsport Park have the potential to distract road users on the transport network. I expect that only a very small proportion of the number of distraction events associated with activities on the Motorsport Park will result in road users making mistakes that result in crashes occurring. However, it needs to be kept in mind that crashes are often defined as “rare, random, multi-factor events preceded by a situation in which one or more persons failed to cope with their environment.” (Transport Agency, 2004, page iv). Distraction due to activities at the Motorsport Park is a potential factor that may result in a road user failing to cope with their environment.
- 6.2 Because activities at the Park do not contribute to the information needed by road users to safely and efficiently travel along SH1, I consider activities at the Park should be screened from the view of road users on the transport network. Notwithstanding that screening of the site does not presently meet the requirements of the 2006 resource consent, I agree with the s42A author (paragraph 215) that “[...] it is important that landscape planting is in place to mitigate visual and traffic safety effects from the activities on the site from vehicles travelling along the highway [...]”. As noted in Section 7 of this statement, the screening does not necessarily need to be achieved using vegetation, it could be achieved using the backs of signs. However, similarly to the signage, it is important that any screening installed does not present a hazard to vehicles leaving the Highway.
- 6.3 Wallace (2003) describes consideration of the external to vehicle distractors (refer to Section 7 of this statement). While most road users on the transport network will not be distracted by activities at the Motorsport Park to the extent that crashes occur, it is important to recognise that such distraction and

crashes do occur. As an example, on 7 January 2017 a cyclist was killed on SH1 near Taupō. “The crash happened as [the driver] was driving home to Auckland [... The cyclist], was on a regular training ride from his holiday home near Taupo when [the driver...] veered to the left in a split-second's distraction and collided with [... the cyclist. The driver] told police that he had glanced across to the Moto X [motocross] track beside the road when he veered, and had not seen [the cyclist...]” (NZ Herald, 2017). I am not aware of any other crashes on that portion of SH1 associated with a road user looking at the motocross track rather than at the highway. However, if activity at the motocross track had been screened from view from SH1 that fatal crash may not have occurred. In my view, it is important for activities at Hampton Downs Motorsport Park to be obscured from the view of road users on the adjacent transport network to minimise the potential for activities at the Park to distract road users.

- 6.4 With regard to the screening, I question the basis on which the s42A author has identified that the evergreen species required to screen activities at the Motorsport Park from road users on SH1 need to be only 3 m high (s42A report, paragraph 220 and s42A report, Appendix 3, Rule 26.2.4 P1). Given the topography of the Hampton Downs track, I consider that it may be necessary for screening along the northern perimeter of the Motorsport Park track (in particular) to be higher than 3 m to ensure that southbound road users (in particular) on SH1 cannot readily view activity on the track and / or at the Park. I also consider that screening of the Park (and activities at the Park) along its eastern boundary, where it directly adjoins SH1, needs to be more effective than the existing planting. While I consider there is scope for the Rule (refer s42A report paragraph 220 and s42A report, Appendix 3, Rule 26.2.4 P1, P2, and RD1) to be clearer than the present draft, I support the view of the s42A author that buildings and activities at the Motorsport Park should be screened from view by road users on SH1.

## **7 Signage**

- 7.1 There are arguments for and against having advertising signage visible from transport corridors. With regard to the Motorsport Park the “unofficial” signage presently visible (and potentially visible in the future) from the transport network is not specifically focused on assisting road user journeys on the network, but rather is intended to advertise products and / or facilities associated with the Motorsport Park.
- 7.2 Wallace (2003, page ii) found (inter alia) “[...] that driver distraction is a serious problem in road safety.” “[...] External-to-vehicle distraction is likely to be under-reported, and seems likely to be a larger contributory factor than is commonly stated. It seems highly likely that billboards are a major contributory factor to such distraction incidents.”
- 7.3 Taking into account that advertising associated with the Motorsport Park is unlikely to be of benefit to many of the road users on the adjoining transport network (particularly SH1), the transport engineers (involved in the caucusing) identified the importance of sign messages not being visible from the Highway.
- 7.4 The Transport Agency (2011) describes a systematic approach to guide signage for destinations including urban centres and facilities such as Hampton Downs Motorsport Park. Noting that the

Motorsport Park may be required to contribute financially to the establishment of specific signs that could be installed within the SH1 corridor, I consider that route and guide signs, motorist service signs, and / or tourist signs could be used to provide ample advanced warning for visitors to the Motorsport Park. Therefore, I confirm the opinion I presented in 2006 that it is unnecessary for there to be any “unofficial” signage associated with the Motorsport Park that is visible from the transport network.

- 7.5 With regard to signage, I support the principles behind the recommendations of the s42A author (s42A report, paragraph 295) where they recommend (inter alia) that “A sign visible from a public place [...] (vi) Is oriented to be internally facing so the main audience are spectators on the site; (vii) Is screened from State Highway 1 [...]” (refer also to s42A report, Appendix 3, 26.2.11 P1). However, I consider the recommendation needs to go further such that the messages (including graphics and symbols) on any “unofficial” signs associated with the Motorsport Park should not be visible to road users on the transport network. I am concerned that the recommendation as presently worded makes reference to “the main audience”, which implies there is a secondary audience to which the sign message may be oriented. I consider it important for the rules to clarify that the signage must only be visible to the main audience.
- 7.6 It is also unclear in the s42A report (paragraph 295) recommendation as to what is meant by “screened from State Highway 1”. There are presently signs on the Motorsport Park site whose messages are visible from State Highway 1. From a transport engineering perspective, I consider it desirable and important for the Rule to require that messages on signs are not visible from the transport network.
- 7.7 The s42A author also makes reference to sign heights and setbacks (s42A report, Appendix 3, Rule 26.2.11 P1). From a transport engineering perspective, provided that any signs in close proximity to the transport network are frangible when struck and will not cause harm to vehicle occupants (or visitors at the Motorsport Park), the sign height and setback is unlikely to be of particular concern. In some ways, having the plain back of a sign oriented towards the transport network will assist with screening the Motorsport Park from the road network, which I consider is a desirable outcome.

## **8 Conclusions and Recommendation**

8.1 In conclusion I consider that:

- (a) The s42A report does not adequately address the significant variability in the effects of activities at the Motorsport Park on the safe and efficient operation of the transport network including (but not limited to) State Highway 1 and the Interchange.
- (b) The traffic management provisions that the s42A author proposes are included in the District Plan do not provide for adequate consideration and control of the potentially significant adverse effects associated with vehicle movements to and from the Motorsport Park. In addition, I consider the Rule provisions place unreasonable demands on the traffic management coordinators (TMCs) for the Transport Agency and Waikato District Council who will be required to review and accept (or reject) the plans. One of the key functions of the IMC (as required under the 2006 resource

consent conditions) is to review TMPs; this provides the TMCs with confidence that the TMPs submitted for acceptance will achieve the operational requirements of the members of the IMC. In this regard, the IMC is intended to confirm the operational adequacy of the TTM measures while the TMC confirms the compliance of the TTM measures with CoPTTM.

- (c) All activities at the Motorsport Park should be screened from view by road users on SH1.
- (d) All signage associated with the Motorsport Park (except “official” signs on the transport network) should not be visible to road users on the transport network and on SH1 in particular. In this regard, I consider that all signage (including some existing signage) at and associated with the Motorsport Park should have the sign message oriented so it is only visible to visitors at the Motorsport Park.
- (e) The changes the s42A author proposes are made from the 2006 resource consent to the District Plan provisions do not adequately address the adverse effects likely to be involved with activities at Hampton Downs Motorsport Park.

8.2 Taken as a whole, I consider that the changes proposed by the s42A author remove several of the important safeguards that were incorporated in the 2006 resource consent.

8.3 My concern is that, despite their experience and knowledge in relation to such matters, if the Commissioners seek to develop District Plan provisions without adequate input from transportation engineers there is a significant risk that the adverse effects arising from those District Plan provisions will be more than minor.

8.4 Based on my involvement with developing consent conditions for activities at the Hampton Downs site and the different positions between the various parties involved as to what constitutes an appropriate planning framework to manage activities at the site, I consider there would be merit in having all affected parties working together to develop a suite of District Plan provisions for which there is consensus.

## **9 References**

9.1 I have referred to the following documents while preparing this statement:

- (a) NZ Herald, 2017, *Man who killed Steel and Tube boss sentenced*, NZ Herald article dated 24 June 2017, obtained from [https://www.nzherald.co.nz/business/news/article.cfm?c\\_id=3&objectid=11881040](https://www.nzherald.co.nz/business/news/article.cfm?c_id=3&objectid=11881040) on 13 March 2020.
- (b) Swears, R., 2006, *In the matter of the Resource Management Act 1991 and in the matter of a submission made by Transit New Zealand on an application made by GP Farms Limited to Waikato District Council for Hampton Downs Motorsport Park and other related the activities*,

*Statement of Evidence of Robert Clive Swears, 28 July 2006*, Opus International Consultants, Hamilton.

- (c) Transport Agency, 2004, *A New Zealand guide to the treatment of crash locations, A companion document to the Austroads Guide to traffic engineering practice. Part 4. Treatment of crash locations*, NZ Transport Agency (formerly Land Transport NZ), Wellington to
- (d) Transport Agency, 2011, *Traffic Control Devices Manual, Part 2, Direction, Service and General Guide Signs, First Edition, Effective from January 2011*, NZ Transport Agency (Waka Kotahi), Wellington, New Zealand.
- (e) Transport Agency, 2019, *Training and Competency Model, Temporary Traffic Management, CoPTTM Training and Design Team, 30 August 2019, v5.3*, NZ Transport Agency, Wellington.
- (f) Wallace,B., 2003, *External-to-Vehicle Driver Distraction*, Transport Research, Planning Group, Transport Research Series, Scottish Executive, Edinburgh, Scotland.