

Briar Belgrave
Barker & Associates

Ref: B25134

11 November 2025

Subject: Greenhill Industrial Park - Transportation
Issued via: [REDACTED]

Dear Briar

Introduction

This memo has been prepared to support the fast-track consenting referral for the proposed development of approximately 178 ha of rural land to Industrial use. The site is located within the Waikato District, east of Hamilton, and immediately adjacent to the Greenhill Interchange on the Waikato Expressway (WEX).

The purpose of this assessment is to identify and evaluate the transport and traffic implications of the proposed industrial zoning, having regard relevant national, regional and local government transport policies.

Proposal and Wider Locational Context

The proposal seeks to rezone 178 ha of farmland on the eastern side of Hamilton city and the WEX for general industrial and logistics activity. This will create a significant employment node adjacent to Hamilton's urban edge. The site extents and location are shown in Figures 1 and 2 respectively. It is bounded to the north by Puketaha Road, the west by WEX (part of State Highway 1 (SH1)), Greenhill Road to the south and farmland to the east.

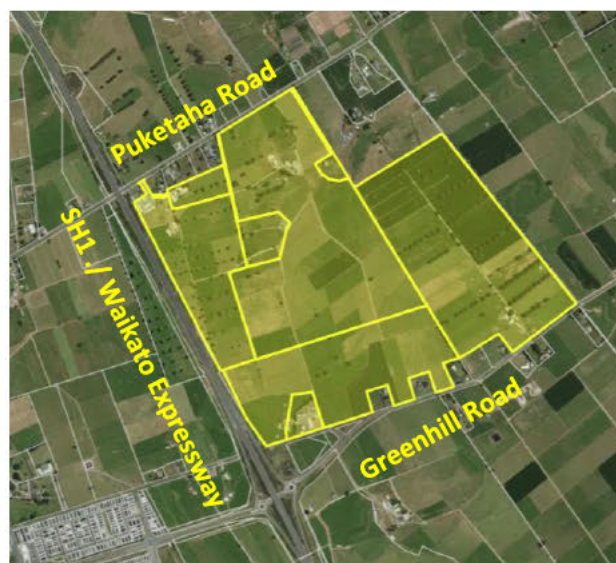


Figure 1: Site Extents

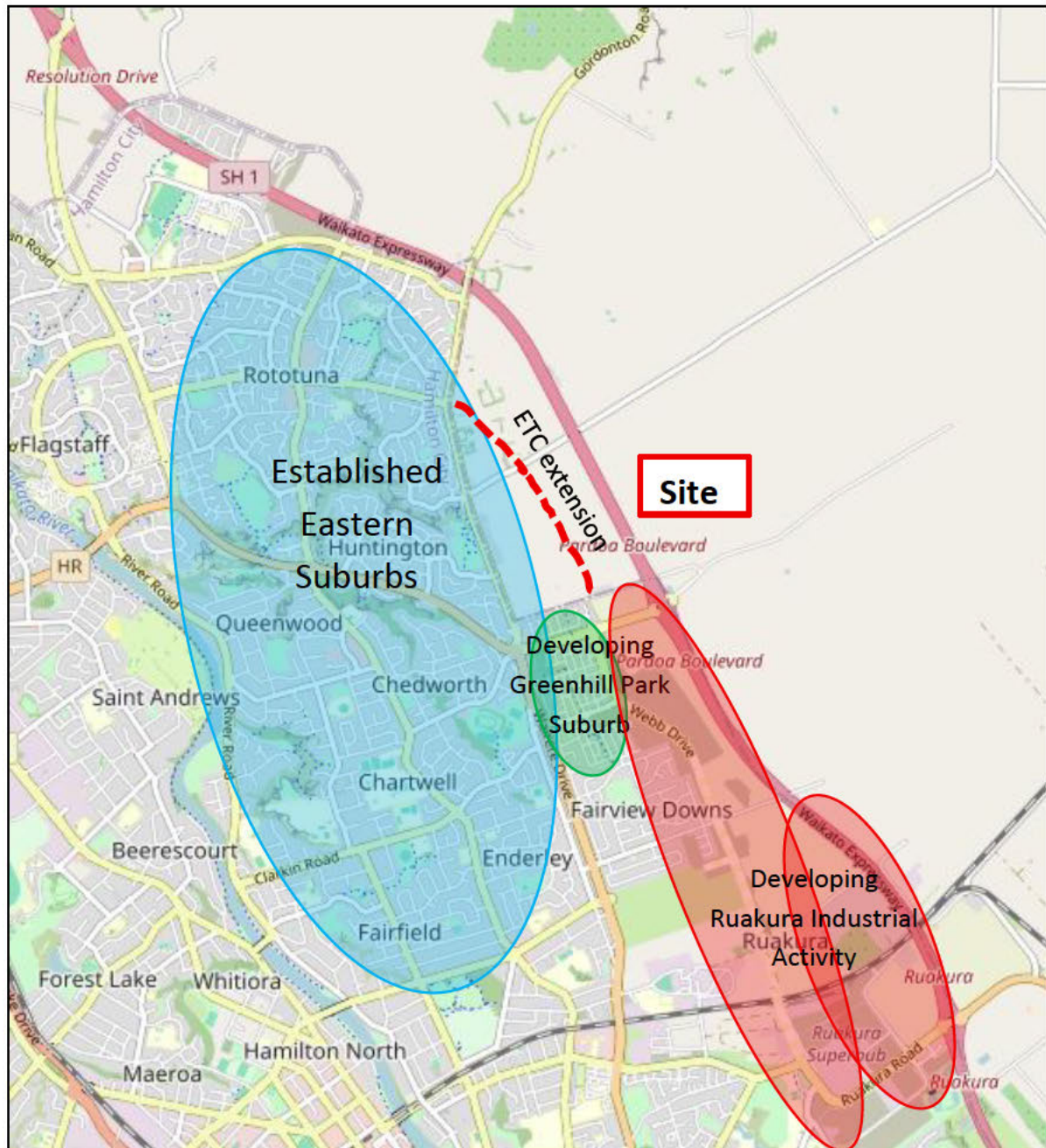


Figure 2: Site Location

The site is located adjacent to well established and emerging residential suburbs and to the north of the developing Ruakura industrial area. The Eastern Transport Corridor (ETC) through the Ruakura growth cell is expected to provide an arterial standard transport corridor from Ruakura Road in the south to Thomas Road in the north. This will be an extension of Webb Drive in both directions and is expected to provide a high frequency public transport corridor, as well as high-quality off-road walking and cycling routes.

The concept masterplan included as Figure 3 identifies:

- A structured internal spine road network aligned with Greenhill Road and Puketaha Road;
- Multiple industrial lots, designed for flexible warehousing, distribution, and service activities;

- Peripheral landscape buffers and stormwater corridors;
- Logical access spacing coordinated with the Greenhill Service Centre frontage.

2.0 Masterplan



Figure 3: Greenhill Industrial Park Masterplan

There is a proposed service station adjacent to the site shown as the pink area of land in Figure 3. It is noted that this does not form part of the fast track application, however, that area of land is zoned Commercial and is subject to an overlay for a service centre. It is understood that a resource consent application for the development has been lodged with Waikato District Council. The traffic effects of the service centre were assessed as part of the rezoning of the land from Rural through the recent District Plan review and it is understood that the proposal as submitted is smaller than permitted by the zone rules (Rule COMZ-R18). Traffic movements to and from the proposed service centre are expected to be accommodated within the existing Greenhill Interchange and at this time, no alterations to Greenhill Road or Taha Lane are proposed.

Transportation Networks, Connectivity and Integration

Greenhill Road is classed as a rural road under the One Network Framework (ONF) and carries minimal traffic volumes. It is a no exit road at its eastern end and connects with the Greenhill Interchange on SH1 / WEX at its western end. Primary access is anticipated from Greenhill Road due to its direct connection with SH1/WEX and connectivity with Hamilton City via Pardoia Boulevard. This supports primary freight access to the strategic road network whilst also supporting

employment access from within Hamilton.

An internal spine road providing a connection through the site to Puketaha Road is proposed.

Puketaha Road is classed as a rural connector road under the ONF and currently carries approximately 4,500 – 5,000 vehicles per day (vpd). It creates a link between rural communities within the Waikato, SH1B and Hamilton City's northern residential suburbs. It is anticipated that urbanisation of sections of this road may be needed, subject to strategic traffic modelling outcomes.

No direct access is proposed to the WEX corridor.

The surrounding network exhibits good vertical and horizontal geometry with no geometric constraints precluding future upgrade or intersection improvement is anticipated.

The internal road layout will accommodate B-train and semi-trailer turning paths and are expected to comply with the requirements of the Waikato District Plan, the Regional Infrastructure Technical Specification (RITS) and Austroads design standards as appropriate. The road corridors will provide appropriate levels of walking and cycling facilities and are expected to include roadside

Internal road intersections are anticipated to be priority-controlled t-intersections, or roundabout controlled crossroads. The external intersections linking to Greenhill Road and Puketaha Road are anticipated to be priority t-intersections, potentially with right turn lanes and with the capability to be signalised in future if required based on future traffic volumes.

While primarily freight-oriented, the industrial zoning will employ a significant workforce. Hamilton's eastern fringe currently supports limited public transport as the area is still under significant development, however, the location supports staff access from Hamilton's eastern suburbs and the development of bus services to the site in future via the ETC and Pardoia Boulevard. This could be in the form of on-demand shuttle services as the site develops, and potentially scheduled service provision over time.

In terms of walking and cycling, there is potential for linkage to the Paroda Boulevard shared path corridor and also the WEX cycle lanes. These corridors can be extended or integrated with the internal subdivision network to support workforce commuting by active modes. A 20-minute walk time isochrone would enable people living within 1.5km – 2km of site to walk to work. This includes the fringes of Greenhill Park. A 20-minute cycle would be expected to include some of the eastern suburbs in addition to the Greenhill Park area.

In terms of freight and logistics integration, the location of the site adjacent to WEX supports direct access to the strategic road network. It also promotes integration and connectivity with nearby industrial areas, as well as the Hamilton City strategic road network. The key connection routes between these areas are shown in Figure 4.

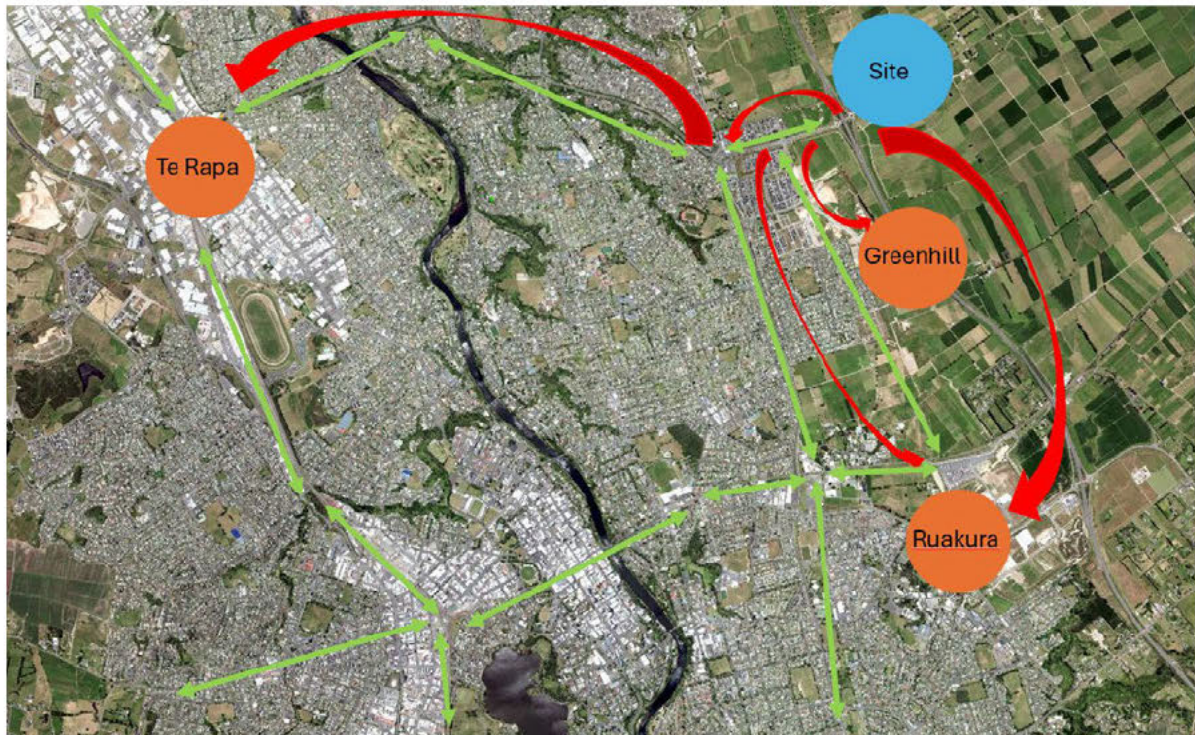


Figure 4: Strategic Road Connections

Consistency with the Transport Policy Framework

National Policy Statement on Urban Development (NPS-UD, 2022)

The NPS-UD seeks to enable “well-functioning urban environments” that meet the needs of all people and communities for their social, economic, and cultural wellbeing. It directs councils to provide sufficient development capacity for both housing and business land, and to integrate land-use and infrastructure planning so that growth occurs where it can be efficiently serviced.

Policies 1 and 2 and Objective 3 are directly relevant — they require that planning decisions support the availability of “a range of sites suitable for different business sectors” and that development is “enabled in locations that are well-served by existing or planned infrastructure.” The proposed development of approximately 178 ha of rural land to industrial directly gives effect to these objectives. The site is immediately adjacent to WEX and has access to other industrial areas via the City’s strategic road network, as well as access for future employees from within the City. The location minimises the need for new strategic infrastructure and optimises use of the existing road hierarchy. The proposed development rezoning therefore supports the NPS-UD’s aims of creating a well-functioning, economically resilient urban system with coordinated land-use and transport outcomes.

Government Policy Statement on Land Transport 2024 (GPS 2024)

The GPS 2024 sets the national direction for land transport investment, focusing on improving safety, resilience, and economic productivity. It identifies four strategic priorities as follows:

- Economic growth and productivity;
- Resilience and maintenance;
- Safety; and
- Value for money .

It emphasises that New Zealand's prosperity depends on efficient freight and people movement along strategic corridors such as the Auckland–Hamilton–Tauranga triangle. The GPS directs investment toward projects that support freight efficiency, connect growth areas, and make best use of existing networks before pursuing new capacity.

A key policy strand in GPS 2024 is enabling freight productivity through high-performing inter-regional corridors. It highlights WEX as part of the national high-volume freight route linking the upper North Island ports and distribution centres. The policy intent is to facilitate industrial development adjacent to these routes so that freight efficiency and safety are optimised.

The proposed industrial development aligns directly with this intent. By concentrating industrial activity adjacent to the Greenhill interchange, this proximity delivers measurable productivity gains for regional and national freight operators, aligning with the GPS objective of improving economic performance through reduced travel time and improved reliability.

Furthermore, the proposal supports the GPS's Resilience and Value for Money priorities by leveraging existing WEX capacity rather than relying on costly new arterial corridors. Appropriately staged intersection upgrades on Greenhill Road and Puketaha Roads will maintain safe and efficient operations, demonstrating good asset stewardship consistent with GPS funding principles.

Waikato Regional Land Transport Plan 2021–2051 (RLTP)

The Waikato RLTP 2021–2051 provides the strategic framework for land transport development across the region for the next 30 years. Its vision is *“an integrated, safe, responsive and sustainable land transport system that supports the region's social, economic and environmental wellbeing.”* The plan identifies four focus areas:

- Integrating land use and transport planning,
- Improving safety outcomes,
- Supporting economic development through freight connectivity, and
- Enhancing resilience.

Within this framework, the RLTP identifies WEX as a Tier 1 strategic freight corridor, forming part of the upper North Island freight triangle. It explicitly supports industrial land development near inter-regional connectors to strengthen supply-chain efficiency and reduce pressure on urban road networks. Policy 2.1 of the Plan calls for *“aligning growth nodes and industrial zones with the strategic transport network to maximise investment value and freight efficiency.”*

The proposed 178 ha industrial development directly implements these regional objectives. It establishes a large employment node immediately adjoining WEX, using an existing interchange to distribute freight efficiently while maintaining WEX performance through managed access. This mirrors RLTP Outcome 3, which seeks to *“reduce travel times and costs for freight and business*

traffic through improved connectivity.” The site’s proximity to Hamilton City also supports multimodal commuting for employees, aligning with RLTP Policy 4.3 to improve accessibility to major employment areas.

Arataki – Waka Kotahi 30-Year Plan (2024)

The Arataki 30-Year Plan sets NZTA’s long-term view of the changes needed in the transport system to support New Zealand’s future. It identifies Hamilton and the broader Waikato as one of the country’s key growth nodes and highlights the need to plan for significant industrial and freight growth along the WEX corridor. Arataki emphasises that transport and land-use decisions must enable economic productivity while delivering safety, environmental performance, and resilience.

In particular, Arataki identifies the WEX corridor as a focus area for freight-oriented land use because it connects major ports and logistics hubs across the upper North Island. It calls for coordinated industrial development at locations where the network already has sufficient capacity and where access can be safely managed.

The proposed industrial development directly responds to that national spatial intent. It provides a large, contiguous area of industrial land adjacent to the expressway and near Hamilton’s skilled labour market, thus meeting Arataki’s objective of *“aligning industrial growth with high-performing corridors.”* The site will help absorb freight-related activity that might otherwise disperse into less suitable rural areas, reducing inefficiencies and safety risks on secondary rural roads.

By integrating its internal network design with ONF road categories and ensuring staged upgrades, the development supports Arataki’s outcomes for *“safe, reliable, and sustainable freight and people movement.”* In strategic terms, it operationalises the 30-year plan’s goals within the Hamilton growth node, reinforcing the corridor’s role as New Zealand’s primary logistics spine.

Road Safety Objectives 2024

The Road Safety Objectives 2024, adopted by the Ministry of Transport, reaffirm the national vision of *“Vision Zero – where no one is killed or seriously injured on our roads.”* The objectives commit to embedding the Safe System approach across all transport planning and design, emphasising speed management, safe infrastructure, vehicle safety, and post-crash care.

For land-use integration, the Objectives stress designing access and intersections that reduce conflict risk, ensuring freight corridors are designed to safely accommodate large vehicle movements, and supporting rural/urban transition areas with appropriate speed environments.

The proposed development incorporates these principles by using controlled intersection forms both internally and when connecting to Puketaha Road and Greenhill Road. The proposed roads are expected to be designed to current standards and connect to the existing, and relatively recently constructed strategic road network (i.e WEX and Pardoia Boulevard). This focuses traffic activity on roads that are designed and constructed to modern standards and with the purpose of carrying significant volumes of traffic.

Emissions Reduction Plan (ERP) – Amendment 2024

The Amendment 2024 updates New Zealand's first Emissions Reduction Plan under s 5Z1 of the Climate Change Response Act and is to be read alongside the original ERP (2022). For transport, the Amendment's direction is pragmatic and seeks to use effective/efficient policies and credible carbon pricing to unlock low-emission choices, while targeting investment where it best reduces net emissions and supports resilience.

The 178 ha industrial development is consistent with the Amendment's transport and land-use intent. Locating large-scale freight and logistics adjacent to WEX reduces dead-running and idling on lower-order roads, lowering emissions per freight task while protecting the inter-regional corridor's efficiency. The internal road network can be specified for EV-ready operations (yard power capacity, depot charging), leveraging the ERP commitment to nationwide charging rollout and the broader electrification push. For employees, the site's Hamilton interface allows shorter commute trips and integration with active and PT links, further reducing VKT growth pressure. Collectively, these measures demonstrate ERP-consistent decarbonisation through siting, access management, electrification readiness, and safe, efficient operations.

Traffic Effects and Assessment Methodology

Based on a generic trip rate of 20 trips/ha/hr for the peak periods across the full 178 ha yields approximately 3,560 veh/hr peak-hour (two-way). This includes trips within the Greenhill Industrial Park itself as well as ones that would be expected to occur on the external road network. Industrial developments typically exhibit a heavy-vehicle proportion of 10–15% and this would equate to some 350–500 HCV/hr in peak.

The Waikato Regional Transport Model (WRTM) is a commonly used tool within the wider Waikato region to assess the traffic effects of significant development and infrastructure upgrades. In the case of the proposed change in land use, it will assess the movements of people between residential areas and the new employment opportunity the proposed development would represent, as well as the draw of freight traffic to and from the city, district and region.

The WRTM model is owned and maintained by local councils within the Waikato region including HCC. From experience, WRTM is an appropriate tool for assessing the traffic effects of the proposed development and ensuring that existing or future infrastructure is appropriately sized. Consultation with Hamilton City Council (HCC), Waikato District Council (WDC) and NZTA will be ongoing to agree and refine the modelling methodology to ensure that a practical and cost-effective analysis is undertaken.

It is proposed to run both base and future scenarios, forecasting 10 and 20 years into the future. The model outputs will be used to identify intersections that are most affected by future development. The SIDRA modelling package is proposed to be used for this detailed analysis of individual intersections. Thresholds relating to changes in both level of service (LOS) and traffic

volumes will be adopted to identify the critical intersections. The thresholds will be confirmed with HCC, WDC and NZTA however are likely to be defined as follows:

- LOS E or above which represents delays in excess of 50 seconds
- Traffic volumes increase by more a GEH statistic of more than 5.

The approach of using thresholds that relate to both intersection capacity and change in traffic volumes is similar to the methodology that has been used for other projects involving WRTM analysis. The use of the GEH statistic, which is a form of the chi-squared statistic, is a common parameter used in model calibration to ensure that the modelled flows appropriately represent observed counts and is outlined within the Waka Kotahi Transport Model Development Guidelines. In this case it ensures that low volume roads that may have a high percentage difference from only a small increase in traffic are not overrepresented within the subsequent analysis.

The results from the modelling will feed into a Broad Integrated Transportation Assessment undertaken in accordance with Rule 25.14.4.3 of the Hamilton City District Plan that will accompany the consent application. This will include reference to the ethos for the multi-modal transport corridor road and demonstrate alignment with the various transportation policy documents and will include:

- **Background** - A description of the proposed activity, the purpose and intended use of the ITA, and an outline of any previous discussions with the relevant road controlling authorities
- **Existing land data** - A description of location, site layout, existing use and consents (if any), adjacent and surrounding land use
- **Existing transport data** - A description of the existing access and service arrangements and on-site car parking, the surrounding transport network (including hierarchy, traffic volumes, crash analysis, congestion and intersections) and the passenger transport modes, accessibility, walking and cycling networks.
- **Committed environmental changes** - Consideration of other developments and land use and transport network improvements (including passenger transport, walking and cycling)
- **Existing travel characteristics** - Details on the existing trip generation, modal split, and assignment of trips to the network
- **Proposal details** - A description of the proposal (including site layout, operational hours, vehicle access, on site car parking and drop off, and internal vehicle and pedestrian circulation). A description of any construction management matters. A description of what end of journey facilities are proposed
- **Predicted travel data** - A description of the trip generation, modal split, trip assignment to the network, trip distribution and trip type proportions of the proposal.
- **Appraisal of transportation effects** - An assessment of safety, efficiency, environmental, accessibility, integration and economic effects (including sensitivity testing).
- **Avoiding or mitigating actions** - Details of any mitigating measures and revised effects, including measures to encourage other modes.
- **Compliance with policy and other frameworks** - Review against District Plan objectives, policies and rules. Detailed assessment against Access Hamilton and associated action plans.

Other relevant local, regional and national strategies or plans (e.g. Regional Land Transport Strategy, Regional Public Transport Plan)

- **Safety and Efficiency** - Any changes over the relevant assessment period to the predicted level of personal risk to individuals (safety) using the network and levels of service (efficiency) of the network
- **Discussion and conclusions** - An assessment of effects and conclusion of effects. Confirmation of the suitability of the location of the proposal
- **Recommendations** - Proposed conditions (if any)

CKL Team

CKL has significant experience working with private sector developers to deliver major greenfield and brownfield developments.

Judith Makinson is CKL's Director in charge of Transportation Engineering. Judith has a strong technical background in development projects for private sector clients. She has over 20 years' experience in preparing Integrated Transportation Assessments, Travel Plans and feasibility studies for developments as well as developing transport masterplans for both the public and private sector. Judith is also an experienced project manager, leading a range of projects with multidisciplinary engineering inputs, placing a strong focus on client risk and project commerciality. She regularly acts as an expert witness and has also acted as an Independent Hearing Commissioner on behalf of Palmerston North City Council in relation to the Te Ahu a Turangi SH3 notification of requirement and the notification of requirement for a newly proposed Kiwirail Hub facility.

An example of some of the many significant projects on which Judith has worked in the Waikato include:

Rotokauri Rise Stages 6 – 8, Hamilton

This project involved land located at the southern end of the Rotokauri minor arterial road corridor. It involved the provision of transport masterplanning input and preparation of an Integrated Transportation Assessment, particularly in relation to considering walking and cycling connectivity, suitability of proposed road cross sections to perform desired functions and network capacity assessment to support the development of around 800 residential lot development. This has specifically included the consideration of location and form of intersections to integrated with the existing road network and also consideration of the proposed road network in the context of the Structure Plan requirements, leading to an agreed variation through demonstration of suitability of proposals. This project used WRTM as the assessment tool to test the effects of road network changes and identified the form and scale of the major / minor arterial road intersection forming the southern connection point of the Rotokauri Arterial Road project.

Lockerbie Estate, Morrinsville

Lockerbie Estate is residential subdivision of approximately 2,000 dwellings on over 80ha to the north of Morrinsville. Transportation advice to support the masterplan of the subdivision was

required including identifying upgrades to the surrounding road network and coordination with neighbouring subdivisions already in progress. A retirement village, local shops, a medical centre, and a childcare centre were also included in the subdivision to support the residential activities. Consideration was given to ensure that there was good pedestrian and cycling connectivity within the site especially for higher density areas.

Conclusion

The proposed 178ha industrial development on the eastern urban fringe of Hamilton aligns national, regional and local transport policy documents and provides an opportunity to locate a significant industrial activity adjacent to existing strategic transport nodes. Based on our experience and information received to date, it is concluded that there are no transport-related reasons why the proposed development could not proceed under a fast-track application process and that following detailed analysis, the effects can be managed with suitable conditions.

We trust this meets your requirements. Please do not hesitate to contact us if you have any questions or require any additional information.

A handwritten signature in black ink, appearing to read 'Judith Makinson', written in a cursive style.

Judith Makinson
Director

CKL