



Planning | Surveying | Engineering | Environmental

Integrated Transportation Assessment

Quigley Family Trust

233 Wilton Collieries Road, Glen Massey

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1 Introduction

- 1.1.1 CKL has been engaged by the Quigley Family Trust to assess the effects of a proposed change to the zoning in the Waikato Proposed District Plan for 233 Wilton Collieries Road, Glen Massey known legally as Lot 20 DP 431591. A consent was granted for an 18-lot residential subdivision of the site in 2007. It is understood that, of those 18, only two lots were created on the basis of this consent, however consent lapsed before completion of the project.
- 1.1.2 The site is included within the Rural zone within both the Operative District Plan and the notified version of the Proposed District Plan (PDP). It is proposed to rezone the site to a Country Living Zone to reflect the activity anticipated by the previous residential subdivision consent.
- 1.1.3 In summary, given the effects of the proposed rezoning to Country Living are similar to what has been previously been assessed and accepted by Council through the previous subdivision consent and no significant changes to the roading environment have occurred, the previously assessed effects and mitigations remain appropriate. Subject to those mitigations being in place, there is no traffic or transportation reason why the proposed rezoning cannot be adopted.

2 Site Location

2.1.1 The site is located at 233 Wilton Collieries Road south of Glen Massey as highlighted in red in Figure 1. The site and the surrounding area is rural in nature. It covers approximately 29ha and is irregular in shape.

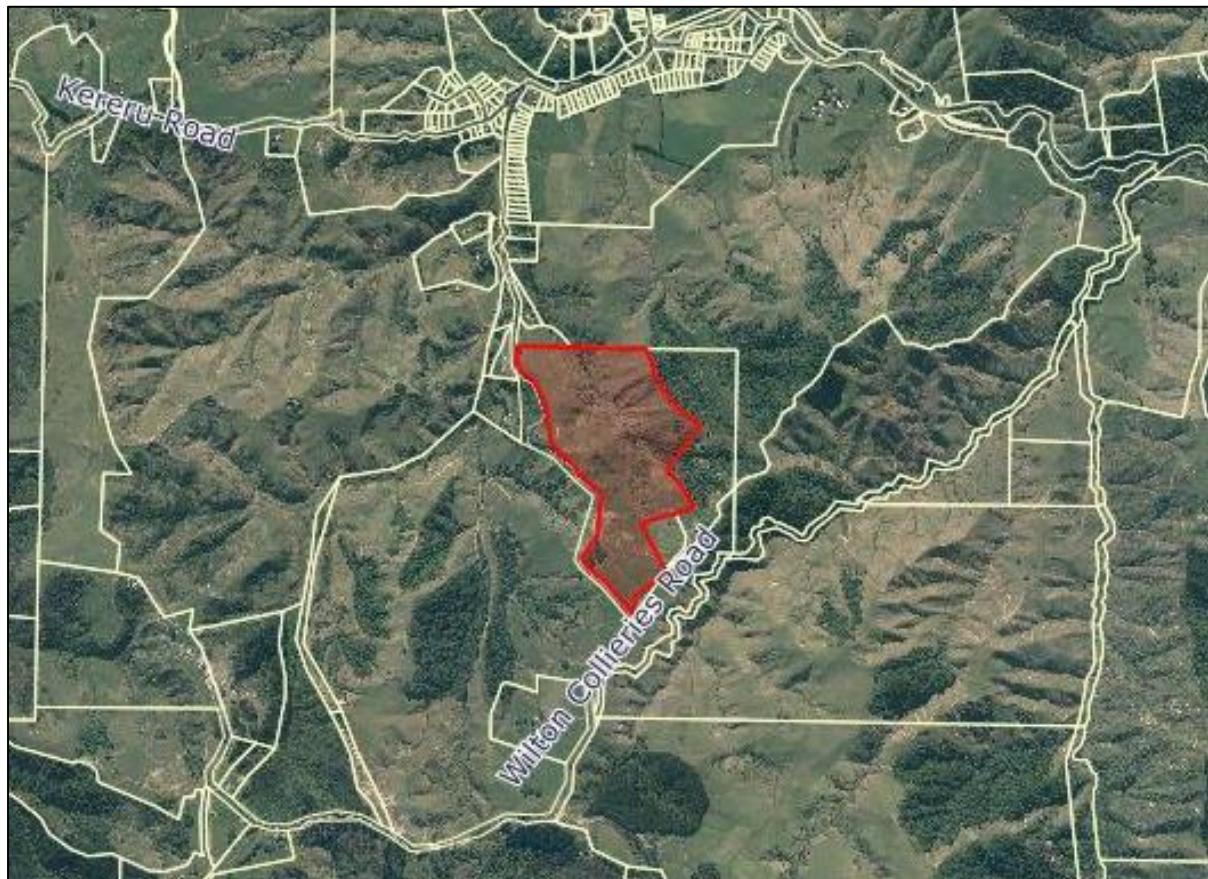


Figure 1: Site Location

3 Existing Road Network

3.1 Physical Environment

- 3.1.1 Wilton Collieries Road is a no-exit road that branches off from Waingaro Road in Glen Massey to the north of the site. From Glen Massey, Wilton Collieries Road is sealed up to 118 Wilton Collieries Road, which is approximately 2km north of the site. It is generally around 5m - 6m wide. The posted speed limit is 100km/h however the unsealed nature of the road means that the operating environment is assessed as being 30km/h - 40km/h. A new gravel surface has recently been applied.
- 3.1.2 Figure 2 shows the typical cross section along Wilton Collieries Road. This photo is taken approximately halfway along the site frontage.



Figure 2: Typical Cross Section of Wilton Collieries Road (Site frontage looking north)

- 3.1.3 Figure 3 shows a narrow section of Wilton Collieries Road at number 127. Full visibility is available along this section which is approximately 30m long and has a useable surface 3.8m wide. Driveways on either side of the road are able to be used as informal passing bays.



Figure 3: Narrow Road Section at 127 Wilton Collieries Road

- 3.1.4 As part of the previous resource consent granted for the subdivision of the site, benching was required in two locations on Wilton Collieries Road in the vicinity of the site. Benching is a type of excavation consisting of a series of horizontal steps with steep sloping surfaces between them, as shown in Figure 4. While the subdivision consent lapsed, the required benching was undertaken. The two curves that required benching can be seen on Figure 5.
- 3.1.5 In addition, widening of the road was required to maintain a 6m carriageway with their being acceptance by Waikato District Council¹ that in some areas, there would be narrower sections due to physical constraints. Other roading conditions such as vehicle crossings as indicated on the approved plan must be constructed in accordance with WDC Plan No. TSG-EI to the satisfaction of Council.

¹ Consent Condition RC10 Advisory Note A



Figure 4: Signs of Benching



Figure 5: Areas Requiring Benching

3.2 Traffic Volumes

- 3.2.1 The latest traffic volumes on Wilton Collieries Road have been sourced from the MobileRoads database. This section of Wilton Collieries Road has an estimated 75 vehicles per day (vpd). The peak hour volumes are typically 10% of the daily volumes which is approximately 8 vehicles per hour (vph).

3.3 Road Safety

- 3.3.1 A search was made of the Waka Kotahi NZTA Crash Analysis System for all crashes that had been reported along the length of Wilton Collieries Road in the last five-year period.
- 3.3.2 No crashes have been reported in the last five-year period along Wilton Collieries Road. This is to be expected given the very low traffic volumes using Wilton Collieries Road. The vertical and horizontal alignment of the road is such that visibility is constrained compared to the requirements for the posted speed limit. However, the minimum sight distance for a local road with an operating speed of 40km/h is 40m. Given the assessed speed environment and unsealed nature of the carriageway, forward visibility is generally considered to be in keeping with expectations.

4 Sustainable Travel Modes

4.1 Walking and Cycling

- 4.1.1 Currently there are no specific provisions for pedestrians and cyclists in the area around the proposed site. Pedestrians and cyclists would be expected to share the road with other vehicles or use the berm which is typical of a rural environment.

4.2 Public Transport

- 4.2.1 Currently there are no provisions for public transport within 600m of the site. Only school buses currently service the Glen Massey area. The nearest school bus stop is on Waingaro Road.

5 Committed Environmental Changes

- 5.1.1 No future projects are known to be committed or planned in the vicinity of the site that would affect the transportation environment in the Glen Massey area.

6 Development Proposals

- 6.1.1 It is proposed to rezone the site at 233 Wilton Collieries Road in Glen Massey from the Rural Zone to Country Living Zone. In order to consider the potential effects of the proposed rezoning, the previously consented subdivision layout has been used as a baseline. This is shown in Figure 6 below with the previously consented access locations shown in blue.
- 6.1.2 The previous consent required benching for two corners as previously mentioned and also for the road to be upgraded to a 6m width. However, subsequent discussions with council which can be found in consent condition RC10 advisory note A, have resulted in a 5m road width being acceptable if site constraints are present. Some sections of Wilton Collieries Road have some sections that are less than 5m in width, but based on on-site observations, adequate visibility available, passing opportunities, and the low traffic volumes expected, the current road width is assessed as being sufficient for the proposed plan change.

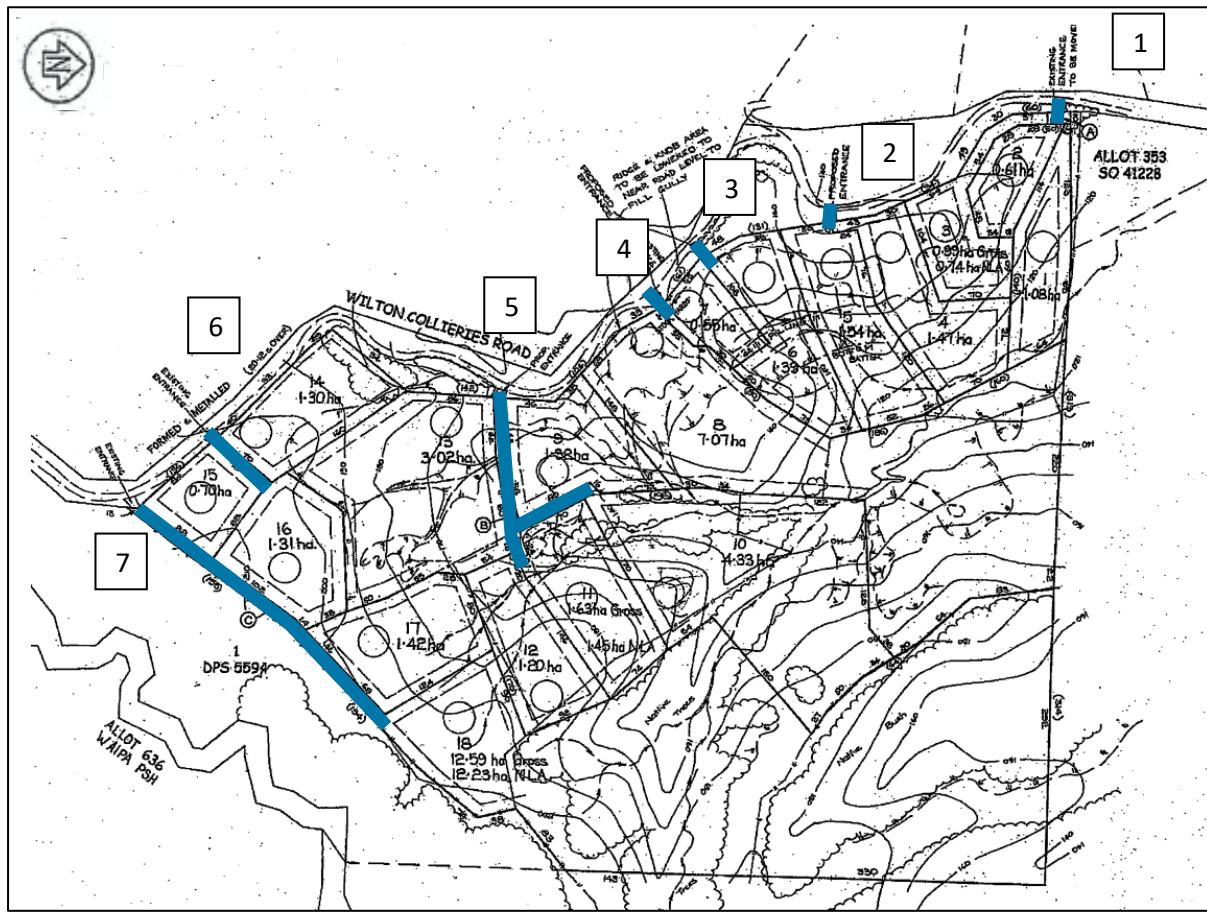


Figure 6: Previously Consented Subdivision Layout and Access Locations

- 6.1.3 Previously, a total of seven vehicle crossings were consented to serve the site and it would be reasonable to anticipate a similar level of vehicle crossing provision to Wilton Collieries Road in future, with each crossing providing access to one to five lots.
- 6.1.4 The future design of each lot would be determined as part of future subdivision applications. Given that the lots are expected to all be at least 0.5ha, it is likely that each lot will be able to provide sufficient on-site parking to accommodate the expected parking demands.

7 Traffic Effects

- 7.1.1 The number of trips expected to be generated by the proposed Country Living Zone has been derived from Waka Kotahi NZTA Research Report 453 *Trips and Parking Related to Land Use* (RR453). The 85th percentile rate provided for residential dwellings in a rural setting is 1.4 trips per unit in the peak hour and 10.1 trips per unit over the course of the day. Therefore, the

estimated 18 dwellings would be expected to generate some 25vph in the peak hour and 182vpd.

- 7.1.2 Wilton Collieries Road is reported as carrying an average of approximately 8vph and 75vpd. The additional traffic expected to be generated by the site is likely to increase hourly volumes to approximately 30vph to 40vph and daily volumes to 250-260vpd. The Waka Kotahi NZTA One Network Road Classification (ONRC) document states that a road serving less than 250 population would be classified as an access road which is the lowest classification in this hierarchy. Similarly, the Code of Practice for Temporary Traffic Management (CoPTTM) states that a low volume road is one that carries less than 500vpd. With the proposed rezoning, traffic volumes are likely to still be well below 500vpd and therefore the nature of the road and its function is unlikely to change. As such it is considered to be of an appropriate form to accommodate the assessed future traffic demands.
- 7.1.3 It is assessed that the surrounding road network is able to safely and efficiently accommodate the traffic volumes associated with the proposed rezoning.

8 Access

- 8.1.1 It is anticipated that a number of vehicle crossings would be required to access a potential 18-lot subdivision, ensuring that all lots have access to a public road. These previously consented crossings are identified in Figure 6 . All accesses are expected to be privately owned, and no public roads are anticipated within the new Country Living Zone.
- 8.1.2 The PDP states that for vehicle accesses in the Rural or Country Living zone, that an access serving 1 to 3 lots should have a 6m width while an access serving 4 to 8 lots should have a 10m width. The previously consented access widths are compliant with the PDP standards and are therefore considered to be appropriate for the proposed rezoning and any potential future subdivision.
- 8.1.3 Visibility from each vehicle crossing has been measured in accordance with the Proposed District Plan. The operating speed environment is considered to be 30km/h - 40km/h given the unsealed nature of the road. The lowest operating speed within the District Plan standard is 40km/h and this will be adopted for the visibility assessment. For vehicle crossings with less than 40 vehicle movements per day, at least 40m visibility is required. For vehicle crossings in rural areas with more than 40 vehicle movements per day, this increases to 70m.

- 8.1.4 Of the previously consented vehicle crossings, only one would be expected to generate more than 40 vehicle movements per day. Therefore, visibility for this access is required to be at least 70m while 40m is the standard for the other vehicle crossings. All of the previously consented vehicle crossings satisfy the visibility requirements of the District Plan.
- 8.1.5 The PDP requires at least 30m separation from vehicle crossings to nearby intersections. No intersections are within 500m of the site and this requirement can be readily satisfied in the design of any future subdivision within the proposed Country Living zone.
- 8.1.6 The PDP also requires at least 15m between vehicle crossings however this does not include vehicle crossings on the opposite side of the road. All of the previously consented vehicle crossings to the site are at least 50m apart and no vehicle crossings to other sites on the same side of the road are within 50m. There is one vehicle crossing opposite the site located between vehicle crossings 2 and 3. This is located over 50m from both vehicle crossings and therefore a potential future subdivision is able to satisfy the separation criteria of the PDP.
- 8.1.7 Benching was previously required for two curves on Wilton Collieries Road as part of the consent conditions as shown previously in Figure 5. However, this has already been completed.
- 8.1.8 Widening the road to 6m was also part of the previous consent conditions, with 5m being acceptable if site constraints are present. No further mitigation measures were required as part of the previously granted consent for the subdivision.
- 8.1.9 The narrow section in Figure 3 will have low volumes of traffic and tidal patterns therefore unlikely for opposing vehicles i.e. most people would exit site in the morning with few inbound movements and vice versa in the evening. This section also has adequate visibility along the 30m length and driveways can be used as informal passing bays if necessary.
- 8.1.10 Overall, it is assessed that a potential future subdivision can comply with the relevant standard of the PDP.

9 Parking Effects

- 9.1.1 The notified version of the PDP states that only two car parks are required for dwellings with two or more bedrooms. Given the scale of lots expected within the Country Living zone, there is no reason to expect that they will not be able to comply with the PDP parking requirements.

10 Planning Framework

10.1 Proposed District Plan

10.1.1 Table 1 below summarises the expected effects of a future subdivision (based on that previously consented) against the transportation criteria from Section 14.12 of the notified version of the Proposed District Plan.

Table 1: Proposed District Plan Compliance

Rule	Requirement	Proposed	Compliance
14.12.1.1 Vehicle Access for All Activities			
1a	The site has a vehicle access to a formed road that is maintained by a road controlling authority	All sites will have access to a formed public road	Compliance achievable
1b	The site has a vehicle access that is constructed to comply with the relevant requirements of Table 14.12.5.1, Figure 14.12.5.2, Table 14.12.5.3 and Figure 14.12.5.4	Vehicle crossings expected to comply to these standards	Compliance achievable
1c	No new vehicle access shall be created from Newell Road (south of Birchwood Lane)	Site not near Newell Road	N/A
1d	No access, access leg or right-of-way shall run parallel to any road within 30m of the road	No parallel access roads expected	Compliance achievable
1e	On a site with legal access to two roads, the activity only accesses the road with the lower classification in the road hierarchy in Tables 14.12.5.5 and 14.12.5.6 (where the roads have the same classification, access is only to the road with the lower average daily traffic movements)	Site only has frontage to one road.	N/A
1f	New vehicle accesses/entrances are not to be constructed to any site from the following roads	No listed roads are near site	N/A
1g	No new vehicle access shall be created within 30 metres of a railway level crossing	No nearby level crossings	N/A
14.12.1.2 On-Site Parking and Loading			
1a	The parking requirements in Table 14.12.5.7 and 14.12.5.11,	Parking spaces expected to meet requirements	Compliance achievable
1b	On-site bicycle space requirements in Table 14.12.5.10,	Parking spaces expected to meet requirements	Compliance achievable
1c	Any on-site car parking spaces for non-residential activities within the Residential Zones must be set back at least 3m from the road boundary of the site and screened by planting or fencing	No non-residential activities proposed	N/A
1d	On-site car parking spaces and loading bays are to be provided in accordance with the requirements of Table 14.12.5.7, Figure 14.12.5.8 and Table 14.12.5.11 and be located on the same site as the activity for which they are required;	Parking spaces expected to meet requirements	Compliance achievable

1e	On-site car parking spaces and loading bays are formed	Parking spaces expected to meet requirements	Compliance achievable
1f	On-site car parking spaces and loading bays are to be permanently marked if five or more parking spaces are required;	Parking spaces expected to meet requirements	Compliance achievable
1g	On-site car parking spaces and loading bays are not to be located on any shared access or residential court;	Parking spaces expected to meet requirements	Compliance achievable
1h	Vehicles occupying any on-site car parking or loading spaces must have ready access to the road (or relevant access or right of way) at all times, without needing to move any other vehicle occupying other on-site car parking or loading spaces;	Parking spaces expected to meet requirements	Compliance achievable
1i	On-site car parking spaces and loading bays are not required on sites with sole frontages to the following	No listed roads are near site	N/A

14.12.1.3 On-Site Manoeuvring and Queuing

1a	On-site manoeuvring space shall be provided to ensure that no vehicle is required to reverse onto a road	Future sites expected to meet requirements	Compliance achievable
1b	A 90 percentile car, as defined in Figure 14.12.5.8, can enter and exit all parking spaces without making more than one reverse movement, excluding spaces required for a dwelling	Future sites expected to meet requirements	Compliance achievable
1c	On-site manoeuvring space for any heavy vehicle shall comply with the tracking curve (relevant for the type of activities to be carried out on the site and trucks to be used),	Future sites expected to meet requirements	Compliance achievable
1d	On-site manoeuvring space shall be formed	Future sites expected to meet requirements	Compliance achievable
1e	On-site queuing space shall be provided in accordance with Table 14.12.5.12 for vehicles entering and exiting any on-site car parking, loading or manoeuvring space	Future sites expected to meet requirements	Compliance achievable
1f	On-site manoeuvring and queuing spaces are not required on sites with vehicle accesses/entrances to the following:	No listed roads are near site	N/A

14.12.1.4 Traffic Generation

1a	Within the Residential, Village or Country Living Zones there is a maximum of 100 vehicle movements per day, and no more than 15% of these vehicle movements are heavy vehicle movements;	No individual site expected to generate more than 100 movements per day	Compliance achievable
1b	Within the Rangitahi Peninsula Zone	Site not in this zone	N/A
1c	Within the Business Zone Tamahere, Business Zone or Business Town Centre Zone	Site not in these zones	N/A
1d	Within the Rural Zone	Site not in this zone	N/A
1e	Within the Industrial Zone and Heavy Industrial Zone (excluding the Huntly Power Station and Huntly Quarry)	Site not in this zone	N/A
1f	From the Huntly Power Station	Site not in this zone	N/A
1g	From the Huntly Quarry	Site not in this zone	N/A
1h	Within Precincts A and B of the Te Kowhai Airpark Zone	Site not in this zone	N/A

1i	Within Precincts C and D of the Te Kowhai Airpark Zone	Site not in this zone	N/A
14.12.1.5 Operation, maintenance and minor upgrading of existing public roads			
1a	The works occur within the road or unformed road	Upgrade works to occur within road reserve	Compliance achievable
1b	Works within the road must be: i) Incidental to, and serve a supportive function for, the existing public road; or ii) Required for the safety of road users; or iii) Required for the safety of adjacent landowners or occupiers;	Upgrade works will be support future development	Compliance achievable
1c	Lighting shall be designed and located to comply with the Australia New Zealand Roading Lighting Standard 1158, (series) – Lighting for Roads and Public Spaces: 2005	Lighting expected to comply with these standards	Compliance achievable
1d	Any earthworks must comply with Rule 14.3.1.3	Earthworks expected to comply	Compliance achievable
14.12.1.6 New Public Roads			
1a	The public road is located within road or unformed road	No new public roads proposed	N/A
1b	The public road is not located within an Identified Area	No new public roads proposed	N/A
1c	The design requirements of Table 14.12.5.14 or 14.12.5.15, based on their function within the Road Hierarchy as set out in Table 14.12.5.5	No new public roads proposed	N/A
1d	Within road or unformed road located within the Tamahere Country Living Zone	No new public roads proposed	N/A
1e	Within road or unformed road located within the Rangitahi Peninsula Zone, the relevant access and road requirements of the Rangitahi Structure Plan take priority over the conditions in Table 14.12.5.14 or 14.12.5.15 in the event of any conflict	No new public roads proposed	N/A
1f	Within road or unformed road located within the Te Kauwhata Structure Plan area	No new public roads proposed	N/A
1g	Any earthworks must comply with Rule 14.3.1.3	No new public roads proposed	N/A
14.12.1.7. Access and New Roads – Te Kowhai Airpark Zone			
1a	Airpark roads which are to be vested in Council must comply with the following conditions: The design requirements of Table 14.12.5.14 or 14.12.5.15, based on their function within the Road Hierarchy as set out in Table 14.12.5.5,	Site is not in this zone	N/A
2	Road alignment and the taxiway network within the Te Kowhai Airpark Zone shall be in accordance with Appendix 9 – The Te Kowhai Airpark Framework Plan	Site is not in this zone	N/A
3	The western boundary of the Te Kowhai Airpark Zone shall provide for future connectivity options (vehicular and / or pedestrian) in accordance with the location identified in Appendix 9 – The Te Kowhai Airpark Framework Plan.	Site is not in this zone	N/A
4	Any earthworks must comply with Rule 14.3.1.3.	Site is not in this zone	N/A
14.12.1.8 Off-Road Pedestrian and Cycle Facilities			
I	Have a minimum 2.0m width	No off-road paths proposed	N/A

li	Are formed	No off-road paths proposed	N/A
iii	Comply with the relevant setback standards for the applicable zone	No off-road paths proposed	N/A
iv	Any earthworks must comply with Rule 14.3.1.3	No off-road paths proposed	N/A
V	Are not located within an Identified Area.	No off-road paths proposed	N/A
14.12.1.9 Stock Underpasses			
1a	Any earthworks must comply with Rule 14.3.1.3	No stock underpasses proposed	N/A
1b	Are not located within an Identified Area	No stock underpasses proposed	N/A

10.1.2 Overall, future subdivision based on the proposed Country Living zone is expected to be able to comply with the standards of the PDP.

10.1.3 An assessment has also been made against the transportation objectives and policies outlined in section 6.5 of the PDP. This assessment is summarised in Table 2 below.

Table 2: Proposed District Plan Transportation Objectives/Polices Assessment

Objective/Policy	Comment	Compliance
6.5.1 Objective – Land Transport Network a) An integrated land transport network where: i) All transport modes are accessible, safe and efficient ii) Adverse effects from construction, maintenance and operation of the transport network are managed	The proposed rezoning is not considered to exacerbate road safety issues, concerns, or efficiency.	Aligns
6.5.2 Policy – Construction and Operation of the Land Transport Network a) Promote the construction and operation of an efficient, effective, integrated, safe, resilient and sustainable land transport network through: (i)Corridor, carriageway and intersection design which is appropriate to the road function as specified in the road hierarchy and in accordance with relevant guidelines; (ii)The appropriate design and location of sites accesses; (iii)Traffic signage, road marking, lighting, rest areas and parking as appropriate; (iv)Provision for pedestrians and cyclists that addresses accessibility, including off-road facilities and connections; (v)Corridor and carriageway design which is sufficient to enable provision of public transport; (vi)Provision for other infrastructure, including where suitable low impact design stormwater facilities; (vii)Provision for stock underpasses where suitable access is not readily available;	The proposed rezoning is not considered to exacerbate road safety issues, concerns, or efficiency.	Aligns

(viii) Discouraging the installation of new at grade road and pedestrian rail level crossings: A. Controlling the location of buildings and other visual obstructions within the sightline areas of rail level crossings; and B. Railway crossing design in accordance with the requirements of the rail operator.		
6.5.3 Policy – Road hierarchy and function Provide a hierarchy of roads for different functions and modes of land transport while recognising the nature of the surrounding land use within the district.	The proposed rezoning respects the road hierarchy by not providing direct access to the state highway or arterial network	Aligns
6.5.4 Policy – Road standards Ensure that the construction and operation of roads is consistent with their function in the road hierarchy.	No new road proposed	N/A
6.5.5 Policy - Road safety Ensure that structures, lighting, signage and vegetation are located and designed so as to not compromise the safe and efficient operation of the land transport network, or obscure RAPID numbers.	Lighting, signage etc are expected to be designed to the appropriate standards thereby not compromising the safe or efficient operation of the land transport network	Aligns
6.5.6 Policy – Network utility location Encourage the location of network utility infrastructure within transport corridors where the function, safety and efficiency of the transport network will not be compromised.	No new roads proposed. Access widths can comply with PDP standards	Aligns
6.5.7 Policy – Vehicle access Control the location of new vehicle accesses to sites adjacent to other accesses and rail level crossings to improve the safety and efficiency of the land transport network.	No nearby accesses or level crossings to proposed vehicle crossings.	Aligns

10.1.4 Overall, the proposed rezoning is considered to align with the objectives and policies of the Proposed District Plan.

11 Conclusions and Recommendations

- 11.1.1 As part of the update to the Waikato District Plan, it is proposed to rezone the site known legally as Lot 20 DP 431591 in Glen Massey from the Rural Zone to Country Living Zone.
- 11.1.2 A consent was previously granted for the site to be subdivided and developed into 18 lots, with associated road upgrades. The subdivision consent was actioned in part, however lapsed before project completion.
- 11.1.3 Based on the assessment undertaken, it is concluded that:
- As Country Living zone, the site may reasonably be expected generate some 182vpd and 25 vehicles in the peak hour. The surrounding road network is able to accommodate these traffic volumes.
 - Access to future lots is assessed as being able to comply with the PDP standards.
 - The large lot sizes are considered to be sufficient to provide sufficient on-site parking spaces.
 - It is noted that some sections of Wilton Collieries Road are less than 5m in width. Based on on-site observations, adequate visibility available, passing opportunities, and the low traffic volumes expected, the current road width is assessed as being sufficient for the proposed plan change.
- 11.1.4 It is concluded that the transportation effects of the proposed rezoning to Country Living will be less than minor and that the mitigations previously required as part of an 18-lot residential subdivision consent remain applicable.

CKL