

Before the Waikato Regional
and Hauraki District Councils

Under the Resource Management Act 1991 (**RMA**)

In the matter of An application for resource consents to extend the Waihi Gold Mine via underground and open pit mining methods known as Project Martha

By **Oceana Gold (New Zealand) Limited**
Applicant

Statement of evidence of Doug Saunders for Oceana Gold (New Zealand) Limited

25 October 2018

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Qualifications and experience

- 1 My name is Douglas John Saunders, I hold a Bachelor of Commerce (Valuation and Property Management) from Lincoln University. I am a registered valuer and hold Fellow membership of the Property Institute New Zealand and New Zealand Institute of Valuers.
- 2 I am a Director in the Valuation and Property Advisory Company TelferYoung (Waikato) Limited.
- 3 My firm was established in the early 1980's covering all facets of property valuation and advisory matters. I have some 36 years' experience in valuation of a wide variety of property types throughout the Waikato and Bay of Plenty.
- 4 I have been involved in providing valuation evidence relating to activity or development that is not typical of the market in that locality. This has included:
 - (a) Rural land values around the proposed Mathers Road landfill – Waihi.
 - (b) Rural property values surrounding the Tailings Storage Facilities and the Martha Mineral zone extension 1996 – Waihi.
 - (c) Rural property values around the then proposed Meridian Wind Park Te Hauhiko O Wharauoa – Te Uku, Raglan.
 - (d) Compensation valuations for various types of public works including the assessment of injurious affect.
- 5 In preparing this evidence I have reviewed:
 - (a) The reports and statements of evidence of other experts giving evidence relevant to my area of expertise, including:
 - (i) Vibration Assessment – Heilig Partners (Dr Heilig)
 - (ii) Noise Assessment – Hegley Acoustics (Mr Hegley)
 - (iii) Traffic Assessment – Traffic Design Group (Mr Carlisle)
 - (iv) Ground Settlement Assessment – Engineering Geology Limited (Dr Matuschka)
 - (v) Air Quality Assessment – Beca (Ms Harwood)

- (b) The parts of the section 42A report relevant to my area of expertise.
- (c) Submissions relevant to my area of expertise.

6 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note 2014. This evidence has been prepared in accordance with it and I agree to comply with it. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed.

Scope of evidence

7 I have been asked by Oceana Gold (New Zealand) Limited (**OGNZL**) to prepare evidence in relation to the impact that Project Martha is likely to have on property market values in Waihi. This includes:

- (a) An analysis of available information on the historical effect mining has had on property values in Waihi.
- (b) Predictions of the likely impact of Project Martha on property values.

8 I confirm that my evidence relates to the proposal known as Project Martha as described in Chapter 3 of the Assessment of Environmental Effects dated 25 May 2018 (**AEE**).

9 I confirm that I am the author of a report dated 25 May 2018 entitled Assessment of Market Effects attached as Appendix X to the AEE. I also confirm that I am responsible for the following additional information supplied in response to questions asked under section 92 of the RMA:

- (a) Further Analysis of Complaints
- (b) Long Term Sales Data
- (c) Extent of Market Discount
- (d) Long Term Perspective
- (e) Maintaining Existing Insurance Cover

Executive summary

10 Based on residential market sales data from 1980, i.e. prior to the granting of the original mining licence for the Martha Mine, to December 2017, the mining operations in Waihi have continued to have a positive effect on property values as compared to the neighbouring provincial towns of Te Aroha and Paeroa, which can be generally considered comparable to Waihi except there is no mining activity.

- 11 In 2012 I undertook a detailed investigation of the possible impact the then-proposed Golden Link Project (which became the Correnso underground mine) might have on residential property sales in the overlying Waihi East area. The conclusions of that study were that some decrease in property value was expected, the effect being greatest for those properties immediately above the mine and decreasing with increasing distance from the mine.
- 12 My Project Martha report includes the Correnso experience as a case study, comparing my predictions against the market sales within Waihi East. The conclusion from the case study is that overall market activity since the announcement of the Golden Link Project followed the predicted pattern and the assessed levels of anticipated market reaction.
- 13 An important element underpinning that conclusion is the property programme implemented by OGNZL during the initial years of consenting and operation of Correnso, specifically the Amenity Effect Programme (AEP) and the Top Up policy.
- 14 The AEP continues but the Top Up programme for Correnso ended in March 2016. Since then, property values have continued to be maintained, and the volume of sales is improving but remains below that existing prior to project announcement.
- 15 For Project Martha, I expect an effect on residential property sales for the area overlying and bordering the Rex vein similar to that predicted and observed with Correnso. That is, there is likely to be a dip in property values in the short term. The greatest potential change in residential property values or sales volume are expected to occur between the period of project announcement (March 2018) through project start-up and into the early part of mining activity. Once mining starts, normal market forces are expected to take effect reflecting the supply and demand pressures similar to other areas of the town and property values are expected to recover.
- 16 The critical mitigation for managing and reducing these effects for Project Martha is the continuation of the AEP and the reintroduction of the Top Up policy similar to that used for Correnso in the vicinity of the proposed Rex workings, to which I understand OGNZL has already committed.
- 17 Other factors on which I've based my conclusion include:
 - (a) Ground stability being unaffected by underground mining;
 - (b) No restrictions being introduced by external organisations such as the local authority in terms of building or subdivision consents; and

(c) Property in the Project Martha area being able to maintain existing insurance cover at no additional premium or variation on cover (on which Mr Kit Wilson will provide further comment in his evidence).

18 Commercial property values will continue to benefit from the extended mining activity in the town.

Locality

19 Development on the northern side of the Martha Pit includes primarily single residential homes to within 400m of the pit crest with rural small holdings and farmland beyond that distance.

20 Development adjoining the southern side of Martha Pit includes the commercial town centre, community-based amenities including churches and sports fields and mixed residential development of primarily single residential nature although there are also some medium density residential units.

21 The Town Centre is developed to either side of Seddon Street and is bounded to the southern side by State Highway 25 (Kenny Street), and on the western side by State Highway 2 (Seddon Street and Rosemont Road).

22 The Town Centre includes development typical of a provincial town including retail, office, service business and public amenity. Development is predominantly single level with only limited first floor development. This commercial development adjoins the southern rim of the existing Martha Pit and extends out some 400m although to the west and south west this is approximately 600m. Beyond this, the development is predominantly residential in nature.

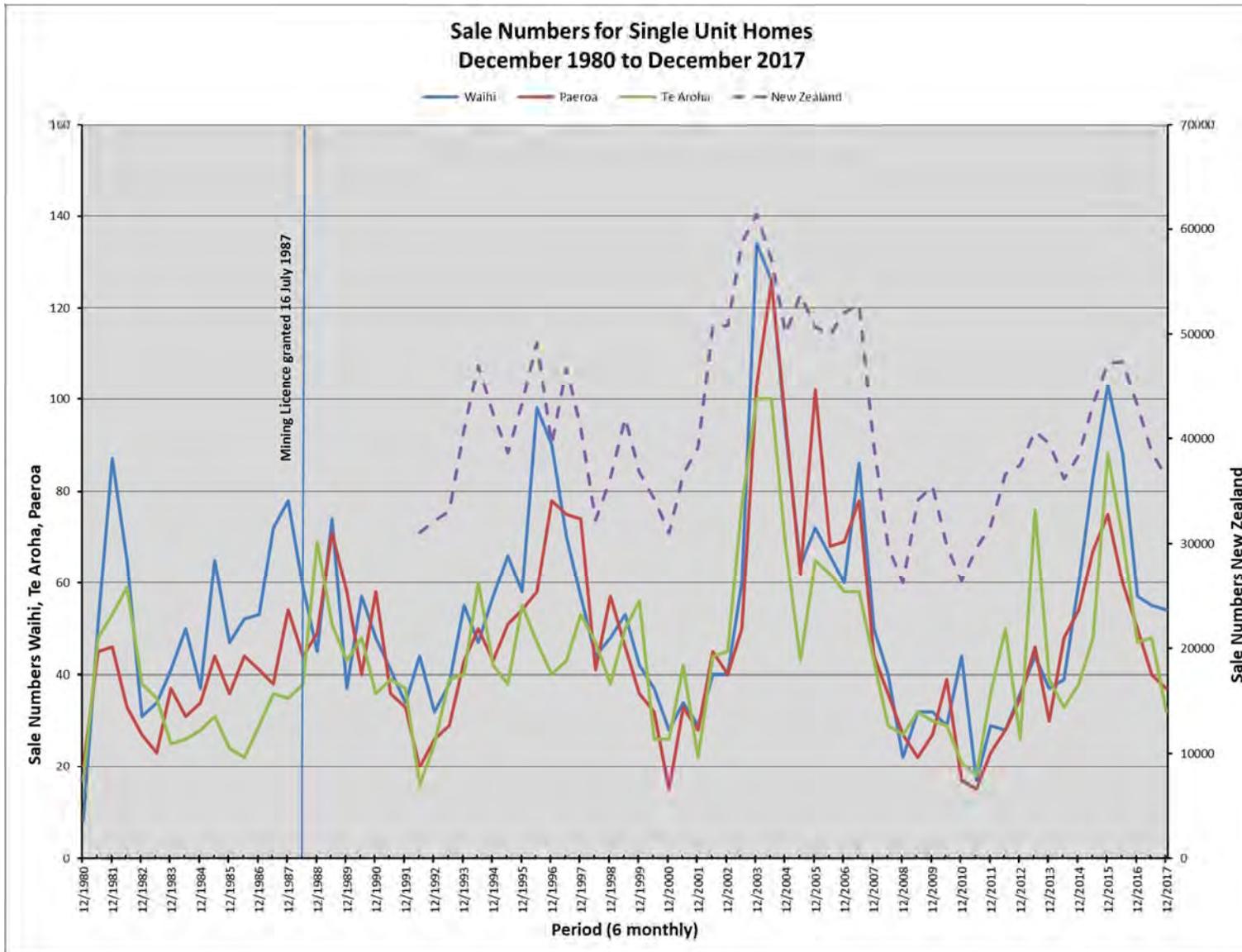
Market History

23 Long Term Market Activity (1980 – 2017)

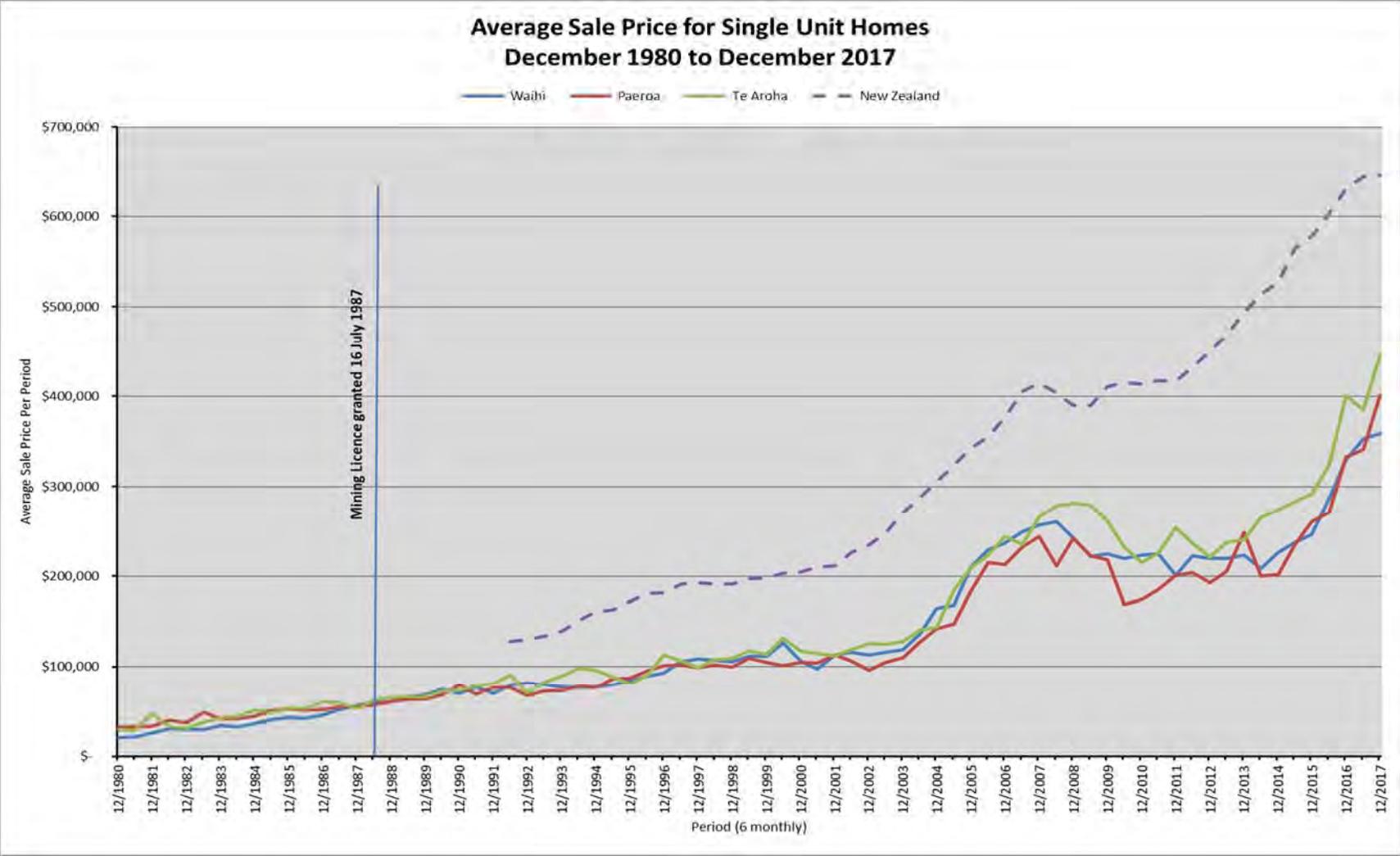
24 In my report I refer to a review of market activity within Waihi relative to the similar markets of Te Aroha and Paeroa undertaken by TelferYoung (Robertson Young Telfer) over the years.

25 Prior to mining recommencing in 1987, Waihi residential values tracked below Paeroa and Te Aroha in terms of average sale price of houses and sections. Subsequent to this date Waihi has typically tracked above Paeroa and has been consistent with Te Aroha for both developed and undeveloped residential properties.

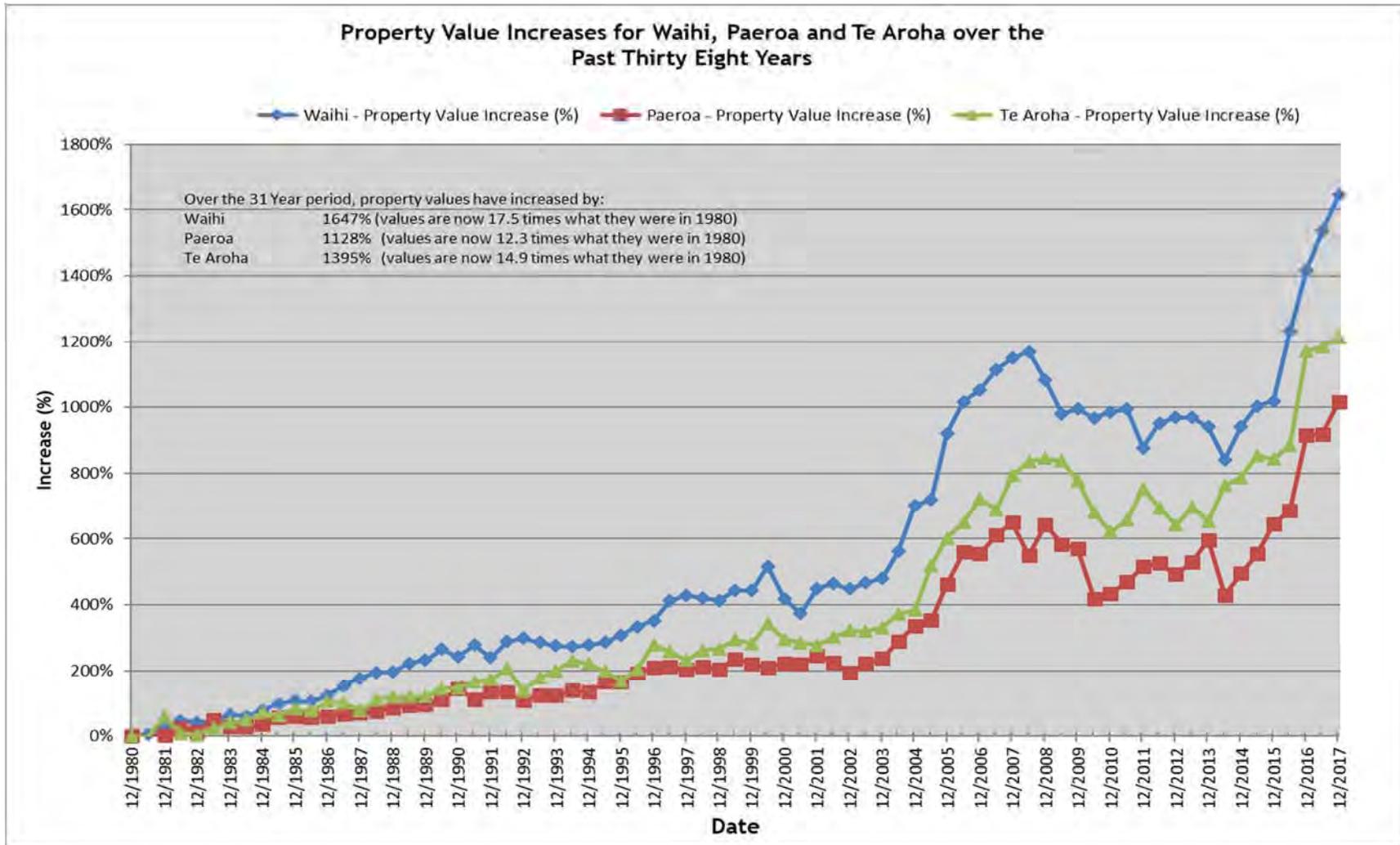
- 26 Te Aroha had a higher peak following the strong market activity of the mid 2000s which I believe was as a result of demand by out of town retirees buying in Te Aroha as an affordable and attractive community.
- 27 Each of the three towns has followed the national trend and they are otherwise consistent with each other in market behaviour through the peak in the mid-2000s, in responding to the negative effect of the Global Financial Crisis (GFC), and in responding to a migration-driven uplift through 2015/2016. This market activity plateaued through 2017.
- 28 A previous study of the Waihi residential market by Mr RP Young concluded (Environment Court - Evidence of RP Young 16 August 1998 paragraph 28 page 10) that while the market value of some property located immediately adjacent to existing mining activity had generally increased at a lower rate than prices paid for similar properties in streets only a short distance away, those properties immediately adjacent to existing mining activity had nevertheless increased in value above the level that would have pertained had mining activity never taken place in Waihi.
- 29 I would expect a similar market reaction to continue to occur after an initial period of market uncertainty, which I address later in my evidence.
- 30 To ensure the Waihi market trend is not influenced by purchases of property by OGNZL (and previously purchased by its predecessors), OGNZL purchases have been excluded from the data in the following Graphs 1-3 showing market activity from 1980 - 2017.



Graph 1



Graph 2



Graph 3

Short Term Market Activity (2008 – 2017)

- 31 My investigation of the Waihi market covers the period from 2008 to 2017. I have tracked the sales activity over six-month periods from January 2008 to December 2017 recorded from Real Estate Institute of New Zealand residential sales statistics. This data base tends to be more up to date and excludes non-market transactions that are recorded by the Territorial Local Authority and accessed through RP Data and Terralink data providers.
- 32 In particular, I reviewed and compared the residential market activity in Waihi East being the area most affected by the Correnso underground mine which was publicly announced in August 2011, with the residential market activity in Waihi generally and in Waihi West, the latter being remote from and not directly affected by Correnso.
- 33 Table 1 shows the volume of sales within Waihi and then Waihi East (as a percentage) together with the average sale price for Waihi overall and then for Waihi East and Waihi West. As noted above, the sales referred to through my evidence as “Market Sales” exclude OGNZL’s property purchases.

Sale Period	Total No. of Sales	Waihi East Sales	Waihi East as a Percentage of Total	Waihi Overall Avge Sale Price	Waihi West Avge Sale Price	Waihi East Avge Sale Price
Jan 2008 - Jun 2008	25	2	8.0%	\$ 258,900	\$ 288,611	\$ 192,000
Jul 2008 - Dec 2008	16	1	6.3%	\$ 246,906	\$ 272,000	\$ 210,000
Jan 2009 - Jun 2009	27	7	25.9%	\$ 216,778	\$ 224,750	\$ 194,357
Jul 2009 - Dec 2009	23	6	26.1%	\$ 201,883	\$ 170,400	\$ 227,300
Jan 2010 - Jun 2010	25	6	24.0%	\$ 236,200	\$ 232,500	\$ 224,583
Jul 2010 - Dec 2010	21	3	14.3%	\$ 216,262	\$ 238,800	\$ 257,500
Jan 2011 - Jun 2011	19	8	42.1%	\$ 225,237	\$ 252,438	\$ 224,875
Jul 2011 - Dec 2011	29	4	13.8%	\$ 197,900	\$ 222,000	\$ 230,625
Jan 2012 - Jun 2012	27	4	14.8%	\$ 200,759	\$ 184,192	\$ 221,625
Jul 2012 - Dec 2012	41	14	34.1%	\$ 216,195	\$ 228,667	\$ 219,143
Jan 2013 - June 2013	56	15	26.8%	\$ 212,732	\$ 220,132	\$ 255,767
Jul 2013 - Dec 2013	41	9	21.9%	\$ 211,805	\$ 231,409	\$ 173,444
Jan 2014 - June 2014	43	5	11.6%	\$ 200,384	\$ 196,917	\$ 237,300
Jul 2014 - Dec 2014	72	7	9.7%	\$ 205,540	\$ 227,212	\$ 180,357
Jan 2015 - June 2015	96	10	10.4%	\$ 234,606	\$ 232,824	\$ 222,550
July 2015 - Dec 2015	113	31	27.4%	\$ 226,974	\$ 244,076	\$ 233,629
Jan 2016 - June 2016	105	11	10.5%	\$ 262,228	\$ 282,189	\$ 231,045
July 2016 - Dec 2016	56	2	3.6%	\$ 312,661	\$ 334,421	\$ 255,000
Jan 2017 - June 2017	64	4	6.3%	\$ 342,939	\$ 350,795	\$ 296,250
July 2017 - Dec 2017	64	8	12.5%	\$ 340,392	\$ 340,854	\$ 296,875

Table 1

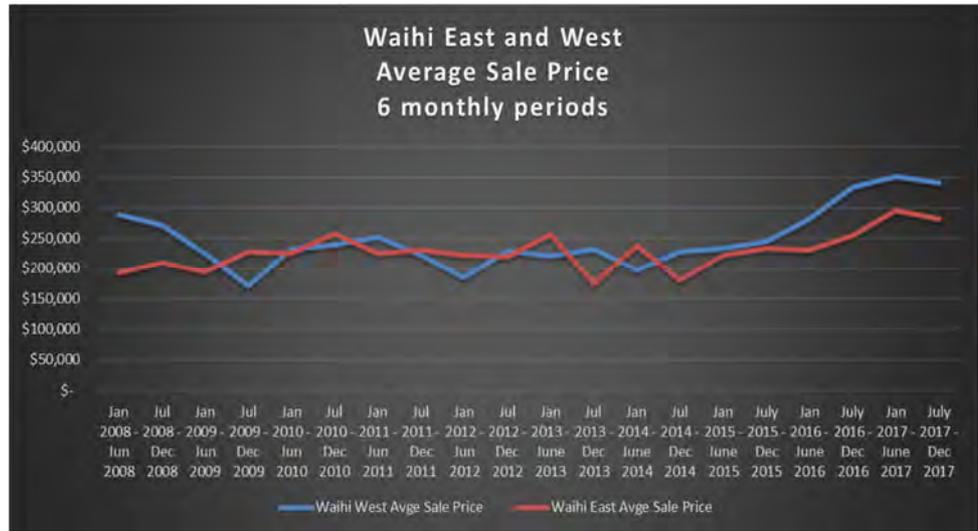
- 34 A Property and Community Investment Program (PCIP) was implemented subsequent to the August 2011 announcement of the Golden Link Project (which resulted in the granting of consents for and the subsequent development of the Correnso underground mine). In Waihi East this included a “Top Up” policy. Top Up involves paying the purchaser of a

property the difference between the fair price offered by a purchaser and a market value not influenced by mining activity to ensure market value for the vendor within the Golden Link Project Area (GLPA). A primary aim of Top Up was to support the market through the early period of uncertainty following the project announcement.

- 35 The sales of single residential homes on sites of less than 1200m² over this period of nine years indicate a consistent level of total sales within the town of between 20 and 30 sales per six-month period up to the start of the national market recovery in 2012 following the GFC. From this time, the six-monthly volume of sales for the town has averaged 65 of which the Waihi East locality accounts on average for 15.8% of total sales (ranging from 3.6% to 34.1%). This includes the sales to which OGNZL's Top Up policy applied between 2011 and 2016. The market share for Waihi East remained quite consistent through this period (around 21%). In late 2013 the Top Up policy was pulled back in terms of the quantum available to purchasers, then stopped in March 2016 to allow the market to re-establish. Since mid-2014, Waihi East sales have averaged 11.5% of Waihi's total residential property sales volume.
- 36 The full GLPA contains 519 residential properties, equating to 19% of the total Waihi housing stock (approx. 2750). The sales over the period from 2008 to 2013 (22.8%) which included the Top Up policy subsequent to the announcement in 2011 are therefore approximately proportionate to the total stock for the town. This indicates that during this period the locality did not suffer any abnormal market supply or demand from external factors such as the current mining activity relative to other areas of the town.
- 37 The continued sales in Waihi East indicate that confidence in the market was maintained as people continued to buy into the locality above the Correnso mine, as intended by introducing the policy. The cost of Top Up to the mining company quantified the influence of the Correnso mining relative to current values, which I can confirm generally fell in line with the impact predicted.
- 38 Since the commencement of Correnso development (December 2013) and then mining (June 2015), and with the initial reduction in Top Up support (2013) and then cessation in March 2016, the volume of sales in Waihi East as a % share of the total market has dropped. The average sale price in Waihi East has since 2008 typically been slightly below both the Waihi Town overall average and the Waihi West average. Since July 2015 the average sale price in Waihi East has been lower than expected as measured against the Town average and Waihi West average. However, the relatively low volume of sales in that period can cause distortions.

Separate analysis of market sales in Waihi East since 2016, after the Top Up was removed, has shown the sales to be comparable with values in Waihi West. Any disparity shown by these sales would lie within the predicted range of between 5% - 10% in the short-term mining period of 0 – 2 years post commencement and 5% in the medium term mining period of 3 – 7 years post commencement. Further discussion can be found in my report at Appendix D.

39 Graph 4 relates to this market activity.



Graph 4

Waihi Market Activity – Concluding Comments

- 40 Residential sales activity prior to the August 2011 announcement dispelled any suggestion that property values in Waihi East had been adversely affected by the mining activity as compared to Waihi West and the town as a whole. Subsequent to the Golden Link/Correnso project announcement in 2011, the market reaction has been as predicted and was redressed by the “Top Up” policy.
- 41 Application of Top Up ceased in 2016 and the Waihi East market is re-establishing under its own dynamics since then. Sale prices are at or within 5% of an expected market value relative to sales of other property in Waihi.
- 42 In conclusion, in my opinion market sales indicate that the mining operations in Waihi have continued to have a positive effect on property values when compared to the neighbouring provincial towns of Te Aroha and Paeroa which can be generally considered comparable to Waihi, except there is no mining activity. Market activity in Waihi East has moved in response to the Correnso project as predicted.

Project Martha and Effects on Property Values

- 43 For the purpose of considering the potential change to property values associated with Project Martha I have considered the potential effects of particular concern to the community.
- 44 Residential property values are determined by supply and demand, Demand will be influenced by market perceptions held by purchasers whether real or not. Due to the influence of perception on market values, I have in the past reviewed the six-monthly reports prepared by Newmont Waihi Gold and OGNZL of complaints raised by the community as a snapshot of issues of concern to the community and in particular property owners and occupiers that may influence the perception of potential purchasers. This includes complaints received during the operation of the Martha Pit before it closed after the north wall slip.
- 45 The reports offer a similar pattern of complaint over each six-month period and therefore assist in identifying matters that could potentially generate changes to property value.

MP4

- 46 I considered the complaints relative to the Martha Open Pit operation as being more comparable to the Phase 4 Cutback component of Project Martha.
- 47 The complaints received relative to the Martha Open Pit operation during 2014 included;
- (a) Vibration (135 complaints from 18 individuals and of that total 121 were from 3 individuals)
 - (b) Noise (39 complaints from 17 individuals evenly spread)
 - (c) Property (1 complaint)
 - (d) Dust (8 complaints with 4 being from one individual)
- 48 Based on the above, I consider the effects that may influence residential property values from the Phase 4 Cutback are;
- (a) vibration
 - (b) noise
 - (c) dust

Martha Underground

- 49 I considered the complaints relative to the Correnso underground mining activity as being more comparable to the proposed underground component of Project Martha.
- 50 Notably, although there are numerous complaints, as discussed below the majority of the complaints received are made by a small number of residents. The same pattern occurred with complaints about the earlier Favona underground mine operation (and with the Martha open pit as shown above).
- 51 The complaints received during the period 2016 – 2017 in relation to mining in Correnso are summarised as follows:
- (a) Vibration (110 complaints from 20 individuals and of that total 79 were from 4 individuals)
 - (b) Noise (76 complaints from 15 individuals and of that total 59 were from 4 individuals)
 - (c) Property (6 complaints)
 - (d) Dust (2 complaints)
- 52 The Correnso complaints summary includes separate Vibration and Noise sources, nearly all of the noise complaints were listed as “Felt & Heard” with the exception of 8 complaints directly about noise. Of these 8, 3 were clearly non-blast related. While noise is not usually an issue with underground mining, for my assessment I did not separate the two issues.
- 53 As evidence of market factors, an important difference with the Correnso Underground Mine is its location beneath existing residential property as compared to both the previous Favona and Trio Underground Mines. In this regard it is relevant to note that the vast majority of underground mining as part of Project Martha will take place beneath the existing Martha pit and not beneath occupied properties. The exception is the Rex lode, which may occur under 20-30 residential properties.
- 54 Based on the complaints received for the Correnso Underground Mine, I consider the matters that may influence residential property values from the proposed Project Martha, and specifically the mining of the Rex lode, are perceptions of unrealised effects, i.e. uncertainty about vibration, noise and potential property damage. That perception and hence the potential for the market to be affected, is greatest with underground mining and for

those properties that overlie or are close to the edge of the mining, reducing with increasing distance.

55 In my report I have made a similar assessment for commercial property (s6.2.2 and s6.5) and for reserve areas (s6.2.3) near the proposed Project Martha mining activity. My conclusion is that mining has little to no effect on these types of property. Rather than provide the details of my assessment for these property types, which are covered in detail in my report, the remainder of my evidence focuses on the potential effects on existing residential property. I will however present the summary findings of my assessment for commercial property and reserve land later in my evidence (paragraphs 112 to 117).

Assessment of Market Effect

56 I now assess the potential for change in the residential property market in relation to the matters listed above in paragraphs 43 to 54. It is important to note at the outset that the change in property value is notional only – that is, any reduction in property value is only realised should a person decide to sell their property during the period of potential influence.

57 On the basis that dust and noise, outside of noise referred to with blasting (felt and heard) have attracted a low or infrequent level of complaint I do not anticipate there to be any measureable impact on values from these factors relative to the Phase 4 Cutback component of Project Martha. Nor are there noise and dust effects associated with underground mining; in this case the Martha Underground.

58 The description by complainants of having “felt and heard’ blasts has not been separated into two issues and I have dealt with it combined under vibration.

59 I have therefore considered the following;

- (a) Concerns about vibration
- (b) Fears of Property Damage
- (c) Proximity to mining Activity

Concerns about Vibration

60 Vibration from either open pit or underground blasting has generated the greatest number of the complaints in the six-monthly summaries recorded by OGNZL. In assessing the potential for vibration to influence property

values I have been able to draw on the reports and experience gained over the life of the Favona and Correnso (to date) underground mines.

- 61 Favona was located under unoccupied rural land. It is comparable to a large part of the proposed Martha Underground where the mining is largely under the existing pit, sports fields and land owned by OGNZL. The vibration experienced at the closest residential property – whether it be adjacent to the mine or above it – will essentially be the same (limited by the Favona consent to 6mm/s while the proposal for Project Martha is to adopt a limit of 5mm/s).
- 62 Correnso provides experience of mining being undertaken directly beneath residential property, and with the same 5mm/s vibration limit proposed for Project Martha. As with the market evidence from Favona, it has been difficult to isolate any material effect on the market value of residential property sales from vibration either when the Top Up was in place and now subsequent to Top Up being stopped.
- 63 It is apparent that vibration impacts on different people in different ways. Of the 110 vibration complaints received in 2016, 71.8% (79) were received from just 4 people (OGNZL Complaints/Concern Summary Report January 2016 to December 2016). Also, the location of complaint does not relate well to the level of received vibration, as shown in the “complaints heatmap” provided to HDC in response to its request for more information (Figure 2 of Appendix 6, Response to Request for Further Information, July 2017). This observation is consistent with past complaint records.
- 64 Nevertheless, for potential purchasers the location of property that may be subjected to differing levels of vibration and more importantly how often vibration events occur has the potential to affect value, the magnitude of this effect reducing with increasing distance from the source.
- 65 Of note is that the number of blast events and levels of vibration felt at individual properties during this period 2020 - 2030 will change as the mining activity moves from and to different areas either at the surface or beneath the surface.
- 66 What has been shown with the Correnso development and mining to date is that the levels of vibration at the properties closest to Correnso were similar to those experienced by the properties closest to Favona.
- 67 A study of the market activity from the announcement of Correnso to date has shown that the market behaviour has fallen in line with the predicted levels of impact on value relative to the distance from the mining activity. More particularly the most recent sales activity since the withdrawal of the

Top Up policy has shown consistency with market values of property in other parts of Waihi. Details of these analyses are attached as Appendix D to my report.

68 This evidence is supported by early analysis of property values adjacent to Favona. Details of the analysis is attached as Appendix H to my report.

69 This analysis suggests that vibration, at the levels and frequency experienced from Correnso, is not influencing property values within the area where vibration levels trigger complaint. In the same way, I am of the opinion that vibration associated with Project Martha will have little to no quantitative influence on property values.

70 The predicted effect on property value in relation to Correnso was primarily related to proximity to mining. This could naturally be correlated with vibration given a perception that proximity to mining would directly relate to greater vibration.

71 The six-monthly AEP payment tabulated below (Table 2) is indicative of the vibration experienced at each of the sale properties. Each sale property was considered relative to sales of similar property not in the Correnso (Waihi East) locality. The estimated value, excluding any influence of mining, was compared to the actual sale price. The relationship of the sales in each AEP zone were compared to the estimated values in each AEP zone. For example, in the table, where no AEP payment was received by the sale property (i.e. properties experiencing little to no vibration), the four sales averaged 2.4% above the value estimated without any mine influence with a median above the estimated values of 2.3%.

Market Sales to TY estimates			
AEP Payment (6mthly)	Average	Number of Sales	Median
Nil	102.4%	4	102.3%
\$250-\$500	100.6%	16	100.6%
\$500-\$1000	93.0%	6	95.7%
\$1000-\$2000	99.0%	2	99.0%
\$2000-\$3000	95.3%	1	95.3%
		29	

Table 2 Correnso Sales & Estimated Value vs. Measured Vibration

72 Sales at values at 100% or above indicate that the property was not negatively influenced by mining.

- 73 In the AEP zone of \$500 - \$1,000 (those receiving some vibration) there is one sale of the six that appears as an outlier. If excluded, the evidence would suggest an average of sale price of 98.6% of the estimate price.
- 74 Similarly, the sales prices in the \$1,000 - \$2,000 AEP zone (those receiving more vibration) were very close to the estimated prices (99%). One of these two properties sit directly above the mine, while the other is close to, but slightly to one side to the vertical projection of the mine.
- 75 The one property sold in the \$2,000-\$3,000 AEP zone, being that area that receives the most vibration, sits directly above the mine.
- 76 The data shown in Table 2 indicates that potentially vibration is part of an effect on property value where property is located above proposed mining activity. Caution is required as to any conclusion drawn, given the small sample size and any impact shown on these sales may be related to vibration directly or to proximity of the property to the mining activity.
- 77 However, on balance, I do not anticipate there being any effect on residential property value as a direct consequence of vibration within the consented levels associated with Project Martha, either MP4 or the underground mining.
- 78 To the extent that the effect may be present for Project Martha, I would expect it to be limited to those properties above the Rex lode, and for the effect to dissipate over time as predicted with Correnso.

Fears of Property Damage

- 79 People's perception of the potential for property damage is most likely to be related to concerns about vibration from blasting causing cracking and ground movement with resultant damage to existing improvements.
- 80 In my opinion, the area where these fears may be held will be about the same as that in which people may be concerned about vibration.
- 81 I am advised that there has been one incidence of property damage from a specific technical mining fault, that event relating to an improperly grouted exploration borehole. Otherwise, to date there has been no actual damage to property as a consequence of the modern mining activity (this excludes the subsidence events due to the unfilled voids left by historical underground mining). I also note that the evidence on ground settlement, stability and vibration demonstrates that there will be no damage to property.

82 Further, OGNZL in its Project Martha property programme has confirmed that it will be responsible for the cost of remedying any property damage linked directly with its mining activity.

83 On the basis of the evidence that the one instance of property damage was as a result of a technical fault in the exploration process, and that there has been no other damage or damage likely to be caused to property by either the open pit or underground mining in Project Martha, as well as OGNZL's public acknowledgment of its responsibility in the unlikely event that there is damage caused by its activities, I am of the opinion that the market has not, and will continue to not, discount property values for the risk of property damage outside of those properties potentially impacted by proximity to underground mining.

Proximity to Mining Activity

84 The market research addressing the influence of mining activity on property values has in the past concluded that the positive effects of the mining activity outweigh any negative effects and that the impact on market value is positive rather than negative in Waihi. This overall positive impact on property values in Waihi relates to mining activity that has to date been adjacent to or distant to residential and rural property in Waihi. The same positive effect on property values has been observed in Stawell (Australia) where the mining activity was of an underground nature beneath the residential areas of the town and similarly had underpinned the local economy.

85 Before Correnso, the modern underground mining activity in Waihi had not been beneath privately owned residential property.

86 In my opinion, the occurrence of underground mining beneath privately owned property, as proposed with Correnso, was likely to generate an initial negative market reaction relating to the perceived concerns around an industrial activity occurring beneath the properties.

87 On that basis, I considered that it would be the proximity to the proposed Correnso mine and the associated perceptions of effects, rather than actual vibration and property damage effects, that would influence the property market in Waihi East.

88 The expected market reaction was likely to be as a consequence of a general fear of the unknown as mining having not occurred, in recent times at least, under privately owned property in Waihi. The reaction would be similar to the market behaviour of an "unpopular use" being established in an urban area.

89 It is widely regarded that the greatest influence on property value where an unfavourable event or development is to take place is at the time of announcement and that any discount to property value generally diminishes with time and the presence of the activity within the conditions of consent. Any discount relates to the fear of the unknown and the inability of the market to price something it can't tangibly see and therefore measure in its absence.

90 To date the market behaviour in Waihi East has reasonably fallen in line with the predicted market reaction in terms of value. Actual volume of activity has been slower than predicted but this could be influenced by other factors such as the reduction in market supply caused by OGNZL's acquisition of property in the area and possibly greater purchase of property in the area by investors who may have a longer term holding outlook, reducing turnover of property.

Location and Number of Properties Affected

91 Based on my assessment of the factors likely to affect residential property values, I have identified the properties that potentially may be subject to value change as a consequence of the concerns and perceptions listed above in paragraphs 43 to 54 that may arise.

92 As I've stated above, the potential for the market to be affected is greatest with underground mining and for those properties that overlie the mining, reducing with increasing distance from the activity. I have therefore classified potentially-affected individual properties relative to the Rex lode as follows:

- (a) Above – proposed development or stoping.
- (b) Fringe - property fringing proposed development and stoping areas.
- (c) Outer – property beyond the fringe.

93 These classification areas, shown in Diagrams 1 and 2, are determined by the maximum expected extent of the mining activity with Rex lode for the Above and Fringe areas.

94 For the Outer area, I have used Dr Heilig's vibration predictions as an indicator for the maximum possible extent of any potential market effect. Dr Heilig states in his Project Martha evidence that the rate of complaints related to open pit blasting starts to increase at around 3.5mm/s. His Project Martha report also refers to the Hauraki District Plan, which describes a transient vibration magnitude of between 0.5mm/s and 2mm/s

as being “Slightly perceptible (barely perceptible)”, and above 2mm/s as being “Distinctly perceptible (noticeable)”. I have adopted a vibration level of 3.0mm/s as a benchmark to people’s awareness and hence a level above which vibration could potentially create a market reaction. The 3mm/s vibration level sits between the rate of complaints threshold referred by Dr Heilig and the lower end of the District Plan’s noticeable vibration range and has regard to my past analysis of sales relative to vibration contours.

- 95 The area covers residential and other types of land use, but as I’ve already stated, the potential for Project Martha to affect the market is limited to residential property.



Diagram 1 - Northern Area of Project Martha



Diagram 2 - Southern Area of Project Martha

Key

- Red “Above” property
- Blue “Fringe” property
- Orange “Outer” property

- 96 “Above” property includes those physically above the proposed mining activity and within the 5mm/sec vibration contour as a measure of very close proximity.
- 97 “Fringe” property includes those residential properties situated adjacent to the actual underground activity. The extent or distance from the “above” property has been based on my experience with the Correnso underground mine and the successful application of the Top Up policy that related to similarly identified bands for that project.
- 98 There are 22 and 58 residential properties in the “Above” and “Fringe” categories respectively.
- 99 I have not counted the number of properties in the Outer area because, as I conclude later in my evidence, the residential property market will not be materially affected outside the Fringe area.

Assessment of Potential Change to Property Values

- 100 Based on my research and having considered all of the factors, in particular the findings from the Correnso case study, I would expect to see a similar graduated impact on property value starting from the announcement of the proposed Martha Project through planning/consenting to its initial operation (2020) and the extended life of ten years (2030). The property value impact will be greatest at the beginning of the project and for those immediately above the Rex lode portion of the Martha Underground. The effect for those properties will wane as people become accustomed to the activity over a period of time without it causing disruption by a breach of the usual amenity to surrounding property owners.
- 101 This impact could possibly be reduced from that experienced in Waihi East given that the Town (local market) has now experienced mining activity under a residential location. This could alleviate part of the “unknown” in that initial phase.
- 102 My evidence submitted for the Golden Link Project consent application suggested that while there was likely to be an effect on values for those properties above and fringing the Correnso mine, any extensions of the underground mining in the GLPA after successful completion of Correnso mine would likely draw a reduced period of impact.
- 103 However, I anticipate the level of impact through the initial phase of Project Martha is likely to be similar to Correnso given the often referred to NIMBY (not in my back yard) effect where despite similar situations existing elsewhere, the reaction of a new market in a greenfield situation needs to

progress along the same pathway to acceptance from a starting point of announcement to one where the “unpopular use” is able to be physically measured by the market and neutralised, leaving values to restore to pre announcement level.

- 104 The period over which the change in market reaction is expected to occur is broadly grouped as:
- (a) Announcement phase (announcement to 6 months, which has passed).
 - (b) Planning/consent (6 months to 18 months).
 - (c) Mining Short term (0 year to 2 years).
 - (d) Mining Medium term (2 years – 7 years).
 - (e) Mining Long term (8 years +).
- 105 The properties in the Project Martha area have been identified relative to the Phase 4 Cutback and the Martha Underground. I do not expect property values to be impacted by the Phase 4 Cutback for the reasons discussed in paragraphs 57 to 90.
- 106 The assessment therefore determines that any market effect relates to the underground mining component of Project Martha and particularly the Rex lode that underlies residential properties.
- 107 In measuring the influence of an “unpopular use” or negative effect it is often helpful to consider the following:
- (a) A perception of little change in market value, i.e. difficult to measure or separate from other market influences; +/- 2.5%.
 - (b) A perception that the changes will be measurable but not definitive, usual valuation ranges suggest +/- 5% as being acceptable valuation tolerance. A variation attributable to a single factor could be identified if the influence on value was at or around this 5% limit.
 - (c) A perception that the change will be noticeable and easily recognised ahead of other market influences on the property’s value, equivalent to a change of more than 10% i.e. an example using a positive expectation would be a reasonably well recognised or expected premium paid by an owner purchasing an adjoining property being in the order of 10% above market value.

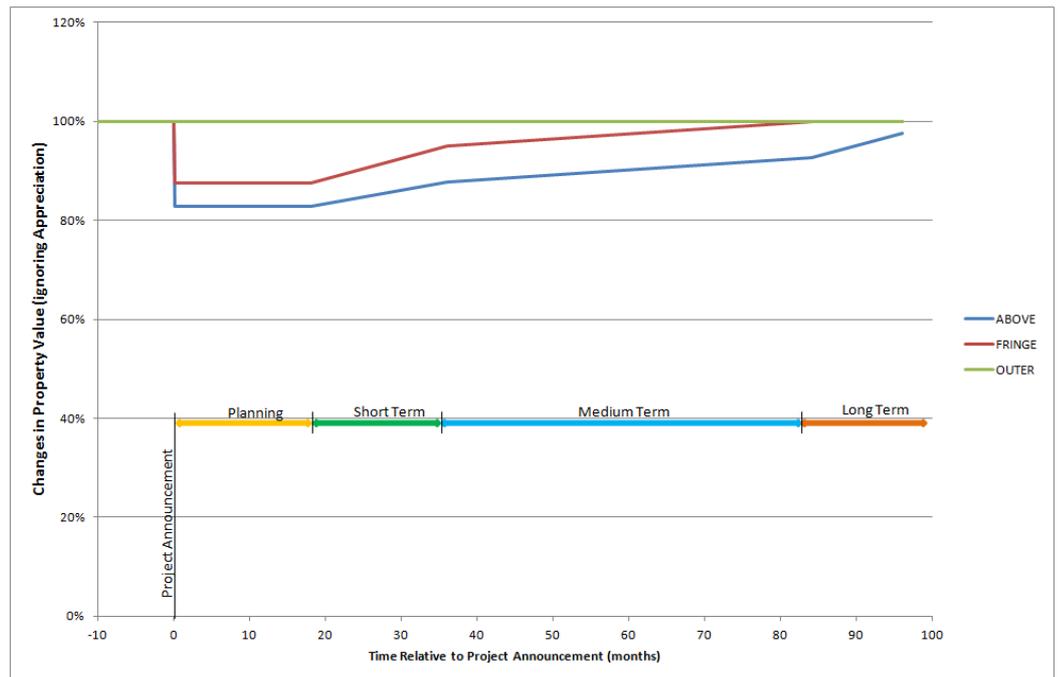
- (d) A perception that the change will be materially detrimental (or positive), equivalent to a change of more than 20% i.e. again an example of a positive expectation would be an adjoining owner with a distinct financial benefit from acquiring.
- (e) A perception that the market will need to be enticed to buy, equivalent to a change of more than 30%.

108 Table 3 is a summary of the approximate notional discount I have assessed as applicable to residential property in the three proximity locations relative to the Rex lode and relative to the market periods from the announcement. This includes my opinion of the market reaction to the mining activity having determined that the market will not consider property damage or vibration as material influences on property value. It is important to note that quantifying the market reaction at each stage of the life of a project and for each group is subjective.

Property proximity category	Announcement Phase (0-6 months)	Planning & Consent (6 mths – 18mths)	Mining Short Term (0-2 yrs)	Mining Medium Term (3-7 yrs)	Mining Long Term (8 yrs +)
ABOVE	No sales activity.	15%-20%	10%	5%	0%
FRINGE	Limited sales activity.	10%-15%	5%	0%	0%
OUTER	Slow sales activity	0%	0%	0%	0%

Table 3: Project Martha Market Effects

- 109 The assessment of influence on valuation is a holistic assessment for all of the property in each of the proximity categories. I would expect some variation around these amounts within each proximity.
- 110 Graph 5 reflects my assessment of the potential change in the average sale price of residential property within each of the two proximity categories over the period from the announcement phase of the mining through to the long-term position after seven years.



Graph 5

- 111 Graph 5 highlights the potential for a sudden decline in value for property “above” or residential “fringe” after the initial announcement through the planning and consent period (generally short term) to where property values re-establish over the following seven years.
- 112 Commercial property is likely to react differently. Commercial property ownership and occupancy are driven principally by visible or tangible factors (rent and required investment return or simply the suitability to carry out a business activity) and typically values are not driven by emotive market reactions associated with residential property.
- 113 With no privately owned commercial property being located in an “above” location I do not envisage the influence of proximity to mining will affect values.
- 114 I do not see the activities or outcomes from Project Martha affecting the highest and best use of the established commercial properties in the Town Centre and with the majority of supply of commercial property being located within the sphere of influence the market does not have a choice of property with which to price differentiate.
- 115 Potentially there could be some impact on a commercial property with a residential component. This impact is not anticipated to be any greater than that addressed for “fringe” residential property and is more likely to align with the “outer” category.

- 116 The prolonging of mining activity beyond the current intended closure of mining in 2019 would have a positive impact on commercial ownership.
- 117 The area of Reserve (Active) zone is likely to follow the same influence as residential land given that this is the most likely underlying use should the property not continue to be used as sports fields. Residential use would require re-zoning and addressing the issues associated with the hazard zones over old mine workings. But nevertheless, the value would be underpinned by the end use and therefore subject to similar market influences.
- 118 Overall, there is an anticipated nil effect on all property values in the long-term subject to usual market forces that may prevail at that time. This would include the continuation of mining activity, as without this, the market in Waihi could well be expected to act differently (decline) than it has since 1987 when the mining licence was granted. The potential temporary change in residential value does need to be seen in the context of the demonstrated increase in property values in Waihi as a result of mining, compared to property values without mining operations within the town. Further, as discussed above in paragraph 28, the research study of Mr R P Young has shown that while some property located immediately adjacent to existing mining activity has generally increased at a lower rate than prices paid in streets only a short distance away, those properties had nevertheless increased in value above the level that would have pertained had mining activity never taken place.
- 119 The market reaction to Project Martha and in particular the Rex lode of the Martha Underground Mine is summarised as follows:
- (a) Commercial property will not be impacted.
 - (b) Commercial property with a residential component may be impacted but I would expect any concern to be alleviated by the property being included in the AEP.
 - (c) The matters of concern likely to be considered by the market as having the potential to influence property values will relate to residential property and the magnitude of any such effect would be determined primarily on the proximity of the individual property to the underground mining.
 - (d) The potential influence on residential property values in the area of underground mining is as follows:

- ABOVE (property predominantly directly above the Rex underground mine activity). Noticeable and easily recognised in the short term, measurable but not definitive in the medium term and nil impact in the long term.
- FRINGE (where residential property fringes the underground mining activity).

Noticeable and easily recognised reducing to measurable but not definitive in the short term and to nil impact in the medium and long term.

- FRINGE (where a residential component of a commercial property fringes the underground mining activity).

Not definitive in the short term.

- (e) The location of an area of privately owned Reserve (Active) zone above a large part of the Martha Underground is likely to experience the same influence as the residential “Above” if it were to be sold for residential purposes during the duration of Project Martha. Noticeable and easily recognised in the short term, measurable but not definitive in the medium term and nil impact in the long term

- 120 Property values beyond the underground mine area will not be influenced by the proposed mining although the general conclusions relating to the positive influence of mining in Waihi would be expected to remain.

Response to Submissions

- 121 The following is a summary of the submissions received relating to property:

- (a) A total of 16 submissions were received being the combined total of submissions made to Hauraki District Council (HDC) and Waikato Regional Council (WRC)
- (b) The total submissions were received from 11 submitters
- (c) The submissions related to 10 properties

- 122 Seven of the submissions raised impact on property value as a concern.

- 123 The matters of concern raised within the submissions received align with those identified in my evidence including:

124

- (a) Noise (6)
- (b) Vibration (7)
- (c) Dust (5)
- (d) Property damage (6)

125 The range and nature of the matters raised by submitters supports my original determination of matters likely to impact on property values. The number of submissions on these matters relative to the Waihi market size is also supportive of my findings that the wider market is unlikely to be impacted by the matters identified.

126 Additional matters raised as concern included:

- (a) Disruption to general amenity (2)
- (b) Bulltown Road realignment creating faster traffic flow (4)
- (c) Ability to obtain property insurance (1)

127 I have dealt with the matters raised in sub paragraphs 2.1 – 2.5 in my evidence.

128 I have considered each of the additional matters raised and comment as follows.

Disruption to general amenity

129 This is quite an overarching statement in one submission stating that there will be continued environmental disruption. It would not seem to be specific to individual property. As shown by the analysis of historical market activity, the Waihi property market has not acted any differently to comparable markets in Te Aroha and Paeroa over time. I would suggest this supports the conclusion that the amenity and environment of the town and available to the residents has not been negatively impacted by the operation of mining.

130 Combined with this concern of disruption are two submitters that comment that they had expected the pit to be developed as a park and being filled as a lake by now and not have continued mining activity. This concern is specific to those owners’ personal motivations and could reflect a perceived loss in value to them or more particularly a deferral of the perceived gain in value (if any). The two submitters are located in close proximity to the north wall and the Martha Pit operation. My evidence shows that I have not been able to determine loss in value to properties in that area associated with past operation of the Martha Pit and I expect this to be the case with the proposed MP4.

131 The continued operation of the Martha Pit beyond the original planned closure, excepting the ceased operations between 2014 and now through the slip on the north face, would seem to be reasonably accepted by the Waihi market. That is, the town is a mining town and where viable it is likely that mining will continue.

132 I do not believe that the deferral of the closure of Martha Pit mining and the delayed development of the lake and reserve would negatively impact existing property values.

The realignment of Bulltown Road will result in faster traffic flow

133 I understand the view of the traffic experts is that the realigned road will not materially change the speed of traffic. I also understand though that OGNZL is happy to adopt the measures recommended by Mr Carlisle if the Commissioners are of the view that traffic calming is required on the realigned section of the road.

134 Observations of property values in areas of varied traffic flow and speed would suggest to me that the value of property adjacent to the realigned corner is not likely to be impacted.

Ability to obtain property insurance

135 One submitter, a commercial property owner and business operator sought reassurance that he would be able to get property insurance.

136 This has been covered in Kit Wilson's evidence.

Response to Hauraki District Council S42A Report

137 I have reviewed section 10.6 Property Aspects of the report and have no comment to make in respect of the contents of that section.

Response to Waikato Regional Council S42A Report

138 I have reviewed this report and note the comment on page 24

139 "Some submissions raise issues relating to vibration, "Top Up Area", noise and property values - I have not addressed these matters as they are not matters the WRC can address as they generally fall within HDC's jurisdiction. I have not recommended any consent conditions to address these matters raised in submissions."

140 I have no further comment to make in respect of the report.

Conclusion

- 141 Past evidence produced by TelferYoung has established that property values in Waihi have increased more than would have occurred if mining had not taken place since 1987.
- 142 A reported perception or concern that Waihi East property values suffer from the closer proximity to mining activity is not borne out by the evidence.
- 143 The greatest potential changes in residential property values are anticipated through the period from the announcement of the project until the start-up and early part of the mining activity. Beyond that and with certainty around the earlier market perceptions of mining and its effects, normal market forces would be expected to take effect reflecting supply and demand pressures similar to other areas of the town.
- 144 The magnitude of change will also depend on the proximity of a given property to the mining activity, being initially greatest close to the mine and decreasing with increasing separation.
- 145 Commercial property values will not be impacted by Project Martha.
- 146 The conclusions are conditional upon:
- (a) The terms of the Project Martha property programme, including AEP and Top Up being similar to those that have previously applied for Correnso.
 - (b) Ground stability being unaffected by the underground mining.
 - (c) No restrictions being introduced by external organisations such as the local authority in terms of building or subdivision consent.
 - (d) Property in Project Martha area being able to maintain existing insurance cover at no additional premium or variation on cover (which I understand is the case to date and will be confirmed by Mr. Wilson in his evidence).

Doug Saunders - B Com (VPM); FNZIV; FPINZ

Registered Valuer

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28 October 2018

References

- 1) Mr RP Young's evidence of property resales Waihi East and West 1996 – 2002
- 2) "Gold mining – Environmental stigma or property value enhancement" Evan Gamby and Pamela Reid of Telfer Young Ltd presented to the 11th Annual Conference Pacific-Rim Real Estate Society (PRRES) Conference January 2005.
- 3) Land Air Water Association v Waikato Regional Council (Decision number A110/01) - Hampton Downs Landfill
- 4) Department of Corrections v Gisborne District Council (Decision A057/99)
- 5) Mr Young - November 2003 statement of evidence on the Favona underground mine
- 6) Mr Cullen – December 2010 Statement of Evidence on the Trio Underground Mine Project
- 7) The impact of transit corridors on residential property values by J A Kilpatrick, R L Throupe, J I Carruthers and A Krouse. Reported 2007.
- 8) Leader Property Practice Market Report January 2012 Ballarat & Stawell Mr Peter Zala