#### **BEFORE** Waikato Regional Council Hearing Commissioners IN THE MATTER of the Resource Management Act 1991

AND

IN THE MATTER

of Waikato Regional Proposed Plan Change 1 - Waikato and Waipā River Catchments

## CLOSING LEGAL SUBMISSIONS ON BEHALF OF THE WAIKATO AND WAIPA RIVER IWI

# **HE KUPU ARATAKI – INTRODUCTION**

Tooku awa koiora me oona pikonga he kura tangihia o te maataamuri. The river of life, each curve more beautiful than the last.

Kiingi Taawhiao, the second Maaori King (Waikato-Tainui)

- 1. Over the course of the three PC1 hearings, submitters have presented various proposals to the Panel addressing the technical and policy matters at the centre of this plan change.
- 2. In reflecting on those technical and policy proposals, the Waikato and Waipā River Iwi<sup>1</sup> (**River Iwi**) return to the words of Kiingi Taawhiao quoted above, as they have done at each stage of the PC1 hearing.<sup>2</sup> These words are taken from the maimai aroha (lament) of Kiingi Taawhiao in 1863 in which he recorded his love and reverence for the Waikato River and the significance of the tupuna awa (ancestral river) as a taonga for all generations.
- 3. Importantly, these words of Kiingi Taawhiao are the opening words of Te Ture Whaimana<sup>3</sup> – the Vision and Strategy for the Waikato and Waipā Rivers (Te **Ture Whaimana**).<sup>4</sup> As such, they not only frame the expectation for the actions that are necessary to respond to the vision and aspirations of the tūpuna of the Waikato and Waipā Rivers (and of the rangatira of the River Iwi who negotiated the Waikato and Waipā River settlements), but they are a

<sup>&</sup>lt;sup>1</sup> Waikato Tainui, Ngāti Maniapoto, Raukawa, Te Arawa River Iwi and Ngāti Tūwharetoa.

<sup>&</sup>lt;sup>2</sup> These words have featured as the concluding statement in each of the legal submissions presented on behalf of the River Iwi.

<sup>&</sup>lt;sup>3</sup> Te Ture Whaimana, clause 1(1).

<sup>&</sup>lt;sup>4</sup> The term "Te Ture Whaimana" is used throughout the submissions of the River Iwi, rather than "Vision and Strategy". The River lwi propose this global edit in Consolidated PC1.

fundamental part of the statutory touchstone against which the technical and policy proposals within PC1 must be assessed.

4. The Panel knows the unique nature of Te Ture Whaimana and its legal effect – in terms of the statutory and policy regime of the RMA – through the Waikato and Waipā River Acts.<sup>5</sup> Te Ture Whaimana represents the strongest direction that Parliament has given in relation to any RMA planning document and it is the pre-eminent planning instrument within the Waikato region.<sup>6</sup> Te Ture Whaimana and the words of Kiingi Taawhiao must therefore reverberate and be given effect to throughout PC1 (from the background and issues, to the objectives, policies, rules, conditions and implementation methods, through to the tables and other schedules).

### CONSOLIDATED PC1 – RIVER IWI PROPOSAL

5. Accompanying these closing submissions, the River Iwi have filed a consolidated marked-up version of PC1 (Consolidated PC1) that reflects the cumulative amendments to PC1 that the River Iwi's experts have either recommended in evidence or now propose in response to matters arising during the oral presentation of evidence and/or submissions in the course of the three blocks of PC1 hearings.

### FINAL SUBMISSIONS

- 6. These closing submissions do not seek to repeat (and should be read with) the submissions presented on behalf of the River Iwi at each of the three PC1 hearing blocks. Rather, these submissions focus on certain key matters in respect of the accompanying Consolidated PC1 with particular reference to points arising from the oral exchanges between the Panel and the River Iwi's counsel and experts at the Block 3 hearing, and from presentations made by other parties in the Block 3 hearing subsequent to the River Iwi's presentation.
- 7. The particular matters addressed are:
  - (a) signalling the future;
  - (b) the Horticulture NZ (HortNZ) proposal;
  - (c) Te Mana o te Wai;

<sup>&</sup>lt;sup>5</sup> Waikato River Act 2010, sections 9-17 and Schedule 2; Upper Waikato River Act 2010, sections10-18 and Schedule 1; Waipā River Act 2012, section 8 and Schedule 1. *Puke Coal Ltd v Waikato Regional Council* [2014] NZEnvC 223 at [133] and [143] – [146]. *Carter Holt Harvey v Waikato Regional Council* [2011] NZEnvC 350 at [99].

<sup>&</sup>lt;sup>6</sup> It is deemed to be part of the Waikato RPS and prevails over any inconsistent provision in a national policy statement, national planning standard or the NZ Coastal Policy Statement: Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, sections 11-12.

- (d) the application of the precautionary approach; and
- (e) FEPs and activity status for farming.

### SIGNALLING THE FUTURE

Te Kī Tapu – The word is sacred.

The word of a Rangatira is sacrosanct, binding not only the leader but his family and his people.

Maniapoto Traits<sup>7</sup>

- The River Iwi re-emphasise their Block 3 submissions supporting the policy intent behind, and the application and significance of, signalling the future in Policy 7.<sup>8</sup> The River Iwi's Consolidated PC1 reinstates, in revised form, Policy 7 and Objective 4.<sup>9</sup>
- 9. The Panel asked both counsel and Ms Kydd-Smith to further consider whether the express reference to future allocation was necessary in Policy 7 or whether referring to a "future management regime" might suffice. Having reflected on this issue, the River Iwi consider that an express reference to allocation in Policy 7 is necessary. It is not enough to rely on an imprecise reference to a future management regime. Instead, a strong signal is required to ensure, so far as possible, that the next iteration of the Plan is not delayed or diluted by arguments that 'no one was previously aware allocation was intended'.
- 10. The River Iwi acknowledge that allocation is only one aspect, albeit a critical one, of a future management regime. For that reason, the River Iwi have proposed that references to both "allocation" and a "future management regime" are retained in Policy 7.

### HORTICULTURE NZ PROPOSAL

#### Titiro ki ngā wai o Waikato, ki te tiaki i te oranga o te iwi

Turn to the waters of the Waikato, to sustain the wellbeing of the people

Raukawa Tūpuna<sup>10</sup>

 The Panel asked the River lwi to comment on HortNZ's proposed alternative framework for Commercial Vegetable Production (CVP). Drawing on clause 1(2) of Te Ture Whaimana which envisages "...a future where a healthy

<sup>&</sup>lt;sup>7</sup> John Kaati (Maniapoto Māori Trust Board) Block 1 EIC, at [12].

<sup>&</sup>lt;sup>8</sup> River Iwi Block 3 Legal Submissions, at [12] to [32].

<sup>&</sup>lt;sup>9</sup> In respect of Objective 4, the re-draft is intended to address the criticism which led to its suggested deletion (or amendment to remove any reference to future allocation) in the Section 42A Block 2 "Tracked Changes" Recommendations.

<sup>&</sup>lt;sup>10</sup> Vanessa Eparaima (Raukawa Charitable Trust) Block 1 EIC, at [19].

Waikato River sustains abundant life and prosperous communities...", HortNZ argues that access to healthy vegetables is consistent with this vision.

- 12. However, under clause 1(2) of Te Ture Whaimana, "abundant life and prosperous communities" (which HortNZ says reflects healthy communities) cannot be viewed independently from a healthy river. Rather, Te Ture Whaimana identifies abundant life and prosperous communities as the positive consequence of a healthy river. Accordingly, the River lwi say that giving effect to Te Ture Whaimana, first and foremost, requires consideration of the impact of the HortNZ framework on the health and wellbeing of the Waikato and Waipā Rivers.
- 13. The River Iwi understand that the HortNZ framework would: (1) exempt CVP from making mandatory reductions of the four contaminants; (2) retain support for existing CVP and increase flexibility for crop rotation on changing parcels of land; (3) create policy support for new CVP over the life of PC1; and (4) establish a more permissive regulatory pathway based on a land area cap that is supported by offsetting.<sup>11</sup>
- 14. The HortNZ evidence suggests that allowing new CVP to be established during the life of the Plan will result in a decrease in the total load of nitrogen entering the catchment by -2.45%.<sup>12</sup> However, as an increase in CVP must inherently carry with it an increase in nitrogen load, any suggested decrease in total nitrogen load under the HortNZ framework must necessarily be predicated on all other land uses making reductions of contaminant discharges to offset the increase in nitrogen produced by new CVP.
- 15. The HortNZ framework therefore does not result in "improvements to water quality" as stated. Rather, it undermines PC1 Objectives 1 and 3 by extending deleterious CVP activities and eroding the effectiveness of contaminant reductions made by other land uses. This fundamentally affects a critical aspect of achieving Te Ture Whaimana namely, the trajectory of change and the requirement for further contaminant reductions to meet the 80-year long-term targets. For these reasons, the HortNZ framework cannot be supported by the River Iwi.
- 16. The River Iwi position in this regard is not without careful consideration. They understand the desirability of access to healthy vegetables and are sympathetic to the fact that urban growth in existing horticulture production areas (including South Auckland) and other matters are impacting the land available for CVP. However, any claimed 'public good' in CVP does not offset the adverse effects of any increased CVP on the health of the Waikato and

<sup>&</sup>lt;sup>11</sup> Vance Hodgson Block 3 EIC, at [53] to [75].

<sup>&</sup>lt;sup>12</sup> Timothy Baker Block 3 EIC, at [50].

Waipā Rivers.<sup>13</sup> The River Iwi have waited a long time to articulate a timeframe for realising Kiingi Taawhiao's vision in Te Ture Whaimana. The Block 1 evidence of the River Iwi Governors to the Panel was that the 80-year timeframe was itself a compromise. The River Iwi expect that timeframe to be met. The HortNZ proposal undermines this.

#### TE MANA O TE WAI

#### Kei te tūwhera tonu te awa ki Nukuhau

So long as the water flows out at Nukuhau, so will our relationships remain firm with neighbouring tribes. It is the river that connects and binds us.

Tūwharetoa Ancestress<sup>14</sup>

- 17. At the Block 3 hearing, in the course of discussion with counsel about the HortNZ proposal, Commissioner Tepania raised the question of considering such submitter proposals in the context of Te Mana o te Wai and noted examples of views that might be held – "a purist view" (a return to natural state), a holistic perspective, and a focus on figures (such as the PC1 short and longterm water quality states) as proxies for realising Te Mana o te Wai.
- 18. Commissioner Tepania enquired as to the River Iwi's view in respect of Te Mana o te Wai. In considering and responding to this question, the River Iwi note the point made in their Block 2 legal submissions that the purpose of the River Iwi's participation in the PC1 hearing was to ensure that the detail of PC1 did not lose sight of, and directly or inadvertently undermine, the "Block 1 imperatives".<sup>15</sup>
- 19. At the centre of the Block 1 imperatives is the overarching purpose of the Waikato River Acts "to restore and protect the health and wellbeing of the Waikato River for present and future generations"<sup>16</sup> (and for Ngāti Maniapoto, in relation to the Waipā River, "to restore and maintain the quality and integrity of the waters that flow into and form part of the Waipā River for present and future generations of the mana tuku iho o Waiwaia"<sup>17</sup>). Notably, the present NPS-FM states that "[b]y recognising Te

<sup>&</sup>lt;sup>13</sup> The River Iwi say that the Waikato and Waipā Rivers have borne the adverse effects of so-called 'national interests' for all too long and any land pressures that may exist nationally for CVP is a matter that should be the subject of national direction and initiative (if required) and should not be opportunistically and inequitably imposed or facilitated within the Waikato Region through the inclusion of exceptional mechanisms in PC1.

<sup>&</sup>lt;sup>14</sup> Topia Rameka (Tūwharetoa Māori Trust Board) Block 1 EIC, at [16].

<sup>&</sup>lt;sup>15</sup> River Iwi Block 2 Legal Submissions at [3].

<sup>&</sup>lt;sup>16</sup> Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, section 3; Ngāti Tūwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010, section 3. NB: The former statute referred solely to "future generations" whereas the latter Act added the reference to both "present and future generations".

<sup>&</sup>lt;sup>17</sup> Ngā Wai o Maniapoto (Waipā River) Act 2012, section 3(1). Section 3(2) further records that the reference to the "mana tuku iho o Waiwaia" means the ancestral authority and prestige handed down from generation to generation in respect of Waiwaia and that

Mana o te Wai as an integral part of the freshwater management framework, it is intended that the health and well-being of freshwater bodies is at the forefront of all discussions and decisions about fresh water, including the identification of freshwater values and objectives, setting limits and the development of policies and rules".<sup>18</sup>

- 20. It is apparent, therefore, that the policy intent of Te Mana o te Wai within the context of the NPS-FM is broadly synonymous with the overarching purpose of the River Acts (and related Deeds), and also the vision in Te Ture Whaimana. The reason for the preference of the River Iwi to speak to Te Ture Whaimana in the context of their joint PC1 participation is that it represents a collective position centred on the Rivers, where they would otherwise each articulate the concepts of 'Te Mana o te Wai' and, related to this, 'Te Mana o te Awa', in slightly different ways with reference to their individual tikanga, histories and relationships with different parts of the awa.
- 21. For example, in respect of references found within the Waikato River Act, Waikato-Tainui articulate 'Te Mana o te Wai' in terms of 'Te Mana o te Awa' "the spiritual authority, protective power and prestige"<sup>19</sup> of the Waikato River. Te Mana o te Awa is at the heart of the relationship between the Waikato-Tainui and the Waikato River, but it is also central to their relationship with the other River Iwi. It is also inter-related with mana whakahaere the authority that Waikato-Tainui has exercised over many generations in relation to control, access to and management of the Waikato River and its resources and the reciprocal obligation to protect the awa.
- 22. In contrast, but without implying a material distinction, Ngāti Maniapoto speak in terms of 'Te Mana o te Awa o Waipā', 'Te Mana o te Wai' and 'Te mana tuku iho o Waiwaia' when referring to their tikanga, rights, responsibilities and relationships with the Waipā River.<sup>20</sup> While the Upper Waikato River Act does not expressly refer to 'Te Mana o te Wai' or 'Te Mana o te Awa', the Block 1 evidence of Raukawa, Te Arawa River Iwi and Ngāti Tūwharetoa speak authoritatively to their relationship with, and rights and obligations to, the Waikato River, which are an innate part of providing for the health and wellbeing of the River.

<sup>&</sup>quot;Waiwaia" refers to the essence and wellbeing of the Waipā River (to Maniapoto, Waiwaia is the personification of the waters of the Waipā River, its ancient and enduring spiritual guardians).

<sup>&</sup>lt;sup>18</sup> National Policy Statement for Freshwater Management 2014, at page 7 - National significance of fresh water and Te Mana o te Wai.

<sup>&</sup>lt;sup>19</sup> Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010, Preamble, section 8 and Schedule 1 (Kiingitanga Accord).

<sup>&</sup>lt;sup>20</sup> Ngā Wai o Maniapoto (Waipā River) Act 2012, Preamble and sections 4 and 7.

23. Ultimately though, the River Iwi each view the Waikato and Waipā Rivers as a holistic whole; encompassing, indivisibly, Te Mana o te Awa, Te Mana o te Wai and Te Mana o te Iwi. Informed by this context, the approach of the River Iwi to the health and wellbeing of the Waikato and Waipā Rivers through Te Ture Whaimana and PC1 is grounded in a unified demand for meaningful change. In practical terms, through PC1, that necessarily requires a focus on figures in the form of short and long-term water quality targets. However, the River Iwi are clear that those figures do not reflect, or detract from, the full meaning and import of Te Mana o te Awa, Te Mana o te Wai or Te Mana o te Iwi given expression through Te Ture Whaimana. This is an important matter when considering the interests of, and proposals and amendments advanced by, other submitters against the fundamental interests of the Waikato and Waipā Rivers.

### APPLICATION OF THE PRECAUTIONARY APPROACH

Our relationship with the Waikato River and its tributaries, and our respect for it, gives rise to our responsibilities to protect the River and all it encompasses.

Evelyn Forrest (Te Arawa River Iwi)<sup>21</sup>

- 24. Federated Farmers submit that Objective (f) of Te Ture Whaimana does not result in a requirement to adopt a precautionary approach over and above that provided for in the RMA, stating that a precautionary approach should only be adopted in the face of scientific uncertainty or lack of information about the scope or nature of the relevant environmental harm of an activity, or when there is a need to prevent serious or irreversible harm due to the potential effects of that activity.<sup>22</sup>
- 25. However, as articulated in the River Iwi's Block 1 legal submissions, Te Ture Whaimana creates an interpretation of the requirements of the RMA that is unique to the Waikato and Waipā River catchments.<sup>23</sup> As such, RMA case law decided in other statutory contexts cannot reasonably be advanced as determinative here. This is particularly so when a statutory recognition that the waters of the Waikato and Waipā Rivers are degraded *now* is at the heart of the context for PC1, together with a statutorily embedded vision that *requires* the restoration and protection of water quality over time.
- 26. Furthermore, Federated Farmers' submission fails as a simple matter of statutory interpretation. Te Ture Whaimana directs that, "in order to realise the vision", a precautionary approach toward decisions that *may result in significant adverse effects* on the Waikato River and, in particular, those effects that threaten serious or irreversible damage to the Waikato River "will

<sup>&</sup>lt;sup>21</sup> Evelyn Forrest (Te Arawa River Iwi) Block 1 EIC, at [10].

<sup>&</sup>lt;sup>22</sup> Federated Farmers Block 3 Legal Submissions, at [36] – [42].

<sup>&</sup>lt;sup>23</sup> River Block 1 Legal Submissions at [1] – [53].

be pursued".<sup>24</sup> This is the correct statutory threshold for the adoption of the precautionary approach in the context of PC1.

27. The River Iwi also note the July 2015 document, 'Outcome Statement and Principles for implementing Te Ture Whaimana – the Vision and Strategy for the Waikato and Waipā Rivers', which was developed through engagement with the River Iwi and the Waikato River Authority to assist the thinking of the Collaborative Stakeholder Group when developing PC1,<sup>25</sup> included as a key principle that "[a] precautionary approach to setting limits and addressing water quality problems must be adopted".<sup>26</sup> Reflecting Objective (f), the document further explained:<sup>27</sup>

The precautionary approach should be adopted within the Plan Change where the irreversibility of actual or potential impacts of the discharge of contaminants from the use of land creates an unacceptable level of risk. This is particularly the case where land use moves from low to high discharge of contaminants and the impact of that change is currently beyond the ability of the regional council to manage within water quality limits.

The precautionary approach requires decision makers to be risk averse when considering applications that may compromise the achievement of the broader water quality outcomes. This is particularly the case where best available information is not available to support sound resource management decision making. For example where there is uncertainty about the contribution of nutrient discharges to water quality deterioration throughout the catchment; it would be precautionary to address both the discharge nitrogen and phosphorus from all land uses.

28. The River Iwi maintain that this interpretation of the precautionary approach properly gives effect to Objective (f) and is appropriate in the context of PC1.

### FEPs AND ACTIVITY STATUS FOR FARMING

- 29. Farm industry body submitters have expressed opposition to the insertion of general guidance by way of objectives and principles in Schedule 1 of PC1, and continue to advocate (as in Block 2) for a suitably directive permitted activity rule to regulate farms.<sup>28</sup>
- 30. A permissive framework for farm regulation is the status quo, and has contributed to the degradation of water quality in the Waikato and Waipā Rivers. The River Iwi consider that no amount of direction will change farming behaviour if the rules remain the same. For this reason, the River Iwi support

<sup>&</sup>lt;sup>24</sup> Te Ture Whaimana, clause 1(3).

<sup>&</sup>lt;sup>25</sup> See: http://waikatocivildefence.govt.nz/assets/WRC/Council/Policy-and-

Plans/HR/S32/D/3483800.pdf. This document was referred to in the River Iwi Block 1 joint statement at [26]; and also forms part of the PC1 background documents.

<sup>&</sup>lt;sup>26</sup> 'Outcome Statement and Principles for Implementing Te Ture Whaimana', at page 2.

<sup>&</sup>lt;sup>27</sup> 'Outcome Statement and Principles for Implementing Te Ture Whaimana', at page 5.

<sup>&</sup>lt;sup>28</sup> Farm industry submitters presented after the Block 3 River Iwi presentation.

the Block 2 Section 42A staged approach to farm regulation that requires consents for medium (Rule 3.11.5.2A) and high intensity (Rule 3.11.5.3) farms, while also providing permitted activity status for low intensity farms (Rule 3.11.5.2) and interim permitted activity status for other farming activities on a staged basis (Rule 3.11.5.1A).

- 31. In respect of the Block 3 Section 42A change of FEP requirements to include objectives and general principles, Mr Lowe for the River Iwi considered that while the approach had possible merit, greater certainty was required. Mr Lowe's evidence was that it is critical for FEPs to reflect a balance between flexibility through thought-provoking, idea-generating objectives and general principles, and certainty through specific requirements.<sup>29</sup>
- 32. In the River Iwi's Consolidated PC1, Mr Lowe has made additional amendments to Schedule 1 to achieve this balance. He has maintained the use of principles and objectives, but has also included specifically measurable targets that relate to the various management areas. He has also suggested a split between medium and high intensity farms, to allow issues of 'relevance' and 'criticalness' to be considered based on farm intensity.
- 33. Farm industry body submitters also inferred that the resourcing of rural professionals to prepare FEPs is problematic and, as a result, the threshold for farms qualifying for permitted activity status should be lowered. The River lwi acknowledge a potential bottleneck with many FEPs having to be prepared in a short period of time. However, Mr Lowe's Block 2 evidence suggested a three-part process to stagger the provision of information.<sup>30</sup> This is partly achieved with the Interim Permitted Activity Rule (3.11.5.1A) requiring the provision of Schedule A information initially, and then the balance of information, including the FEP, when consent is applied for.
- 34. To further address the bottleneck, Mr Lowe has made a further addition to Rule 3.11.5.1A in the Consolidated PC1 that allows the second step to be split, with only an outline of an FEP being provided at the time of consent application and then the provision of a final FEP becoming a condition of consent (and the date allowing prioritisation of when FEPs have to be provided). This will assist with industry resourcing and enable the Council to target FEPs in catchments that have higher exceedances of the NRP 75<sup>th</sup> percentile (ie, if over the 75<sup>th</sup> percentile, they could be put on a faster-track FEP submission process; if less than the 50<sup>th</sup> percentile, they could be given more time).

<sup>&</sup>lt;sup>29</sup> Hamish Lowe Block 3 EIC at [14] to [22].

<sup>&</sup>lt;sup>30</sup> Hamish Lowe Block 3 EIC, at [46].

- 35. Two other matters in Mr Lowe's Block 2 evidence that related to Schedule B were the need for ongoing revisions to the NRP<sup>31</sup> and potential non-compliance arising from not having the required data.<sup>32</sup> In the Consolidated PC1 Mr Lowe has proposed changes to Schedule B to:
  - (a) require farms with higher NRP to more frequently revise their NRP; and
  - (b) where there is incomplete data available to calculate an NRP using the standard protocols, allow for reliance on WRC approved default values.
- 36. These amendments proposed by the River Iwi will go a long way to increasing the practical workability of the PC1 requirements. The River Iwi respectfully consider that this is the approach that should be adopted by the Panel in response to submitter concerns as to cost, timing and capacity, rather than adopting more permissive approaches.

### HE KUPU WHAKAKAPI - CONCLUSION

- 37. PC1 represents the first step on the journey toward giving effect to Te Ture Whaimana and hereby achieving the overarching purpose of the River Acts by 2096. To realise the freshwater objectives set out in PC1 the River Iwi expect to see meaningful reduction in contaminant discharges from land use and a corresponding improvement in water quality 10 years from notification.
- 38. There is no question that the Waikato and Waipā Rivers must be protected from further degradation. The statutory framework, including Te Ture Whaimana, demands it. Accordingly, in respect of PC1:
  - the aim must be to prevent further degradation of the Waikato and Waipā Rivers, acknowledging there is a lag effect of some nutrients;
  - (b) the inter-generational timeframes, lag effects and complexity of the problem are not defensible reasons to delay putting in place management interventions; and
  - (c) maintaining policies that perpetuate the status quo will not prevent water quality from further deteriorating, nor contribute to achieving restoration outcomes.

# Tooku awa koiora me oona pikonga he kura tangihia o te maataamuri. The river of life, each curve more beautiful than the last

<sup>&</sup>lt;sup>31</sup> Hamish Lowe Block 2 EIC, at [83] to [86].

<sup>&</sup>lt;sup>32</sup> Hamish Lowe Block 3 EIC, at [96] to [108].