

New Plymouth District Council Plan Change Hearing Commissioners

Supplementary Section 42A Officer's Report (Response to Expert Evidence) -
Proposed Private Plan Change 48: Wairau Road, Oakura Rezoning
Prepared for New Plymouth District Council

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CONTENTS

1.0	Introduction	1
	Purpose of this Supplementary Officers' Report	1
2.0	Proposed Change to Plan Change Request	3
	Yield Reduction	3
	Rainwater Harvesting and On-site Water Storage	3
3.0	Supplementary Evaluation and Recommendations	3
	The Appropriateness and Extent of Zoning and Suitability for Development	3
	Traffic, parking and access	8
	Landscape Values and Visual Impact	9
	Effects on High Pressure Gas Pipelines	15
4.0	Recommended Amendments to Plan Change District Plan Provisions	15
5.0	Overall Recommendations and Conclusions	16
	Conclusion	16
	Recommendations	16

Appendices

Appendix 1: Expert Conferencing Joint Witness Statements

Appendix 2: Council Technical Advice

1.0 Introduction

Purpose of this Supplementary Officers' Report

- 1.1 This supplementary Section 42A Report to Proposed Private Plan Change 48 Wairau Road, Oakura Rezoning request has been prepared in response to the expert evidence that has been received and pre-circulated before the hearing.
- 1.2 Expert evidence was received from the following experts on behalf of the applicant:
 - Cornelis Bevers - Ecology
 - Ivan Bruce - Archaeology
 - Alan Doy - Land Survey
 - Andrew Fraser - Civil Engineering
 - Andrew Skerrett – Traffic
 - Shaun King – Acoustic
 - Richard Bain – Landscape
 - Colin Comber - Planning
- 1.3 Expert evidence was received from the following experts on behalf of submitters - Matthew Peacock, Richard Shearer, Steven Looney And Wayne Looker:
 - Nic Gladstone – Traffic (evidence also in support of submission by Nic Gladstone)
 - Richard Rollins – Pesticides in Water and Potential Health Effects on Children (evidence also in support of submission by Richard Rollins)
 - Matt Peacock – Land Development and Subdivision Infrastructure Engineering
 - Peter Kensington - Landscape
 - Cam Twigley – Planning
- 1.4 Expert evidence was received from the following experts on behalf of submitters – NZ Transport Agency:
 - Kelly Standish – Planning (including a peer review of the Traffic Impact Assessment by Caron Greenough)
- 1.5 Expert evidence was received from the following experts on behalf of submitters – First Gas Limited:
 - Erin Whooley – Planning
- 1.6 Since the original s42A Report was prepared, Council has received notice from the following submitters withdrawing their submissions on Proposed Private Plan Change 48:
 - Chris Kindler (Submitter #228)

- Alan Kindler (Submitter #199)
 - Donna Bell (Submitter #344)
 - Jessica Mahood (Submitter #360)
 - Michelle Benton (Submitter #367)
 - Robyn McGregor (Submitter #367)
- 1.7 The evaluation and recommendations contained in this report have been informed by the discussions and conclusions drawn from the Landscape and Visual Impact Expert Conferencing and the Traffic Expert Conferencing held on 10 July and 16 July respectively. The Joint Witness Statements (JWS) as the output from these conferences can be found in Appendix 1 of this report.
- 1.8 The following report contains our further evaluation of the Plan Change addressing expert evidence received, specifically providing an evaluation of the following predominant matters raised in expert evidence:
- The appropriateness and extent of zoning and suitability for development
 - Growth pressures
 - Traffic, parking and access
 - Landscape values and visual impact.
- 1.9 The report also provides our revised recommended changes to Proposed District Plan 48 in Appendix 2 and our overall conclusions and recommendations.

Acronym table for reference throughout Section 42A report:	
PPC48	Private Plan Change 48
NPDC/ Council	New Plymouth District Council
NZTA/ Agency	New Zealand Transport Agency
JWS	Joint Witness Statement
SH45	State Highway 45
FUD	Future Urban Development (Overlay)
District Plan	New Plymouth District Plan
RMA	Resource Management Act 1991
NPS-UDC	National Policy Statement on Urban Development Capacity
HBA	Housing and Business Development Capacity Assessment March 2019
OL	Outstanding Landscape
TIA	Traffic Impact Assessment
KNE	Key Native Ecosystem

2.0 Proposed Change to Plan Change Request

- 2.1 This section summarises changes proposed to the original plan change request by the applicant's experts within their expert evidence. These matters have been proposed following the release of the original Section 42A report. These matters are addressed in more detail in section 3.0.

Yield Reduction

- 2.2 Following topographical slope analysis which found a reduced yield for Oakura and a different yield for the different FUD and undeveloped residential areas to what was proposed in the Housing and Business Development Capacity Assessment, the applicant presents a new total lot yield of 316 residential lots for the plan change area.

Rainwater Harvesting and On-site Water Storage

- 2.3 In response to the evaluation and recommendation in the original s42A report to limit the maximum number of lots due to lack of available water, the applicant now proposes a requirement that lots require rainwater harvesting and onsite water storage. This proposal is discussed in the evidence of Mr McKie, Mr Comber and Mr Fraser and further in section 3.1.1 below.

3.0 Supplementary Evaluation and Recommendations

The Appropriateness and Extent of Zoning and Suitability for Development

- 3.1 The appropriateness and the extent of zoning and the suitability of development is discussed in both applicant and submitter expert evidence. The three main themes discussed in evidence relating to this topic and which are addressed below are:
- Housing capacity assessment, slope analysis and services provision
 - Water infrastructure proposed by the applicant
 - FUD Overlay and FUD allocation

Housing Capacity Assessment, Slope Analysis and Services Provision

- 3.2 Mr Doy has undertaken a topographical slope analysis on behalf of the applicant to 'confirm and refine the section yield for the Oakura Growth Area' as discussed in the draft Housing and Business Development Capacity Assessment March 2019 for the New Plymouth District. Mr Doy's analysis has concluded that there is a reduced total yield of 542 lots compared to the 630 lots included in the NPDC's capacity assessment which is referred to in the original S42A report.

- 3.3 The results of Mr Doy's ground truthing show Oakura West FUD as having the main reduction in lot yield from the HBA's recorded yield of 355 to 283. The second area to experience a reduction is the Undeveloped Residential Land in Oakura which has been reduced from 157 in the HBA to 134, with Oakura South FUD's capacity growing from 117 lots in the HBA to 125. Mr Doy attributes these differences to his topographical slope analysis particularly with regard to restricted development with slopes greater than 20% and utilising a different grade to the HBA.
- 3.4 As discussed in section 4.0 below, based on expert advice from NPDC's technical three waters engineers, the proposed water supply predictions and capacity to service proposed Wairau Estate lots has not changed. I recommend that the scale of the development be limited to the maximum yield previously recommended of 167 lots to be developed.

Water and stormwater infrastructure proposed by the applicant

- 3.5 Issues that were raised in both applicant and submitters' expert evidence on water infrastructure relate to:
- Residential lot limits and water supply limitations
 - Rain water harvesting and on-site storage
 - Suggested on-site town storage
 - Firefighting supply
 - Current bore quality
 - Existing stormwater network and modelling requirements.

Residential lot limits and water supply limitations

- 3.6 Mr Fraser details that NPDC's website has information on Oakura Water Usage from 2014 to present. From this information, Mr Fraser details that these records confirm that the greatest daily water usage has been '1497 m³/day during this period with an average daily usage of 743 m³/day'. Based on this usage he comments there is an apparent surplus from the capacity of the bore. Given this surplus, Mr Fraser notes that 'there is an opportunity for additional storage to be pumped to during low demand periods. This could either be to an additional Council reservoir or trickle feed to tank supply on individual lots'¹.
- 3.7 Mr Fraser further comments that based on approximately five years of available data the actual peaking factor at Oakura is 2.10 and if this factor is adopted, which is closer to the NZ 4404 daily peaking factor of 2.00, the residential lot limit given in the Council's previous technical advice would calculate as 1,418 lots.
- 3.8 Mr Doy considers that the Existing Vacant Zoned Residential land will yield 134 lots, not the 158 lots estimated in the HBA. Mr Comber suggests that this residual 24 lots is thus available for allocation and utilising a 50/50 split, this will result in 179 lots to South and West FUD each. Mr Comber details that taking the 50/50 split of the remainder of the revised 1,418 lots water supply capacity figure, will leave both FUD

¹ Statement Of Evidence Of Andrew Desmond Lovat Fraser, Paragraph 45

areas with 248 lots that can be serviced, with 68 residential lots and the 12-14 rural residential lots within the estate obtaining water via potable water supply (rainwater collection).

- 3.9 Council's advisor notes that due to staff absence until 22 July, it is not possible to provide comment on the NPDC peaking factor. Council's advisor states that for smaller water supplies there is more volatility in demand compared to a large supply, this is why the peaking factor for Oakura is higher than that quoted in NZS 4404.
- 3.10 Council's advisor notes that the residential lot limit and the revised water supply capacity is something that they are unable to comment on.
- 3.11 Based on this advice, we continue to rely on the NPDC's water figures and housing capacity assessment and as such our recommendation for total lot yield remains at 167 lots.

Rainwater harvesting and on-site storage

- 3.12 Mr McKie, Mr Fraser and Mr Comber all raised in their evidence the potential use of rainwater harvesting with onsite storage by households, supplemented by a restricted flow connection (trickle feed) from Council mains reticulation. Mr Fraser notes that 'such a system may require means of backflow prevention to safeguard the Council's potable supply'².
- 3.13 Council's water supply technical expert advises that under the Water, Wastewater and Stormwater Services Bylaw 2014 there is a requirement for backflow prevention where there is a cross-connection between the Council water supply and any storage tank (which includes rainwater tanks). This requirement is specified under clause 9.6.1(b) as included below:

'It is the customer's responsibility (under this bylaw, the Health Act 1956 and the Building Act 2004) to take all necessary measures on the customer's side of the point of supply to prevent water which has been drawn from the Council's water supply from returning to that supply. These include:

....

- b) The prohibition of any cross-connection between the Council water supply and:*
- i) Any other water supply (potable or non-potable).*
 - ii) Any other water source.*
 - iii) Any storage tank.*
 - iv) Any other pipe, fixture or equipment containing chemicals, liquids, gases or other non-potable substances.*

- 3.14 Council's advisor notes that using rainwater tanks to supplement the council water supply if this means connecting into the same plumbing is not permitted under the Bylaw. Clause 9.6.1 (b) of the Bylaw prohibits cross-connection between the Council water supply and any storage tank (this includes rainwater tanks). Council's advisor

² Statement Of Evidence Of Andrew Desmond Lovat Fraser, Paragraph 53

notes that for lifestyle blocks within rural designated areas then restricted flow connections are the only option permitted under the Bylaw.

- 3.15 Council's advisor notes that the District Plan requires all Allotments in a residential area to be provided with service connections, including water (Rule Res 61 and Appendix 22.2). Under Section 4 of the Bylaw any premise in a Council's water supply area is entitled to a water supply.
- 3.16 Therefore, a developer must provide all Allotments within any new residential zones with a water supply service connections, and then Council must provide the water if the person who builds on the Allotment requires it. Therefore Council cannot approve more Allotments within the proposed residential zone than the current limit of the water supply.
- 3.17 Overall, I consider that rainwater harvesting and on-site tanks for all proposed residential lots is not possible, given these requirements. This however, would not be an issue for rural lifestyle lots given restricted flow tanks are for development of a rural nature and rural supply.

Suggested on-site town storage

- 3.18 In his evidence, Mr McKie advises that he has set aside land required by the NPDC to future-proof community water storage. Mr Comber in his evidence furthers this noting that the 'Applicant has noted the Council may be requiring additional land in the future on which to locate additional reservoir capacity'³.
- 3.19 Council's advisor details that the type of storage referred to by Mr McKie (tanks) and Mr Comber (a reservoir) would be part of NPDC's "operational storage" requirements. Council's advisor notes that operational storage is treated water stored in reservoirs which are connected to the reticulation to cover normal variations in demand such as peaks and troughs during the day and also firefighting requirements.
- 3.20 Council's advisor notes that Oakura has already got sufficient operational storage. Council advisor states that if NPDC provided more in an attempt to cover low flow periods the water would be sitting in the reservoirs for long periods of time. Council's advisor details that this will compromise the quality of the water as the "residual chlorine" (the disinfection method for ensuring the water remains safe to drink when released into the reticulation) drops with time to unacceptably low levels. Council advisor states that Council does not believe more operational storage would assist with the issue of providing storage to cover peak demands.
- 3.21 Council's advisor notes that the difference between average daily water use and peak water use quoted by Mr Fraser relate to averages and peaks over a whole year. Council's advisor states that this suggests he is proposing storage to collect water during low periods such as winter for use during the peak periods which are generally in summer, i.e. this is long term and likely to be large volume storage. Council's advisor notes that this generally is raw water and takes the form of a dammed lake or large open reservoir.
- 3.22 Council advisor states that whilst more raw water storage may provide a method of supplementing normal demand, the volume of water needing storage and consequently the size of the lake is considerable. Council's advisor notes that also a suitable stream for damming or level area to construct a raw water reservoir would be

³ Statement Of Evidence Of Colin Michael Comber, paragraph 152

needed. Council's advisor details that given the location of the Oakura Water Treatment Plant close to the Egmont National Park boundary and the nature of the surrounding land it is not considered that building a raw water reservoir is a feasible proposition.

- 3.23 Based on this advice, there are risks and uncertainties associated with this additional reservoir. On this basis, I consider that this additional reservoir is not an appropriate option.

Firefighting Water Supply

- 3.24 Mr Fraser details in his evidence that the Oakura Water Supply has areas of low pressure which do not provide the required firefighting supply for Council's FW 3 requirements. Mr Fraser recommends a mixture of booster pumps and additional storage at areas of need to potentially provide a solution to this shortfall. Mr Fraser furthers that discussion should be entered into determine areas where firefighting supply is critical.
- 3.25 Council's advisor notes that they are aware of areas in existing developed areas of Oakura which do not meet firefighting requirements. Council's advisor states that a second trunk main is proposed to address these issues and that part of this main has already been installed. Council's advisor notes that completion to Wairau Road has been put on hold until the final layout of this plan change is confirmed. Council's advisor states that it will need to be extended to SH45 and then to Wairau Road if the development proceeds. In the future the main will also need to be extended to Russell Drive.
- 3.26 Mr Peacock details in his evidence that the only way to clearly establish firefighting capacity is to complete comprehensive flow testing of the entire Oākura water network, and combine this with computer modelling of the proposed 395 lot residential plan change development and the existing Oākura network.
- 3.27 Based on the Council's technical advice, I consider that there is adequate provision for firefighting water supply if the plan change was approved due to the installation of the proposed second trunk main. Notwithstanding this conclusion, additional information may assist in better understanding measures to provide this firefighting water supply.

Current Bore Reliability and Resilience

- 3.28 Mr Peacock raises in his expert evidence that the current water bore has no redundancy due to only one bore servicing the Oākura village. Mr Peacock details that 'At present the water supply is unreliable and should problems arise with the single remaining bore Oākura would only have a water supply for between 1.7 – 3.4 days. Increasing water supply demand on the Oākura bore, which has questionable supply reliability, is likely to increase the risk of further bore failures and its adequacy to supply water to Oākura'⁴.
- 3.29 I understand that Council is planning to drill a second bore before the end of this year. Based on Council's technical advice, this second bore would provide additional reliability and resilience for the Oakura water supply.

⁴ Statement of Evidence of Matthew Peacock, paragraph 11.8

Existing Stormwater Networks

- 3.30 Mr Peacock details in his expert evidence that the existing stormwater network in areas through Oākura is not suitable to carry the current rainwater flow down to the sea during high intensity storm events and that ponding occurs in various locations in Oākura. Mr Peacock also notes that the Council wastewater pump station has the potential to be inundated by stormwater during storm events of shorter return periods than originally considered. The flood return period for the pump station could be as low as 1 in 20 years for the station located in Shearer Reserve which is within a flood zone.
- 3.31 Issues associated with the existing stormwater network have been referred to Council's three water team.

Traffic, parking and access

- 3.32 Traffic, parking and access from the application site were discussed in detail within the applicant and submitters expert evidence. The following points were raised:
- Traffic Impact Assessment (TIA) and the appropriateness of methodology used and the adequacy of existing information
 - New intersection with State Highway 45 (SH45), Limited Road Access Road classification and safety requirements
 - Effects on wider Oakura transport network and Oakura village, including Oakura School and traffic effects from queues at intersection of Donnelly Street and SH45, and use of the Butlers Lane and Donnelly Street to Wairau Road Paper Road options
 - Intersection of Wairau Road/ SH 45 and intersection and underpass design
 - Consideration for pedestrians and cyclists
- 3.33 Traffic Expert Conferencing was held on 16 July 2019 to discuss these matters and identify areas of agreement/disagreement. In reading the Joint Witness Statement from this conferencing it is apparent there is a notable difference of opinion between the traffic experts in terms of the adequacy of the information and assessment, and therefore the ability to assess the traffic effects of this proposal. Furthermore, as there are different options for providing access (via Wairau Road only, or link road connecting with Wairau Road and State Highway 45), these options have raised uncertainty for the traffic experts. In addition, there is divergent views on the appropriate measures to address the potential traffic effects arising from this plan change.
- 3.34 I note that the traffic experts proposed an integrated package of measures at the end of the Joint Witness Statement as follows:
- Addressing and lowering the approach speed on SH45.
 - The potential option, if the roundabout is not developed and once speed has been reduced, of a right turn from Wairau Road through the investigation of a right turn pocket and merge onto SH45.
 - If roundabout is developed, additional assessment and design is required to ensure safety, sight line visibility and appropriateness for vulnerable users.

- Footpaths and other urban design treatments that expand the look and feel of the village, for example pedestrian refuges, planting, lighting and crossings are needed, taking into account all modes.
 - Investigate the removal of the access from SH45 taking into account the agreed land use and trip generation rates to determine the appropriate form of Wairau Road/ SH45 intersection i.e. roundabout or crossroads.
 - Provision of a shared pathway on the south side of SH45 from Donnelly Street and turning into Upper Wairau Road connecting to an improved Upper Wairau Road at the development.
 - A pedestrian link between Wairau Road and Donnelly Street needs to be assessed if upgrading is required and considered as a non-vehicular route, taking into account the needs of vulnerable road users.
- 3.35 This list of measures indicates it may be possible to address the traffic effects. At this time, I consider it would helpful at the hearing for the traffic experts to more specifically identify key pieces of information required as part of this process to inform an assessment.

Landscape Values and Visual Impact

- 3.36 Both the applicant and submitters' evidence discussed landscape values and visual impact matters and this was discussed through expert landscape and visual conferencing held on 10 July 2019. The following matters are evaluated in this report:
- Change to landscape from rural to urban, including scale and extent of rezoning/ development area and proposed zoning typologies
 - Effects on views to the Kaitake Ranges and Landscape Character
 - Noise bund attenuation and design solutions
 - Landscape Structure Plan and mitigation
 - Effects on Key Native Ecosystem and gully tributaries (including from road construction)

Change to landscape from rural to urban, including scale and extent of rezoning/ development area, 'buffer zone' and proposed zoning typologies

- 3.37 Mr Bain in his evidence details that the landscape and visual effects of the proposal are self-evidently significant as rural land changes to urban. However, Mr Bain notes that the proposed layout's focus on varying land use intensity based on context, the character effects are contextually appropriate given the site's proximity to Oakura, and the visual effects are able to be mitigated.
- 3.38 Mr Bain furthers that the Structure Plan provides a holistic framework for this urban expansion by way of an indicative road circulation pattern and land use types. Mr Bain furthers that the important biophysical aspects of the site, in particular the stream network, are acknowledged and integrated into the framework. Mr Bain also details that the Structure Plan 'recognises the importance of the rural/urban interface,

provided by the 'equestrian zone' that provides a gradual transition from urban to rural'.

- 3.39 In Mr Kensington's evidence he details that the anticipated layout of the urban development that would be enabled by PPC48 would result in significant adverse landscape and visual effects and in his opinion is inappropriate because:
- 'It will not successfully integrate seamlessly with the existing Oākura landscape;
 - It severs key landscape features of importance, including an esplanade strip and a Key Native Ecosystem (KNE) area;
 - It does not provide for a logical integration (physically or visually) with potential future urban development as anticipated under the Council's 2006 Oākura Structure Plan;
 - Significant adverse landscape and visual effects, at both a macro and detailed scale, will arise from the urban development that would be enabled; and
 - It has received considerable community opposition through submissions which raise issues relating to the potential for adverse landscape and visual effects to arise'⁵.
- 3.40 Mr Kensington also notes that he does not agree with the request documents statement that the proposed layout of development represents a 'design led approach'. Mr Kensington furthers that if residential expansion of Oakura village was to go ahead on this property, a more logical approach would be to work in collaboration with future residential development on the western (seaward) side of SH45, being consistent with NPDC's 2006 Oākura Structure Plan which would provide a more visually and physically integrated solution.
- 3.41 Mr Kensington also details that he does not agree with Mr Bain's evidence that the proposed 'equestrian zone' will provide an effective buffer between the proposed high density residential development and the existing Rural Environment area.
- 3.42 Mr Kensington furthers that the proposed minimum lot sizes for the 'Rural Lifestyle' area will, as a whole, have more of an urban than a rural appearance in the landscape. Mr Kensington suggests that a minimum lot size of 4.0ha is required in order to allow for the continuation of any perception of rural character in the landscape. However, Mr Kensington notes in this instance, for lots to have a minimum 4.0ha in size would be inconsistent with the outcomes anticipated by the District Plan for the rural environment.
- 3.43 In the landscape and visual expert conferencing (see Joint Witness Statement in Appendix 1), all three experts (Mr Bain, Mr Kensington and NPDC's advisor Ms McRae) agreed on the anticipated change (landscape and visual effects) from rural to urban from the proposal. However, there is a fundamental disagreement between the three experts about the appropriate scale and the extent of the development. Mr Kensington stated that the current scale and extent of development is inappropriate because of the purpose of the Consent Notice is not being achieved, Ms McRae argued that the scale and extent of development should be aiming to achieve effects that are less than significant, as opposed to managing significant effects, based on detailed analysis of the site.

⁵ Statement of Evidence of Peter Kensington, Paragraph 4.2

- 3.44 In regard to the Rural Lifestyle Area buffer, Mr Kensington and Ms McRae do not accept the rural lifestyle area (buffer/equestrian zone) as an effective transition from urban to rural. Both experts agreed it does not offer a defensible boundary to urban development and the proposed lot sizes will not achieve rural character.
- 3.45 In the expert conferencing, Mr Kensington suggested that a possible defensible boundary to urban development could be the Wairau Stream as opposed to the cadastral boundary. Mr Kensington noted that the rural environment could adjoin the stream edge and with no need for the rural-lifestyle development. Mr Bain disagreed noting that the Wairau Stream is small to act as a natural boundary and would leave a piece of rural land that is too small to be effective, noting the equestrian zone creates an effective spatial transition and meets a social need.
- 3.46 Overall, I agree with Mr Kensington and Ms McRae's advice from the expert conferencing, that a defensible and logical boundary to urban development is needed to provide an effective transition from urban to rural. This boundary would contribute to achieving Objective 23 and implementing Policy 23.1 in the Operative District Plan in terms of interfaces with surrounding land uses. Natural or physical features are generally more effective and enduring as boundaries for the extent of urban development and responds to site features as expressed by Objective 23 and Policy 23.1. In this respect, the Wairau Stream appears to be a logical boundary in this respect. Should the commissioner recommend approval the plan change, I recommend that a revised Structure and Staging Plan be prepared to reflect this boundary for the extent of residential development.
- 3.47 Should the commissioner recommend approval for the plan change, I recommend the revised Structure and Staging Plan should achieve the following outcomes:
- No built development to the south of Wairau Stream
 - An open space corridor along the edge of Wairau Stream to protect Wairau Stream
 - Limited residential development along the northern edge of Wairau Stream to provide transition from dense residential development to rural land, being the balance of the land and the open space corridor
 - To minimise built development on elevated land as defined by the 'Inland Area - e.g. building height, scale, form' detailed in the Oakura Structure Plan 2006.
- 3.48 The above requirements will redefine urban form and define an urban edge for South-East Oakura.

Effects on views to the Kaitake Ranges and Landscape Character

- 3.49 Mr Bain in his evidence comments that effects on the Outstanding Landscape (OL) are limited to perceptual aspects, as the site is not located within an OL and that any potential effects of the proposal on the characteristics and qualities that contribute to the Kaitake Ranges values as an OL, will be subsumed by the scale of the ranges, as well as the other buildings in the area i.e. houses in The Paddocks. Mr Bain furthers that the natural character values of the OL will remain unchanged by the proposal. Mr Bain does not consider that this represents an adverse effect on the OL's natural character values.

- 3.50 In the landscape and expert conferencing, as detailed in the JWS (Appendix 1), all experts agreed that the site is not in an area of OL and that the character of the view will be changed. Additionally, all experts agreed that there is an effect and there will be an impact on landscape character and a loss of visual amenity. However, there was a disagreement in regard to the scale of the effect and the quality of the view from the SH45. The experts do not agree about the degree of the adverse effect on the views of the Kaitake Ranges.
- 3.51 Based on the outcome of the expert conferencing on these effects, I consider that options should be evaluated on how and if the scale and extent of development can address the adverse visual effects on the Kaitake Ranges to achieve Objective 15 and implement Policy 15.1 in the Operative District Plan. For example, what influence (if any) would limiting the extent of development to them Wairau Stream help to mitigate effects upon the views to the Kaitake Ranges.

Noise bund attenuation and design solutions

- 3.52 Mr Bain states in his evidence that road users will experience a 600m long earth bund, 2-3 metres high and planted with native vegetation which has been primarily created to mitigate reverse sensitivity noise effects and prevent views of the urban development. Mr Bain states that the 'visual experience of this stretch of highway will change from partly open (approximately 350m of the 900m road frontage has open views) to enclosed'. Mr Bain states that this bund is used to avoid the requirement of an 80m setback to address reverse sensitivity effects that would be required by NZTA and would potentially become a no man's land.
- 3.53 Mr Bain also details that there will be amenity planting between the toe of the bund and inland boundary of residential properties and the bund also provides an opportunity for a continuous strip of entrance/ exit planting into Oakura. Mr Bain details that the 'the loss of openness and views to the ranges is in my opinion outweighed by the benefit of screening urban development that has no relationship with the highway'.
- 3.54 Mr Kensington details that his pre-mentioned logical approach for the two FUD areas to work in collaboration for future residential development, could result in the speed limit on SH45 near the property reducing, enabling direct vehicle access and reducing the need for a noise attenuation bund. Mr Kensington notes that the bund will create a visual and physical separation between the existing village, and the proposed urban residential / business development behind the bund.
- 3.55 Mr King in his evidence details that a 2m bund represents good "bang for buck" but that there is only a modest difference between acoustic performance of a 3m high bund compared to a 2m high bund. Ms Standish details that NZTA is supportive of a District Plan recommended amendment of the inclusion of the proposed noise bund within the proposed Structure Plan, supporting a 3m high noise bund. Ms Standish also notes NZTA's support for inclusion of reverse sensitivity effects in Policy 23.8.
- 3.56 The landscape and visual expert conferencing JWS (Appendix 1) notes that all experts understand that the bund is 2m high and acknowledge that the purpose of the bund is noise mitigation. Furthermore, all experts agree that the bund will block views of the development from those travelling in cars on SH 45, with all experts requiring further information to the scale and length of the bund and its interface to SH45 access. It is

acknowledged that without this information, the experts cannot provide additional expert comment.

- 3.57 The JWS also states that all experts agree that clarity is required regarding the rationale for the return proposed on the bund (see figure 7, S42a report, figure 2 Marshall Day report) and that all experts agree that the return on the bund will potentially result in adverse effects particularly the area in close proximity to KNE.
- 3.58 Mr Kensington and Ms McRae agree that the bund unless re-designed, will be perceived as an inappropriate artificial landform, whilst Mr Bain proposes that once planted the bund's underlying form will not be apparent. Mr Kensington and Ms McRae agree that consideration should be given to the bund design that integrates with the overall landscape, which may require additional depth from SH45.
- 3.59 I consider that there is a lack of information provided regarding the proposed design of the bund and the potential effects that will arise from the bund, particularly in accordance with the alternative SH45 access. I recommend that should the commissioner approve of the plan change, further detail and concept design of the bund be proposed as part of this plan change, and that landscape and visual effects are to be mitigated.
- 3.60 I also suggest the applicant's noise expert elaborates at the hearing on the effectiveness of the return sections on the bund and what alternatives are available.

Landscape Structure Plan and mitigation

- 3.61 Mr Bain details in his evidence that a 'detailed landscape structure plan' as referenced in the S42A report, has not been prepared for this development as Mr Bain considers that the Structure Plan is sufficiently detailed for its purpose. Mr Bain also notes that several structure plan areas in the Draft District Plan have similar levels of detail to the proposal.
- 3.62 Mr Kensington in his evidence details that while the request proposed to plant and enhance the existing waterways and gully landforms of the site, in his opinion a stronger landscape framework, utilising these natural features, would be more appropriate. Mr Kensington provides an example of strong ecological corridors which assist with the connection between the mountain and sea.
- 3.63 In Mr Kensington's opinion no attempt has been made to 'avoid adverse landscape and visual effects through either the proposed layout of the 'master plan', or the proposed changes to the text of the District Plan'⁶.
- 3.64 As stated in the JWS (Appendix 1) from the landscape and visual expert conferencing, Ms McRae and Mr Kensington propose that the Plan Change requires a stronger Landscape Framework requirement with the Structure Plan. Mr Kensington and Ms McRae detail that this may be appropriate for a development of this scale because it offers a stronger landscape structure. A stronger Landscape Framework would break up the scale and form of development, assist in maintaining rural character, and potentially mitigate views from The Paddocks and SH45.
- 3.65 Mr Bain considers that additional landscape matters can be addressed through the subsequent subdivision applications. All experts agree that fencing controls are

⁶ Statement of Evidence of Peter Kensington, Paragraph 9.20

important and should be required. All experts also agreed that staging effects vary between the two proposals (superstage concept plan C-09 and superstage concept plan alternative C-10) and it is important that each stage mitigates itself.

- 3.66 All experts acknowledge that earthworks required for the urban development will be extensive and if not well managed may cause adverse effects on the character of this area. Experts also agree that the stormwater bunds need to be well designed and integrated into the gully landforms. In regard to planting, all experts agree that landscape planting measures to the gullies and waterways across the whole site should be undertaken prior to any development on the site to assist with mitigating potential effects from staging.
- 3.67 I consider that Mr Bain's assertion that additional landscape matters can be addressed through the subsequent applications does not provide certainty in regard to using appropriate and effective planting to mitigate the landscape and visual effects from PPC48. I understand from NPDC officers that recent experience with implementing landscape and planting aspects of Structure Plans has proved challenging, with the anticipated outcomes not being achieved in the implemented development. On this basis, I consider a higher level of certainty of outcomes is required for PPC48 given the contribution planting and landscaping makes to the character of Oakura. Based on the above, I recommend that should the plan change be approved that a:
- A Landscape Framework is provided as part of the Plan Change and is consistent with the Structure Plan. All planting and landscape controls are then to be complied with as a requirement of the subdivision consent.
 - Landscape planting measures to the gullies and waterways across the whole site should be undertaken prior to any development.
 - Further information and detailed design on the proposed noise bund is provided as part of a subdivision application.

Effects on KNR and gully tributaries (including from road construction)

- 3.68 Mr Kensington in his evidence details that PPC48 severs key landscape features of importance, including an esplanade strip and a Key Native Ecosystem (KNE) area.
- 3.69 The JWS from the landscape and visual impact expert conferencing (Appendix 1) discusses the effects of development on the KNE and tributaries. It is noted that all experts agree that the streams are important landscape features, Wairau Stream is particularly important, so any structures such as crossings should be undertaken in a manner so as to not to undermine the character and amenity value of these waterways.
- 3.70 In addition, all experts agree that further detail about the form and nature of the structures on each of the streams is required to provide certainty about the avoidance of landscape character effects.
- 3.71 I agree with the agreed conclusions of the experts and that greater detail is needed about the structures including pipework before any subdivision approval can be given.

Effects on High Pressure Gas Pipelines

- 3.72 Ms Whooley in her expert evidence also sought on behalf of First Gas limited that the gas and petroleum pipeline corridor be illustrated clearly on the concept/ structure plan and a new rule provided in the Proposed Plan Provisions that provides for structure and building setbacks within 20m of the centreline of a gas pipeline, the LPG pipelines or the Oakura Delivery Point Station.
- 3.73 In accordance with Ms Whooley's evidence, I consider that a new rule should be provided in the Proposed Plan Provisions that provides for the setbacks required from the High Pressure Gas Pipelines. I also concur that the gas and petroleum pipeline corridor should be illustrated clearly on the concept/ structure plan, in a means similar to how they are currently illustrated on the applicant's Plan EQ-2 'EQUESTRIAN LINKAGES - Wairau Estate, Oakura with SH45 Access'.

4.0 Recommended Amendments to Plan Change District Plan Provisions

- 4.1 I have reviewed the amendments proposed by Mr Comber in his evidence. I recommend the following amendments to the Plan Change District Plan as they provide greater certainty and consistency with the overall intent of the Plan Change request:

Page	Provision	Ref:	Amendment Requested
4	Reasons 23.8	5 th para	Delete '(Rural E Environment Area')
17	Volume 1 Rules	Res102	In the column 'Matters over which control is reserved' add the following: 13) All earthworks undertaken pursuant to a General Archaeological Authority issued by Heritage New Zealand Pouhere Taonga together with an earthworks management plan that provides for IWI/HAPU monitoring, archaeological oversight, and Accidental Discovery Protocols to mitigate any adverse effects arising from the proposed works.
24	Add a new rule re light reflectance to correct an omission on original notification.	Bus14b	Apply the same provisions as in Rur107 to the Business C Environment Area.
24	Add a new rule re light reflectance to correct an omission on original notification.	Bus14c	Apply the same provisions as in Rur108 to the Business C Environment Area.

5.0 Overall Recommendations and Conclusions

Conclusion

- 5.1 This supplementary report follows the release of the Section 42A report and applicant and submitter expert evidence.
- 5.2 Information provided by the applicant's experts, submitter's experts, technical advice commissioned by the Council and outcomes of the expert conferencing for traffic and landscape and visual impact have all been considered as part of this report and have informed the conclusions and recommendations.
- 5.3 Based on technical advice relating to reticulated infrastructure and the previous technical advice relating to housing capacity, I recommend the Section 42A's recommendation for a lot/dwelling yield limit to be retained. Specifically, a limit of 167 lots/dwellings within the Wairau Estate Structure Plan Area is recommended. I also recommend that the extent of development should be limited to the northern side of the Wairau Stream.
- 5.4 Based on the outcomes of the traffic expert conferencing, additional information is sought to better understand the traffic effects and effectiveness and efficiency of the proposed traffic measures.
- 5.5 Based on expert advice, I recommend the applicant should provide a revised Structure and Staging Plan in regard to the proposed defensible boundary.
- 5.6 In addition, a Landscape Framework is required with the PPC48 Structure Plan as well as accompanying landscape requirement and control guidance to ensure effective landscape mitigation measures.

Recommendations

- 5.7 Given the conclusion on traffic matters, I do not make a final recommendation at this time.

Appendix 1: Expert Conferencing Joint Witness Statements

Appendix 2: Council Technical Advice

