



***Council Decision on
Proposed District
Plan Change 46***

Subdivision Design Guide Review

8 March 2008

Absolutely

POSITIVELY

ME HEKE KI PŌNEKE
WELLINGTON CITY COUNCIL **Wellington**

APPENDIX 2

REPORT OF THE DISTRICT PLAN HEARINGS COMMITTEE

SUBJECT: **PROPOSED DISTRICT PLAN CHANGE
46: SUBDIVISION DESIGN GUIDE
REVIEW**

COMMITTEE MEMBERS **COUNCILLOR FOSTER (CHAIR)
COUNCILLOR AHIPENE-MERCER
COMMISSIONER STUART KINNEAR**

DATE OF HEARING: **27-28 AUGUST AND 27 SEPTEMBER
2007**

1. INTRODUCTION

Proposed District Plan Change 46 (DPC 46) was publicly notified on 10 August 2006. The change has proceeded through the submission and hearing processes and the Hearing Committee is now recommending decisions to the Council for approval.

The Subdivision Design Guide became part of the approved District Plan in the year 2000. The purpose of the guide was to improve the quality of subdivision development through the application of qualitative criteria rather through prescriptive measures. Proposed DPC 46 introduced a redrafted Subdivision Design Guide to bring the guide into line with more recent thinking on subdivision design and development.

It is expected that the revised Subdivision Design Guide will play an important role in the assessment of new Greenfield subdivisions. As outlined in the introduction, the guide aims to:

“...promote high quality living environments including the public settings and facilities which allow a sense of community to develop. It will advance implementation of low-impact, environmentally sustainable design, maintaining valued landscapes and natural features. It also aims to provide for walking and cycling and convenient access to local facilities.”

Plan Change 46 was heard in conjunction with Plan Change 45 (Urban Development Area and Structure Plans) and Variation 2 (Amendments and Deletions to Proposed District Plan Change 33 (Ridgelines and Hilltops (Visual Amenity) and Rural Area).

1. RECOMMENDATIONS

It is recommended that the Council:

1. *Receive the information.*
2. *Approve District Plan Change 46 with the following additions, amendments and deletions resulting from the consideration of submissions:*

Introduction

- 2.1 *That the submission from the Department of Conservation be accepted and in the section headed “Intention of the Design Guide” the introductory statement be amended by the inclusion of the underlined wording as follows:*

“To facilitate neighbourhoods that are liveable, sustainable (both socially and environmentally), well connected, safe, that have a strong sense of place and which respect existing landscape and natural features.”

Section 1 - Activity Location

- 2.2 *That the submission from Transpower NZ Ltd be accepted in part and that in the Subdivision Design Guide under the heading ‘Activity Location’ add a new provision at the end as G1.10 as follows:*

“In cases where land subject to subdivision and development proposals are located near, or traversed by, high voltage electricity transmission lines, take into account Transpower’s Development Guide for development near high voltage transmission lines (September 2006).”

Section 2 – Access and interconnection

- 2.3 *That the submission from Greater Wellington Regional Council be accepted and that Section 2, “Access and Interconnection” be amended by the inclusion of the following:*

In the seventh line of the introductory statement after the word “for” include the words “public transport”

In Guideline G2.1 at the end of the third line add the following words, “and more direct links to existing or proposed public transport services.”

In the second line of Guideline G2.2 after the words “access to” include the words “public transport services,”

In the first paragraph of the italicised explanation to Guideline G2.2 add at the end the following sentence:

“Where practicable, new residential development should either be located within 500m of a public transport route or provide for a viable public transport route.”

Section 3 – Landform and natural features

- 2.4 *That the submission from Ohiro Properties Limited be accepted in part and that in Section 4, “Landform and natural features” Guideline G4.1 be amended as follows:*

In the second line of Guideline G4.1 after the word “and” the words “generally on” be included.

In the italicised explanation to Guideline G4.2 add the following sentence at the end:

“Where landform modifications are made, cut faces should be concealed behind development, or finished to present as natural an appearance as practicable.”

- 2.5 *That the submissions from Woodridge Estate Limited, Lincolnshire Farm Limited and Truebridge Callender Beach Limited opposing Provision G4.2 not be accepted but that to address the submissions in part, the last sentence of the provision be amended and an additional sentence be included as follows:*

“but wholesale stepping and terracing of lots should be avoided. Where contour modification occurs, the slopes, edge alignments and contour transitions created should relate to existing contours and reflect natural landform. Any transitions at lot edges should be battered, with a slope that harmonises with the natural contours.”

- 2.6 *That the submissions from Woodridge Estate Limited, Lincolnshire Farm Limited and Truebridge Callender Beach Limited be accepted to the extent that the second and third sentences in the second paragraph of Guideline G4.3 be reworded to read:*

“Where practicable, alternative design solutions for stormwater management incorporating existing watercourses, together with associated vegetation should be provided in order to contribute to visual and ecological connectedness and coherence.”

3. *That all submissions and further submissions be accepted or rejected to the extent that they accord with the above recommendations.*

2. SUBMISSIONS

A total of 14 main submissions and 2 further submissions were received on proposed District Plan Change 46. These were:

Main Submissions

1. Architectural Centre Inc
2. H I Walshe
3. Transpower New Zealand Limited
4. Pauatahanui Inlet Community Trust
5. Ohiro Properties Limited
6. Housing New Zealand Corporation (HNZC)
7. Trelissick Park/Ngaio Gorge Working Group
8. Woodridge Estate Limited
9. Lincolnshire Farm Limited
10. Truebridge Callender Beach Limited
11. Ngaio Progressive Association
12. Department of Conservation
13. Greater Wellington Regional Council
14. New Zealand Fire Service Commission

Further Submissions

1. Ohiro Properties Limited
2. Housing New Zealand Corporation (HNZC)

Submitters 8, 9 and 10 above were represented at the hearing and spoke to their submissions. Submitters 3 and 13 presented further written statements of evidence but did not appear.

6. CONSIDERATION OF SUBMISSIONS

Submissions generally supporting the Plan Change

The Architectural Centre Inc, Housing New Zealand Corporation, Woodridge Estate Limited, Lincolnshire Farm Limited, Truebridge Callender Beach Limited and the Ngaio Progressive Association (Submissions 1, 6, 8, 9, 10 and 11 respectively) generally supported the Plan Change with most only having reservations about certain specific provisions.

Consideration

To the extent that submissions 1, 6, 8, 9, 10 and 11 supported the Plan Change the Committee recommended that they be accepted.

Decision

That the submissions from The Architectural Centre Inc, Housing New Zealand Corporation, Woodridge Estate Limited, Lincolnshire Farm Limited, Truebridge Callender Beach Limited and the Ngaio Progressive Association, generally supporting Plan Change 46 be accepted.

Submissions relating to process issues

The Trelissick Park/Ngaio Gorge Working Group (Submitter 7) commented that some of the wording of the Design Guide is subjective and there should be more “teeth” in the text making some matters mandatory.

The Ngaio Progressive Association (Submitter 11) expressed concern that the Design Guide provisions have no “teeth” and should be extended into rules within the District Plan.

These submissions were opposed by further submissions F1 and F2.

Consideration

The Committee heard that since the early 1990’s the Council has taken the lead in dealing with qualitative design issues through the application of design guides forming part of the District Plan. This approach has been successful, enabling matters that cannot easily be enforced as measurable rules to be applied with appropriate discretion. The Subdivision Design Guide was introduced in 1994 and is one of 15 approved Design Guides. The Committee accepted that the Design Guides do have “teeth” in that they form part of the rule regime in the District Plan and are enforceable through the resource consent process. The Committee also accepted that it would be impractical to attempt to deal with design issues through prescriptive rules in the District Plan. Accordingly, the submissions were not supported.

Decision

That the submissions from the Trelissick Park/Ngaio Gorge Working Group and the Ngaio Progressive Association seeking the application of design guide provisions as specific rules, not be accepted.

Submission relating to the Intention of the Design Guide

The Department of Conservation (Submitter 12) commented that the section headed “Intention of the Design Guide” is not entirely consistent with the explanatory text in that section. It was requested that the provision be amended to read as follows:

“To facilitate neighbourhoods that are liveable, sustainable (both socially and environmentally), well connected, safe, that have a strong sense of place and which respect existing landscape and natural features.”

(new wording underlined)

Consideration

The Committee considered that the proposed amendments were appropriate and would provide consistency with the related explanatory text.

Decision

That the submission from the Department of Conservation relating to the section headed “Intention of the Design Guide” be accepted and the provision be amended to read as follows:

“To facilitate neighbourhoods that are liveable, sustainable (both socially and environmentally), well connected, safe, that have a strong sense of place and which respect existing landscape and natural features.”

Submissions requesting that the Subdivision Design Guide be applied to small subdivisions

The Housing New Zealand Corporation, Trellissick Park/Ngaio Gorge Working Group and the Ngaio Progressive Association (Submissions 6, 7 and 11 respectively) all requested that the Subdivision Design Guide be applied to smaller infill subdivisions and not just those in greenfield situations. Submissions 7 and 11 were opposed by further submission F2.

Consideration

The Committee was aware that these residential infill issues have been addressed through proposed Plan Change 56 (Residential Infill) and this includes new Design Guide provisions for smaller infill subdivisions. The intent is that these new Design Guide provisions will eventually merge with the reviewed provisions under DPC46. The Committee therefore supported these submissions to the extent that the concerns have be dealt with under Plan Change 56.

Decision

That the submissions from the Housing New Zealand Corporation, Trellissick Park/Ngaio Gorge Working Group and the Ngaio Progressive Association relating to the introduction of design guide provisions for smaller infill subdivisions be accepted to the extent that this matter is being addressed under Proposed District Plan Change 56.

Submission from Transpower requesting provisions for High Voltage Transmission Lines

Transpower NZ Ltd (Submission 3) requested the inclusion of a range of provisions for development near high voltage transmission lines as an appendix to the Subdivision Design Guide. The submission was supported by further submission F2.

Transpower NZ Ltd did not appear at the hearing but submitted a statement in support of their original submission. Transpower did not consider that the amendments proposed in the officer's report provided a sufficient level of detail and advice to future applicants or developers. They requested that the full wording outlined in their submission be included in the Design Guide as an appendix. It was further requested that if their substantive submission was not accepted the a reference to Transpower's Development Guide be made under Section 1 (Activity Location)

Consideration

In response to the Transpower submission the Committee considered that existing measures provided reasonably for the protection of high voltage transmission lines in the city and for the protection of the public. It was noted that existing District Plan provisions relating to transmission lines, recommended proposals for the inclusion of provisions in the Lincolnshire Farm Structure Plan and other mandatory codes of practice that apply outside the statutory RMA process would work in conjunction to achieve acceptable outcomes. The Committee did not agree therefore that further extensive provisions needed to be included in the Subdivision Design Guide. Nevertheless, it was agreed that it would be helpful to include a reference to Transpower's Development Guide in the Design Guide under Section 1 (Activity Location).

Decision

That the submission from Transpower NZ Ltd be accepted in part and that in the Subdivision Design Guide under the heading 'Activity Location' add a new provision at the end as G1.10 as follows:

"In cases where land subject to subdivision and development proposals are located near, or traversed by, high voltage electricity transmission lines, take into account Transpower's Development Guide for development near high voltage transmission lines (September 2006)."

Submission from the NZ Fire Service Commission requesting provisions for emergency services

The NZ Fire Service Commission (Submission 14) requested the inclusion of several additional provisions in the Design Guide to recognise the needs of emergency services and particularly the NZ Fire Service.

The submitter did not appear at the hearing but acknowledged in writing that it had not been recommended to include specific standards within the Subdivision Design

Guide, but rather to leave these matters to be enforced through other statutory requirements.

Consideration

The Committee acknowledged the importance of designing subdivisions to accommodate emergency services but it was not considered necessary to make specific references in the Design Guide. It was accepted that it was implicit in good subdivision design that access would be available for a range of vehicles including those required for fire fighting. The Committee did not agree therefore that there was a need to distinguish between one service or another. The Committee also noted that one of the key principles of the Design Guide is to promote connectivity within subdivisions and that this is fully consistent with the necessity for all services to access new developments.

The submitter also made reference to the need for adequate water supplies for fire fighting and in this regard the Committee noted that this is a standard requirement of subdivision development. Such matters are enforced through the District Plan rules and the Council's Code of Practice for Land Development. The Committee accepted therefore that there is no need for design guide provisions in this regard.

Decision

That the submission from the NZ Fire Service Commission relating to the inclusion of provisions in the Design Guide for fire fighting not be accepted

Submission relating to Stormwater

The submission from the Pauatahanui Inlet Catchment Trust (Submission 4) concerned the discharge of stormwater from new subdivisions, particularly as this might affect the silting of Porirua Harbour. It was requested that the relevant Design Guide provisions 04.4, 04.2, G4.3, G4.4 and G5.8 be retained.

Consideration

The Committee agreed that Design Guide provisions 04.4, 04.2, G4.3, G4.4 and G5.8 should be retained to assist in addressing stormwater issues.

Decision

That the submission from the Pauatahanui Inlet Catchment Trust concerning the discharge of stormwater from new subdivisions be accepted to the extent that the relevant Design Guide provisions 04.4, 04.2, G4.3, G4.4 and G5.8 be retained.

Submission Relating to Public Transport issues

The Greater Wellington Regional Council (Submission 13) commented that the Design Guide should be more explicit about the need for street layouts to accommodate public transport services and the provision of public transport

infrastructure. Various additions were requested to Section 2 of the Design Guide headed “Access and Interconnection” to highlight the importance of connectivity for public transport reasons. The submission was supported by further submission F2.

Greater Wellington did not appear at the hearing but submitted a written statement of evidence requesting that the plan change be adopted in accordance with their submission and as recommended in the officer’s report.

Truebridge Callendar Beach Ltd (Submission 10) speaking at the hearing to their own submission and on behalf of Lincolnshire Farm Ltd and Woodridge Estate Ltd commented on the Greater Wellington Regional Council proposals. Specific concern was expressed about request to include the words “where practicable, new residential development should be located within 500m of a public transport route”. It was requested that the sentence be amended as follows to more properly reflect the situation in greenfield subdivision developments

“where practicable, new residential development should either be located within 500m of a public transport route or provide for a public transport route”.

The Committee noted that neither Truebridge Callendar Beach Ltd, Lincolnshire Farm Ltd nor Woodridge Estate Ltd had submitted on this matter and accordingly any amendment would have to be a Council response to the Greater Wellington Regional Council submission.

Consideration

The Committee was of the view that as the promotion of enhanced public transport is directly relevant to achieving connectivity within subdivisions, and considered that the additional wording in Section 2 requested by Greater Wellington Regional Council was reasonable and should be adopted. It was also considered that the amended wording to G2.2 raised at the hearing was appropriate to more properly reflect the situation in greenfield subdivision developments.

Decision

That the submission from the Greater Wellington Regional Council relating to Section 2 of the Design Guide be accepted and that the provisions be amended by including the underlined words as follows:

3.2 *Access and interconnection*

Connections to neighbouring areas provide convenient access to existing facilities, better utilising and strengthening these facilities. Within a development, high levels of connectivity provide increased travel choice and convenience for users, and contribute to social interaction and energy saving by providing enhanced conditions for public transport, walking and cycling. Easily understood networks with interconnected streets provide alternative routes for pedestrians and assist orientation and wayfinding.

Guideline G2.1

Provide street connections to adjoining neighbourhood centres, residential areas, recreational reserves, regional walkways, other public facilities, future development areas and more direct links to existing or proposed public transport services.

Guideline G2.2

Provide streets in a highly interconnected network structure that is simple and legible, and provides good access to public transport services, neighbourhood centres and public facilities.

This will be characterised by relatively small blocks (particularly at and close to any neighbourhood centre) and will provide a choice of routes. Long cul-de-sacs should as far as possible be avoided. Where these are necessary because of topography, their heads should be interconnected wherever possible to provide access for pedestrians and cyclists. Where practicable, new residential development should either be located within 500m of a public transport route or provide for a viable public transport route.

Submission from H Walshe relating to the provision of cycleways, groves of trees and the avoidance of ‘earth damage’

H Walshe (Submission 2) requested some twenty amendments to various sections of the Design Guide. The submissions focused on the following areas:

- 1) Mandatory provisions to have safe, separate cycle paths or cycleways in subdivisions.
- 2) The planting of trees in groves, stands or in significant numbers to promote a sense of place within subdivisions.
- 3) The development of a method to calculate ‘earth damage’ and to educate and encourage the use of products or systems to lessen earth damage.

The submission was opposed by further submissions F1 and F2.

Consideration

With regard to the submissions relating to cycling the Committee heard that the Design Guide acknowledges the importance of cycling as a transport mode but does not focus on the provision of cycleways as a specific design requirement. Section 2 “Access and Interconnection” and Section 5 “Public Space Design” identify the key guidelines applicable to cycling but in any particular situation cycleways may or may not provide the appropriate design response. The Committee did not consider

therefore that the provision of cycleways be mandatory as this would limit the flexibility to consider alternative design options.

The Committee also noted that for larger Greenfield subdivisions the structure plan approach provides the opportunity to achieve a network of cycleways. Structure Plans identify the desired pattern of land development and the connections between uses. It is through this process that the hierarchy and network of roads and public space can be planned to achieve a movement network for various transport modes including cycling. Given the opportunities that can be taken through the structure plan process the Committee was of the view that more specific references for the provision of cycleways need not be included in the Design Guide.

Concerning the planting of groves or stands of trees, The Committee agreed that substantial tree clusters would add significantly to establishing sense of place and improving the attractiveness of new subdivisions. The Committee noted that this is achieved in the first instance through retaining and protecting existing stands of bush and incorporating these areas as part of the planned open space network. Where other cleared open space land is secured for public purposes the opportunity may exist for the Council or developers to plant trees in groves or stands but the Committee accepted that this was a land management matter and not one that necessarily needs to be addressed through the Subdivision Design Guide. With regard to tree planting in streets or other public spaces which may be required the Committee acknowledged that there is usually little scope for substantial clustered planting in such situations. The Committee did not consider it appropriate therefore to expand the Design Guide provisions for tree planting in this regard.

Concerning to the protection of land from damage the Committee was of the view that it was an inevitable consequence of subdivision that land would be earthworked, moulded or otherwise modified in preparation for new urban development. In those areas to be developed it was accepted that little could be done to avoid “damage” to the original surface. Where land is intended to be retained in its original state for open space or other reasons this may be secured by Council acquisition or other methods. The Committee agreed that the identification of land that is to be protected and left largely undisturbed was an important role of the Council in the planning of new subdivisions. The remedies sought by the submitter to deal with land disturbance were not considered to be relevant to the Subdivision Design Guide and were not supported.

Decision

That the submission from H Walshe relating to cycleways, tree planting and land damage not be accepted.

Submissions relating to Section 4 of the Design Guide – Landform and Natural Features

Reference to ‘Wet and Wild’

The Treliwick Park/Ngaio Gorge Working Group (Submission 7) and the Ngaio Progressive Association (Submission 11) commented that section 4 of the Design Guide does not make reference to the Bush and Streams Restoration Plan commonly known as “Wet and Wild” adopted in 2001.

Consideration

The Committee considered that there should be no reference to “Wet and Wild” in Section 4 of the Design Guide as this document has now been superseded by the Council’s new Biodiversity Action Plan that was approved by the Council in September 2007. The Committee noted that the Biodiversity Action Plan will be implemented in various ways to compliment the Subdivision Design Guide to achieve the outcomes desired by the submitters and will eventually be identified in each chapter of the Plan as a method for implementing relevant policies. However, it was noted that reference to the Biodiversity Action Plan as a method for implementation will have to be introduced through future changes to the District Plan. Such changes can not legally be made in response to submissions on DPC 46.

Decision

While accepting the good intentions of the submissions from the Treliwick Park/Ngaio Gorge Working Group and the Ngaio Progressive Association the Committee decided that the request to include a reference to the Bush and Streams Restoration Plan (superseded by the Biodiversity Action Plan) in Section 4 of the Design Guide not be accepted.

Provision 04.2 – Objectives

The Department of Conservation (Submitter 12) requested that the provision which reads “to provide for the long term sustainability of identified valued ecosystems and habitats” be amended by deleting the words “identified valued”. It was argued that no clarification is given as to where, by whom or how these ecosystems and habitats are, or have been identified. This submission was opposed by further submitter F1.

Consideration

The Committee accepted that any subdivision assessment under the Design Guide would occur within a wider content of District Plan zoning, Structure Plans or other plans identifying known and valued ecosystems and habitats. Accordingly, the Committee considered it appropriate to retain the provision as notified. The Committee was of the view that the deletion of the words “identified value” might generate uncertainty regarding the development of land already identified for subdivision by creating an expectation that all ecosystems and habitats on as yet undeveloped land will be protected in some way. The Committee was satisfied that

protection should apply to the most important ecosystems and habitats identified through the planning process.

Decision

That the submission from the Department of Conservation relating to Provision 04.2 not be accepted.

Provision G4.1 – Guidelines: Relation to landform

Ohiro Properties Limited (Submitter 5) was concerned about the blanket presumption against intensive development of sites with slopes greater than 30 degrees. They requested that in the second line of the guideline, the words “generally on” be included before the word “sites”. It is also requested that further italicised explanatory text be included to identify the circumstances in which development on steeper slopes might be permitted.

This submission was supported by further submitter F2.

Consideration

With regard to the first request the Committee acknowledged that the Design Guides in the Wellington City District Plan are comprised almost wholly of qualitative provisions that in terms of their administration require the exercise of subjective judgement. Apart from some limited exceptions they do not contain prescriptive rules. For these reasons the Committee was satisfied that it would be appropriate to include the word ‘generally’ as requested in the submission.

With regard to the request to include additional explanatory text to identify the circumstances in which development on steeper slopes might be permitted the Committee did not agree that the wording suggest by the submitter was necessary. The Committee considered that provision G4.1 was reasonably worded as it aimed to limit intensive development on steeper land and not to exclude development entirely. Under the Design Guide there would still be scope to consider proposals on more difficult hillside sites.

Decision

That the submission from Ohiro Properties Limited in respect of provision G4.1 be accepted in part and that in the second line of the guideline after the word “and” the words “generally on” be included.

Provision G4.2 – Guidelines: Minimise disturbance to natural landform

Woodridge Estate Limited, Lincolnshire Farm Limited and Truebridge Callender Beach Limited (Submitters 8, 9 and 10 respectively) expressed concern about

provision G4.2 but particularly the last sentence in the italicised explanatory statement that reads:

“Some contour modifications on hillsides is expected to provide access and for the building footprint, but stepping and terracing of lots should be avoided.”

It was requested that this section of the Design Guide be re-written to recognise and accommodate the submitters concerns.

The submissions were supported by further submissions F1 and F2.

Truebridge Callendar Beach Ltd appeared at the hearing and spoke to their submission. They also spoke on behalf of Lincolnshire Farm Ltd and Woodridge Estate Ltd. Detailed evidence was presented as to why the submitters disagreed with limitations on the stepping or terracing of lots and the reasons why this method of site development was believed to be desirable. The submitters disagreed that stepping and terracing should be avoided, arguing that it “is a temporary change to the landform that allows for the easy construction of buildings with maximum outdoor usage and the easy maintenance of lots.”

Specifically the submitters requested that the last sentence in provision G4.2 be amended to read:

“Some contour modification on hillsides is expected to provide access to and to create building platforms.”

Consideration

The Committee was presented with a considerable amount of material on the issue of stepping or terracing building lots within subdivisions. The submitters detailed the case for terracing while the Council’s urban design consultant outlined the reasons against this form of development.

The discussion traversed the issues generally under the following headings:

- Wider landscape effects
- Local streetscape effects including fencing
- Planting
- Disposal of excess earth
- Terracing of sloping sites during the building process
- Useable lots.
- Construction implications

The Committee carefully weighed the pros and cons of terracing building lots. The overriding concern was that the Design Guide objective of maintaining the distinctive and natural character of the landscape including general contours and prominent landforms should be respected.

The Committee was of the view that extensive terracing should not be supported. It was agreed that the streetscape effects of terraced building lots, particularly where supported by retaining walls achieved poor urban design outcomes. The Committee accepted the urban design advice that such stepping or terracing creates adverse local streetscape effects due to the monotonous repetition and visual domination of retaining walls or earth batters and the jagged profiles created that contrast with the natural contours. Notwithstanding the development and market advantages of this form of subdivision advocated by the submitters the Committee was firmly of the opinion that the quality of subdivision design should be paramount and that this would not be promoted by permitting extensive terracing.

It was acknowledged that over time the visual effects of terracing would be mitigated to an extent by the placement of buildings, landscaping and planting but the Committee still felt strongly that the long-term streetscape effect of repetitive terracing would not be fully ameliorated. A generally poor streetscape quality would remain.

However, the Committee did accept that in some situations the terracing of building lots might be acceptable. It was considered that if stepping or terracing was not undertaken en masse, related more to the underlying contours and was edged by more gentle batters, without sharp-edged retaining walls the intent of the Design Guide would not be undermined. It was agreed that this would achieve a more natural street edge view.

While not supporting the deletion of the guideline relating to terracing the Committee did consider that Provision G4.2 could be expanded to more fully explain the circumstances for acceptable contour modification for the creation of building lots.

Decision

That the submissions from Woodridge Estate Limited, Lincolnshire Farm Limited and Truebridge Callender Beach Limited opposing Provision G4.2 not be accepted but that to address the submissions in part, the last sentence of the provision be amended and an additional sentence be included as follows:

“but wholesale stepping and terracing of lots should be avoided. Where contour modification occurs, the slopes, edge alignments and contour transitions created should relate to existing contours and reflect natural landform. Any transitions at lot edges should be battered, with a slope that harmonises with the natural contours.”

Ohiro Properties Limited (Submitter 5) also requested an addition to the italicised text to Guideline G4.2 in support of building on steeper slopes. It was requested that the following words be added:

“where landform modifications are made to facilitate more intensive development, to achieve better connectivity, or for other reasons, cut faces should be concealed behind development, or finished to present as natural an appearance as practicable.”

Consideration

The Committee agreed that it would be useful to have comment in the guideline about the reinstatement of cut faces but it was considered that this should apply to all cut faces, not just in situations where more intensive development is proposed.

Decision

That the submission from Ohiro Properties Limited be accepted to the extent that at the end of provision G4.2 the following sentence be added:

“Where landform modifications are made, cut faces should be concealed behind development, or finished to present as natural an appearance as practicable.”

Provision G4.3 – Streams, Watercourses and Storm Water Runoff

Woodridge Estate Limited, Lincolnshire Farm Limited and Truebridge Callender Beach Limited (Submitters 8, 9 and 10 respectively) commented that it is not possible to maintain all watercourses in areas identified for urban growth if any depression in the landform is defined as an ephemeral watercourse. They request that the provisions be re-written to address the concerns expressed in their submissions.

Truebridge Callendar Beach Ltd appeared at the hearing and spoke to their submission. They also spoke on behalf of Lincolnshire Farm Ltd and Woodridge Estate Ltd.

Some rewording had been recommended in the officer’s report to clarify the provision but this was opposed by the submitters. The following wording was requested instead:

“Where a Structure Plan has been prepared the presumption is for development and not the total protection of all natural features including minor watercourses. Structure Plans will identify the streams and watercourses to be protected by incorporating them into the open space network. Other watercourses need not be retained.”

Consideration

The Committee accepted that where subdivision is proposed the overriding aim should be to maintain valued streams, watercourses and wetlands and that this should be recognised in the Design Guide. It was also accepted that in some cases this might involve the protection of ephemeral streams or intermittent watercourses. The intent was to encourage rather than require retention. Judgement would be made on the significance of any particular stream or wetland. The Committee particularly noted that the Design Guide is applicable to areas outside those governed by structure plans.

It was accepted that where development is proposed in accordance with a Structure Plan, the Structure Plan will identify the streams, watercourses and related features to

be protected as part of the desired open space network. The development of a Structure Plan balances the need for urban growth with natural environmental values and in this situation some natural features will inevitably be lost. Within areas for new urban growth there is a general presumption for development and not the total protection of all natural features.

The intent of provision G4.3 in respect of watercourses outside the open space network was that they need not always be retained but they could and ideally should still be incorporated into the design as part of more detailed landscape or storm water planning if this was feasible.

In light of the above the Committee accepted that the second paragraph in G4.3 could cause some uncertainty. This provision addresses the piping of streams and refers to the significance of ephemeral streams and intermittent watercourses as follows:

“The quality and quantity of water and aquatic habitats associated with streams and wetlands should not be compromised by development”

It was accepted that this could be construed to mean that such watercourses and wetlands should be protected and this interpretation would clearly conflict with the intent of the provision as a whole.

The Committee did not support the blanket disregard of other watercourses as requested by the submitters but was of the view that the provision should be reworded to avoid any connotation that all ephemeral streams or intermittent watercourses are to be protected from development.

Decision

That the submissions from Woodridge Estate Limited, Lincolnshire Farm Limited and Truebridge Callender Beach Limited in respect of provision G4.3 not be accepted but to minimise uncertainty the second and third sentences in the second paragraph be reworded to read:

“Where practicable, alternative design solutions for stormwater management incorporating existing watercourses, together with associated vegetation should be provided in order to contribute to visual and ecological connectedness and coherence.”

The Trelissick Park/Ngaio Gorge Working Group (Submitter 7) supported all references to the protection of natural features and open space, including native bush, hillsides and ephemeral streams. Specifically, in respect of streams it was requested that fish passages should be included in this section. The submission was opposed by submitter F2.

Consideration

The Committee was of the view that provision for fish passages is a matter of detail that should not be included in the Design Guide. It was noted that the Design Guide

will work to assist the protection of key watercourses and the quality of habitats but what happens within protected watercourses will be the subject of other plans and programmes, notably the new Biodiversity Action Plan.

Decision

That the submission from the The Trelissick Park/Ngaio Gorge Working Group in respect of provision G4.3, not be accepted.

Provision G4.4 – Minimise additional stormwater runoff resulting from development

The Trelissick Park/Ngaio Gorge Working Group (Submitter 7) also commented that additional wording is needed regarding stormwater, particularly relating to the reduction of hard surfaces and effects on stream banks. The precise location of the wording was not specified but it was presumed to relate to Guideline G4.4. This submission was opposed by further Submitter F2.

Consideration

The Committee considered that the wording of provision G4.4 is appropriate and satisfactorily covers the matters raised in the submission. In particular it was noted that reference is made to the provision of permeable paving as a means of minimising runoff.

Decision

That the submission from the Trelissick Park/Ngaio Gorge Working Group in respect of provision G4.4, not be accepted.

Provision G4.5 – Protect remnant areas of native bush where possible

Ohiro Properties Limited (Submitter 5) requested that the word “possible” in the heading of the provision be changed to “practicable”.

Consideration

As there is little between the meaning of these words the Committee was of the view that no change be made.

Decision

That the submission from Ohiro Properties Limited in respect of provision G4.5, not be accepted.

The Department of Conservation (Submitter 12) commented that with regard to the protection of remnant areas of native vegetation, the emphasis should be placed on

areas of high or significant value as a priority as this would be more consistent with the Resource Management Act. It was requested that the words “where possible” be deleted and replaced with the following:

“which have high ecological value, as a priority”.

Consideration

The Committee did not agree with amending provision G4.5 as requested by the submitter as the importance of protecting valued native bush is already recognized with three references in the guideline’s explanatory text.

The Committee also considered that to prioritise ecological value within the main text of the guideline would risk eliminating other matters such as visual and historical significance as considerations.

Decision

That the submission from the Department of Conservation in respect of provision G4.5, not be accepted.

The Ngaio Progressive Association (Submitter 11) commented that provision G4.5 should be strengthened to cover the protection of existing vegetation, especially mature trees and areas of bush.

Consideration

The Committee was of the opinion that the wording of the proposed provision is appropriate and does not require change or amendment.

Decision

That the submission from The Ngaio Progressive Association in respect of provision G4.5, not be accepted.

Ohiro Properties Limited (Submitter 5) requested that additional text be added at the end of the italicised explanation to the guideline G4.5 as follows:

“where it is not practicable to protect existing bush, consider reinstating areas of bush of ecological variety and creating corridor effects using street planting and planting in parks and gardens.”

The Trelissick Park/Ngaio Gorge Working Group (Submitter 7) and the Ngaio Progressive Association (Submitter 11) (11 opposed by further submitter F2) also comment that no reference has been made to new native vegetation planting.

Consideration

The Committee noted that a key focus of the Subdivision Design Guide is to protect valued trees or bush on land to be subdivided and where possible, integrate these into the overall design of the subdivision. Important remnant bush areas are usually incorporated as part of the open space network to be vested in the Council or subject to covenants or other protective measures. Other land that may be acquired by the Council for open space purposes may be the subject of re-vegetation programmes over time. Street planting may also be required in new subdivisions.

The Committee was of the view that the relief sought by submitter 5 was an environmental mitigation matter that would be more appropriately dealt with through resource consent processes. If areas of bush are to be lost as a result of development then it is possible that resource consent conditions could be imposed requiring the reinstatement of vegetation to offset the losses. The Committee agreed that the Subdivision Design Guide is appropriate for the retention of existing bush but does not provide suitable means for dealing with the reinstatement of bush.

Decision

That the submissions from Ohiro Properties Limited, the Trelissick Park/Ngaio Gorge Working Group and the Ngaio Progressive Association in respect of provision G4.5, not be accepted.

CONCLUSION

This report has addressed all of the submissions to proposed District Plan Change 46 either generally in respect of particular issues or specifically.

Overall it is concluded that the plan change be adopted but amendments and additions have been recommended to address omissions or otherwise improve the content or operation of the provisions.

Andy Foster

Chair of the Hearing Committee on Plan Change 46 – Subdivision Design Guide Review

ATTACHMENT 1 – Annotated Subdivision Design Guide showing changes from hearing of submissions

**PROPOSED DISTRICT PLAN CHANGE 46 –
SUBDIVISION DESIGN GUIDE REVIEW**

**Annotated version including changes approved by the
Council on 28 February 2008**

Note – This document is not part of the formal plan change and is for information purposes only.

Key to annotated text:

*Text added by the Hearing Committee as a result of the hearing of submissions is shown as **highlighted***

Text to be removed is shown as ~~struckthrough~~

Subdivision Design Guide

Table of Contents

INTRODUCTION

- *Application*
- *Intentions*
- *Interpretation*

1 Activity location

- *Distribution, intensity and mix of activity*
- *Design for diversity*
- *Locating parks and other open spaces*
- *Orientation of lots*

2 Access and interconnection

- *Connection to neighbouring areas and facilities*
- *Internal connectivity*

3 Sense of place

- *Distinctiveness and memorability*
- *Authenticity*
- *Orientation and wayfinding*

4 Landform and natural features

- *Relation to landform*
- *Streams, watercourses and storm water runoff*
- *Mature trees and established vegetation*

5 Public space design

- *Street trees and landscaping*
- *Walkability*
- *Safety*
- *Providing for recreation*
- *Storm water treatment*

INTRODUCTION

Application

This Guide provides design assessment criteria for subdivision consent applications. It provides guidance to give effect to the Council's *Urban Development Strategy*, *Environmental Strategy*, and the *Northern Growth Management Framework*.

This design guidance should be read with any structure plan prepared for the area. The structure plan will provide strategic guidance on a number of the issues identified in this design guide including activity location, access and interconnection and landform and natural features.

Technical and engineering criteria relating to the implementation of development are contained in the separate Code of Practice for Land Development.

This Guide applies primarily to new 'greenfield' subdivision, but many of its objectives and policies may also apply to significant subdivisions within the existing urban footprint, on either 'infill' sites (undeveloped land within the existing urban footprint) or 'brownfield' sites (previously developed land). While this Guide provides some guidance on where these provisions might apply outside of greenfields, allowance is made for flexibility and judgment by Council in considering the applicability to infill and brownfield sites. In general, provisions of this Guide are more applicable to larger infill or brownfield subdivisions that extend the roading network (e.g. cul-de-sac extensions or creation of new legal road) or that would support additional public space (e.g. a neighbourhood park or neighbourhood centre), than to smaller subdivisions.

In terms of scale, the Guide generally applies to greenfield subdivision of any size for which consent is required. Specific objectives, however, may be less relevant to smaller subdivisions (e.g. less than 20 lots) than to larger subdivisions. Examples include provision for parks and open spaces, neighbourhood centres, and street connections, which may not be required in smaller subdivisions. Again, flexibility and judgment by Council is permitted on where the Guide's objectives and policies are relevant.

The (proposed) Development Contributions Policy defines "Greenfield development" as "a proposal that creates new residential or rural residential areas, and...includes residential or rural residential development on land that was zoned Rural, or Open Space." It also includes land that was zoned Residential within the land areas referred to in appendices 12 to 14 and 16 to 22 to chapter five of the operative District Plan as at 1 July 2005. That definition can be considered applicable to this Guide as well, with the added inclusion of non-residential development.

Besides this Guide, other design guides like the Multi-Unit Design Guide and Central City Design Guide may also be applicable to subdivisions. Relevant District Plan rules for the underlying zoning will also apply.

Intention

To facilitate neighbourhoods that are liveable, sustainable (both socially and environmentally), well connected, safe, that have a strong sense of place and which respect existing landscape and natural features

This Design Guide promotes high quality living environments including the public settings and facilities which allow a sense of community to develop. It will promote implementation of low-impact, environmentally sustainable design, maintaining valued landscapes and natural features. It also aims to provide for walking and cycling and convenient access to local facilities.

Detailed design objectives are set out in each section.

Interpretation

Relevance

Good design is a response to the specifics of the site and development brief for the project, and not all of the design guidelines in this design guide will necessarily apply to every site. However in all cases the relevant guidelines must be considered and the design objectives must be satisfied.

Design flexibility and responsiveness to site

There may also be instances where a design objective can be best achieved by a means not anticipated by a relevant guideline. In this situation, departure from a relevant guideline is justifiable if it can be demonstrated that the proposed design solution better satisfies the associated design objective.

Prioritisation

Priority should be given to those guidelines that are critical to satisfying the intention of this guide in an optimal way in each unique location.

Coherence and integration

Each subdivision design must respond to the range of relevant guidelines in a coherent and integrated way, and should have its own inherent design integrity and coherence.

Explanation

Italicised explanatory text is to assist decisions about the proper interpretation and application of the guidelines.

Information requirements

Refer to Chapter 3 of the District Plan for a list of information required with each application. This includes a design statement that will describe how the proposal satisfies relevant design guidelines and objectives.

1 Activity location

The general location of different types of activity will be established by the structure plan for the area should such a plan have been prepared. In other areas opportunity may be taken to vary the density of activity in response to local site conditions. Close proximity to existing or new local neighbourhood facilities and parks and reserves can justify higher densities, and opportunities should be taken to connect to these. Lower density in peripheral areas may allow important natural features and open spaces to be retained.

Objectives

- O1.1 To provide convenient access to local neighbourhood services and facilities.
- O1.2 To provide a range of lot types and sizes, public spaces and local facilities to meet the needs of the community.
- O1.3 To create lots which lead to conditions of safety in both the public and private environments.
- O1.4 To create lots which have potential to use renewable energy sources.

Guidelines

Distribution, intensity and mix of activity

- G1.1 Provide for service, retail, and community facilities at neighbourhood centres, as set out in the Urban Development Strategy and any applicable structure plans.

- G1.2 Concentrate the highest intensity of residential development within close walking distance of local neighbourhood and larger suburban centres, transportation nodes and public transport routes.

Variations in intensity and clustering of residential development both supports and draws support from neighbourhood centres and community infrastructure, and may also allow important natural features to be retained in other parts of the development. Concentrating smaller lots around important public spaces and at centres generates vitality and reinforces these as the focal point of the development.



Concentrate higher density development at or close to the centre

Design for diversity

- G1.3 Provide a range of lot sizes within a development, where appropriate.

Variation in lot size and density will provide a choice of living opportunities. It increases the likely range of building types and tenures, responding to the diverse needs of the wider community.

Opportunities for a range of lot sizes are more readily available in larger subdivisions but may also occur in some smaller subdivisions.

Locating parks and other public open spaces

- G1.4 Provide parks and other public open spaces close to and well connected with concentrations of activity such as neighbourhood centres, in locations that serve a substantial population within close walking distance, and in keeping with any applicable structure plans.

The broad location of park spaces will be identified in any structure plan applying to the area.

Community parks should be located within each suburb, within 10-15 minutes walking distance (800-1200m) of a significant majority of dwellings in the suburb. Smaller local parks and playgrounds should be provided within 5-10 minutes walking distance (400-800m) of a significant majority of dwellings. See G5.7 for size and design guidelines for community and local parks.

Parks should receive reasonable year-round sunshine and will be in full view and directly accessible from the main streets in the neighbourhood.

Except for areas of bush, streams and wetlands preserved for ecological reasons, public parks should not comprise residual land which is inaccessible, predominantly steep or south-facing, or otherwise unsuitable for recreation.

The need for public parks and other public open spaces can exist in subdivisions of any size. While a smaller subdivision may not always require public open space, it is often necessary to provide such space if private open space is minimal, and the site is not conveniently close to off-site parks and reserves.

Orientation of lots

- G1.5 Orientate lot frontages onto streets and other public spaces, wherever possible locating the fronts of lots opposite other fronts, and connecting backs to backs.

To enhance safety and security, ensure that all streets and other public spaces are bounded by lot frontages or overlooked from adjoining activity. Minimise rear lots.

- G1.6 Provide good natural surveillance of public parks or reserve areas through the orientation of adjacent lots and the provision of adequate adjacent road frontage.



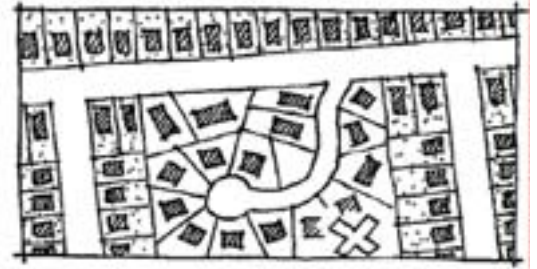
Poor lot orientation shown at left with backs of lots connecting to the park. Preferred orientation with

When lots back onto a park or reserve with high open space values, the lots should be orientated towards these areas. Enough adjacent road frontage should be provided to create a welcoming, practical, safe and accessible entrance to the park or reserve.

fronts of lots and street edge to the park indicated at right

- G1.7 Relate the orientation and alignment of lots in infill subdivision to established and defined neighbourhood patterns.

This applies to infill subdivision within those existing neighbourhoods that have a notably consistent character, and where contrast would undermine that character. Alignment of lot boundaries will influence that of the buildings that will be constructed, and the size of lots will impact on the 'grain' of development. Both characteristics are important determinants of character.



Avoid radical contrast with defining lot patterns

- G1.8 Plan and orientate lots to maximise the potential for solar gain into habitable rooms and private open space.

This suggests concentrating development on north-facing slopes where possible, especially for smaller lots where shading from neighbouring buildings is more likely to be a factor.

- G1.9 Where appropriate, take into account opportunities for joint energy schemes e.g. small scale wind turbines, solar generation and/or solar heating.

Options for producing renewable energy within a subdivision for the benefit of multiple lots should be considered, with allowance made for the space and orientation requirements of any such joint energy scheme.

- G1.10 In cases where land subject to subdivision and development proposals are located near, or traversed by, high voltage electricity transmission lines, take into account Transpower's Development Guide for development near high voltage transmission lines (September 2006).

2 Access and interconnection

Connections to neighbouring areas provide convenient access to existing facilities, better utilising and strengthening these facilities. Within a development, high levels of connectivity provide increased travel choice and convenience for users, and contribute to social interaction and energy saving by providing enhanced conditions for public transport walking and cycling. Easily understood networks with interconnected streets provide alternative routes for pedestrians and assist orientation and wayfinding.

Opportunities for street connections are usually available in larger subdivisions but may exist in some smaller subdivisions as well, depending on their location.

Objective

- O2.1 To provide good accessibility to, from and within an area, permitting a choice of modes of access and routes.

Guidelines

Connection to neighbouring areas and facilities

- G2.1 Provide street connections to adjoining neighbourhood centres, residential areas, recreational reserves, regional walkways, other public facilities, and future development areas and more direct links to existing or proposed public transport services.

Key roading connections will be identified in any applicable structure plan.

Where walkways are provided rather than street connections, apply the principles of Crime Prevention Through Environmental Design (CPTED) to their design.

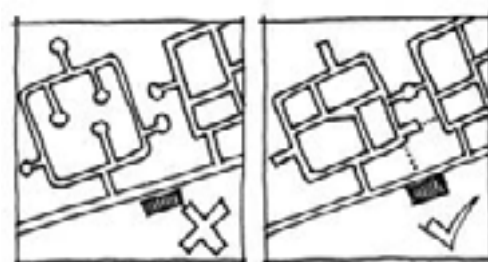
Internal connectivity

- G2.2 Provide streets in a highly interconnected network structure that is simple and legible, and provides good access to public transport services, neighbourhood centres and public facilities.

This will be characterised by relatively small blocks (particularly at and close to any neighbourhood centre) and will provide a choice of routes. Long cul-de-sacs should as far as possible be avoided. Where these are necessary because of topography, their heads should be interconnected wherever possible to provide access for pedestrians and cyclists. Where practicable, new residential development should either be located within 500 metres of a public transport route or provide for a viable public transport route.

Public facilities to which access should be provided include schools, parks, reserves and public walking tracks.

- G2.3 Accommodate vehicles, cyclists and pedestrians together, in preference to pedestrian-only routes.



Connection within and between areas

Neighbourhood streets that provide for a range of uses are safer than pedestrian-only routes. Pedestrian-only routes are generally acceptable only where part of a public recreational space, or where gradients or existing land tenure preclude full street access.

3 Sense of place

How people feel about where they live and whether they find it attractive is related to its sense of place. A distinctive and memorable sense of place may be developed with a combination of physical characteristics such as relation to underlying landscape and the configuration of public spaces and landscaping. It is also influenced by the activity and events in the neighbourhood.

Objectives

- O3.1 To develop a distinctive and valued character within new neighbourhoods.
- O3.2 To create systems of streets and other public spaces that people readily understand and find easy to navigate.

Guidelines

Distinctiveness and memorability

- G3.1 Retain existing notable landscape elements and create new features to give a distinctive and memorable sense of place.

Features that differentiate one place from another will contribute to memorability and a distinctive sense of place. Existing notable landscape features will be identified in any applicable structure plan. Such features will typically include underlying landform and landscape characteristics, spectacular views and distinctive vegetation, including mature trees. Minimising change to the existing landform will help to accentuate local character.

Designed elements such as avenues of street trees, parks and high quality landscaping as well as landmark buildings and neighbourhood centres can also contribute to this effect. When developing local character, it is important to also maintain coherence and a positive relationship with the valued characteristics of the surrounding landscape and neighbourhood.

- G3.2 Identify significant views or landmarks, and align streets and design significant public spaces to focus on these.

New places and buildings that will serve an important public function should be emphasised as landmarks.



View aligned on a local landmark

Authenticity

- G3.3 Reinforce an authentic local sense of place by referencing past local events, the history of development and use of the site, the site's cultural significance, and the underlying landscape patterns.

An authentic sense of place can be developed by identifying, retaining and enhancing the defining features of the site. Methods include highlighting traces of past occupation where these exist; artistic interpretation in form, space or detail; naming of areas, streets and spaces to reflect the history of the place; and designing development to reflect strong underlying landscape or past development patterns. Historically significant existing structures, sites and buildings may be used as features in public open space.



Use of existing landscape features to give character and a sense of place

Orientation and wayfinding

- G3.4 Design new streets, accessways and other public spaces so that they fit within a coherent neighbourhood-wide system.

Clear visual links between existing parts of the city and new neighbourhoods will be achieved when routes are visible, and destinations are obvious.

Ensuring that there is visual continuity and coherence in the street network and its landscape treatment will assist users in finding their way to, from and within the area. For example, when an existing street is extended into or through a new subdivision, its streetscape (road width, footpaths, street trees, etc.) should generally also be continued. However, opportunities may exist to provide local enhancement, particularly when the existing street design or landscaping is unattractive or undistinguished.

Streets and accessways within infill subdivision should complement and complete existing street patterns. This relates to street type and alignment, as well as physical connection.

- G3.5 Where appropriate, give main routes within and through the subdivision a distinctive form and character that differentiates them from other streets in the neighbourhood.

Expressing the street hierarchy through streetscape and other design features will assist users in identifying main routes.

4 Landform and natural features

Landform and natural features contribute significantly to the sense of place and attractiveness of a neighbourhood. Retention of landform, streams and habitats is important to improving sustainability and reducing the adverse effects of sedimentation.

The objectives and policies in this section are generally applicable to all subdivision regardless of size. Whether they apply to infill and brownfield subdivision as well as greenfield subdivision depends on whether the infill and brownfield sites have existing landforms and natural features that have survived previous development.

Objectives

- O4.1 To maintain the distinctive natural character of the landscape including general contours and prominent landforms, areas of native bush, wetlands, streams and their margins.
- O4.2 To provide for the long-term sustainability of identified valued ecosystems and habitats.

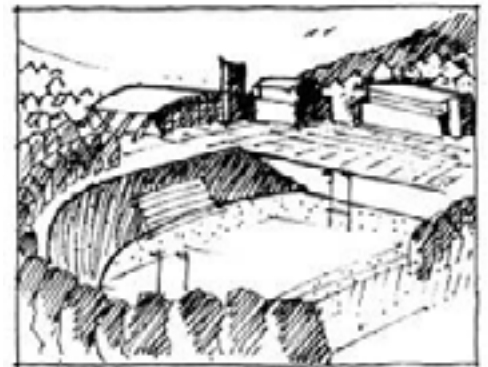
Guidelines

Relation to landform

- G4.1 Avoid intensive development on coastal escarpments, open ridgelines and skylines, and generally on sites steeper than 30 degrees.

This is to maintain valued landscape qualities of highly visible sites. Prominent landforms of particular value in Wellington include the coastal escarpment and terraces, and all main hilltops, ridges and spurs, and watercourses. Concentrating development on relatively flat areas and avoiding development of steep sites (particularly back sites over cliffs) will also give significant improvements in runoff, sediment control and stormwater quality.

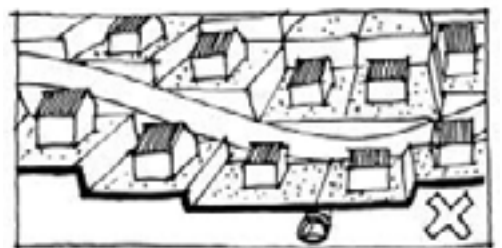
Any applicable structure plan will identify the appropriate intensity of development for particular parts of the area.



Contour modification may be considered for publicly significant facilities

- G4.2 Minimise disturbance to natural landform.

Avoiding subdivision that relies on extensive earthworks will minimise the impact on the landscape, disturbance to natural systems and vegetation, and impact on stormwater quality. It will also maintain the local sense of place that is derived from building with rather than removing local landforms but wholesale stepping and terracing of lots should be avoided. Where contour modification occurs, the slopes, edge alignments and contour transitions created should relate to existing contours and reflect natural



Stepping, terracing and culverting watercourses should be avoided

landform. Any transitions at lot edges should be battered, with a slope that harmonises with the natural contours. Where landform modifications are made, cut faces should be concealed behind development, or finished to present as natural an appearance as practicable.

Streams, watercourses and storm water runoff

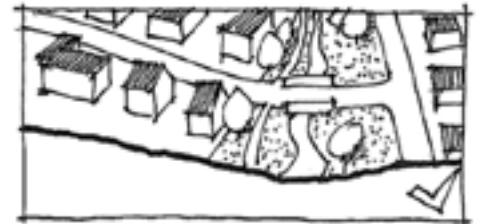
- G4.3 Maintain streams, watercourses and wetlands, and protect aquatic habitats and any associated native vegetation.

Where a structure plan has been prepared, this will identify the streams and watercourses to be protected as part of an open space network. Other watercourses need not be retained for open space values but could be built into a subdivision's natural landscaping and stormwater plan.

Avoid piping streams and wetlands unless no other options are available. Where practicable, alternative design solutions for stormwater management incorporating existing watercourses, together with associated vegetation should be provided in order to contribute to visual and ecological connectedness and coherence.

These and their associated vegetation contribute to visual and ecological connectedness and coherence.

Associated vegetation, including any new planting, may also enhance existing water features and habitats, add to the visual amenity of the neighbourhood, and assist with stormwater treatment and siltation management.



Watercourse retained as a feature within a development

- G4.4 Minimise additional stormwater runoff resulting from development.

Additional stormwater runoff can lead to erosion and degradation of water quality in the receiving environment. Consideration should be given to incorporating existing watercourses and wetlands into a stormwater plan that uses natural drainage to reduce runoff beyond the site. Rain tanks, rain gardens, permeable paving, dispersal trenches, soak pits and other techniques suitable for the site and its geotechnical conditions might also assist in reducing stormwater runoff.

See G5.8 for stormwater guidelines related to public spaces.

Mature trees and established vegetation

- G4.5 Protect remnant areas of native bush where possible.

This includes all native bush recognised as having ecological, visual, or historical significance. Such areas of bush on large private lots should be retained and protected wherever possible to help ensure ecological viability, and to form corridors of vegetation. In addition to their ecological benefits, such corridors help create a visual framework that

integrates development into the landscape.

- G4.6 Retain and integrate mature trees and native vegetation where these can make a positive contribution to the visual character, amenity and ecological values of an area.

Established trees and native vegetation are important components of ecosystems, help with stormwater management, integrate development into the landscape, and provide character, shelter and privacy.



Established trees contribute character

5 Public space design

Public spaces including streets, parks, squares and reserves provide the context for the homes of residents, and the setting for community interaction. When well-designed they will be attractive, safe and comfortable, and support a range of activities.

Objectives

- O5.1 To provide an attractive, safe and pleasant public environment for all users and all modes of use.
- O5.2 To achieve environmentally sustainable stormwater design wherever site conditions allow.

Guidelines

Street trees and landscaping

- G5.1 Use street trees to give local character and amenity, ensuring these are spaced in a way that defines the street space and achieve visual continuity. Generally use a single species of street trees within any one street.
- G5.2 Express the street hierarchy with differentiation of street trees and landscaping as well as street width.

The key elements of the street network will be identified in any structure plan applying to the area. Streets have an important function as public spaces, not just vehicle-ways. They should be designed to reflect their multiple uses and to retain a coherent visual pattern.

Trees on any street might be either distinctly different in appearance from the trees used on other streets to give a unique sense of place, or of the same species to visually emphasise physical connection.

Refer to the Code of Practice for Land Development for required street widths.

Walkability

- G5.3 Provide safe, convenient pedestrian access, generally along both edges of all streets.

Appropriate accommodation for pedestrians may vary in relation to the activities along the street edge. For example, a footpath may not be required along both sides of a street that has private lots on one side only. At the end of the roading hierarchy (ie on streets or accessways that serve a small number of dwellings and that do not provide through routes), shared surfaces for pedestrians and vehicles may be considered.

Safety

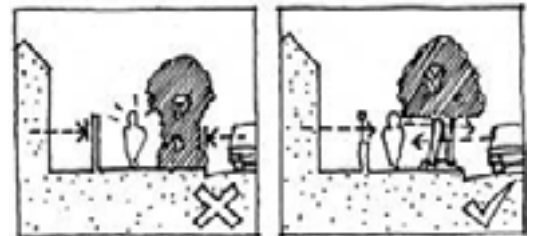
- G5.4 Ensure streets, accessways and other public open spaces are wherever possible bounded by active building frontages, with low or visually permeable fences at these boundaries, to allow the natural surveillance that promotes safety.

Urban places bounded by activity and overlooked from buildings are generally safer.

Lots should be configured so that building fronts and entrances connect to and windows will overlook public spaces. This, and avoiding high blank walls, provides the natural surveillance that contributes to safety in public space and security within the private realm.

- G5.5 Ensure vegetation within the street space does not obstruct car drivers' vision of pedestrians, cyclists or other vehicles and minimises the opportunity for concealment.

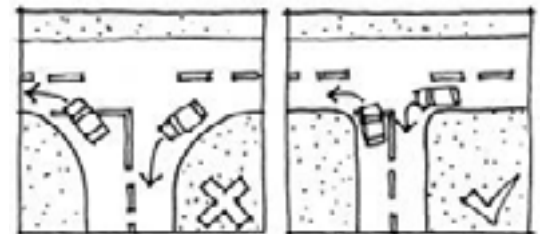
Low vegetation close to walkways or the street edge should be below the level of a driver's eye-line. High vegetation should generally be, when a tree matures, at least two metres above ground level to maintain sightlines for pedestrians.



Planting should allow views from and of the street, and minimise opportunity for concealment

- G5.6 Use traffic calming devices, suitable for the type of street and traffic conditions, to moderate driver behaviour and reduce traffic speeds.

The intention is to ensure drivers travel relatively slowly and cautiously within the local neighbourhood environment, particularly in areas shared with pedestrians. Methods may include planting, on-street parking, narrow carriageways, roundabouts, spatial constriction and tight corner radii. At the end of the roading hierarchy, or in neighbourhood centres, intensive traffic calming may be used to restrict vehicles to very low vehicle speeds. Refer to the Code of Practice for Land Development for specific engineering criteria.



Tight corner radii for traffic calming and pedestrian convenience

Providing for recreation

- G5.7 Provide attractive and accessible park spaces, including some that are suitable for active as well as passive recreation, which are dimensioned for the expected type and intensity of use.

Public parks should be treated as features of the development and should not be simply residual exposed, steep or flood prone areas that are suitable for no other use. Refer to G1.4 for more detail on the desired location and orientation of parks.

Community parks should provide a sunny flat area suitable for active recreation such as running and informal ball games as well as space for play equipment, seating and other passive activities.

Community parks can vary in size but are generally around 4000m². Local parks and playgrounds can be smaller.

Parks and other public open spaces within a neighbourhood centre may be relatively small, as large reserve areas or sports fields at centres tend to fragment them and disperse activities that ideally should be concentrated. Instead, large parks are best placed in locations readily accessible from but slightly away from the centre.

Regardless of size, all parks should contribute to a sense of community and safety by being relatively accessible and at least partly overlooked by adjoining activity.

Storm water treatment

- G5.8 Apply environmentally sensitive methods of storm water disposal within public spaces wherever practicable.

Swales and retention areas are a desirable means of dealing with storm water, assuming that the geological substrate is suitable for retention. These areas can be designed to contribute to visual amenity, irrigation and habitat development. Methods include retention on reserve or park areas, within tree pits, and extending existing wetlands.