

APPENDICES

APPENDIX 1 - HERITAGE PLACES

APPENDIX 1A –WETLANDS, LAKES, RIVERS AND THEIR MARGINS

Refer Rules A2 2.3 and C2 2.4.1 J) (Pages 98 and 158)

Ref No.	Name	Location	Map Grid Reference	Category	Planning Map
W1	Lake Kaikokopu and the Kaikokopu Stream	Himatangi Beach	S24 024 896	QEII A	18 and 40
W2	Karere Lagoon	Karere Road	S24 245 860	A	19
W3	Tangimoana Dump Dunes and Fernbird Area	Tangimoana Beach Road	S24 993 977	A	14
W4	Lake Omanuka	North of Omanuka Road	S24 076 948	A	14
W5	Edwards Lagoon	Oroua Road	S24 232 967	QEII A	15
W6	Boss Lake	Near Lake Omanuka	S24 045 959	B	14
W7	Hamilton's Bend Lagoon	Hamilton's Line	S24 215 843	B	19
W8	Voss Lagoon	Hamilton's Line	S24 217 850	B	19
W9	Willow Island	Karere Road	S24 253 860	B	19
W10	Shaw's Lake	North of Campion Road	S23 100 023	B	14
W11	Foxtangi Dunes	(South of Himatangi Beach)	S24 992 893	B	18

Supplementary List

- 1) South Conspicuous Road Wetlands T22 632 364 and 627 367.
- 3) Jackeytown Road S24 222 866.
- 5) North Raumai T23 464 075.
- 7) Raumai Swamp Oxbow T23 466 067.
- 9) South East Mangawhata Oxbow S24 183 869.
- 11) Tangimoana Road S24 054 990.
- 13) North Highden Oxbow S24 225 005.
- 15) South Highway 56 S24 100 854.
- 17) South No. 1 Line Oxbow S24 225 877.
- 19) Tangimoana Forest S24 015 970.
- 21) Bainesse Road S24 134 893.

- 2) Main Drain Road S24 166 888.
- 4) Southwest Edwards Lagoon S24 223 965.
- 6) Lake Road S24 042 908.
- 8) Taikorea Road S24 131 900.
- 10) East Hokerua Trig S24 238 977.
- 12) Tangimoana Forest S24 026 916.
- 14) Wylies Road S24 039 876.
- 16) North Lake Kaikokopu S24 024 908.
- 18) East PukePuke Lagoon S24 083 942.
- 20) Valley Road T23 436 076.
- 22) Tangimoana Forest S24 015 933.

- 23) Cole Road S24 185 986.
 25) Whale Road S24 070 959.
 27) Tangimoana Road S24 037 980.
 29) East Tangimoana Oxbow S24 016 987.
 31) Sandon Road S23 250 063.
 33) Lockwood Road S24 208 900.
 35) South Taylor Road lagoon S23 083 045.
 37) Tangimoana Forest S24 035 953.
 39) Pukemarama Lagoon S24 075 985.
 41) Highden Oxbow S24 220 999.
 43) Broadlands Wetland, Awahou South Road, T23 467 032
- 24) Midland Road T23 426 059.
 26) Tangimoana Forest S24 023 914.
 28) Downs Road S24 088 894.
 30) Eden Park Oxbow S24 232 850.
 32) South Himatangi Beach S24 017 885.
 34) Whale Road S24 071 960.
 36) South Highway 56 S24 085 860.
 38) Haynes Line T23 380 177.
 40) South Highway 56 S24 095 859.
 42) South Highway 56 S24 094 864.

APPENDIX 1B – SIGNIFICANT AREAS OF INDIGENOUS FOREST/VEGETATION (EXCLUDING RESERVES)

Refer Rules A2 2.3 and C2 2.4.1 J) (Pages 98 and 158)

Key: Protected under QEII Trust Open Space Covenant = QEII
 Manawatu District Reserves Act Covenant = RAC

Ref No.	Name	Location	Map Grid Reference	Category	Planning Map
SA1	Te Rakehou Bush	Sandon Road	S23 230 084	A	10
SA2	Midland Road Bush	Midland Road	T23 439 055	A	16
SA3	The Retreat	No 1 Line/Pohangina Valley East Road	T23 508 11	A	12
SA4	Whariki Bush	Lagoon Road	T22 595 492	A	2
SA5	Rewarewa West Covenant	Mangarere Road	T22 548 459	A	4
SA6	Pakaitui Stream Bush A & B	Waipuru Road	T22 475 396 and 461 399	A	3 and 4
SA7	Ederdale Bush	Rangiwahia Road	T22 511 305	A	8
SA8	Hinau Bush	Mangamako Road	T22 535 422	A	4
SA9	Ngarimu Bush	Ruahine Road, Pemberton	T22 560 400	A	4
SA10	Mangoira/Oroua Confluence Bush	Nix's Road	T22 580378	A	4
SA11	Waituna Valley Road Bush	Waituna Valley Road	T23 370 273 and 370 276	A	7
SA12	Paranui Stream Bush	Oroua Valley Road	T23 535 280	A	8
SA13	Legg Estate Bush	Bainesse Road	S24 120 874	A	18
SA14	Moar Property	Pohangina Township - Kahikatea Trees	T23 482 113	B	12 and 45

SA15	Luttrell Property	Pohangina Township - Kahikatea Trees	T23 477 108	B	45
SA16	Viles Property	Rangiwahia Road, Pemberton	T22 560 460	QEII B	4
SA17	Sinclair Property	Waituna West	T23 354 263	B	7
SA18	Highden Property	Green Road	S24 218 993	RAC B	15
SA19	Chubb Property	Tangimoana Road	S23 111 088	RAC B	10
SA20	Gee-Taylor Property	Tokorangi Road	S23 226 203	RAC B	6
SA21	Southern Pastoral Property	Pohangina Valley West Rd	T23 548 183	RAC B	12
SA22	Eames Property	Pohangina Valley West Road	T23 578 235	RAC B	8
SA23	Clausen Property	Lockwood Road	S24 220 899	QEII B	19
SA24	G H Dear Trust	Cole Road/Taipo Road	S24 186 993 and S24 187 998	QEII B	15
SA25	Durie's Bush	Cameron's Line	S23 284 030	QEII B	15
SA26	Ngaioit	Ngai Road/Mingaroa Road	S23 167 117	QEII B	10
SA27	Hogan's Covenant	Lethbridge Road	S23 264 105	QEII B	11
SA28	Wilson's Bush	Mingaroa Road	S23 182 122	QEII B	10
SA29	Cousins' Bush	Taonui Road	T23 408 115	QEII B	12
SA30	Gandar's Bush	Taonui Road	T23 400 118	QEII B	12
SA31	Wilson's Covenant	Mt Stewart-Halcombe Road	S23 197 127	B	10
SA32	Rangitawa	Pryces Line	S23 193 202	QEII B	6
SA33	Williamsons Covenant	Williamson Road East	T23 360 248	B	7
SA34	Whites Covenant	Coulters Line	T23 446 174	QEII B	12
SA35	Bird's Covenant	Junction Road North	T23, 450 282	QEII B	7
SA36	Wilson's Covenants	Peterson's Rd, Table Flat	T22 666 336 and 664 339	QEII B	5
SA37	Hopkins Property	Main South Road, Apiti	T22 605 364	QEII B	4
SA38	Mc Grath Covenant	S.H. 54, Rewa	T22 357 344	QEII B	3
SA39	Shannon Covenant	Lethbridge Rd / Makino Rd	S23 290 097	QEII B	11
SA40	Nitschke's Bush	Dunolly Road	S23 312 224	B	6
SA41	Mangamako Gorge	Sandon Block Road	T22 405 420	B	3
SA42	Whitelock Covenant	Colyton Road	T23 398 023	QEII B	16
SA43	Blackley Covenant	Nitschke Rd	T23 315 236	QEII B	7
SA44	Henson Covenant	Gorge Road	T22 528 347	QEII B	4
SA45	Newcombe Covenant	Mangapipi Road	T22 372 335	QEII B	3
SA46	Mc Kean's Covenant	Renfrew Road	T22 636 432	QEII B	5

Supplementary List

Kawhatau Junction Forest T22 624 473

South Conspicuous Road Bush T22 625 365

Mangawharariki River Bush T22 565 495

APPENDIX 1C – OUTSTANDING NATURAL FEATURES

Refer Rule A2 2.3 (Page 98)

- OF1) Concretion Terrace, Peka Road, T22 471 475 **A** (Planning Map 1)
 OF2) Glow Worm Caves - Limestone Road, Apiti T22 668 323 QEII **B** (Planning Map 9)

APPENDIX 1D – TREES WITH HERITAGE VALUE

Refer Rule A2 2.3 (Page 98)

1)	7 Pines Court, Feilding	Titoki (<i>Alectryon Excelsus</i>), Planted by Arthur or Edith Halcombe, Circa 1880's	Planning Map 33
2)	28 Kimbolton Road	California Big Tree, (<i>Sequoiadendron Giganteum</i>), Planted by Arthur or Edith Halcombe, Circa 1870's	Planning Map 33
3)	306 Kimbolton Road	North Island Rata, (<i>Metrosideros Robusta</i>)	Planning Map 32
4)	3 Ranfurly Avenue	English Oak, (<i>Quercus Robur</i>)	Planning Map 29
5)	30 Kimbolton Road	Weeping Elm (<i>Ulmus Gladra</i>)	Planning Map 33
6)	7 Pines Court	Chinese Hawthorn, (<i>Photinia Serrulata</i>)	Planning Map 33
7)	2 Pines Court	Tasmanian Blackwood, (<i>Acacia Melanoxyton</i>)	Planning Map 33
8)	19 Pharazyn Street	English Oak (2), (<i>Quercus Robur</i>)	Planning Map 32
9)	Kakariki Road,	Golden Totara	Planning Map 10
10)	28 Kimbolton Road	Magnolia Grandiflora	Planning Map 33
11)	SH 54 (former Waituna West Hall site)	Magnolia Campbellii	Planning Map 43
12)	No.1 Line, Cloverlea (Lot 1 DP 62557)	Group of four chestnut trees (<i>Aesculus hippocastanum</i>) and two oak trees (<i>Quercus Robur</i>)	Planning Map 19
13)	11 South Street, Feilding	English Oak (<i>Quercus Robur</i>) and Giant Redwood (<i>Sequoia Sempervirens</i>)	Planning Map 33
14)	Manfeild Park	English Oak	Planning Map 33

NB – Many trees located on reserves make a significant contribution to the neighbourhood in which they are located, but are not listed here due to their number and since protection is already conferred by reserve status.

APPENDIX 1E - BUILDINGS AND OBJECTS WITH HERITAGE VALUE

Refer Rule A2 2.3 (Page 98)

COMMERCIAL BUILDINGS [deleted PC46]

OTHER TOWNSHIPS

Ref No.	Name	Location	Legal Description	Category	Feature protected	Planning Map
RB1	Old Glaxo Factory	Bunnythorpe	Lots 1, 2, 7, 76 and Part Lots 8 & 9, DP 217	B	(Exterior only)	37
RB2	Rongotea BNZ	Douglas Square	Section 171 DP 160	B	Entire Building	38
RB3	Halcombe Hotel	Stanway Road/Willoughby Street	Lots 293 and 294 DP 42	C	Entire Building	24
RB4	Halcombe Post Office	Stanway Road/Willoughby Street	Lot 2 DP 81868	C	Entire Building	24
RB5	Apiti Bakehouse	Oroua Valley Road	Sec 10 Town of Apiti	C	Entire Building	21
RB6	Apiti Post Office	Oroua Valley Road/Makoura Road	Sec 105 Town of Apiti	C	Entire Building	21
RB7	Rongotea Post Office	Douglas Square	Lot 1 DP 81870	C	Entire Building	38
RB8	Kimbolton BNZ	Kimbolton Road	Lot 15 DP 650	C	Entire Building	22

HOUSES

FEILDING

Ref No.	Name	Location	Legal Description	Category	Feature protected	Planning Map
H1		28 Camden Street	Lot 4 DP 4395	B	Entire Building	29
H2	"Mahoe"	171 South Street	Pt Lot 1 DP 14327	B	Entire Building	34 and 35
H3	"The Pines"	7 Pines Court	Flat 2 DP 55638	B	Entire Building	33
H4	"Awatea"	Pharazyn Street	Pt Lot 73 DP 20	C	Entire Building	32
H5	"Mountfort House"	52 East Street	Lot 9 DP 14389	C	Entire Building	30 and 34
H6		No's 9, 11, 13, & 15 Beattie Street	Lots 1-4 DP 4551	C	Entire Buildings	30 and 31
H7		63 Makino Road	Lot 1 DP 55572	C	Entire Building	27 and 28
H8		4 Highfield Road	Lot 2 DP 40686	C	Entire Building	29
H9	"Midcalder"	334 Kimbolton Road	Lot 2 DP 68449	C	Entire Building	32
H10		24 Hobson Street	Lot 3 DP 2979	C	Entire Building	30
H11	"Kaingara"	320 Kimbolton Road	Lot 11 DP 56867, Lots 2 & 3 DP 46971	C	Entire Building	32
H12	"Broxt"	185 West Street	Lot 1 DP 45623	C	Entire Building	27
H13	"Woodlands"	17 Sherwill Street	Lot 2 DP 50189	C	Entire Building	28
H14		135 Makino Road	Lot 5 DP 46962	C	Entire Building	28
H15		160 Lethbridge Street	Lot 5 DP 43037, Lot 3 DP 45276, Lot 12 DP 50425	C	Entire Building	26
H16		280 Kimbolton Road	Lot 2 DP 76085	C	Entire Building	30

RURAL HOUSES AND BUILDINGS

Ref No.	Name	Location	Legal Description	Category	Feature protected	Planning Map
RH1	"Pukemarama" Homestead and Stables	Rosina Road	Pt Lots 8 & 18 DP 660	B	Entire Buildings	14
RH2	"Omatangi" (Burrell's)	Kimbolton Road	Lot 1 DP 81076	C	Entire Building	11
RH3	"Rangitawa,"	Pryces Line, Halcombe	Pt Lot 3 DP 46	C	Entire Building	6
RH4	Haylocks Barn	Tangimoana Road	Pt Sec 55 Block XV Rangitoto SD	C	Entire Building	10
RH5	Voss Farmhouse	State Highway 56/Karere Road	Pt Sec 30 Karere Block	C	Entire Building	19
RH6	"Cluny Park"	Rangitikei Line	Lot 2 DP 18783	C (Stables are B)	Entire Buildings	15
RH7	Wharekoa (McOviney Residence)	No. 1 Line	Lot 1 DP 34162	C	Entire Building	19
RH8	Woolarah	781 Rangitikei Line	Pt Lot 1 DP 57023, Lot 1 DP 79494	C	Entire Building	15
RH9	Klue Residence	Kaimatarau Road	Lot 1 DP 76817	C	Entire Building	14
RH10	"Tawyll"	Tokorangi Road Halcombe	Lot 1 DP 51154	C	Entire Building	23
RH11	Natusch House	34 Lees Road	Lot 2 DP 61209	C	Entire Building	15
RH12	St Dominics School for the Deaf	Campbell Road	Pt Upper Aorangi 1C1	C	Entire Building	15
RH13	Harris Homestead	State Highway 1, Sanson	Lot 1 DP 62079	C	Entire Building	15
RH14	Duncan Homestead	Greenaway Road, Rongotea	Pt Lot 2 DP 77893	B	Entire Building	15
RH15	"Stromness"	214 Rongotea Road	Sec 42 Douglas District	C	Entire Building	14
RH16	"Arotai"	Haynes Line Beaconsfield	Lot 9 DP 19345	C	Entire Building	11
RH17	"Ashdene"	State Highway 54, Stormy Point	Sec 3 Block XI Ongo Survey District	C	Entire Building	7
RH18	"Pukera"	Williamson Road	Lot 1 DP 44695	C	Entire Building	7
RH19	"Ross Home"	Kimbolton Rd, Kiwitea	Lot 3 DP 72668	C	Entire Building	12
RH20	"Ryani"	Perry Line	Section 201 Sandon Township	C	Entire Building	7
RH21	"Shanwood"	99 Waituna Valley Road	Pt Section 14 Block XV Ongo SD	C	Entire Building	7
RH22	"Brooklands" Homestead	Kimbolton Rd, Cheltenham	Lot 3 DP 59681	C	Entire Building	44
RH23	"Komano"	1650 Kimbolton Road	Lot 1 DP 66137	C	Entire Building	11
RH24	Konini Homestead	1644 State Highway 54, Waituna West	Lot 1 DP 71928	C	Entire Building	7
RH25	"Mahoe"	263 McKay Line	Part Lot 1 DP 61626	C	Entire Building	11
RH26	Saunders Woolshed	Saunders Road Glen Oroua	Lot 3 DP 72430	C	Entire Building	19

RH27	"Williamsons Whare"	Williamson Road East, Waituna West	Lot 3 DP 31654	C	Entire Building	7
RH28	Valerie Corpe's House	291 Haynes Line, Beaconsfield	Lots 281 282 DP 96	C	Entire Building	11
RH29	Parkes House	Napier Road, Whakarongo	Pt Lot 54 DP 215	C	Entire Building	16

OBJECTS AND MEMORIALS

Ref No.	Name	Location	Legal Description	Category	Feature protected	Planning Map
O1	Halcombe War Memorial	Stanway Road, Halcombe	N/A – Road Reserve	B	Entire memorial	24
O2	Feilding War Memorial	Manchester Square	N/A - Road Reserve	B	Entire memorial	31
O3	Mt Stewart Memorial	State Highway 3	Pt Sec 344 Town of Sandon	C	Entire memorial	15
O4	Makino Footbridge	Hobson Street, Feilding	Lot 239 DP 19	C	Entire structure	30
O5	Boer War Memorial	Manchester Square, Feilding	N/A – Road Reserve	C	Entire memorial	31
O6	Rongotea War Memorial	Douglas Square, Rongotea	N/A – Road Reserve	C	Entire memorial	38
O7	Memorial Gates	Kimbolton Domain	Pt Section 265 DP 781	C	Entire memorial	22
O8	Rowland Memorial	Dampneys Road	Lot 1 DP 85825	C	Entire memorial	19
O9	Rangiwahia War Memorial	Rangiwahia Rd, Rangiwahia	Pt Sec 61 Rangiwahia Township	C	Entire memorial	20
O10	Memorial Gates	Old Sanson School	Lot B DP 13	C	Entire memorial	36
O11	Water Trough	Kimbolton Road, Feilding	N/A – Road Reserve	C	Water Trough	11
O12	Hitching Rail	Stanway Road, Halcombe	N/A – Road Reserve	C	Hitching Rail	24
O13	Cylinder Piles to Bridge over Oroua River	Apiti Road	N/A – Road Reserve	C	Entire structure	8
O14	Hitching Post	25 Kimbolton Road, Feilding	N/A – Road Reserve	C	Hitching Post	31
O15	Old Opiki Toll Bridge	Rangitane Road	Pt Lower Aorangi 3H9 Pt Lot 6 DP 10926	C	Entire structure	19
O16	Apiti War Memorial	Makoura Road, Apiti	Section 100 Town of Apiti	C	Entire memorial	21
O17	Concrete plinth - original airfield at Hato Paora property	Kimbolton Rd, Cheltenham	Lot 16 DP 73	C	Concrete plinth	11
O18	Glen Oroua War Memorial	Sansons Road	Lot 12 DP 2557	C	Entire memorial	15
O19	Rangiotu War Memorial	Highway 56	Pt Rangitikei-Manawatu B4, DP 5009	C	Entire memorial	19

MARAE BUILDINGS

Ref No.	Name	Location	Legal Description	Planning Map
M1	Te Rangimarie	State Highway 56, Rangiotu	Pt Rangitikei-Manawatu B4, DP 5009	19
M2	Tokorangi meeting house	Tokorangi Road	Reu Reu No.1 Sec 8A Blk IV Rangitoto SD	6
M3	Te Hiiri meeting house	Pryces Line.	Pt Reu Reu 2G1 Blk VIII Rangitoto SD	10

CHURCHES & COMMUNITY BUILDINGS

Ref No.	Name	Location	Legal Description	Category	Feature protected	Planning Map
C1	St Johns Church, Feilding	Camden Street / Church Street	Lot 3 DP 161	A	Entire Building	29
C2	St Michael & All Angels Church	Makino Road, Stanway	Pt Lot 51 DP 85	B	Entire Building	11
C3	St Simon & St Jude	9 Ouse Street Rongotea	Lot 3 DP 54893, Secs 73 & 74 DP 160	B	Entire Building	38
C4	St Thomas' Church	Acourt Street Sanson	Lot 194 DP 13	B	Entire Building	36
C5	St Pauls Church	Kimbolton Road Cheltenham	Lot 2 Block III DP 134	B	Entire Building	44
C6	St Marys Church	Beaconsfield Valley Road Beaconsfield	Pt Sec 179 Sandon Township	B	Entire Building	7
C7	St Joseph's Church	Pryces Line, Kakariki	ReuReu 2G1B, Block VIII Rangitoto SD	B	Entire Building	10
C8	Feilding Courthouse	cnr Kimbolton Road/Stafford Street	Sec 251 Blk XIV Oroua SD	B	Entire Building	30 and 31
C9	St Andrews Church	Feilding Road Colyton	Pt Lot 12A DP 154	C	Entire Building	16
C10	St Barnabas Church	Rangiwahia Road Rangiwahia	Sec 46 Rangiwahia Township	C	Entire Building	20
C11	Church of St Saviour	Main Road Kimbolton	Lot 48 Pt Lot 47 DP 650	C	Entire Building	22
C12	Church of St Agnes	Perry Line, Kiwitea	Pt Rural Sec 230 Sandon Tship, Pt DP 4658	C	Entire Building	12
C13	Komako Church	Pohangina Valley East Road	Lot 1 of Pt 1 Run 47 Block III Pohangina SD	C	Entire Building	13
C14	Dunnolly School	Dunnolly Road	Sec 340 Town of Sandon	C	Entire Building	7
C15	Waituna West School Building	Waituna Valley Road	Sec 20 Blk XV Ongo SD	C	Original Schoolhouse	43
C16	Beaconsfield School	Beaconsfield Valley Road	Sec 365 Town of Sandon	C	Original Schoolhouse	7
C17	"Paorangi" Hato Paora College	Kimbolton Road, Cheltenham	Lot 16 DP 73	C	Paorangi	11
C18	Public Library	Edwards Street Kimbolton	Pt Sec 3 Block XIII Apiti SD	C	Entire Building	22
C19	Halcombe Hall	Willoughby St, Halcombe	Lot 356 DP 42	C	Entire Building	24

APPENDIX 1F – SITES WITH HERITAGE VALUE

Refer Rule A2 2.3 (Page 98)

ARCHAEOLOGICAL SITES

NB - Authority to destroy or modify any archaeological site is required from the NZ Historic Places Trust under the Historic Places Act 1993.

Type of Site	Location	Map Grid Reference
1) MAORI PAA	(Mangamahoe), McDonell Road	S23 098 074
2) PAA	(Poutu Pa), Poutu Road	S23 085 039
3) PA AND VILLAGE	(Puketotara Pa), Manawatu River, Rangiotu	S24 157 828
4) PA	Napier Road	T24 415 967
5) PIT/WHARE	Rangitikei River – Rosina Road	S23 055 002
6) FLAX STRIPPER	Rangitikei River – Rosina Road	050 001
7) MIDDEN	McDonell Road	106 087
8) PITS	Tangimoana Road near Makowhai Stream	094 027
9) OVENS	Pine Road (Taonui Stream)	291 010
10) OVENS	Pine Road (Taonui Stream)	288 005
11) SHELL MIDDENS	Coastal Dunes, North of Himatangi Beach	S24 993 950
12) MIDDEN	Coastal Dunes, North of Himatangi Beach	996 946
13) MIDDEN	Coastal Dunes, North of Himatangi Beach	999 947
14) MIDDEN	Coastal Dunes, North of Himatangi Beach	997 944
15) MIDDEN	Coastal Dunes, North of Himatangi Beach	996 936
16) MIDDEN	Coastal Dunes, North of Himatangi Beach	997 943
17) MIDDEN	Coastal Dunes, North of Himatangi Beach	995 929
18) MIDDEN	Coastal Dunes, North of Himatangi Beach	995 918
19) MIDDEN	Coastal Dunes, North of Himatangi Beach	995 927
20) MIDDEN	Coastal Dunes, North of Himatangi Beach	998 924
21) MIDDEN	Coastal Dunes, North of Himatangi Beach	998 928
22) MIDDEN	Coastal Dunes, North of Himatangi Beach	999 930
23) MIDDEN	Coastal Dunes, North of Himatangi Beach	999 931
24) SHELL MIDDEN	Coastal Dunes, North of Himatangi Beach	995 908
25) MIDDENS	Near Puke Puke Lagoon	019 937
26) SHELL MIDDEN	Puketotara Road	162 835
27) MIDDEN	Coast, South of Himatangi Beach	000 896
28) MIDDEN	Coast, South of Himatangi Beach	999 897

29)	MIDDEN	Coast, South of Himatangi Beach		999	894
30)	MIDDEN	Coast, South of Himatangi Beach		998	895
31)	MIDDEN	Coast, South of Himatangi Beach		997	896
32)	MIDDEN	End of Whale Road		051	974
33)	MIDDEN	Puketotara Road		142	833
34)	STORAGE PITT	Tangimoana Road		054	989
35)	HEARTH	Between Whale and Omanuka Roads		072	950
36)	FLAX MILL	Rangitane Road		195	832
37)	RAILWAY BRIDGE	SH 56, Longburn		267	885
38)	MIDDEN	Oroua River near Manawatu confluence		166	827
39)	FINDSPOT (ADZE)	Rangitikei Valley Road	T22	332	318
40)	ADZE FINDSPOT	Pohangina River, north of Takapari Road	T23	617	238
41)	ADZE FINDSPOT	Piripiri Road		637	256
42)	ADZE FINDSPOT	Dundas Creek/Pohangina River confluence		525	127
43)	OVEN	Dundas Creek		523	123
44)	ADZE FINDSPOT	Ohinetapu Stream, Awahou		547	122
45)	TERRACES	Napier Road		404	960
46)	HEARTH	Newbury Line		313	999

This list of archaeological sites is from the NZ Archaeological Association file of Recorded Sites. It has been compiled from individual surveys over time, and is not the result of a systematic survey of the District. There will be other archaeological sites that have not been recorded. The existence of a recorded site often indicates that it is likely that there will be further sites nearby. The sites are located by the grid reference, which is the southwest corner of a 100 metre square. Further information can be obtained from the NZ Archaeological Association.

CEMETERIES

Ref No.	Name	Location	Legal Description	Category	Planning Map
1	Feilding Cemetery	Lethbridge Road	Lot 50 Pt Lot 45 DP 21, Lot 1 DP 77268, Lot 1 DP 22476	A	11
2	Apiti Cemetery	Ridge Road	Sec 41B Subn 1 of 41A Block XI Apiti Survey District	A	8
3	Pohangina Cemetery	Kuku Street	Pt Sec 17 Pohangina Suburban	A	12
4	Rongotea Cemetery	Leen Road	Sec 20A DP 514	A	15
5	Sanson Cemetery	Cemetery Road	Pt Lot 2 of Sec 152 Town of Sandon	A	10
6	Rangiwahia Cemetery	Miangoara Street	Sec 12A Block III Apiti Survey District	A	20
7	Waituna West Cemetery	Waituna Valley Road	Pt Sec 17 Block XV Ongo Survey District	A	43
8	St Michael & All Angels Church Cemetery	Makino Road, Stanway	Pt Lot 51 DP 85	A	11
9	Old Settlers Cemetery	Rangiwahia Road, Kimbolton	Pt Sec 100 Block XIII Apiti Survey District	A	8
10	Halcombe Cemetery	Halcombe Road	Lot 98 DP 41 Sec 6 Block X Oroua Survey District	A	10
11	Bunnythorpe Cemetery	Maple Street	Sec 1142 Town of Bunnythorpe	A	37
12	Kiwitea Cemetery	Perry Line	Pt Rural Sec 230 Town of Sandon, Pt DP 4658	A	12
13	Hikungarara Urupa	Whitemans Road, Ohakea	Ohinepuhiawe 141C	A	10

APPENDIX 1G – [DELETED PC46]

APPENDIX 1H [DELETED PC46]

APPENDIX 1I – CRITERIA FOR ASSESSING THE SIGNIFICANCE OF NATURAL AREAS

Refer Rules A1 1.3.4 A) and C3 3.2.1C), (Pages 95 and 159)

Purpose of Plan Criteria

Council will use the criteria set out below to:

- a) Help assess applications for assistance with fencing and enhancement of particular natural areas under Council's proposed heritage incentives programme.
- b) Assess requests from landowners and others to include specific natural areas in Appendix 1, to protect any natural area via a covenant under the Reserves Act 1978, or to place a heritage order over a particular area.
- c) Assess whether an esplanade strip for conservation purposes is warranted in terms of Rule C3 3.2.1 (Page 159).
- d) Assess applications for discretionary or non-complying land use or subdivision consents which have potential effects on natural areas, including applications to modify the areas listed in Appendix 1B under Rule A2 2.3 (Page 98). (Refer also Rule A1 1.3.4 A) xiv) - Page 95).
- e) Assess applications for subdivision consent where the Plan's rules require protection of an natural area as a condition of approval (Refer: Rules C1 1.3.1 A) i) and C2 2.4.1 J), Pages 152 and 158).
- f) Consider acquiring natural areas depending on the merits of the particular case.

Criteria

Whether the natural area concerned:

- 1) Contains indigenous ecosystems that are poorly represented in the ecological district*.
- 2) Contains an indigenous ecosystem that is typical of the character of the ecological district.
- 3) Contains associations of indigenous species which are unusual for their abundance or diversity within the ecological district.
- 4) Supports ecosystems or indigenous species that are rare, vulnerable, or endangered within an ecological district or nationally (including areas of exotic vegetation).
- 5) Forms part of a complex of habitat which aids the maintenance or recovery of threatened species, eg is part of a linking corridor or buffer area.
- 6) Makes an important contribution towards the habitat requirements of indigenous species other than those regarded as threatened.
- 7) Is largely in its natural state.
- 8) Has a significant role in linking natural areas by providing part of a corridor or buffer zone between other natural areas or the coast.
- 9) Contains physical landforms or geology which is nationally or regionally uncommon.
- 10) Is of a sufficient size for the natural processes occurring there to be ecologically self-sustaining, or have the potential to reach this state.
- 11) Has met the criteria to be set aside under covenant or statute for preservation or protection, or identified as a Recommended Area for Protection (RAP) or Site of Special Biological Interest (SSBI) by the Department of Conservation.)
- 12) Has significant landscape, scenic, recreational or aesthetic qualities.
- 13) Has potential for habitat or ecosystem restoration, including the possibility of expanding its size for regeneration, or
- 14) Has conservation benefits such as the maintenance of water quality or in-stream habitat, or soil conservation benefits.

The areas listed in Appendix 1B (Page 175) all meet these criteria to varying degrees. The Category A forest areas have been identified by DoC's RAP survey as being the most significant among them.

* Ecological districts are distinguished by a combination of factors, including climate, geology, landform, soils and biological features that form a recognisable ecological pattern different to that of neighbouring areas. The Manawatu District Council's area includes part of five ecological districts, namely the Foxton (sand country), Manawatu Plains, Rangitikei (hill country), North Manawatu Gorge, and Ruahine ecological districts.

APPENDIX 1J – CLEARANCE OF INDIGENOUS VEGETATION

Refer Rules B3 3.1.1, B7 7.1.1 (Pages 124 and 145)

NB: This rule shall not apply to the heritage places listed in Appendices 1A or 1B of the Plan. Rules on the modification of these places are instead contained in Rule A2 2.3 (Page 98).

PERMITTED

1. Clearance, modification or harvesting of indigenous vegetation shall be a permitted activity if it meets any one of Rules a) to f) below:
 - a) The activity is limited to wind thrown trees or trees that have become dangerous to human life or property.
 - b) The activity is limited to indigenous vegetation which has been planted and managed specifically for the purpose of harvesting or clearance.
 - c) The activity is limited to indigenous vegetation that occurs underneath exotic plantation forestry.
 - d) The activity is associated with the operation and maintenance or minor upgrading of existing utilities, but excluding their expansion.
 - e) The activity is necessary for the maintenance of existing tracks, or existing structures such as farm troughs and fencelines.
 - f) The activity is limited to clearance, modification or harvesting of an agricultural or horticultural crop, (including grazing pasture)
2. Clearance, modification or harvesting of indigenous vegetation (except the clearance, modification or harvesting of indigenous vegetation listed in 3 below) shall also be a permitted activity if it meets any one of Rules a) to c) below:
 - a) The activity is limited to vegetation consisting of early successional manuka, kanuka, bracken or ring fern which has grown naturally from previously cleared land (i.e. regrowth) in the period up to 10 years before the date of clearance and modification.
 - b) The activity does not include:
 - i. An area of indigenous vegetation over one hectare with an average canopy height of at least 6m; or
 - ii. An area of indigenous vegetation of 5ha or greater which has an actual or emerging predominance of indigenous tree species of any height (where 'tree species' is any species which may attain a diameter at breast height of 30cm or greater).
 - c) The activity is limited to no more than 50m³ of timber per 10 year period per certificate of title, solely for private use (i.e. shall not be sold or gifted to a third party) or for use by tangata whenua for culturally appropriate purposes such as rongoa, waka, traditional buildings or marae-based activities.

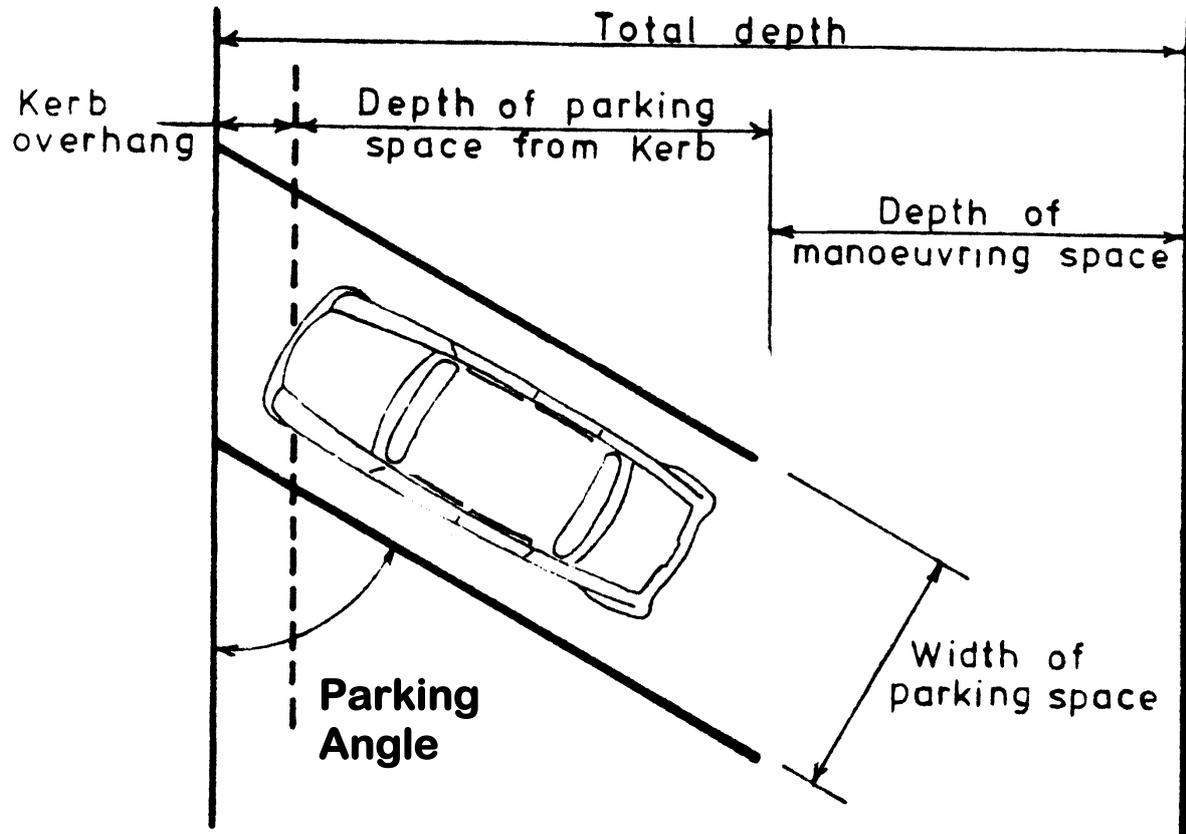
RESTRICTED DISCRETIONARY:

3. Despite Rule 2 above, the clearance, modification or harvesting of indigenous vegetation shall be a restricted discretionary activity if:
 - a) The activity involves the clearance, modification or harvesting of indigenous vegetation within a wetland, or
 - b) The activity involves the clearance, modification or harvesting of indigenous vegetation within the coastal vegetation area shown on the Planning Maps, and the vegetation concerned is not within an artificially-created wetland or within an area of production forest or pasture.
4. Clearance, modification or harvesting of indigenous vegetation shall also be a restricted discretionary activity if the activity involves the clearance, modification or harvesting of indigenous vegetation not permitted under 1 or 2 above.

APPENDIX 2A – [DELETED PC55]

MANOEUVRING AND PARKING SPACE DIMENSIONS

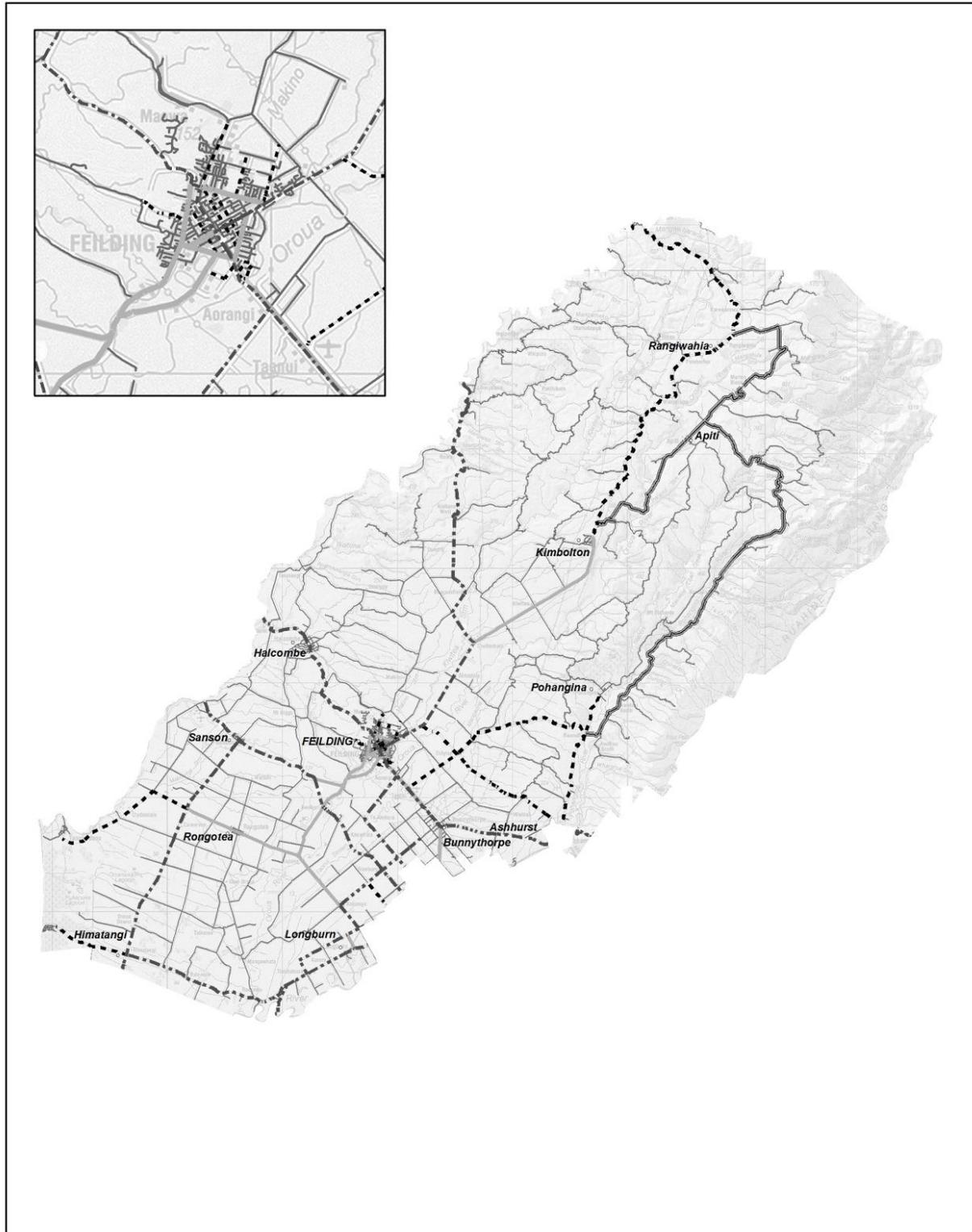
Refer Rule A2 2.4.2 (Page 100)



Parking Angle	Width of Parking Space (metres)	Kerb Overhang (metres)	Depth of Parking Space from Kerb (metres)	Depth of Manoeuvring Space (metres)	Total Depth (metres)
90°	2.45 2.60 2.75	0.60	4.25	8.20 7.30 6.40	13.10 12.20 11.25
75°	2.45 2.60 2.75	0.60	4.55	5.50 4.85 4.25	10.65 10.65 9.45
60°	2.45 2.60 2.75	0.60	4.55	3.95 3.65 3.65	9.15 8.85 8.85
45°	2.45 2.60 2.75	0.45	4.40	3.65	8.55
30°	2.45 2.60 2.75	0.30	3.65	3.65	7.60

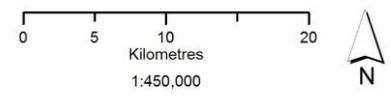
NB – Car parks parallel with the kerb shall have a minimum width of 2.5m and a minimum length of 6m.

APPENDIX 2B – MANAWATU DISTRICT ROAD HIERARCHY

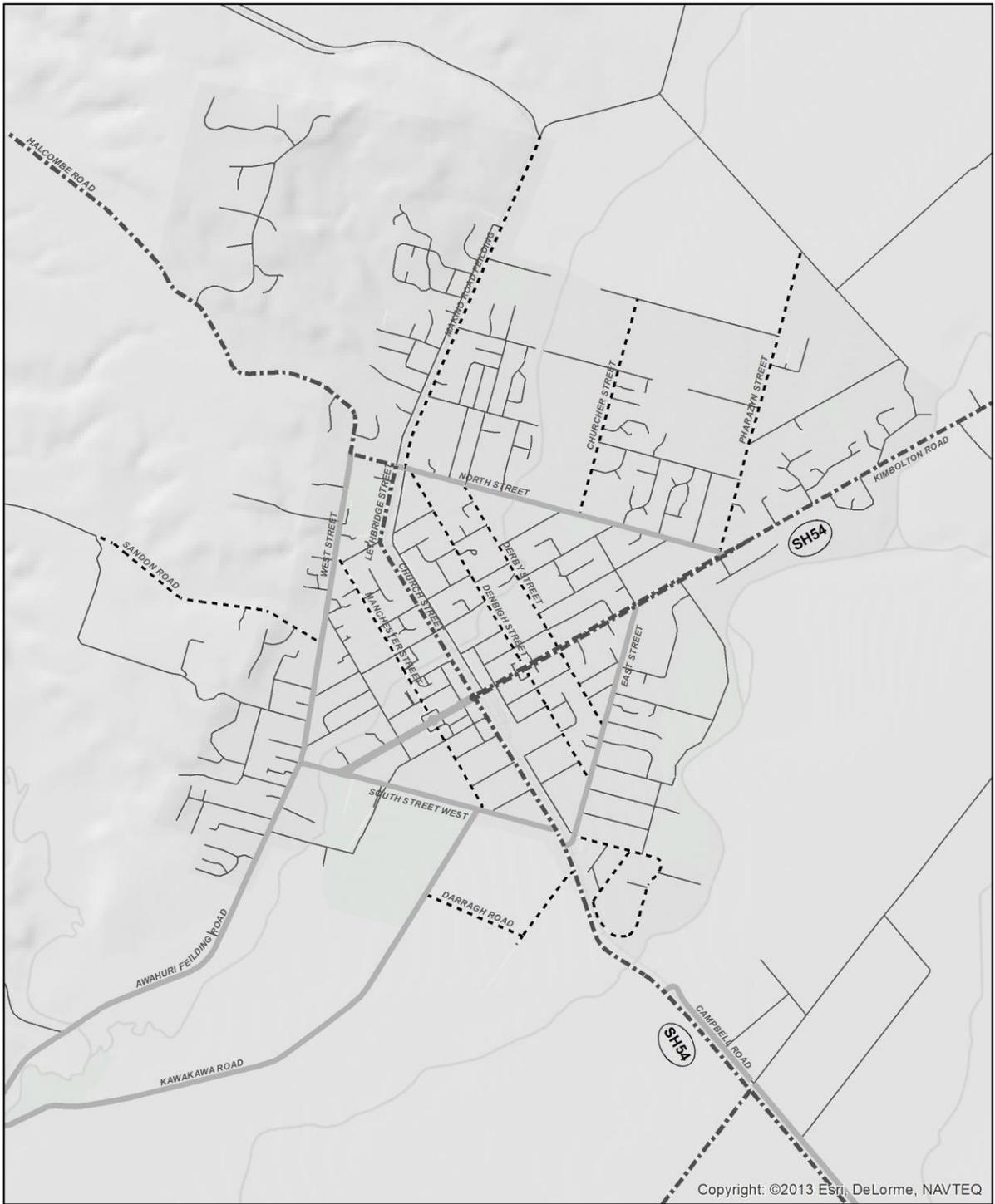


Legend

- - - - Major Arterial Road
- Minor Arterial Road
- Collector Road (Tourist)
- Collector Road
- Local Road

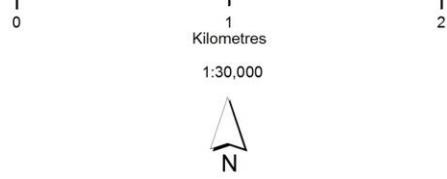


APPENDIX 2B – FEILDING ROAD HIERARCHY



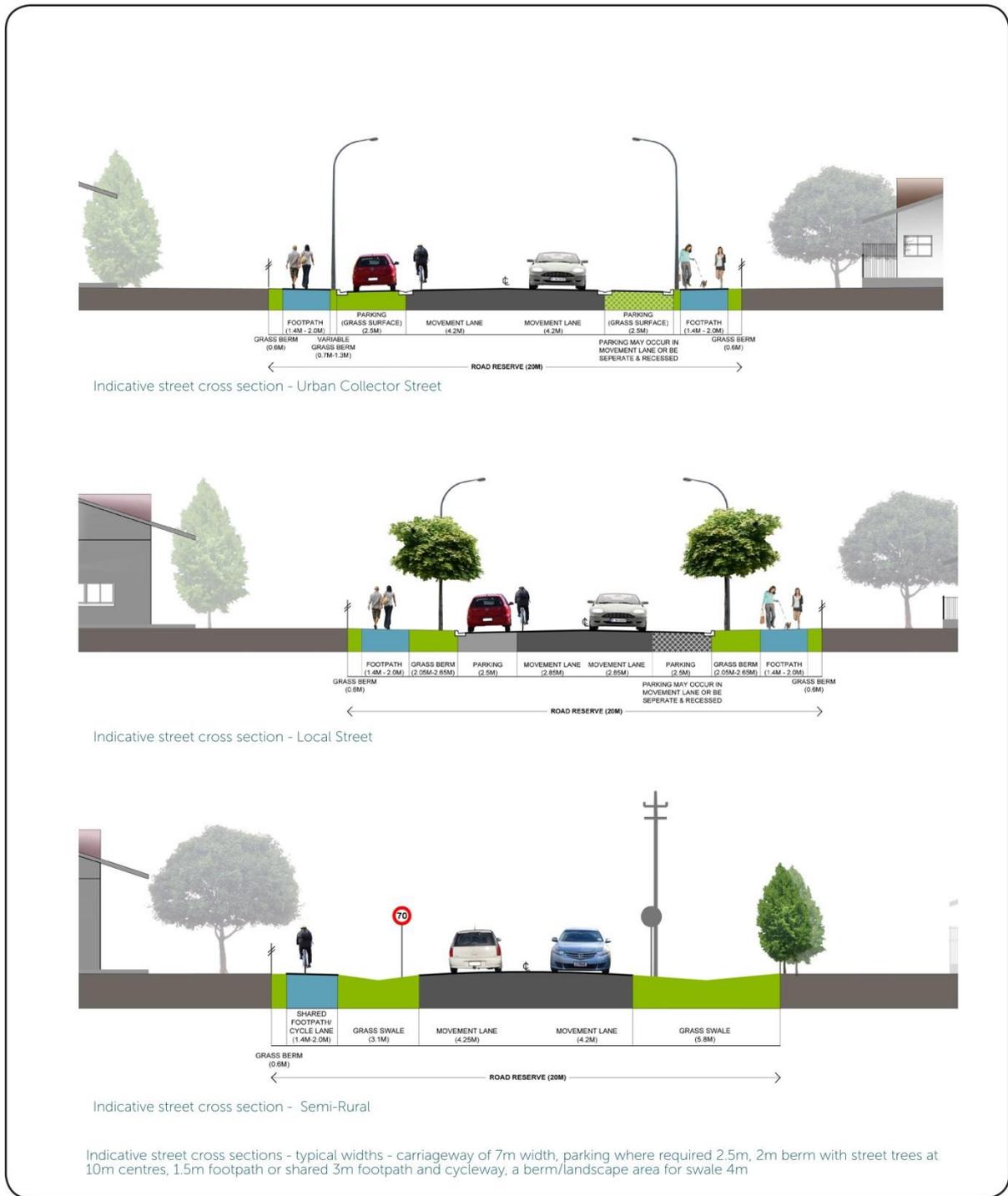
Legend

- Major Arterial Road
- Collector Road (Tourist)
- Minor Arterial Road
- Local Road
- Collector Road



APPENDIX 2B1 – [Deleted PC55]

FEILDING URBAN GROWTH ROAD CROSS SECTIONS Refer Rule C2 2.1.1



APPENDIX 2C – [DELETED PC55] SIGHT DISTANCES AND ACCESS SPACING

Refer Rule A1 1.3.4, Rule B, Rule C2 2.4.1 I) and K), (Pages 94, 108-150, 157 and 158)

Table One - Minimum Sight Distances from Vehicle Crossings

Posted Speed Limit	Minimum Sight Distance (metres)
50 km/h	85m
60 km/h	115m
70 km/h	140m
80 km/h	170m
100 km/h	250m

NB - Sight distances shall be measured in accordance with Appendix 2D – Diagram 1.

Table Two - Minimum Spacings between Intersections and between Vehicle Crossings

Posted Speed Limit	Minimum Spacing (metres)	
	Between Vehicle Crossings (N)	Between Intersections
50 km/h	N/A	150m
60 km/h	N/A	200m
70 km/h	N/A	400m
80 km/h	100m	800m
100 km/h	200m	800m

NB - The spacing shall be measured in accordance with Appendix 2D – Diagram 2.

Table Three - Minimum Distances Between Intersections and Vehicle Crossings

Posted Speed Limit	Minimum Spacing (metres)	
	Relative to Intersection (K)	Down a Side Road (M)
50 km/h	30m	20m
60 km/h	50m	30m
70 km/h	100m	45m
80 km/h	120m	60m
100 km/h	200m	60m

NB - The spacing shall be measured in accordance with Appendix 2D – Diagram 2.

Calculation of Car Equivalent Vehicle Movements

- A) Car equivalent Movements are defined as being the following within any given day:
- i) One car to and from the site = 2 car equivalent movements
 - ii) One truck to and from the site = 6 car equivalent movements
 - iii) One truck and trailer to and from the site = 10 car equivalent movements
 - iv) A dwelling is deemed to generate 8 car equivalent movements
- B) The number of car equivalent movements will be deemed to be less than 30 if they exceed 30 on no more than two days per week, provided that they do not exceed 60 on any given day.
- C) The number of car equivalent movements will be deemed to be less than 100 if they exceed 100 on no more than two days per week.

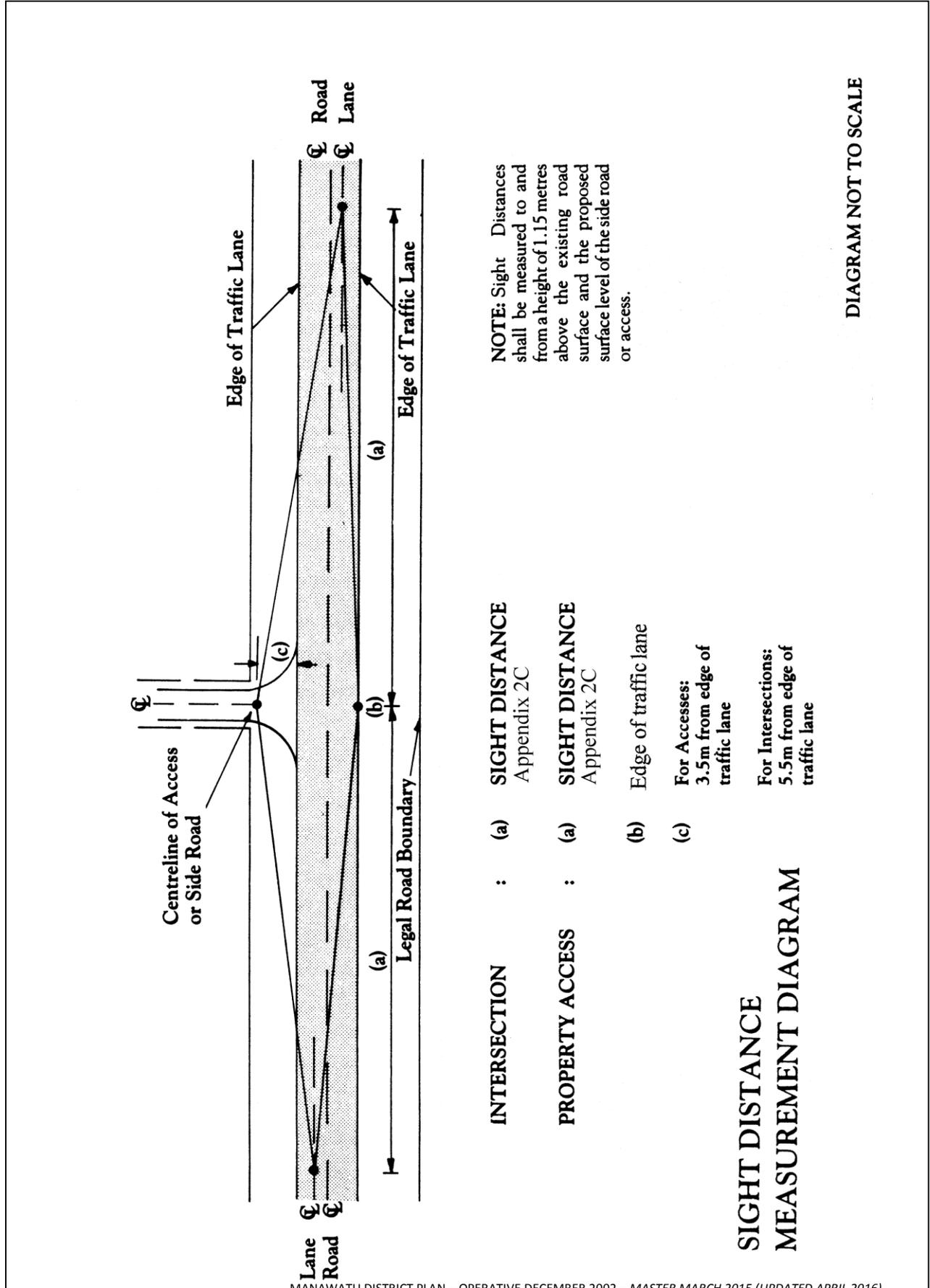
Service Stations on Arterial Routes

In assessing applications for resource consent to establish service stations on arterial routes, the provisions of the "Road Safety Guidelines for Service Stations" (Land Transport Safety Authority 1996) will be considered, in conjunction with the access provisions above.

**APPENDIX 2D – [DELETED PC55]
MEASUREMENT OF SIGHT DISTANCES ETC.**

Refer Appendix 2C, (Page 194)

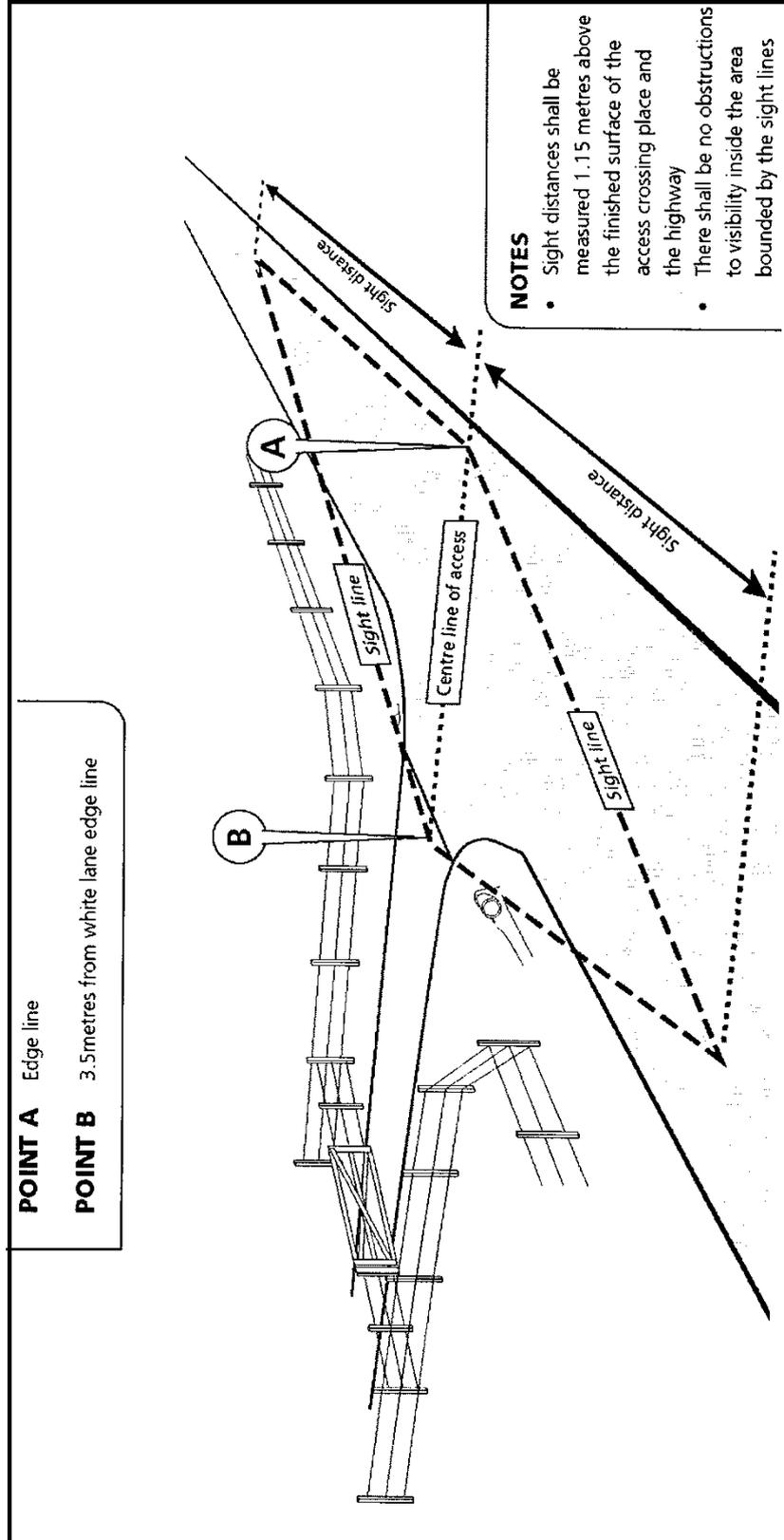
Diagram 1



APPENDIX 2D - MEASUREMENT OF SIGHT DISTANCES ETC.

Refer Appendix 2C, (Page 194)

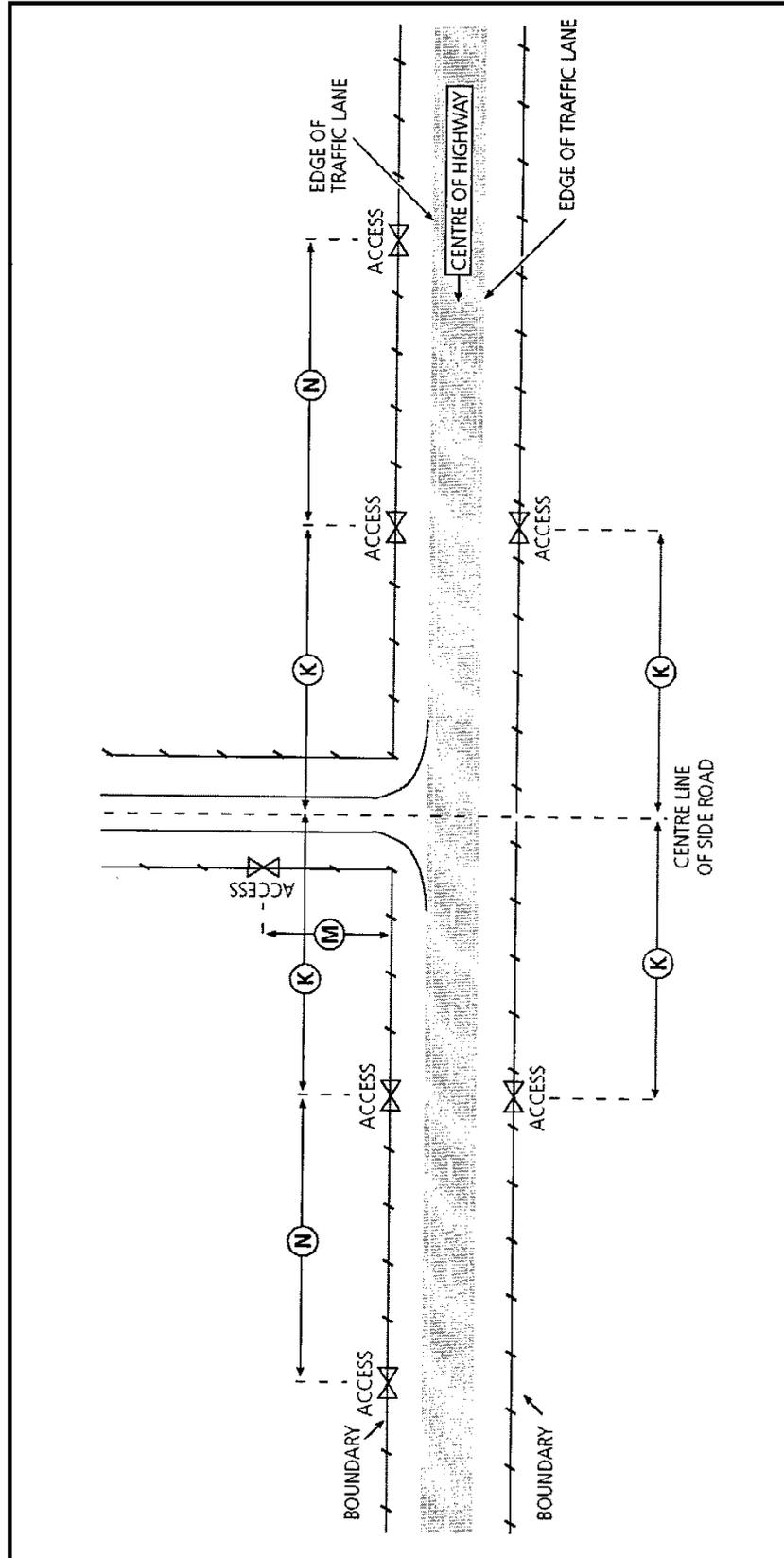
Diagram 1- Perspective



APPENDIX 2D – MEASUREMENT OF SIGHT DISTANCES ETC

Refer Appendix 2C, (Page 194)

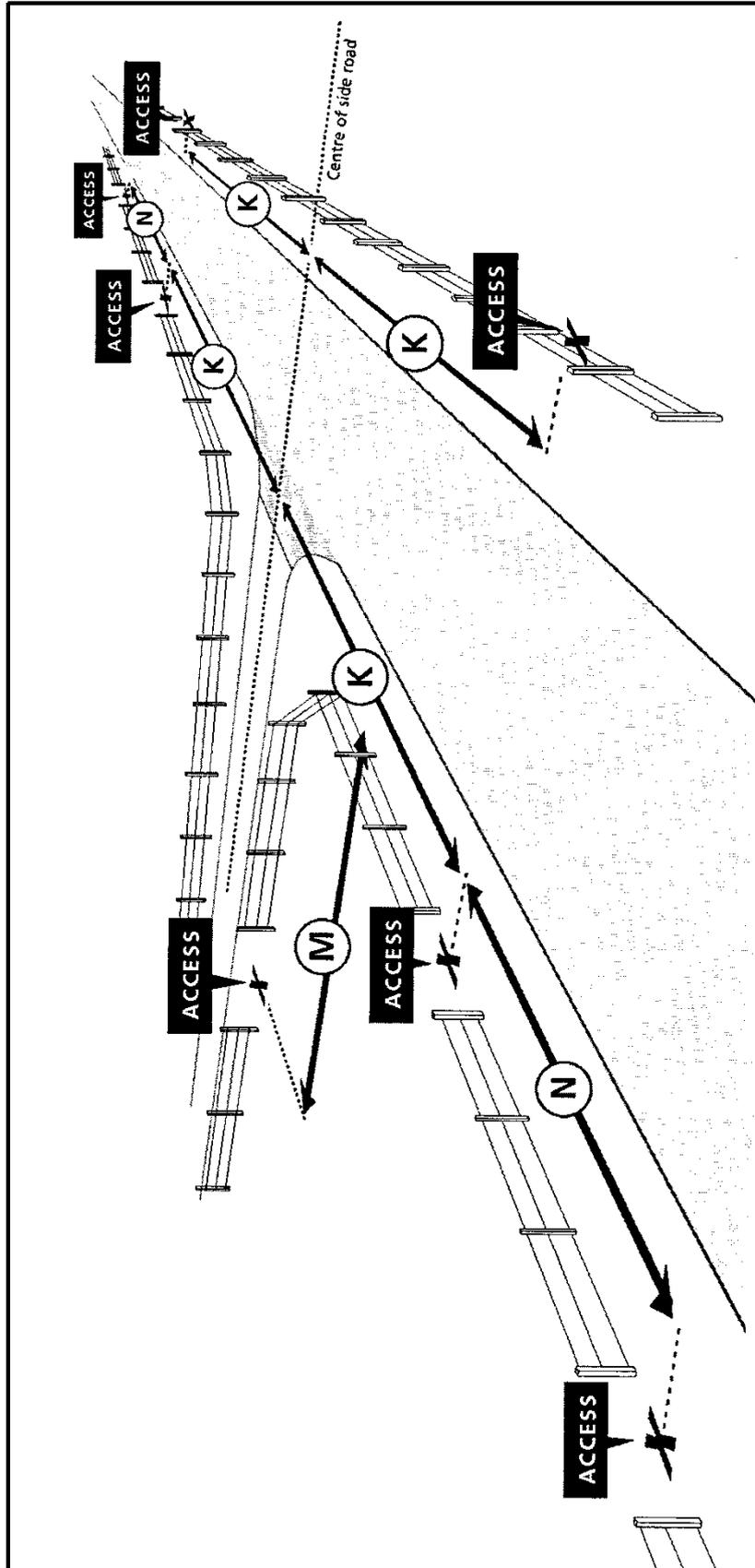
Diagram 2



APPENDIX 2D – MEASUREMENT OF SIGHT DISTANCES ETC

Refer Appendix 2C, (Page 194)

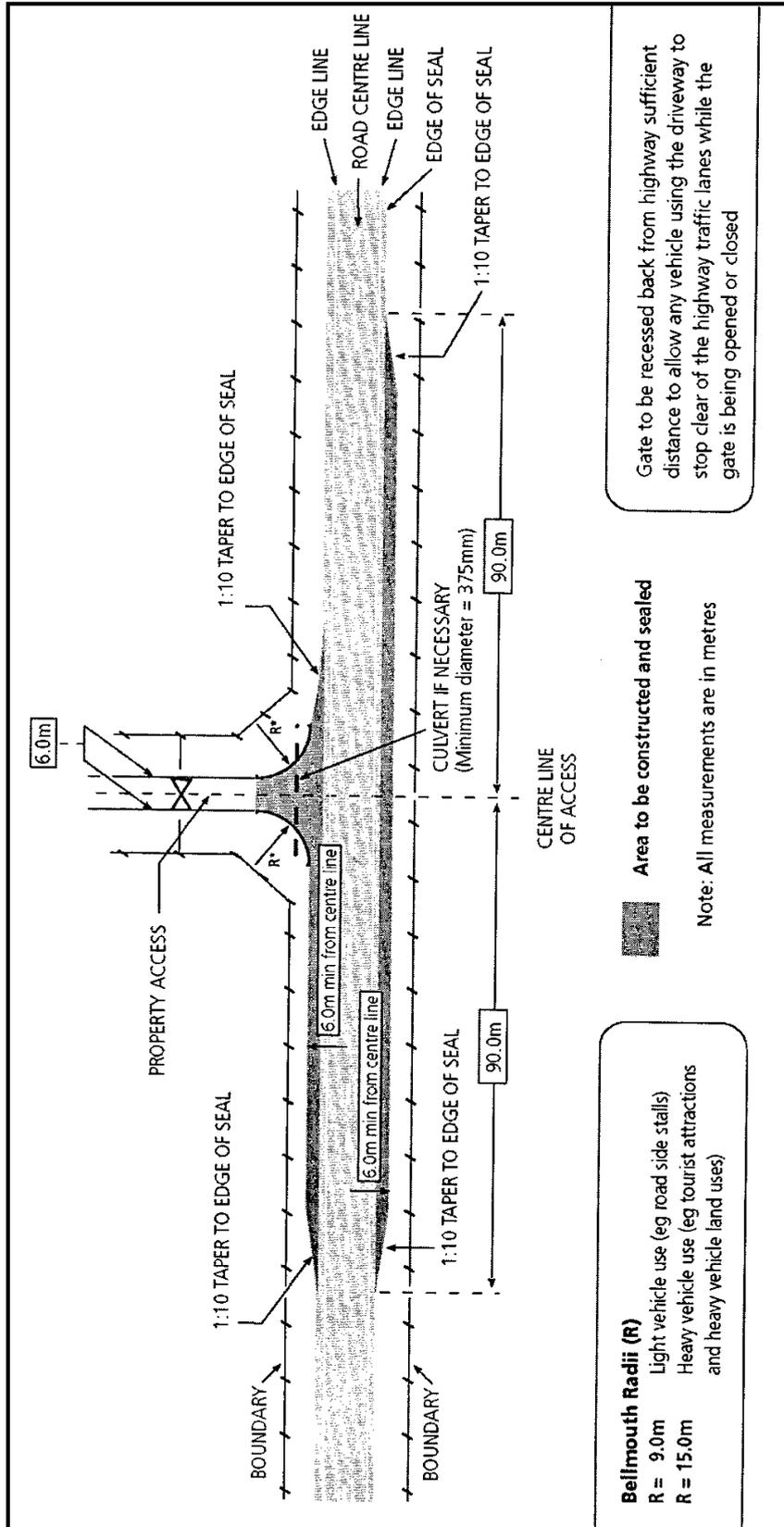
Diagram 2 – Perspective



APPENDIX 2E – [Deleted PC55]

ACCESSWAY FORMATION

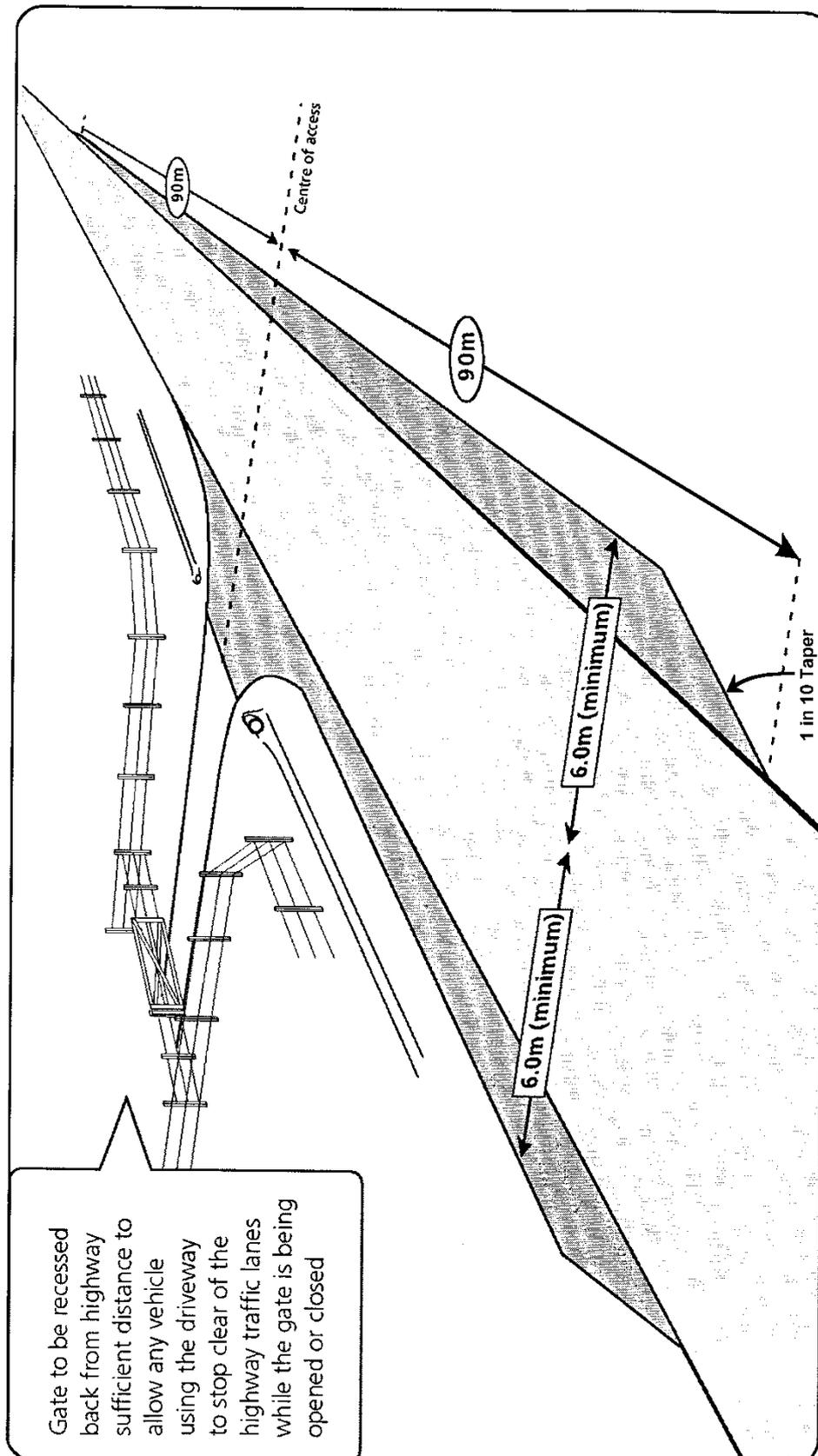
Refer Rules A1 1.3.4, B3 3.3.1 Q) and B7 7.3.1 E), (Pages 94, 130 and 147)



APPENDIX 2E - ACCESSWAY FORMATION

Refer Rules A1 1.3.4, B3 3.3.1 Q) and B7 7.3.1 E), (Pages 94, 130 and 147)

Perspective

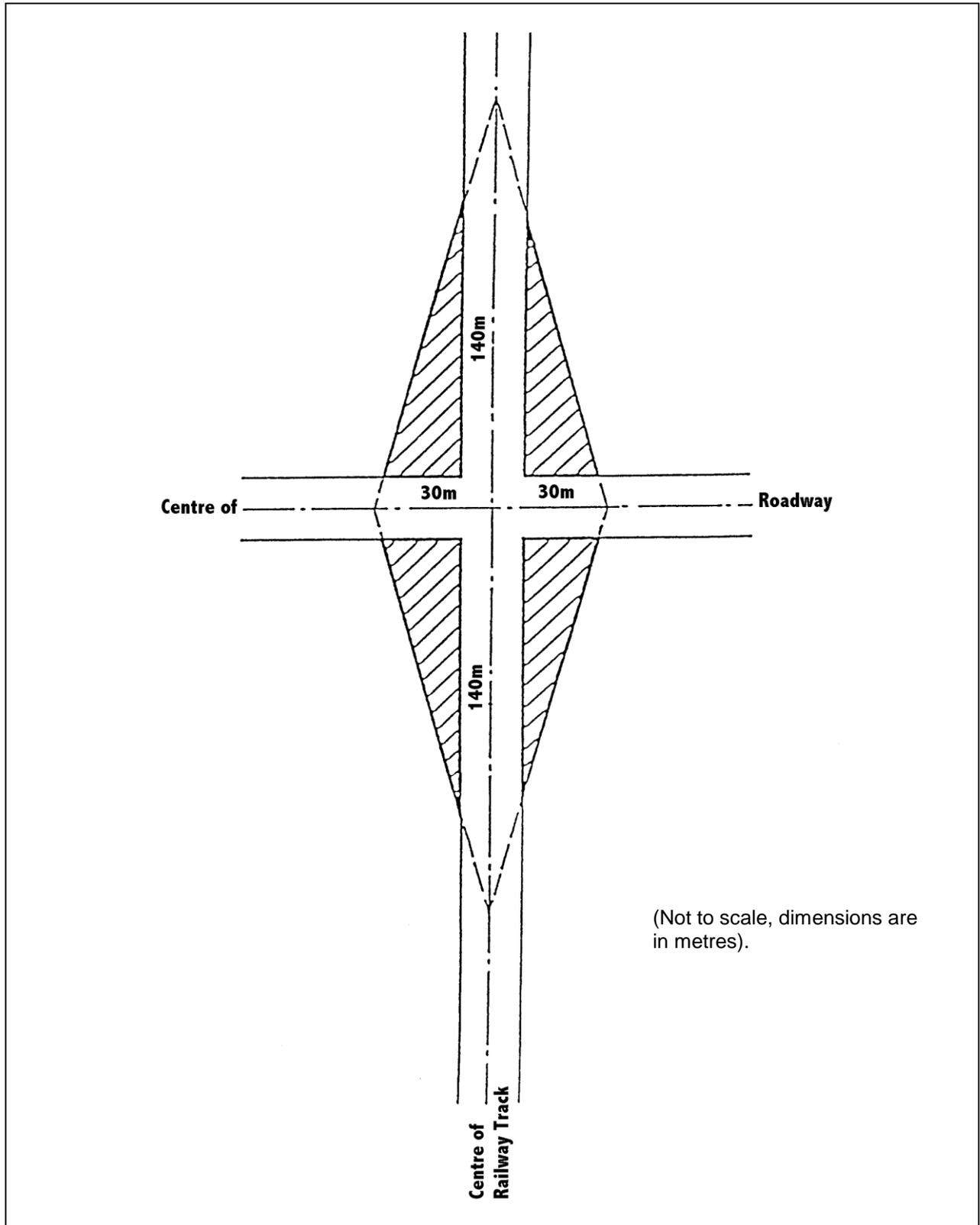


APPENDIX 2F – [DELETED PC55] TRAFFIC SIGHT LINES AT ROAD/RAIL LEVEL CROSSINGS

Refer Rules B1 1.3.5, B2 2.3.1, B3 3.3.1, B4 4.3.1, B5 5.3.1, B6 6.2.1, and B7 7.3.1, (Pages 115, 119, 129, 136, 140, 143 and 146)

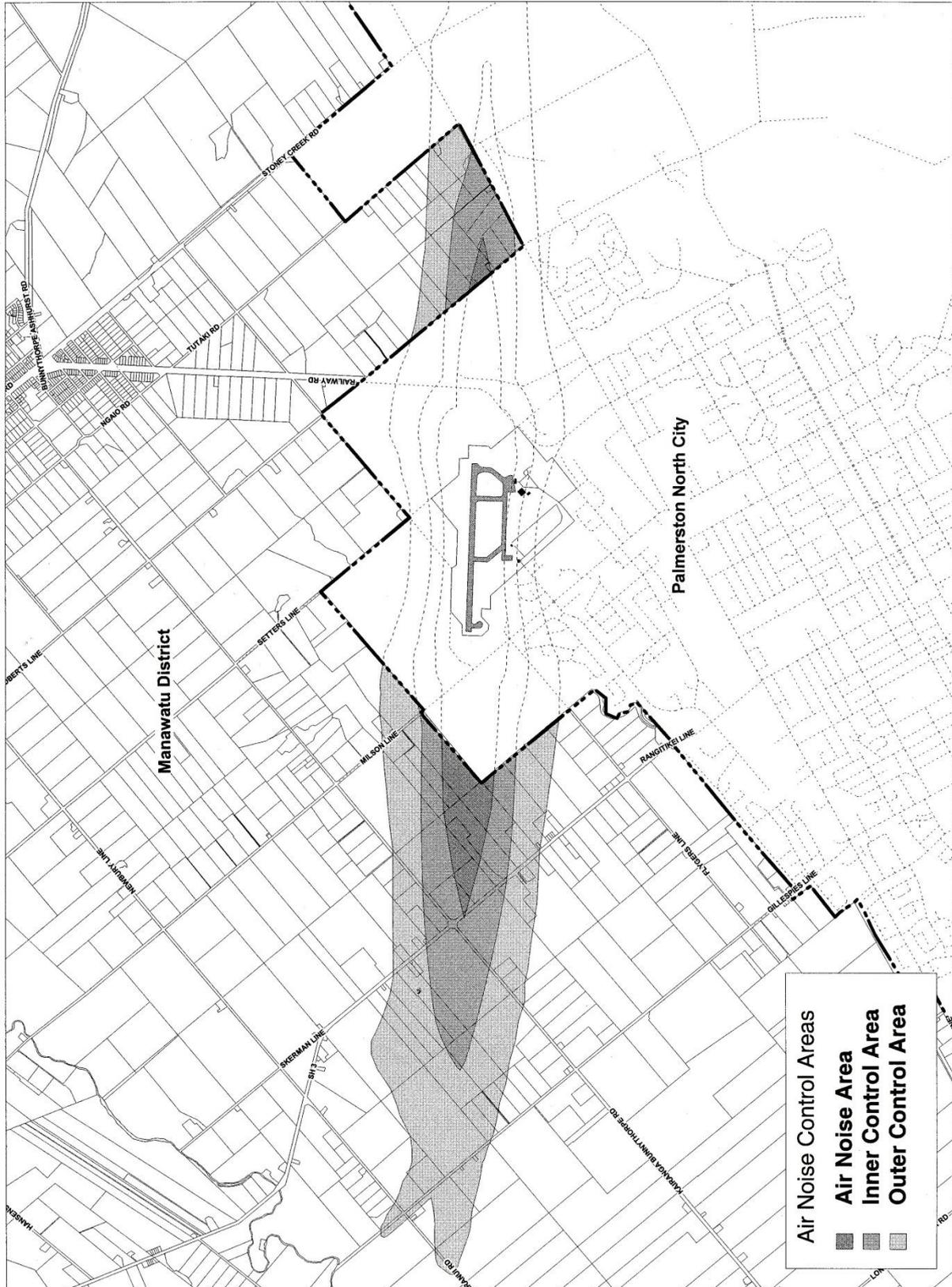
Hatched areas are to be kept clear of buildings or other obstructions which might block sight lines.

NB — Where there are two or more rail tracks, the 30m sight line applies from the centre line of the nearest track.



APPENDIX 3A – AIR NOISE CONTROL AREAS, MILSON AIRPORT

Refer Rules A1 1.3.3 and 1.3.4, B3 3.1, B7 7.5.1 and C2 2.4.1, (Pages 93, 96, 124, 149 and 157)



APPENDIX 3A - SCHEDULE P

Refer Rules A1 1.3.3, A1 1.3.4 and B3 3.3.1 (Pages 93, 96 and 129)

Roof/Upper Floor Ceiling

Options	Description of construction
1	<p><u>ROOF</u> Pitched roof clad with tiles, or not less than 0.5 mm roofing iron, or 6 mm corrugated cellulose-cement.</p> <p><u>CEILING</u> 12.5 mm plasterboard fixed to underside of horizontal ceiling joist or ceiling battens.</p> <p><u>INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent), laid between ceiling joists.</p>
2	<p><u>ROOF</u> Steel trough roofing or other roofing iron, not less than 0.5 mm thick.</p> <p><u>CEILING</u> One layer of 12.5mm thick plasterboard fixed to the same timber framework as the roof but with a separation of not less than 150 mm between the roofing and the plasterboard.</p> <p><u>INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent), laid between ceiling joists or compressed over purlins (can be combined with integral waterproof membrane).</p>

Outer Walls

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Conventional timber stud-framed walls.</p> <p><u>EXTERNAL CLADDING</u> Not less than 18mm thick timber weather board; or Not less than 9mm thick compressed fibre cement sheets; or Not less than 18mm thick solid plaster.</p> <p><u>INTERNAL LINING</u> Not less than 9.5 mm thick plasterboard.</p> <p><u>CAVITY INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Wall Pink Batts R2.2 or equivalent).</p>
2	<p><u>CONSTRUCTION</u> Conventional brick veneer installed in accordance with clearly presented and adequate technical information on installation supplied by the manufacturer.</p> <p><u>INTERNAL LINING</u> Not less than 9.5 mm thick plasterboard.</p>

APPENDIX 3A - SCHEDULE P (CONT)

Outer Windows

Options	Description of construction
1	<p>CONSTRUCTION Single glass windows in an aluminium, steel, timber or PVC frame with a positive sealing arrangement.</p> <p>AREA Up to 50% of the total exterior wall area.</p> <p>GLAZING Not less than 6 mm thick monolithic or laminated glass.</p>
2	<p>CONSTRUCTION Double glazed or double windows in an aluminium, timber or PVC frame with a positive sealing arrangement.</p> <p>AREA Up to 50% of the total exterior wall area.</p> <p>GLAZING Two panes each of a minimum thickness of 4 mm with an airspace of not less than 6 mm.</p>

Outer Doors

Option	Description of construction
1	Solid core door of a thickness not less than 35 mm and a superficial density of not less than 20kg /m ² complete with soft gasket around sides and top and drop seal at base.

Notes:

The required degree of insulation will only be provided if the specified level of integrity is maintained throughout the envelope of the building in respect to areas in which sound insulation requirements apply. If a sound transmission path is provided from outside the building to inside the insulated room in question via a path that is not fully and appropriately insulated against, then the design of the building shall not comply with the permitted activity performance standard. In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the jointing capping and guttering details used in normal construction.

Mechanical Ventilation of spaces with non opening windows or with sound- insulated windows shall be provided in accordance with provisions of the New Zealand Building Code G4 in a manner which does not compromise sound insulation.

In all cases opening windows are permissible. Where non-opening windows are used, an early warning smoke detection system should be installed and maintained within the premises (particularly in sleeping rooms and exitways) in accordance with an approved New Zealand Code or Standard or AS3786:1993. Where mechanical ventilation is provided devices should be installed to shut down or close off the system to prevent the travel of fire and smoke products.

APPENDIX 3A - SCHEDULE Q

Refer: Rules A1 1.3.3, A1 1.3.4 and B3 3.3.1 (Pages 93, 96 and 129)

Roof/Upper Floor Ceiling

Options	Description of construction
1	<p><u>ROOF</u> Pitched roof clad with tiles, or greater than 0.5 mm roofing iron, or 6 mm corrugated cellulose-cement.</p> <p><u>CEILING</u> 12.5 mm plasterboard fixed to underside of horizontal ceiling joist or ceiling battens.</p> <p><u>INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent), laid between ceiling joists.</p>
2	<p><u>ROOF</u> Steel trough roofing or other roofing iron, not less than 0.5 mm thick.</p> <p><u>CEILING</u> Two layers of 9.5 mm thick plasterboard fixed to the same timber framework as the roof but with a separation of not less than 150 mm between the roofing and the plasterboard.</p> <p><u>INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent), laid between ceiling joists or compressed over purlins (can be combined with integral waterproof membrane).</p>

Outer Walls

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Conventional timber stud-framed walls</p> <p><u>EXTERNAL CLADDING</u> Not less than 18mm thick timber weather board; or Not less than 9mm thick compressed fibre cement sheets; or Not less than 18mm thick solid plaster.</p> <p><u>INTERNAL LINING</u> Not less than two 12.5mm thick plasterboard sheets as internal lining to external walls.</p> <p><u>CAVITY INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Wall Pink Batts R2.2 or equivalent).</p>
2	<p><u>CONSTRUCTION</u> Conventional brick veneer installed in accordance with clearly presented and adequate technical information on installation supplied by the manufacturer.</p> <p><u>INTERNAL LINING</u> Not less than 12.5mm thick plasterboard.</p>

APPENDIX 3A - SCHEDULE Q (CONT)

Outer Windows

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Single glass windows in an aluminium, steel, timber or PVC frame with a positive sealing arrangement. No through-frame ventilation.</p> <p><u>AREA</u> Up to 50% of the total exterior wall area.</p> <p><u>GLAZING</u> Not less than 7 mm thick Hush Glass.</p>
2	<p><u>CONSTRUCTION</u> Double glazed windows in an aluminium, steel, timber or PVC frame with not less than a 13 mm air space between panes, and a positive sealing arrangement. No through frame ventilation.</p> <p><u>AREA</u> Up to 50% of the total exterior wall area.</p> <p><u>GLAZING</u> One pane not less than 7.5 mm and the other not less than 6 mm thick with the panes being of dissimilar thickness.</p>
3	<p><u>CONSTRUCTION</u> Double glass windows in separate timber frames with not less than a 70 mm air space between panes, and a positive sealing arrangement. No through-frame ventilation.</p> <p><u>AREA</u> Up to 50% of the total exterior wall area.</p> <p><u>GLAZING</u> One pane not less than 6 mm and the other not less than 5 mm thick with the panes being of dissimilar thickness.</p>
4	<p><u>CONSTRUCTION</u> Completely sealed double glass windows in separate timber frames with not less than a 50 mm air space between panes, and a positive sealing arrangement. No through-frame ventilation.</p> <p><u>AREA</u> Up to 20% of the total exterior wall area.</p> <p><u>GLAZING</u> Each pane of dissimilar thickness but neither being less than 5 mm thick.</p>

Outer Doors

Option	Description of construction
1	Solid core door of a thickness not less than 42 mm and a superficial density of not less than 24kg/m ² complete with soft gasket around sides and top and drop seal at base.

APPENDIX 3A - SCHEDULE Q (CONT)

Flooring (exposed to outside noise via under-floor)

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Conventional timber joist floor and thermal insulation.</p> <p><u>UPPER BOARDS (floor base inside room)</u> Not less than two sheets of 18mm particle board.</p>
2	<p><u>CONSTRUCTION</u> Conventional timber joist floor and thermal insulation.</p> <p><u>UPPER BOARDS (floor base inside room)</u> Not less than one sheet of 18mm particle board.</p> <p><u>UNDER JOISTS (sub floor)</u> Not less than one sheet of 6mm thick compressed fibre cement sheets.</p>

Notes:

The required degree of insulation will only be provided if the specified level of integrity is maintained throughout the envelope of the building in respect to areas in which sound insulation requirements apply. If a sound transmission path is provided from outside the building to inside the insulated room in question via a path that is not fully and appropriately insulated against then the design of the building shall not comply with the permitted activity performance standard. In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the jointing capping and guttering details used in normal construction.

Mechanical Ventilation of spaces with non opening windows or with sound-insulated windows shall be provided in accordance with provisions of the New Zealand Building Code G4 in a manner which does not compromise sound insulation.

In all cases opening windows are permissible. Where non-opening windows are used, an early warning smoke detection system should be installed and maintained within the premises (particularly in sleeping rooms and exitways) in accordance with an approved New Zealand Code or Standard or AS3786:1993. Where mechanical ventilation is provided devices should be installed to shut down or close off the system to prevent the travel of fire and smoke products.

APPENDIX 3A - SCHEDULE R

Refer: Rules A1 1.3.3, A1 1.3.4 and B3 3.3.1 (Pages 93, 96 and 129)

Roof/Upper Floor Ceiling

Options	Description of construction
1	<p><u>ROOF</u> Pitched roof clad with tiles, or greater than 0.5 mm roofing iron, or 6 mm corrugated cellulose-cement.</p> <p><u>CEILING</u> Two layers of 12.5 mm plasterboard fixed to underside of horizontal ceiling joist or ceiling battens.</p> <p><u>INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent), laid between ceiling joists.</p>
2	<p><u>ROOF</u> Steel trough roofing not less than 0.6 mm thick.</p> <p><u>CEILING</u> Two layers of 12.5 mm thick plasterboard fixed to the same timber framework as the roof but with a separation of not less than 150 mm between the roofing and the plasterboard.</p> <p><u>INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent), laid between ceiling joists or compressed over purlins (can be combined with integral waterproof membrane).</p>

Outer Walls

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Conventional timber stud-framed walls</p> <p><u>EXTERNAL CLADDING</u> Not less than 18mm thick timber weather board; or Not less than 9mm thick compressed fibre cement sheets; or Not less than 18mm thick solid plaster.</p> <p><u>INTERNAL LINING</u> Not less than two 12.5mm thick plasterboard sheets as internal lining to external walls.</p> <p><u>CAVITY INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Wall Pink Batts R2.2 or equivalent).</p>
2	<p><u>CONSTRUCTION</u> Conventional brick veneer in which the wall space is ventilated by connection with subfloor vents; upper part of the internal wall sheeting is exposed to, and penetrated by, upper wall vents leading to the eaves space.</p> <p><u>INTERNAL LINING</u> Not less than 12.5mm thick plasterboard.</p>

APPENDIX 3A - SCHEDULE R (CONT)

Outer Windows

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Completely sealed double glass windows in separate timber frames with not less than a 100 mm air space between panes, and a positive sealing arrangement. No through-frame ventilation.</p> <p><u>AREA</u> Up to 20% of the total exterior wall area.</p> <p><u>GLAZING</u> Each sheet of dissimilar thickness but neither being less than 5 mm thick.</p>
2	<p><u>CONSTRUCTION</u> Completely sealed double glass windows in separate timber frames with not less than a 50 mm air space between panes, and a positive sealing arrangement. No through-frame ventilation.</p> <p><u>AREA</u> Up to 20% of the total exterior wall area.</p> <p><u>GLAZING</u> One sheet 7 mm Hush Glass and one sheet 6 mm thick.</p>

Outer Doors

No "single" door or ranch-slider located directly between the Schedule R sound-insulated room and outside area is deemed to provide 30 decibels sound reduction of outside aircraft noise.

Flooring (exposed to outside noise via under-floor)

Options	Description of construction
1	<p><u>CONSTRUCTION</u> Conventional timber joist floor.</p> <p><u>UPPER BOARDS (floor base inside room)</u> Not less than two sheets of 18mm particle board.</p> <p><u>UNDER JOISTS (sub floor)</u> Not less than one sheet of 6mm thick compressed fibre cement sheets.</p> <p><u>FLOOR CAVITY INSULATION</u> Fibre insulation batt or blanket with a thickness of not less than 94mm and density of not less than 12kg/m³ (such as Ceiling Pink Batts R2.2 or equivalent).</p>

Notes:

The required degree of insulation will only be provided if the specified level of integrity is maintained throughout the envelope of the building in respect to areas in which sound insulation requirements apply. If a sound transmission path is provided from outside the building to inside the insulated room in question via a path that is not fully and appropriately insulated against then

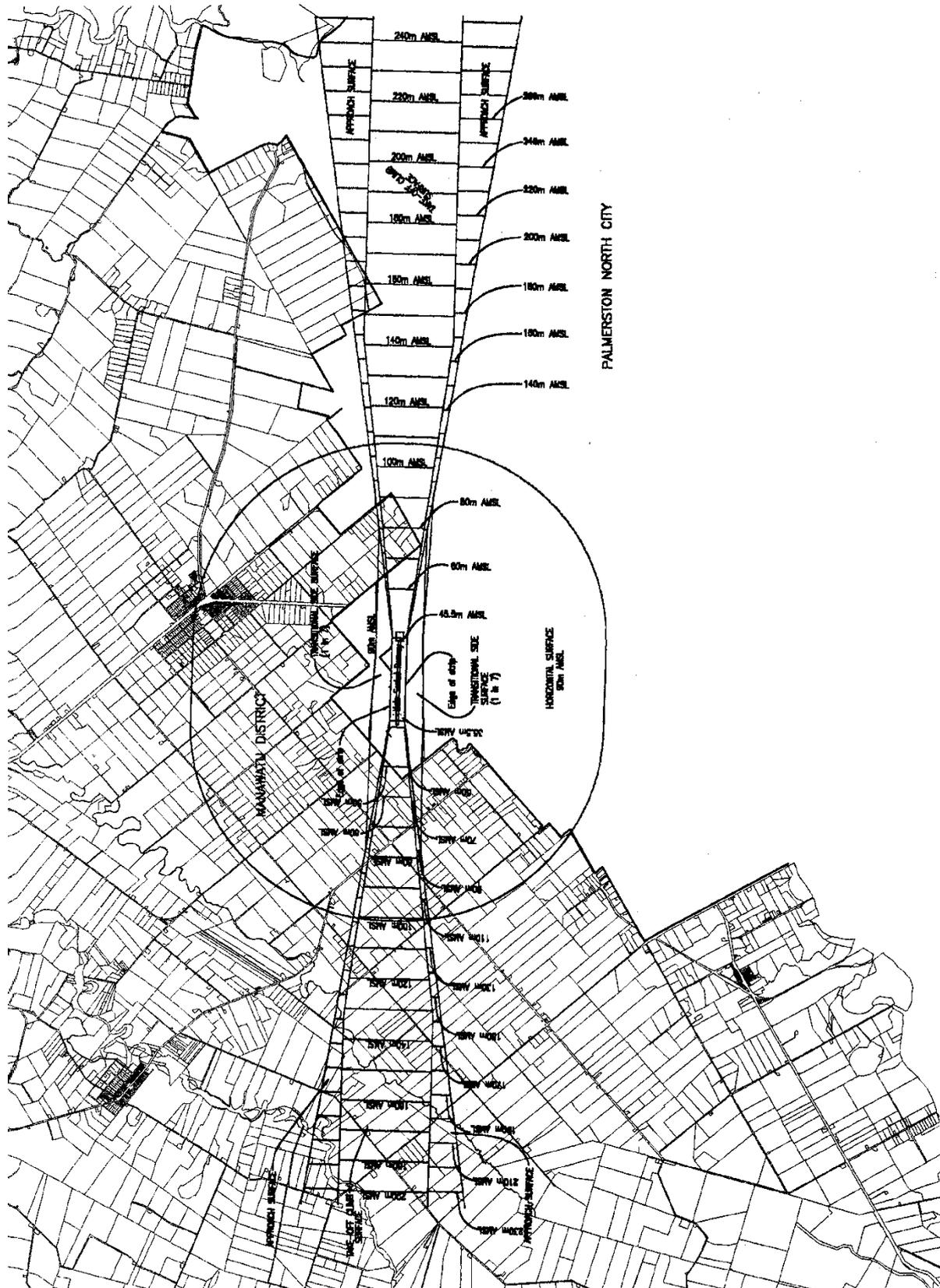
the design of the building shall not comply with the permitted activity performance standard. In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the jointing capping and guttering details used in normal construction.

Mechanical Ventilation of spaces with non opening windows or with sound-insulated windows shall be provided in accordance with provisions of the New Zealand Building Code G4 in a manner which does not compromise sound insulation.

In all cases opening windows are permissible. Where non-opening windows are used, an early warning smoke detection system should be installed and maintained within the premises (particularly in sleeping rooms and exitways) in accordance with an approved New Zealand Code or Standard or AS3786:1993. Where mechanical ventilation is provided devices should be installed to shut down or close off the system to prevent the travel of fire and smoke products.

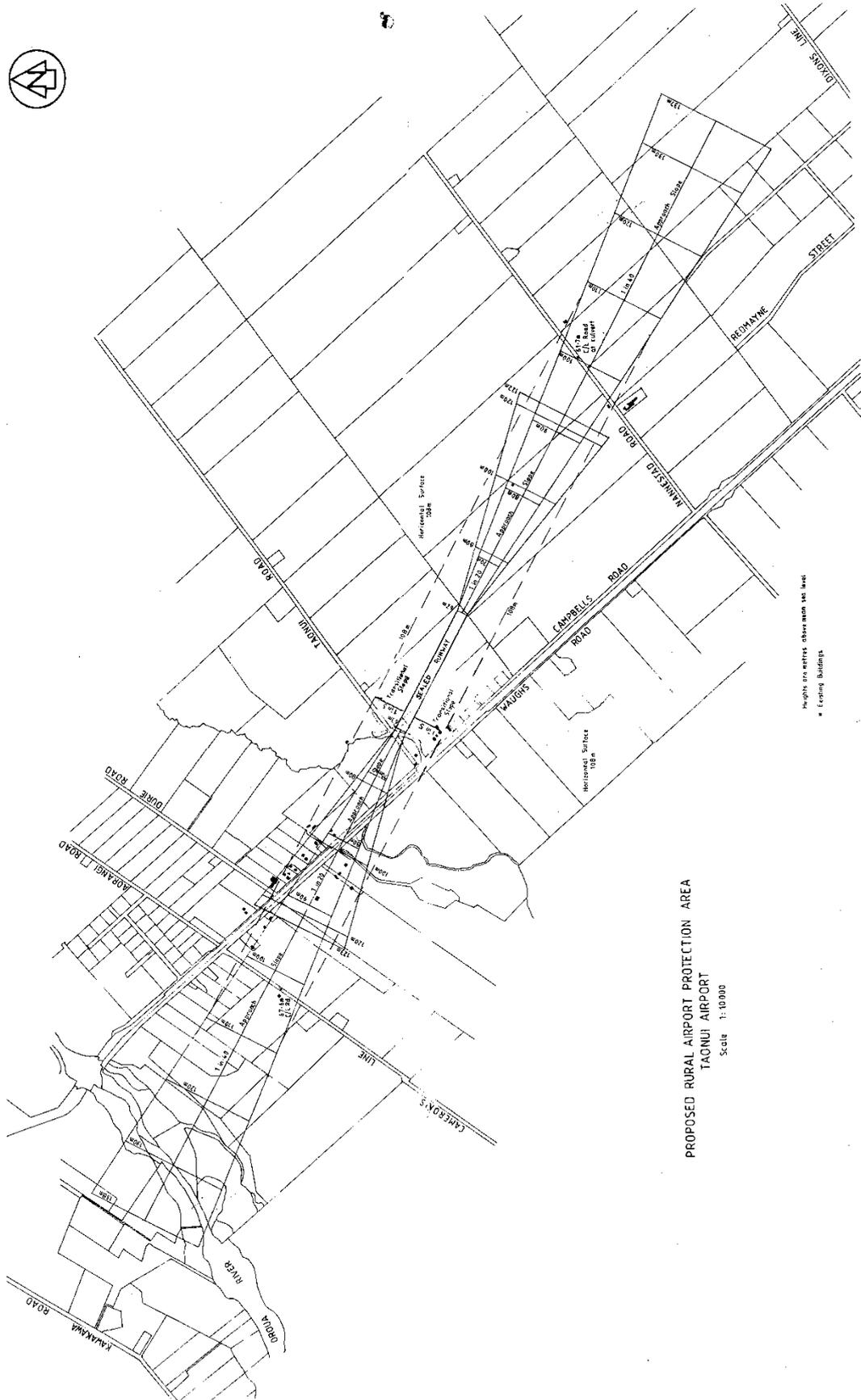
APPENDIX 3B – HEIGHT LIMITS – MILSON AIRPORT

Refer Rules B3 3.3.1 and B7 7.3.1 (Pages 125 and 146)



APPENDIX 3C – HEIGHT LIMITS – FEILDING AERODROME

Refer Rules B3 3.3.1 and B7 7.3.1 (Pages 125 and 146)



APPENDIX 3D - SEPARATION DISTANCES FOR PIG FARMING ACTIVITIES

Refer Rule B3 3.2.1 A) (Page 125)

	Minimum Separation distance in metres	
	Up to 2000 pigs	Over 2000 pigs
From any Residential or Village zone	2000m	$P \times 1.0$ *
From any Business, Industrial or Recreation zone, or place of assembly	1500m	$P \times 0.75$ *
From any dwelling on another site	500m	$P \times 0.25$ *
From any road boundary of the site	410m	$(P \times 0.25^*) - 90$
From any other boundary of the site	430m	$(P \times 0.25^*) - 70$

(* P = number of pigs)

EXAMPLE:

If the proposal was to establish a piggery with 2500 pigs, (ie P= 2500) the relevant buffer distances would be:

From any Residential or Village zone: $2500 \times 1.0 = 2500$ metres

From any dwelling on another site: $2500 \times 0.25 = 625$ metres

From any road boundary of the site: $2500 \times 0.25 = 625$ metres, subtract 90m = 535m

From any other boundary of the site: $2500 \times 0.25 = 625$ metres, subtract 70m = 555m.

NB: It is considered appropriate for Pig farming activities which meet these separation distances to become established as controlled activities, ie where Council is obliged to grant consent and where there is no third-party involvement from potentially-affected neighbours. Pig farming proposals as a discretionary activity may be approved with substantially smaller buffer distances, and the provisions of the Pork Industry Board's Code of Practice will be used as a guideline in this respect. (Refer Rule A1 1.3.4 A) xix), Page 95).

List of Substantial Existing Piggeries (Refer Rule B3 3.3.1 E), Page 127)

The following piggeries had more than 500 growing pigs or 50 sows plus progeny, on site as of 1 August 2000:

1. Managh Piggery, Te Rakehou Road
2. Harsey Piggery, Cloverlea Road
3. Wilkes Piggery, SH 56, Tiakitahuna

These piggeries are also shown on Planning Maps 10 and 19.

APPENDIX 4A [DELETED PC46]

APPENDIX 4B [DELETED PC46]

APPENDIX 4C [DELETED PC46]

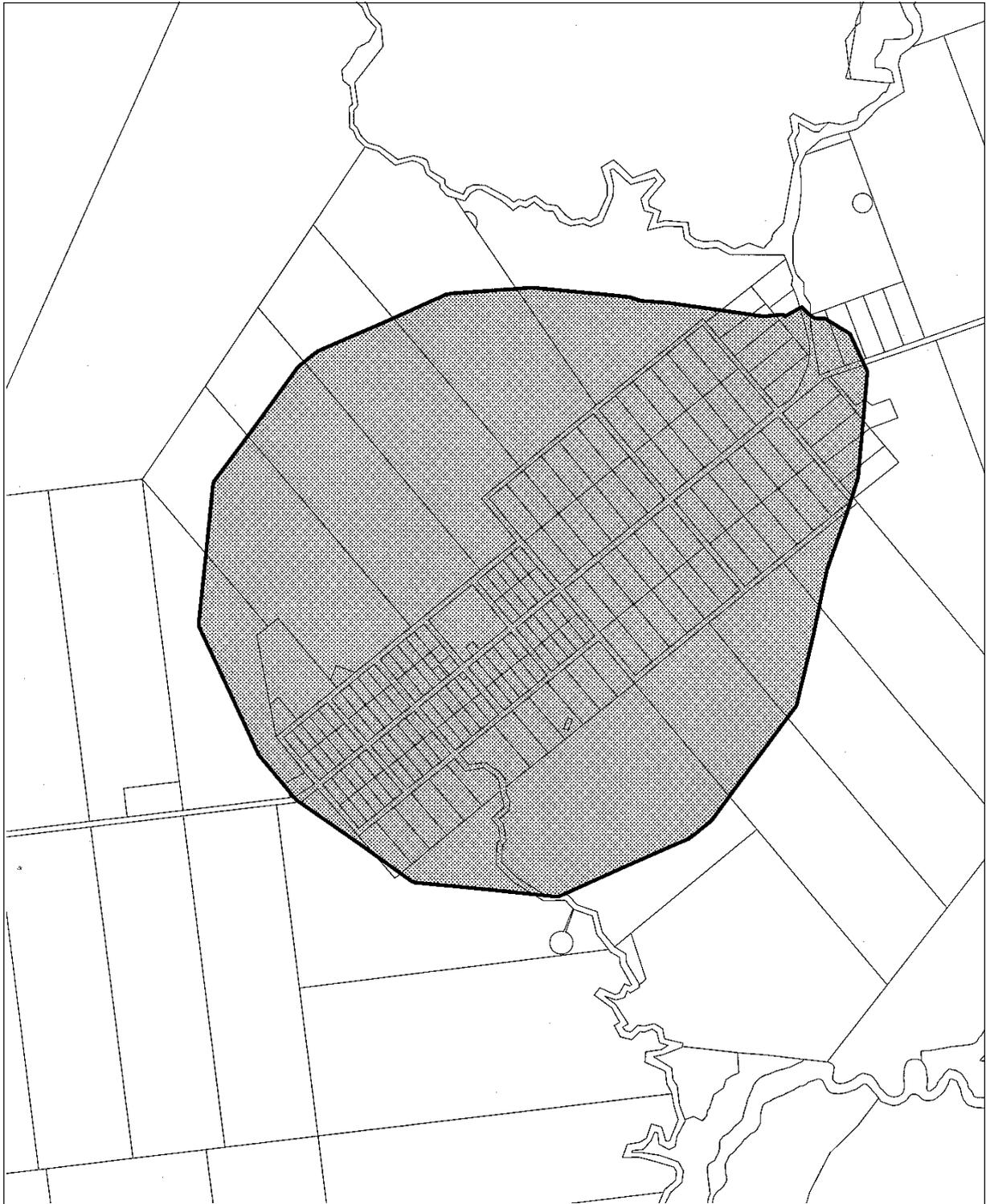
APPENDIX 5A - RURAL SUBDIVISION NODES

Diagram 1 – Feilding Locality
Refer Rule C1 1.3.1 (Page 152)



APPENDIX 5A - RURAL SUBDIVISION NODES

Diagram 2 – Rangiwahia Locality
Refer Rule C1 1.3.1 (Page 152)



APPENDIX 5A - RURAL SUBDIVISION NODES

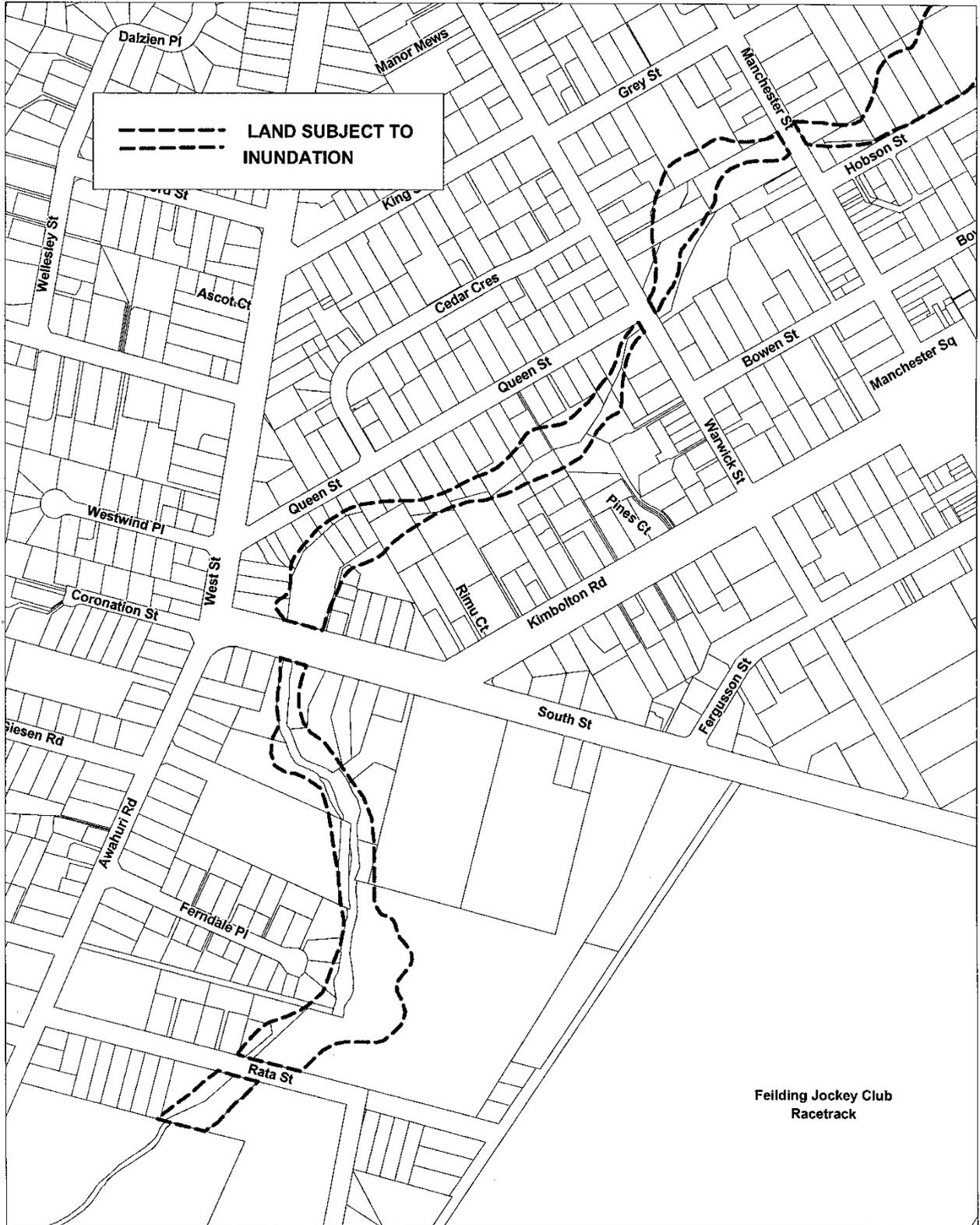
Diagram 3 – Hiwinui Locality
Refer Rule C1 1.3.1 (Page 152)



APPENDIX 6A - LAND SUBJECT TO INUNDATION

Diagram 1 – Southern Feilding

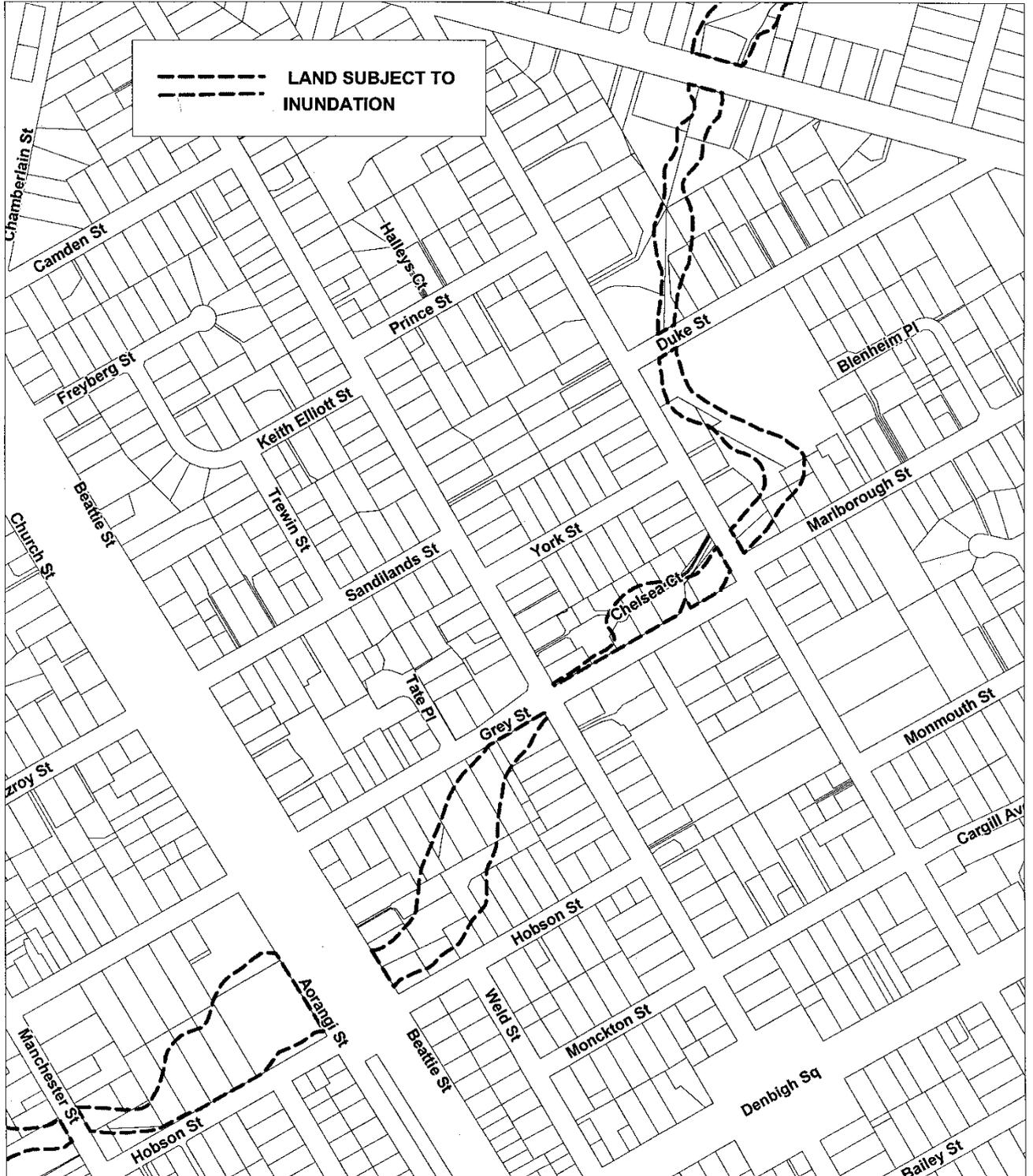
Refer Rule B1 1.2.1, (Page 108)



APPENDIX 6A - LAND SUBJECT TO INUNDATION

Diagram 2 – Central Feilding

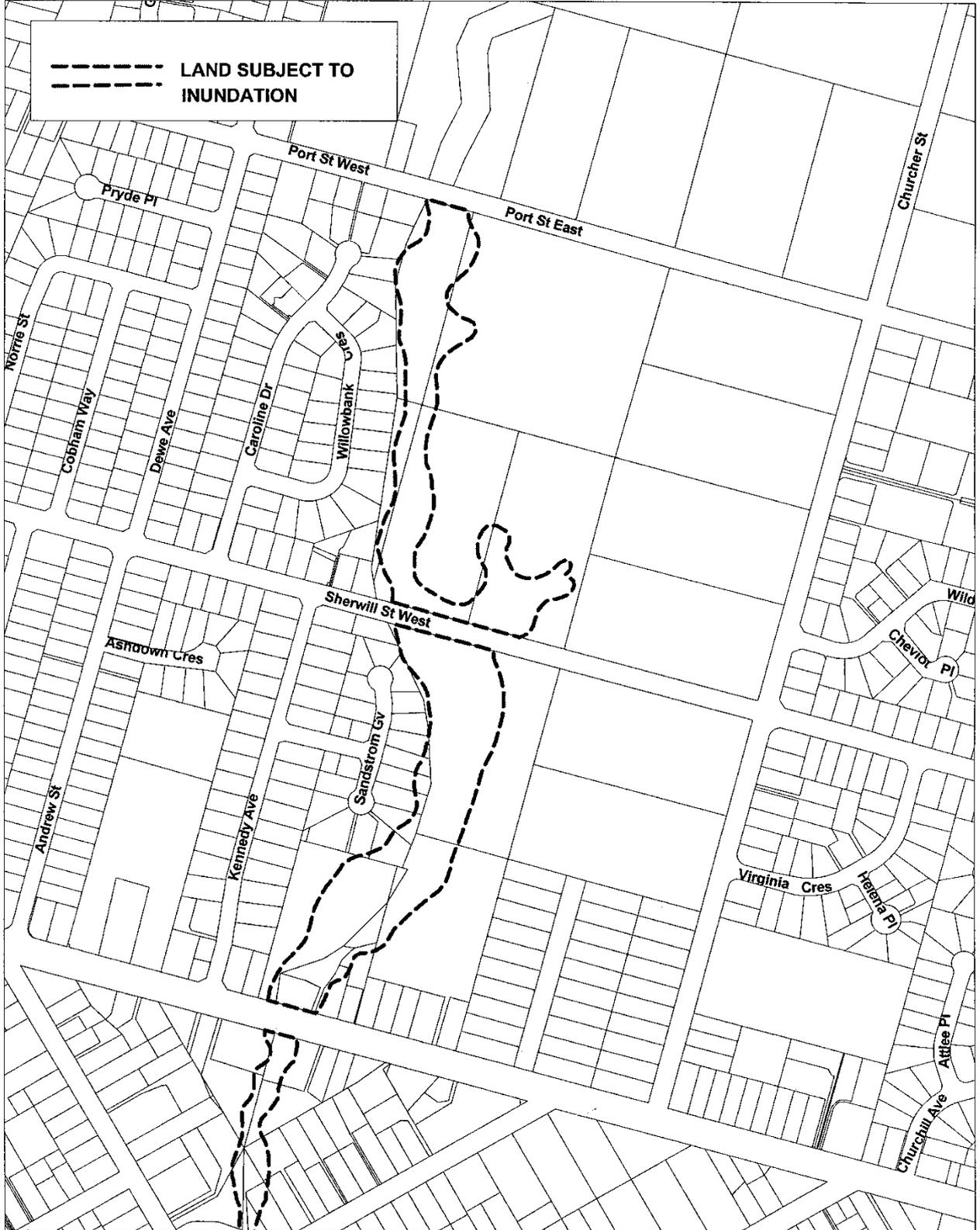
Refer Rule B1 1.2.1 (Page 108)



APPENDIX 6A - LAND SUBJECT TO INUNDATION

Diagram 3 – Northern Feilding

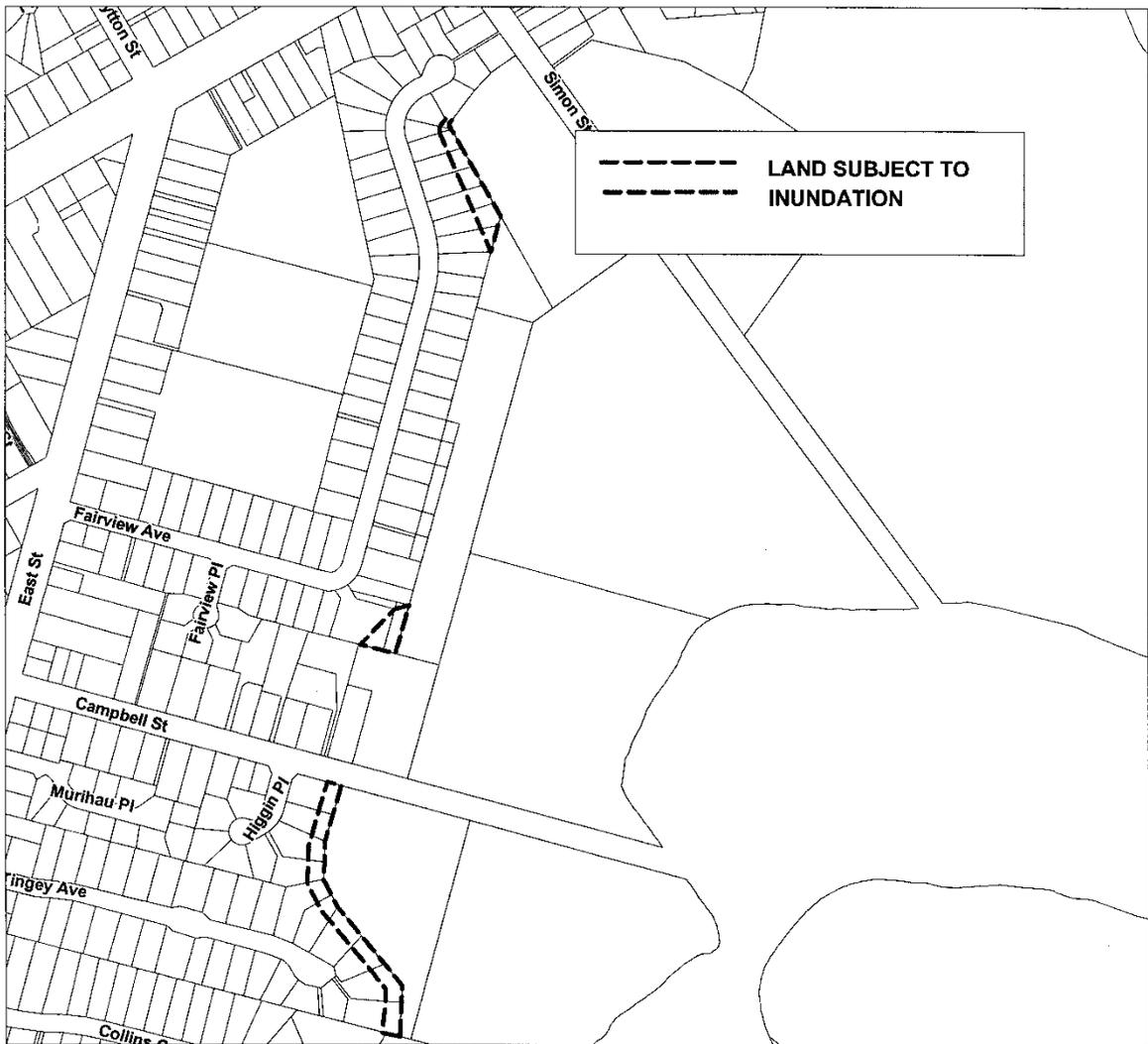
Refer Rule B1 1.2.1 (Page 108)



APPENDIX 6A - LAND SUBJECT TO INUNDATION

Diagram 4 – Oroua River and Kiwitea Stream

Refer Rule B1 1.2.1 (Page 108)



APPENDIX 7A - LIST OF DESIGNATIONS

Refer Rule A2 2.8.1 (Page 106)

No.	Facility	Designation	Underlying Zoning	Legal Description
New Zealand Transport Agency				
D1	State Highway 1	State Highway	Various	
D2	State Highway 3	State Highway	Various	
D3	State Highway 54	State Highway	Various	
D4	State Highway 56	State Highway	Various	
D5	State Highway 57	State Highway	Various	
Tranz Rail Ltd				
D6A	N.Island Main Trunk Railway	Railway Purposes	Various	
D6B	P.North - Gisborne Railway	Railway Purposes	Various	
Manawatu District Council				
D7	Highfield Reservoir	Reservoir	Rural 2	Lot 1 DP 18077
D8	Fraser Drive Reservoir	Reservoir	Residential	Pt Lot 8 DP 118
D9	Bunnythorpe WTP	Water Treatment Plant	Village	Lot 1 DP 74951
D10	Himatangi Beach Hall	Himatangi Beach Public Hall	Village	Pt Lot 30 DP 13009
D11	Himatangi Beach WTP	Water Treatment Plant	Village	Lot 3 DP 17461
D12	Sanson Hall	Sanson Public Hall	Village	Lot 1 DP 75673
D13	Rongotea Hall	Rongotea Public Hall	Village	Sec 127 Pt Sec 128 DP 160
D14	Halcombe Hall	Halcombe Public Hall	Village	Lot 356 DP 42
D15	Halcombe STP	Sewage Treatment	Rural 2	Pt Lots 16, 17 DP 98
D16	Cheltenham Hall	Cheltenham Public Hall	Village	Lot 12 Block I DP 134
D17	Kimbolton Hall	Kimbolton Public Hall	Village	All DP 3147
D18	Apiti Hall	Apiti Public Hall	Village	Secs 98 & 100 Town of Apiti

D19	Rangiwahia Hall	Rangiwahia Public Hall	Rural 2	Pt Sec 62 Rangiwahia Township
D20	Beaconsfield Hall	Beaconsfield Public Hall	Rural 2	Lot 83 DP 96
D21	Waituna West Hall	Waituna West Public Hall	Rural 2	Lot 1 DP 85107
D22	Utuwai Hall	Utuwai Public Hall	Rural 2	Lot 1 Sec 16 Block XII Apiti S.D
D23	Kimbolton STP	Sewage Treatment Purposes	Rural 2	Lots 1 & 2 DP 57923
D24	Ohakea Hall	Ohakea Public Hall	Rural 2	Lot 4 DP 12795
D25	Sanson STP	Sewage Treatment Purposes	Rural 2	Lot 1 DP 42023
D26	Stanway Hall	Stanway Public Hall	Rural 2	Pt Lot 2 DP 147, Lot 1 DP 10327
D27	Feilding WTP	Water Treatment Purposes	Rural 1	Pt Lot 12 DP 73
D28	Almadale Water Intake	Water Supply Purposes	Flood Channel 2	Pt Lot 12 DP 73
D29	Cheltenham STP	Sewage Treatment Purposes	Rural 1	Pt Sec 213 Sandon Township
D30	Kiwitea Hall	Kiwitea Public Hall	Rural 1	Pt Sec 235 Sandon Township
D31	Pohangina Hall	Pohangina Public Hall	Rural 2	Secs 7-14 Block V Town of Pohangina
D32	Clydesdale Hall	Clydesdale Public Hall	Rural 2	Lot 1 DP 7527
D33	Rongotea STP	Sewage Treatment Purposes	Rural 2	Lot 2 DP 48164
D34	Feilding Tip	Refuse Disposal Site	Rural 2	Pt Lots 11 & 12 DP 999
D35	Feilding STP	Sewage Treatment Purposes	Rural 1	Sec 1 SO 34329, Pt Secs 345, 348 Town of Sandon
D36	Awahuri STP	Sewage Treatment Purposes	Rural 1	All DP 2875
D37	Colyton Hall	Colyton Public Hall	Rural 2	Pt Lot 10 DP 181
D38	Bunnythorpe STP	Sewage Treatment Purposes	Flood Channel 2	Lots 2 & 4, DP 47914
D39	Oroua Downs Hall	Oroua Downs Public Hall	Rural 2	Pt Lot 10 DP 5574
D40	Taikorea Hall	Taikorea Public Hall	Rural 2	Lot 2 DP 79834
D41	Rangiotu Hall	Rangiotu Public Hall	Rural 2	All DP 3676
D42	Longburn STP	Sewage Treatment Purposes	Rural 1	Pt 1 DP 44837
	Minister for Courts			
D43	Feilding Courthouse	Courthouse	Business	Sec 251 DP 19
	Minister of Defence			
D44	Ohakea Air Force Base	Defence Purposes (Aerodrome)	Rural 2	Part Sections 53, 55, 56, 63, Block XV Rangitoto SD Sections 45, 57,58,62, 64 Block XV Rangitoto SD Lot 1 Pt Lot 2 DP 4423, Lot 2 DP 12916

				Pt Sec 12 Town of Sandon, Pt Sec 19 Manchester District Lot 1 DP 14231, Pt Lots 1-3 DP 7831 Lot 1 DP 21753 Closed road in SO 32702
D45	Ohakea STP	Defence Purposes (Sewage Treatment)	Rural 1	Parts Section 49 Block XV Rangitoto SD
D46	Wilson Rd Communications	Defence Purposes (Radio Station)	Rural 2	Sec 1 SO 20388, Sec 1 SO 25647
D47	Wightmans Rd Base	Defence Purposes (Administrative /RNZAF Band Hall Facility)	Rural 2	Pt Sec 61 Block XV Rangitoto SD
Minister of Education				
D48	FAHS	Feilding Agricultural High School	Residential	Pt Sec 128 Town of Sandon, Lots 9-33 DP 2262, Lots 59&60 DP 20 Pt 195 DP100, Pts 6,8,12 & 17 DP 12202, Lot 5 DP24831
D49	Feilding Intermediate	Feilding Intermediate School	Residential	
D50	Lytton St School	Lytton St Primary School	Residential	Lots 1-5 DP 13767, Lots 764-766 DP 19, Pts 761,763 &767, 768 & 773 DP 19,
D51	Manchester St School	Manchester St Primary School	Residential	Pts 70-73, 77-79, 81-86 & Lot 74 DP 19
D52	North St School	North St Primary School	Residential	Pt Lots 16 & 17 DP 20
D53	Longburn School	Longburn Primary School	Village	Pt Lot 50 DP 526, Pt Sec 21 Karere District
D54	Bunnythorpe School	Bunnythorpe Primary School and Teachers Residence	Village	Lots 41-46 DP 217 & Lot 2 DP 30293
D55	Tangimoana School	Tangimoana Primary School	Village	Sec 558 Town of Carnarvon
D56	Sanson School	Sanson Primary School	Village	Sec 1 SO 36708
D57	Rongotea School	Rongotea Primary School	Village/ Recreation	Lots 269-276, 280-289, 353-365, DP 160
D58	Halcombe School	Halcombe Primary School and Teachers Residence	Rural 2	Lots 267, 267A, 268A,269, 269A, 270 & 270A, DP42 Pts 373&374 DP42
D59	Cheltenham School	Cheltenham Primary School	Rural 1	Lots 1-8 & Lot 14 DP 134
D60	[deleted]			
D61	Kimbolton School	Kimbolton Primary School	Village	Secs 77, 78, Pt Sec 79 Town of Rangiwahia Pt Secs 33, 34 Kimbolton Suburban Pt Sec 82, Secs 104 & 105 Town of Kimbolton
D62	Apiti Primary School	Apiti Primary School	Village	Secs 163-166 &168 Block XI, Apiti SD

D63	Waituna West School	Waituna West Primary School	Rural 2	Sec 20 Block XV Ongo SD
D64	Not allocated			
D65	Mt Biggs School	Mt Biggs School	Rural 2	Lot 1 DP 4981, Lot 2 DP 15587, Lot 1 DP 88429
D66	Awahou Primary School	Awahou Primary School	Rural 2	Pt Sec 33 Block X Pohangina SD
D67	Kiwitea School	Kiwitea Primary School	Rural 1	Pt Sec 230 Town of Sandon, Pt Lot 2 DP 3502
D68	Glen Oroua School	Glen Oroua Primary School	Rural 2	Lots 2 & 12 DP 2557, Lot 1 DP 72572
D69	Kopane School	Kopane Primary School and Teachers Residence	Flood Channel 2	Pt 1 DP 7235, Pt Lot 1 DP 4055
D70	Newbury School	Newbury Primary School	Rural 1	Sec 347, Town Of PN
D71	Waitohi School	Waitohi Primary School	Rural 2	Pt Sec 229 & Sec 603, Town of Carnarvon
D72	Colyton School	Colyton Primary School	Rural 2	Pt Sec 10 Subn H, Manchester District
D73	Hiwinui School	Hiwinui Primary School	Rural 2	Pt Lot 1 Sec 29 Subn O, Manchester District Pt Sec 576 Town of Bunnythorpe, Sec 1 Block II Kairanga SD
D74	Taonui School	Taonui Primary School	Rural 1	
D75	Bainesse Primary School	Bainesse Primary School	Rural 2	Pt Puketotara 8 & Secs 1 Block XV Te Kawau SD
D76	Oroua Downs School	Oroua Downs Primary School	Rural 2	Lot 1 DP 13176, Pt 15 DP 1368, Pt 10 DP 1367
D78	Kairanga School	Kairanga Primary School		Pt Sec 1576 Block IX Kairanga SD, Lot 4 DP 18892
Minister of Police				
D79	Feilding Police Station	Police Purposes	Business	Section 250 DP19
D80	Kimbolton Police Station	Police Purposes	Village	Sections 19 & 20, Pt 21 DP 650
Radio New Zealand Ltd				
D81	Gillespies Line Transmitter	Radiocommunication, Telecommunication, and ancillary purposes and land uses.	Flood Channel 1	Pt Lots 1 and 2 DP 7073

Telecom New Zealand Ltd					
D82	Feilding Exchange	Telecommunication, Radiocommunication & Ancillary Purposes.	Business	Lot 1 DP 351838	
D83	Longburn Repeater Station	" "	Rural 1	Sec 1 S.O 24142	
D84	Bunnythorpe Exchange	" "	Village	Lot 1 DP 73010	
D85	Tangimoana Exchange	" "	Village	Lot A Sec 558 Town of Carnarvon	
D86	Himatangi Beach Radio Site	" "	Village	Lot 1 DP 72005	
D87	Sanson Exchange	" "	Village	Lot 1 DP 74813	
D88	Rongotea Exchange	" "	Village	Lot 1 DP 81870	
D89	Halcombe Exchange	" "	Village	Lot 1 DP 81868	
D90	Kimbolton Exchange	" "	Village	Lot 1 DP 81869	
D91	Apiti Exchange	" "	Village	Sec 105 Town of Apiti	
D92	Rangiwahia Exchange	" "	Rural 2	Sec 1 SO 28190	
D93	Rangiwahia VHF	" "	Rural 2	Lot 1 DP 67187	
D94	Tapuae Exchange	" "	Rural 2	Sec 1 SO 33663	
D95	Waituna West Exchange	" "	Rural 2	Pt Sec 20 West Waitapu Village, Sec 1 SO 36346	
D96	Ridge Rd Radio Site	" "	Rural 2	Lot 1 DP 78408	
D97	Apiti Radio Site	" "	Rural 2	Lot 1 DP 79319	
D98	Umutoi Radio Site	" "	Rural 2	Lot 1 DP 77147	
D99	Cheltenham Exchange	" "	Rural 1	Sec 1 SO 25527	
D100	Colyton Exchange	" "	Rural 2	Sec 1 S.O. 25528	
D101	Pohangina Exchange	" "	Rural 2	Sec 1 SO 24100	
D102	Komako Radio Site	" "	Rural 2	Lot 1 DP 78409	
D103	Glen Oroua Exchange	" "	Rural 2	Pt 1 DP 1035 Pt Sec 384 T of Carnarvon	
D104	Bainesse Repeater Station	" "	Rural 2	Sec 1 S.O. 24021	
D105	Himatangi Exchange	" "	Rural 2	Pt Lot 4 DP 9194	
D106	Rangiotu Exchange	" "	Rural 2	Sec 1 SO 26031	
D107	Kairanga Exchange	" "	Flood Channel 2	Sec 1 SO 25516	

	Transpower Ltd			
D108	Bunnythorpe Substation	Electricity Substation	Rural 2	Lot 1 DP 76218, Lots 163-165 DP 217, Lot 33 DP 66580
	MWRC (horizons.mw)			
D109	Mangaone Stream stopbanks (including stream channel) between Rangitikei Line and Pluto Place	Flood protection purposes including ongoing stopbank system maintenance and repair	Flood Channel 2	Lot 1 DP 89587, Lots 1 and 2 DP 81647, Pt Secs 1800 and 1801 Town of Palmerston North SO 35103 SO 37783 River Protection Works Gaz 2000 p4266, and Sec 1805 Town of Palmerston North SO 35103.
	Powerco Ltd			
D110	Feilding Substation	Electricity Substation	Industrial	Lot 2 DP 305442
D111	Kairanga Substation	Electricity Substation	Rural 1	Lot 1 DP 84422
D112	Kimbolton Substation	Electricity Substation	Rural 2	Lot 1 DP 22864
D113	Sanson Substation	Electricity Substation	Rural 2	Lot 1 DP 24558
D114	Ashhurst Gas Gate	Gas Gate	Rural 2	Lot 1 DP 68867
D115	Line Function Services	Line Function Services	Rural 2	Lot 1 DP 59428
D116	Palmerston North Gas Gate	Gas Gate	Flood Channel 2	Lot 1 DP 89587

APPENDIX 7B - HEIGHT RESTRICTIONS - OHAKEA AIR FORCE BASE

REFER RULE A2 2.8.1 (PAGE 106)

(Requirements sought by the Minister of Defence in response to Council's invitation pursuant to Clause 4(A) of the First Schedule of the Resource Management Act)

Requirement

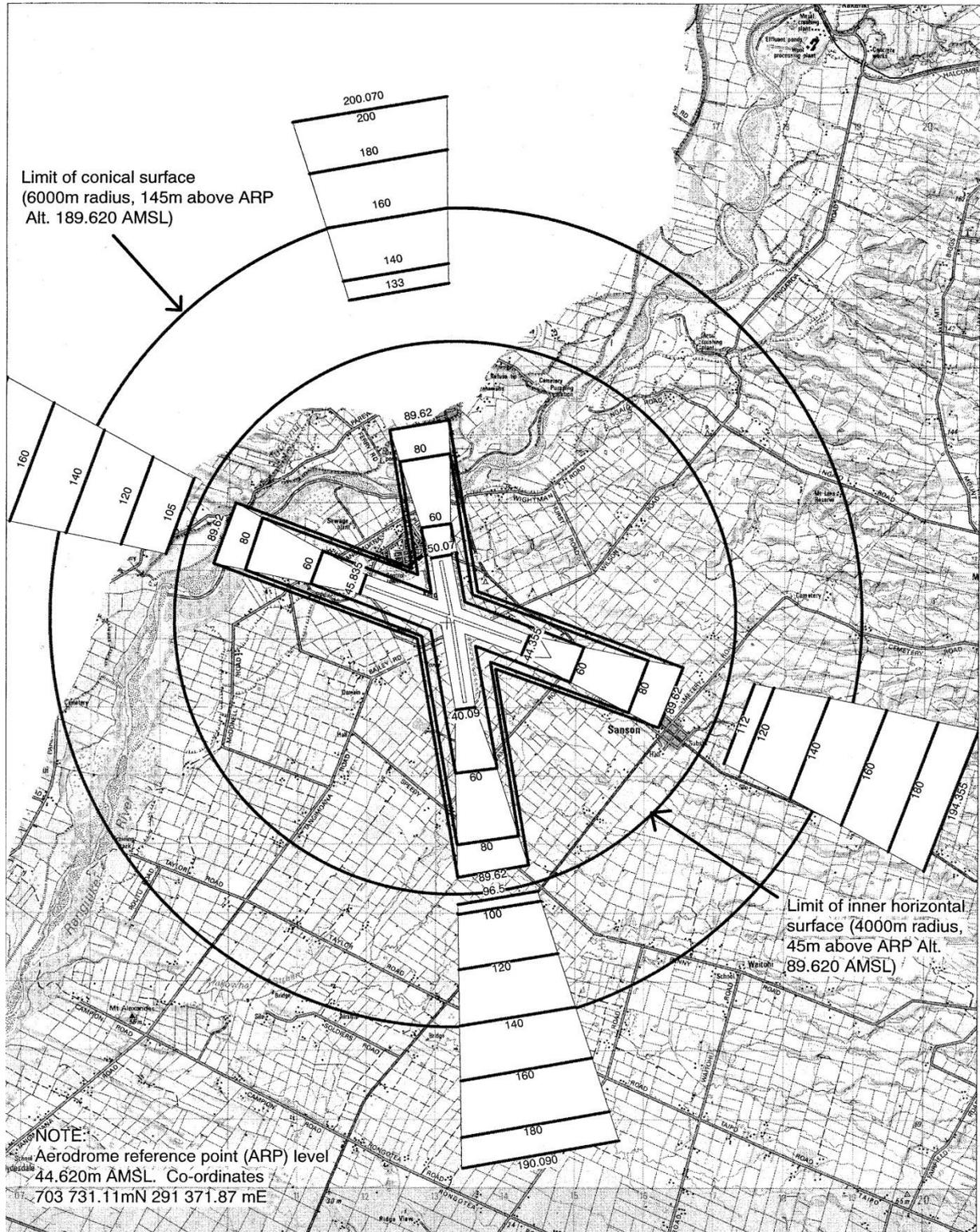
No part of any building, structure, mast, tree or other object shall penetrate any of the climb surfaces, transitional surfaces, horizontal surfaces or conical surfaces associated with Ohakea Airfield. These surfaces are shown on Diagrams 1 and 2 following.

Where two or more surfaces (whether climb, transitional, horizontal or conical surfaces) intersect, the lower shall apply.

Limited infringement of the height restrictions imposed above may be permitted in exceptional cases subject to the prior written consent of the Secretary of Defence and to any conditions the Secretary may require.

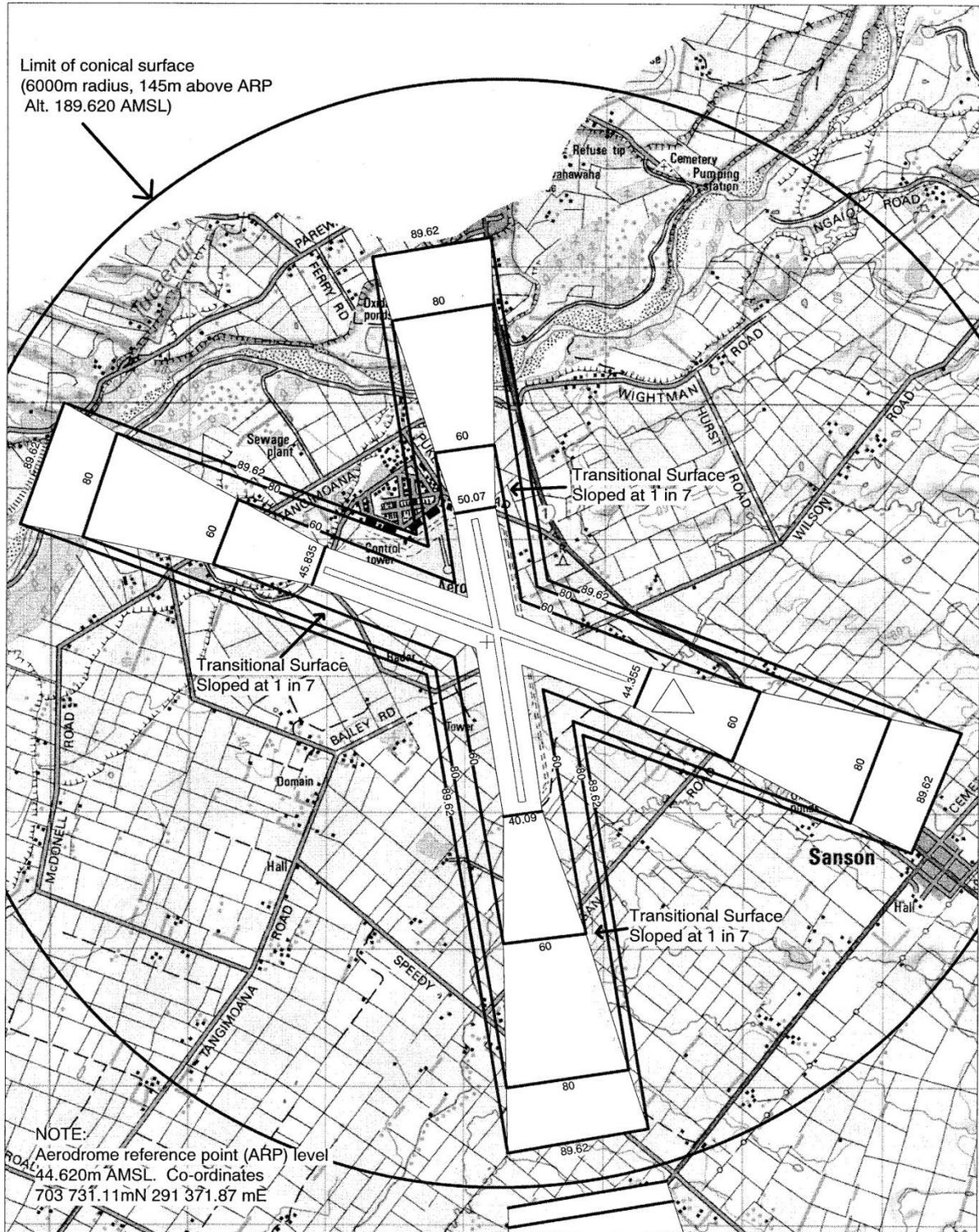
APPENDIX 7B (CONT) OHAKEA HEIGHT CONTROL DIAGRAMS.

Diagram 1 – Height Restrictions



APPENDIX 7B (CONT) OHAKEA HEIGHT CONTROL DIAGRAMS

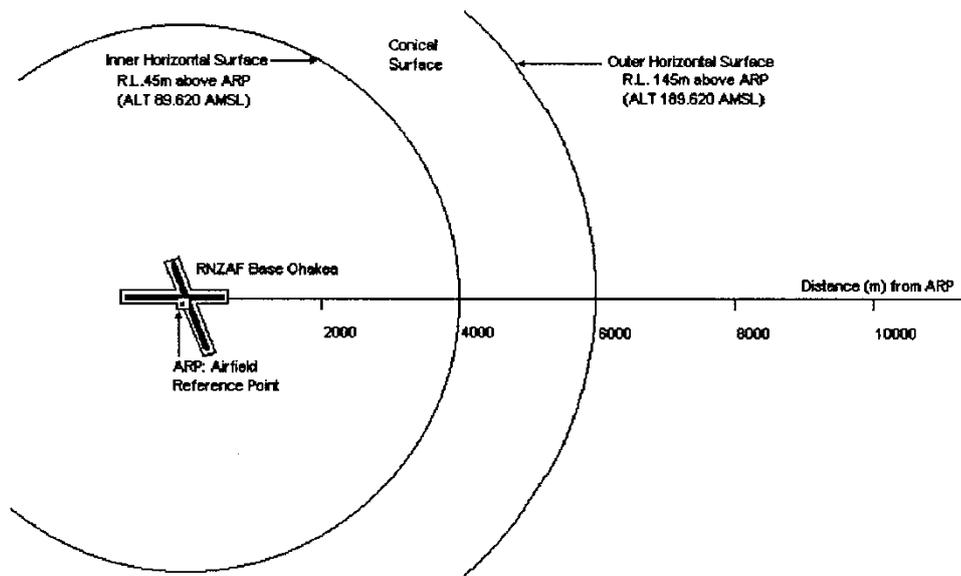
Diagram 2 – Enlargement showing Airfield Thresholds



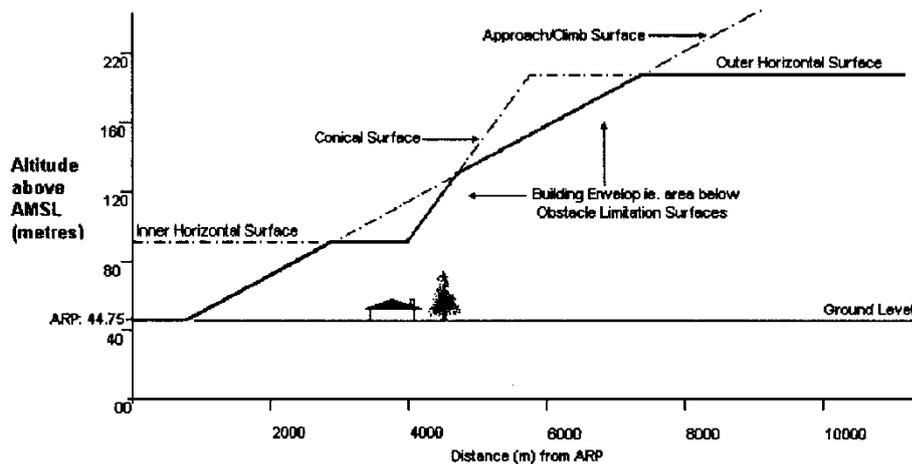
APPENDIX 7B (CONT) OHAKEA HEIGHT CONTROL DIAGRAMS.

Diagram 3 – Approach and Take Off Climb Surfaces and Transitional Surfaces

Approach & Take Off Climb Surfaces & Transitional Surfaces



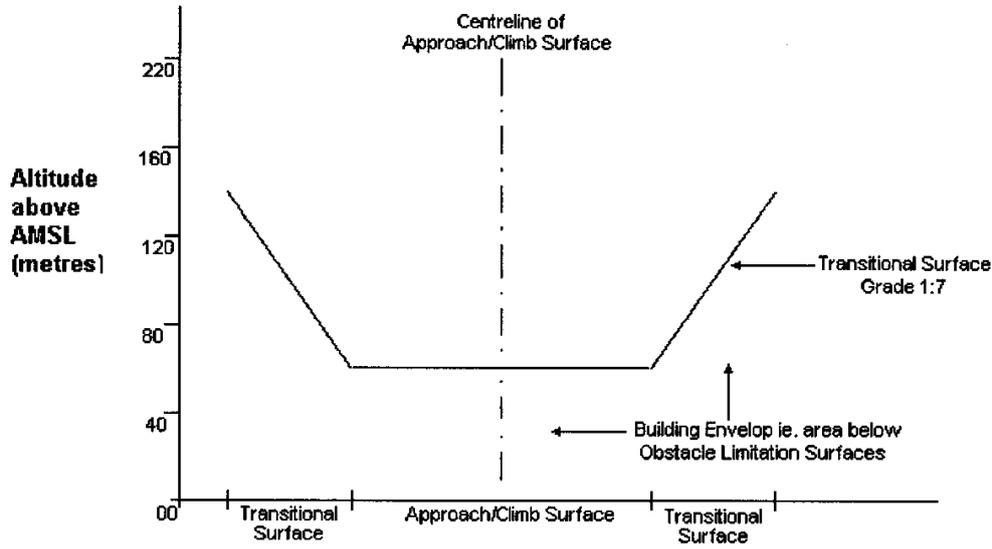
Typical Plan: Horizontal and Conical Surfaces



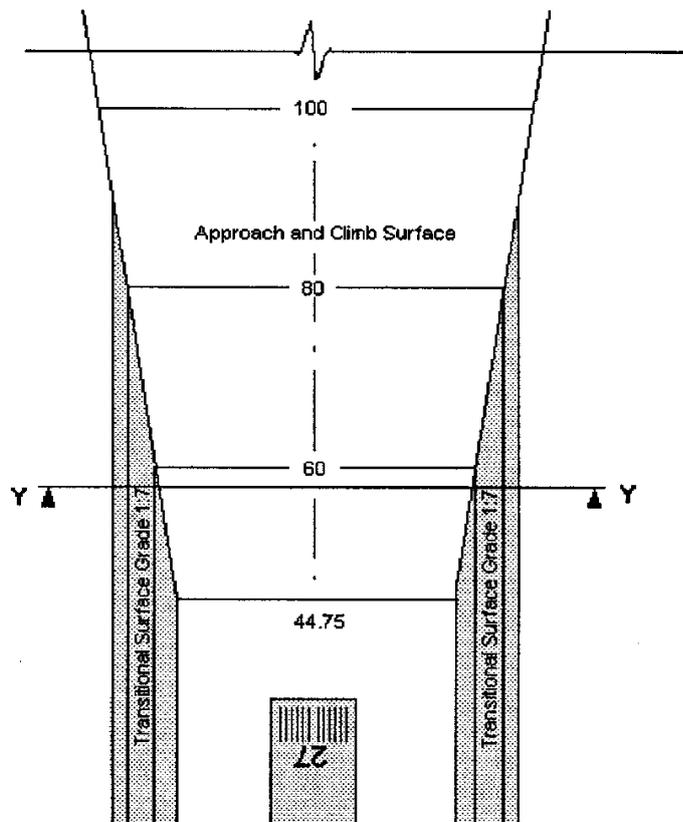
Typical Long Section (Through Centreline of Runway)

APPENDIX 7B (CONT) OHAKEA HEIGHT CONTROL DIAGRAMS

Diagram 4 – Approach and Take Off Climb Surfaces and Transitional Surfaces

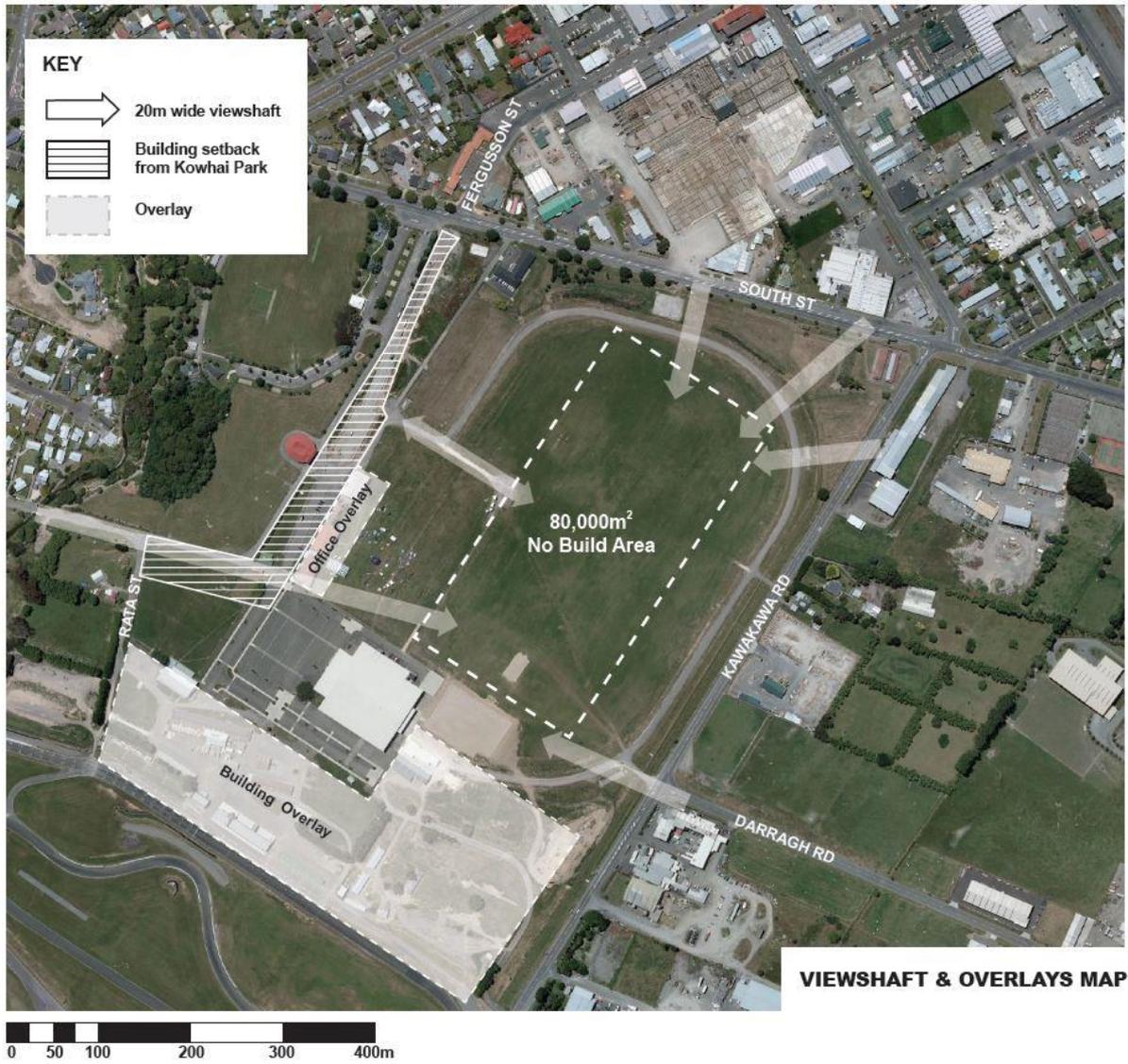


Typical Cross Section Y-Y



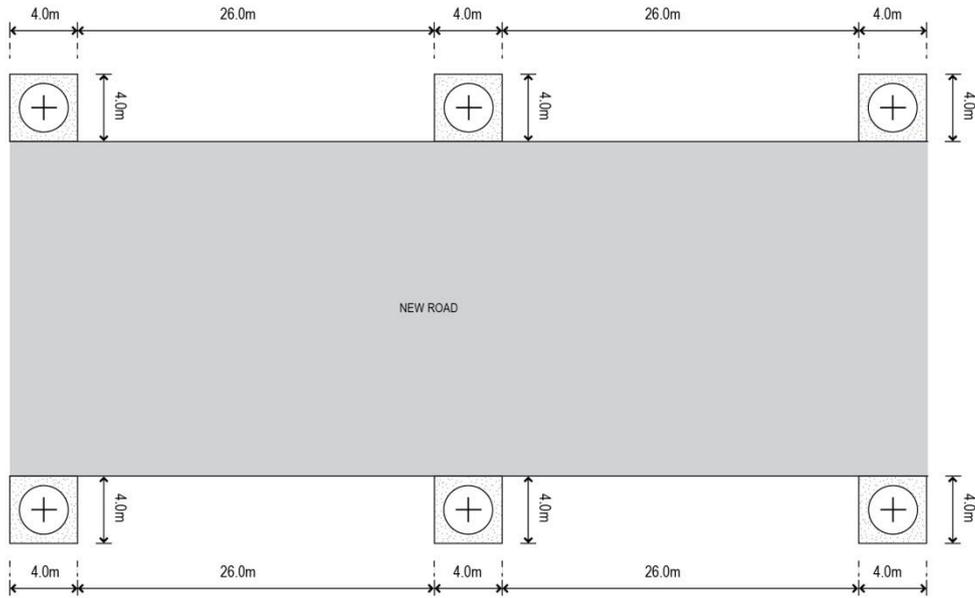
Typical Plan: Approach/Climb Surface

APPENDIX 8A VIEWSHAFTS FOR MANFEILD PARK AND SPECIAL DEVELOPMENT ZONES



APPENDIX 8B LANDSCAPE AND SCREEN PLANTING MANFEILD PARK ZONE

B8.3.1 LANDSCAPE AND SCREEN PLANTING



NOTE

 = Large Tree (>4.0m height with limb of 2.0m)

Diagram 1

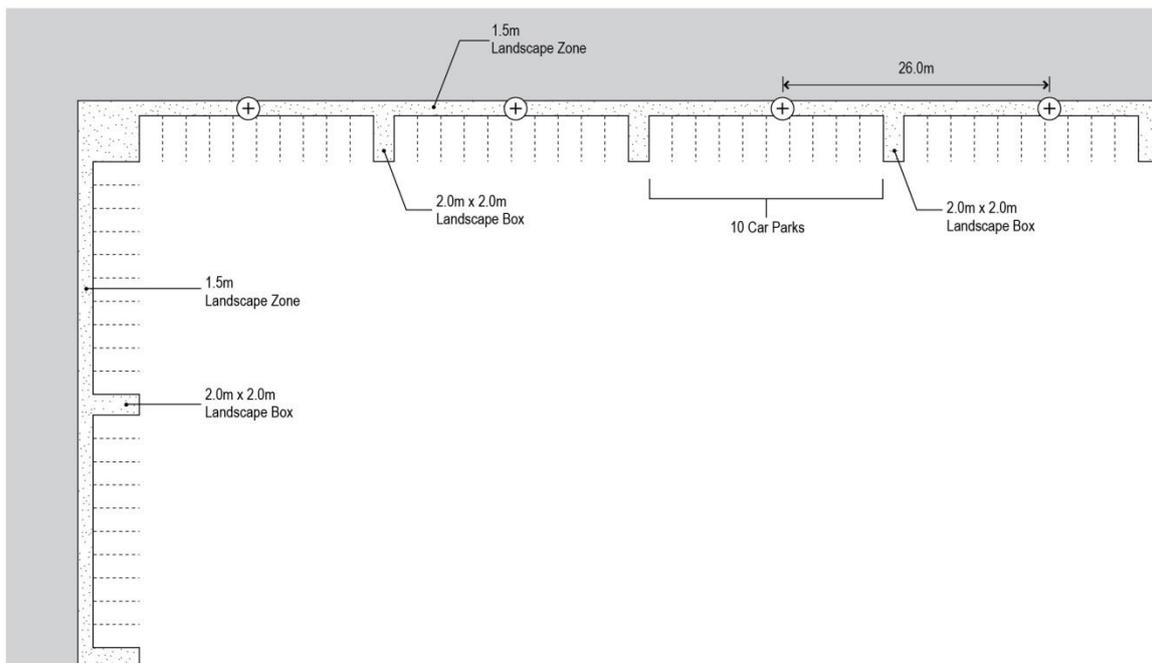


Diagram 2

APPENDIX 8B PREFERRED PLANTING SPECIES FOR MANFEILD PARK ZONE AND SPECIAL DEVELOPMENT ZONE

Shrubs under 1.5m

Botanical Name	Common Name	Botanical Name	Common Name
Rosa floribunda	Carpetrose White	Choisya ternata	Orange Blossom
Rosa floribunda	Carpetrose Crimson	Camellia s. Quintesscent	Camellia
Daphne odorata	Daphne	Plumbago auriculata	plumbago
Daphne burkwoodii	Daphne		

Shrubs over 2m

Botanical	Common Name	Botanical	Common Name
Camellia sinensis sp	Camellia	Griselinia lucida	Akapuka
Pittosporum tenuifolium	Kohuhu	Lophomyrtus bullata	Rama rama
Michelia figo	Port Wine Magnolia	Olearia Cheesmanii	Olearia
Myrtus communis	Myrtal	Corokia virgata	Geenty's Green
Coprosma rhamoides	Divaricating	Myrsine australis	Mapou
Corokia contoneaster	Korokio		

Large Trees

Botanical Name	Common Name	Botanical Name	Common Name
Magnolia grandiflora	Magnolia	Acer pseudoplatanus	Red Maple
Comus capitata	Himalayan Dogwood	Alectryon excelsus	Titoki
Quercus coccinea	Scarlet Oak	Sophora tetraptera	Kowhai
Gingko biloba	Gingko	Nothofagus solandri	Black beech
Fraxinous raywoodii	Claret ash	Phyllocladus trichomanoides	Celery Pine

Taller Screen Planting

Botanical Name	Common Name	Botanical Name	Common Name
Pittosporum tenuifolium	Kohuhu	Coprosma lucida	Shining Karamu
Pseudopanax crassifolium	Lance wood	Pittosporum eugenoides	Tarata
Sophora microphylla	Kowhai	Coprosma parviflora	Leafy Coprosma

Specimen Trees

Botanical Name	Common Name	Botanical Name	Common Name
Podocarpus totara	Totara	Nestegis Cunninghamii	Maire
Sophora microphylla	Kowhai	Cordyline australis	Ti Kouka
Dacrycarpus dacryioides	Kahikatea	Alectryon excelsus	Tioki
Prumnopitys taxifolia	Matai		

APPENDIX 8C LANDSCAPE AND SCREEN PLANTING SPECIAL DEVELOPMENT ZONE

B9.3.1D): YARDS AND SEPARATION DISTANCES

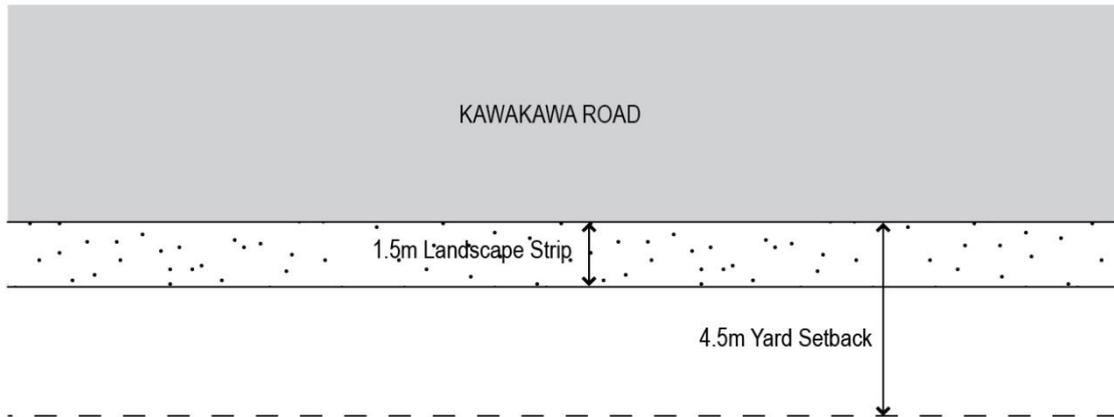


Diagram 1

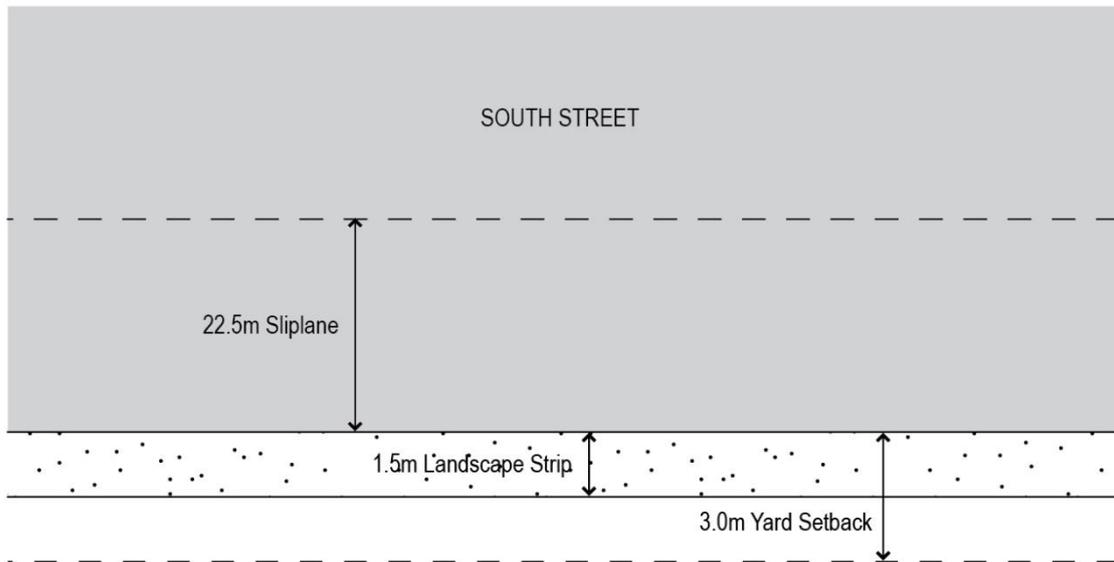
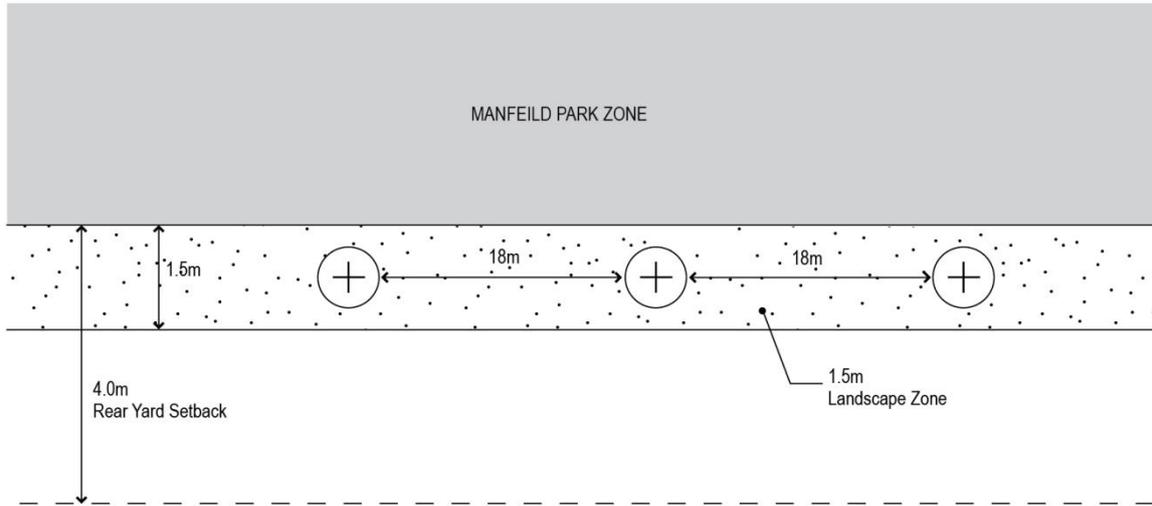


Diagram 2

B9.3.1E): LANDSCAPE AND SCREEN PLANTING



NOTE

 = Large Tree (>4.0m height with limb of 2.0m)

Diagram 3

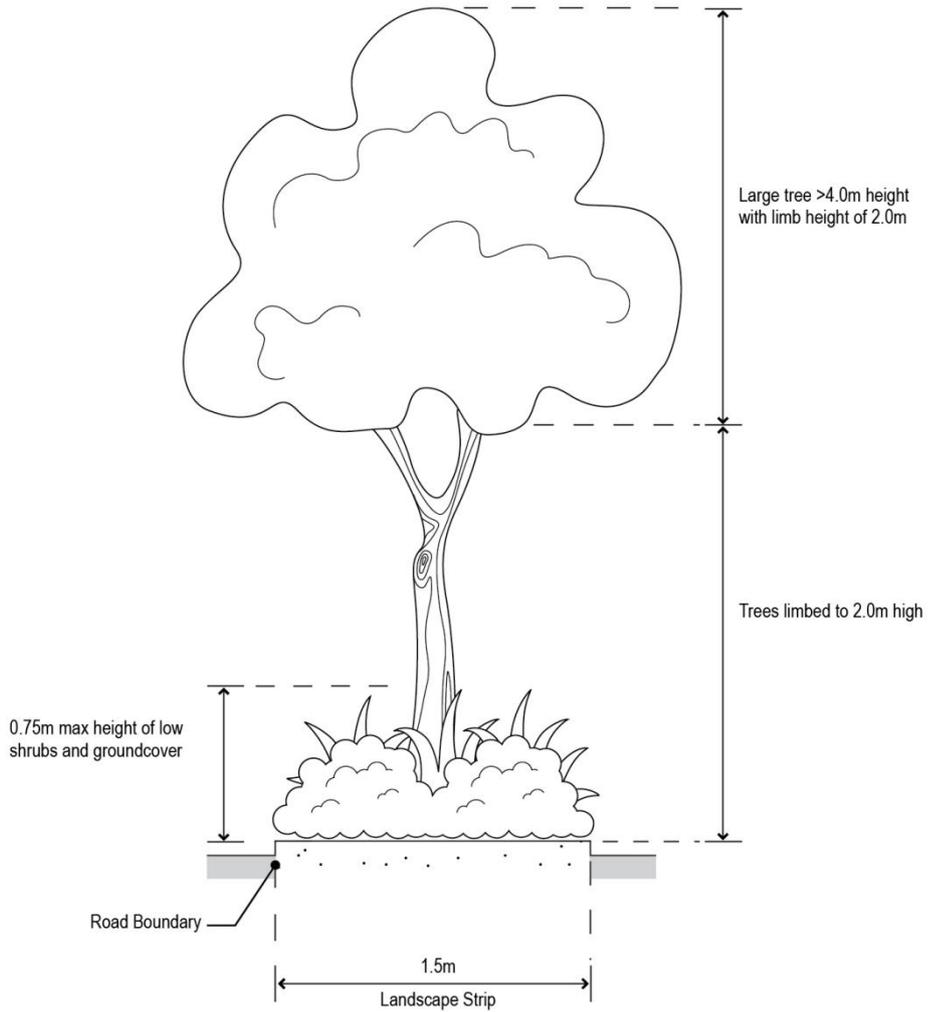


Diagram 4

B9.3.1E): LANDSCAPE AND SCREEN PLANTING

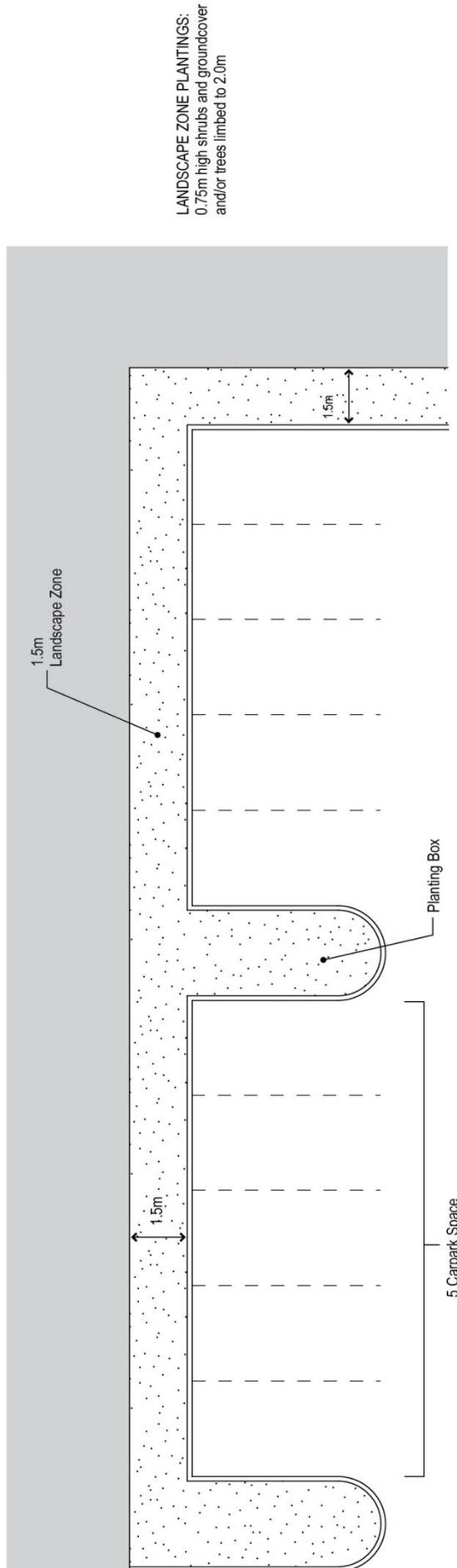


Diagram 5

B9.3.1E): LANDSCAPE AND SCREEN PLANTING

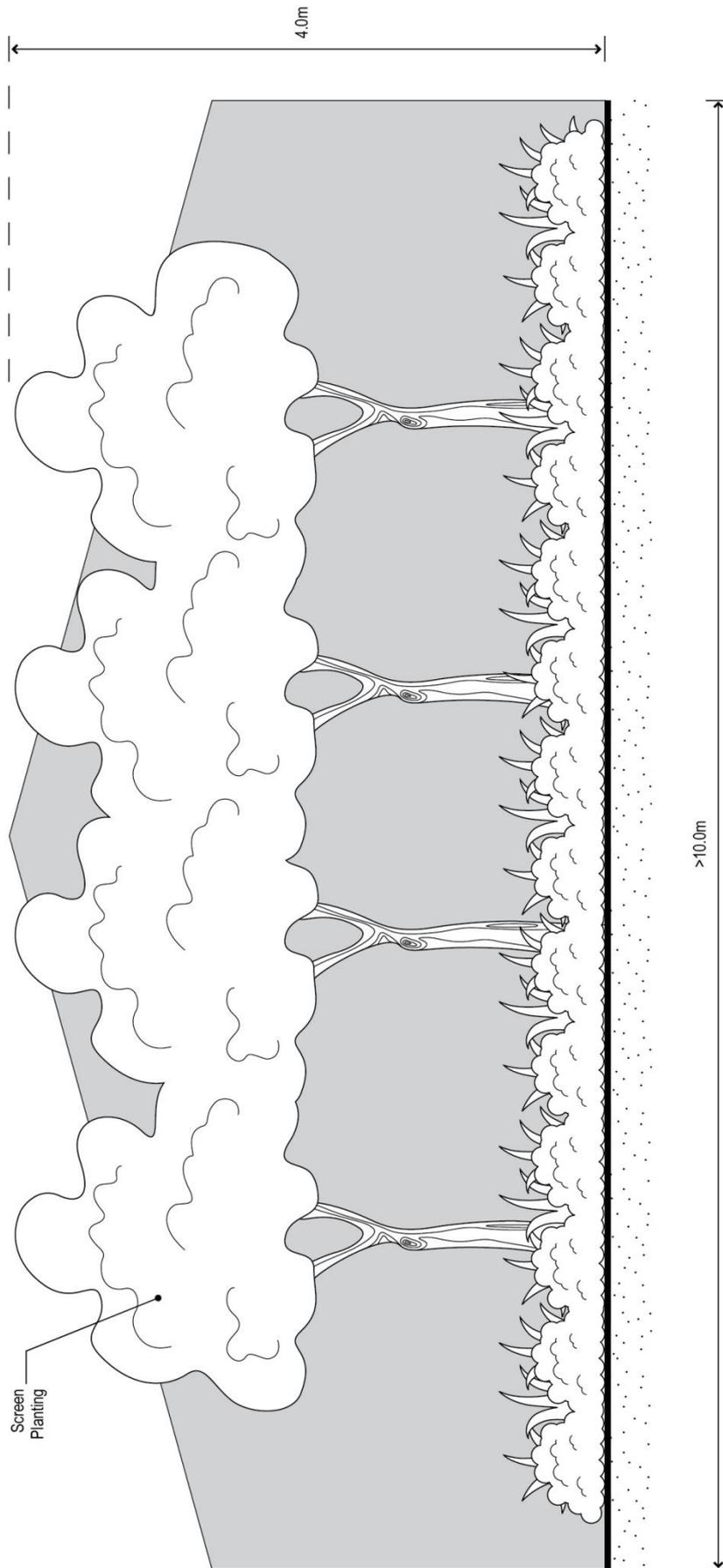
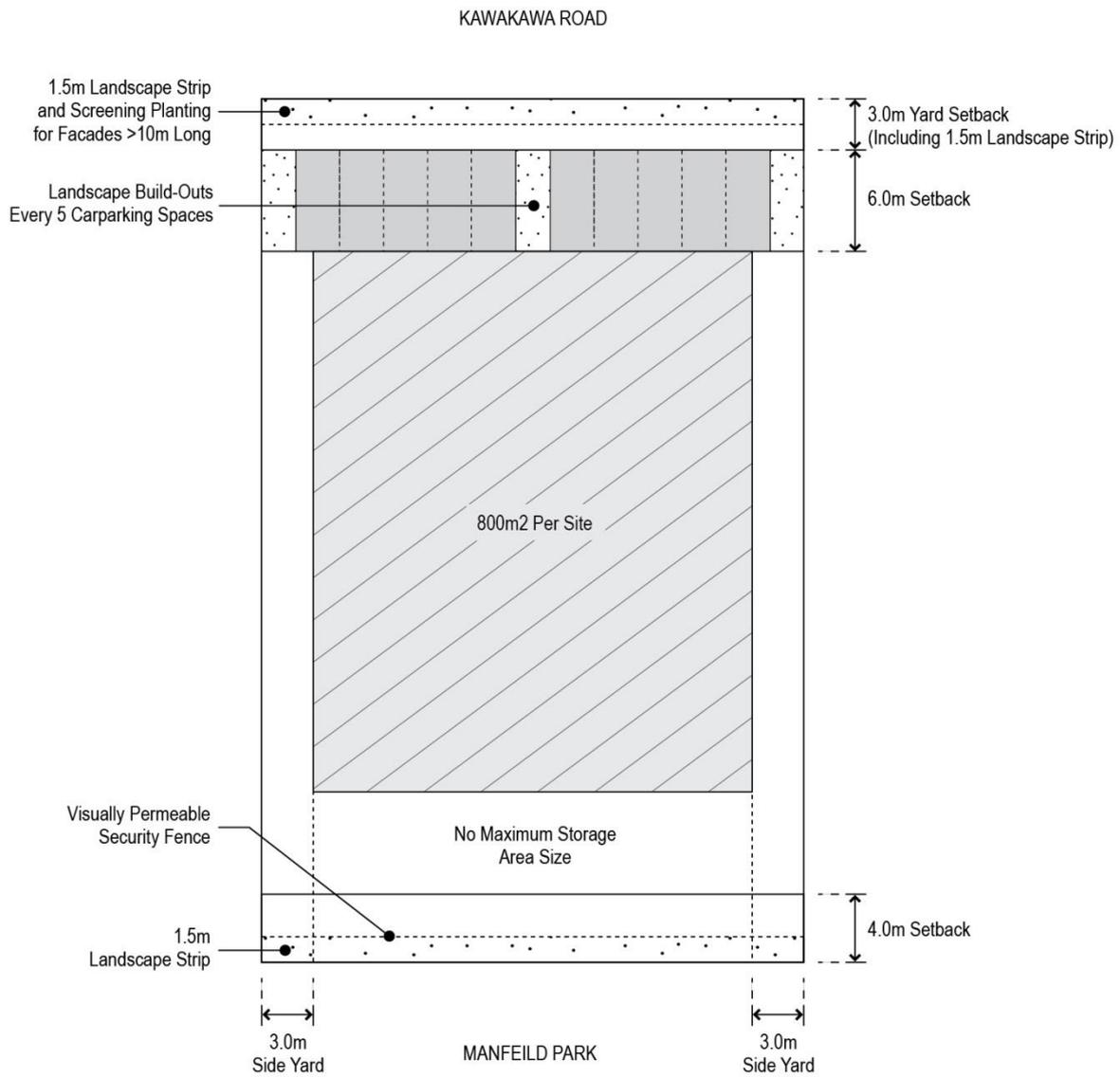
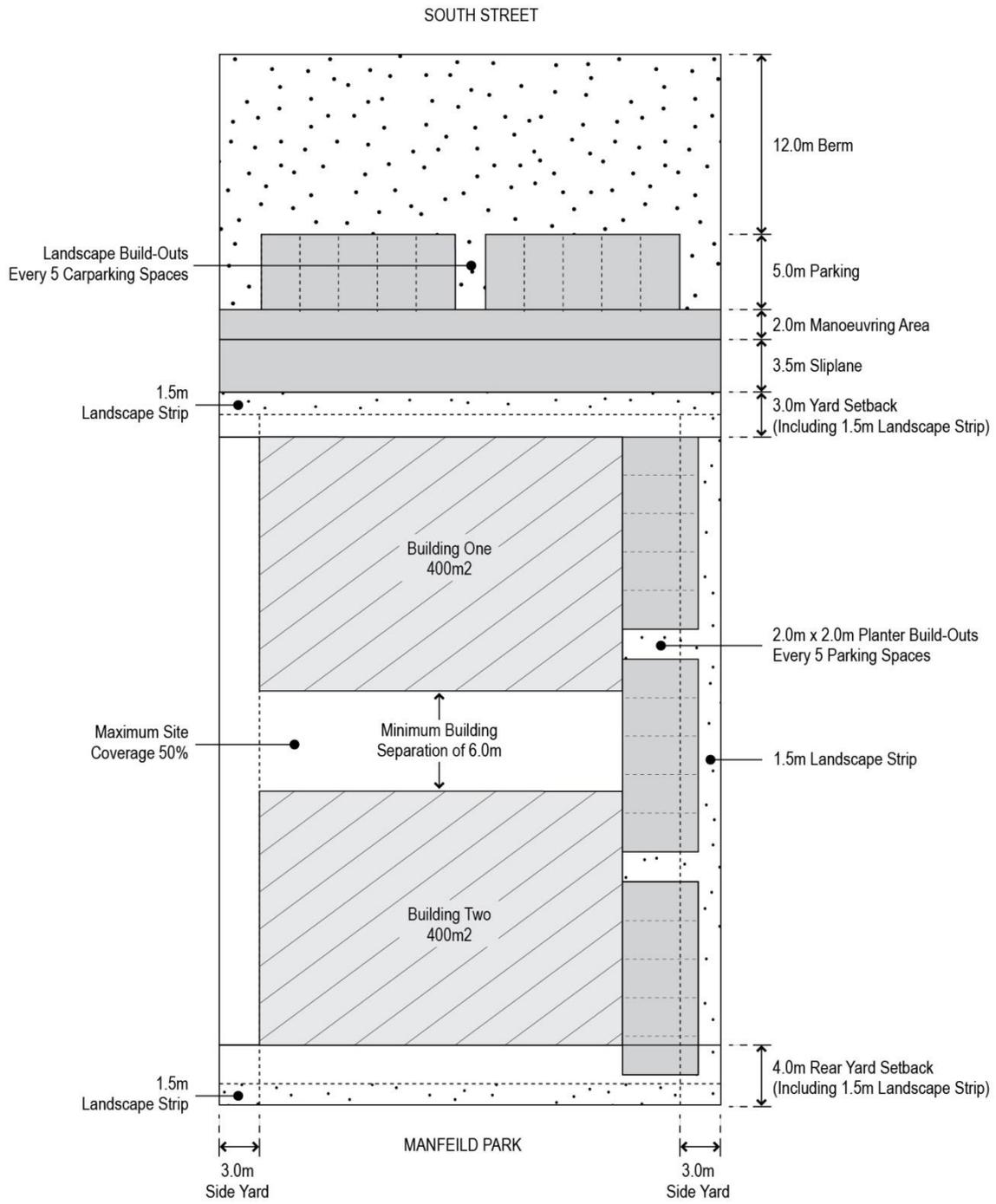
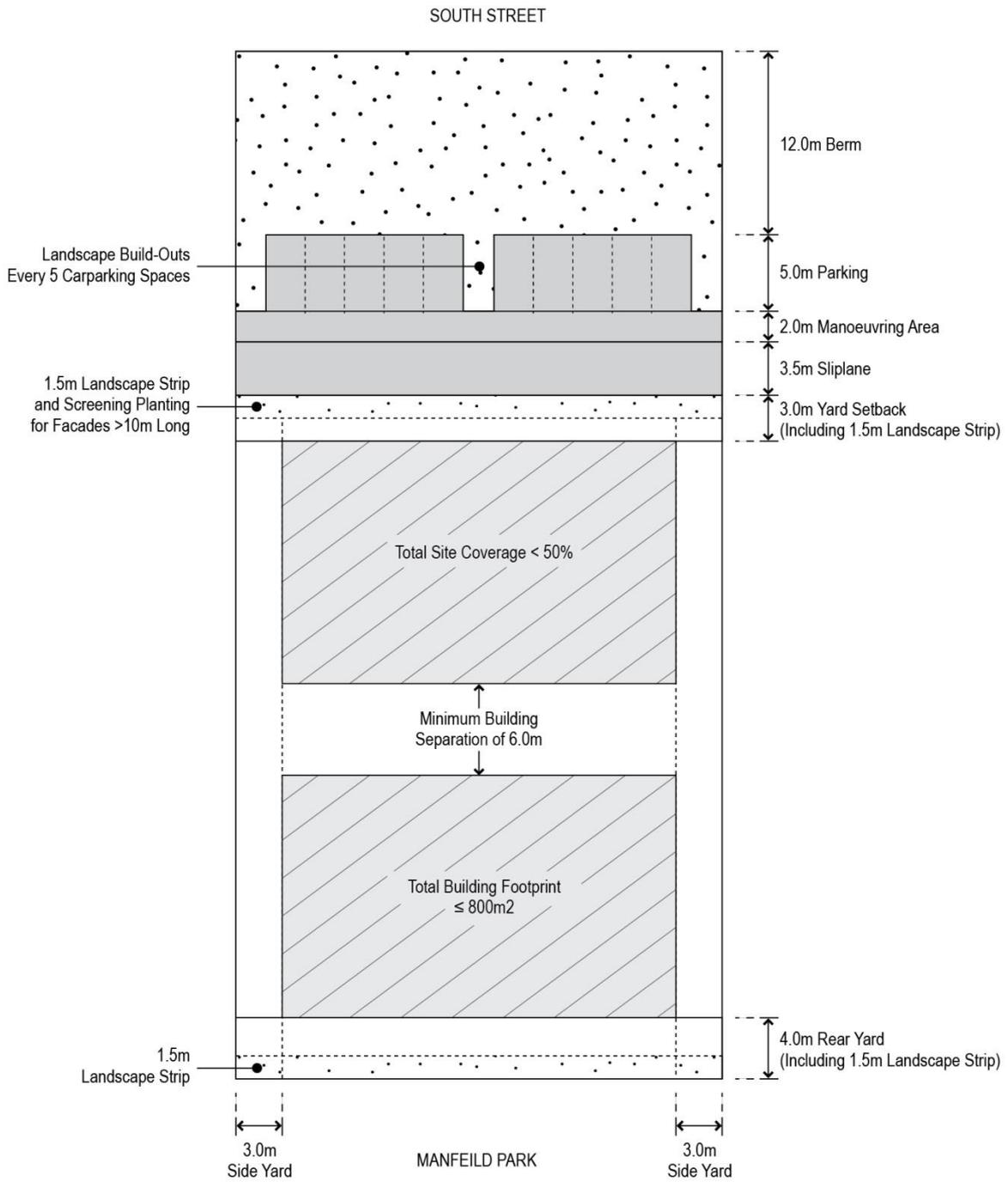


Diagram 6

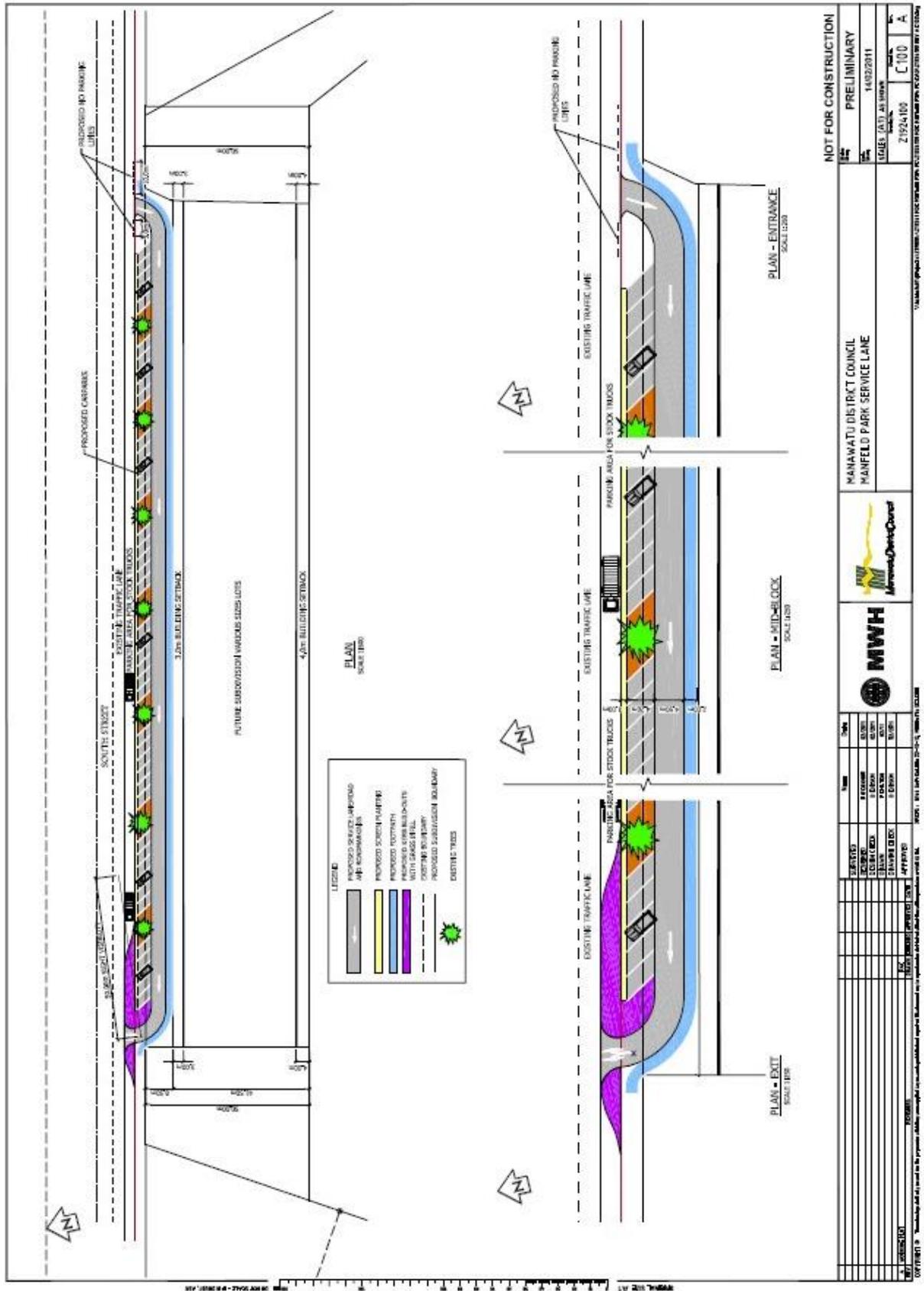
APPENDIX 8D SPECIAL DEVELOPMENT ZONE BUILDING COVERAGE EXAMPLES





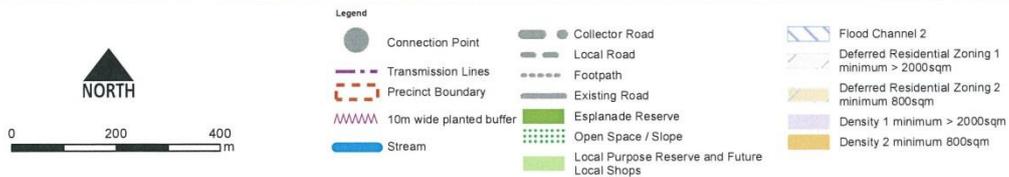
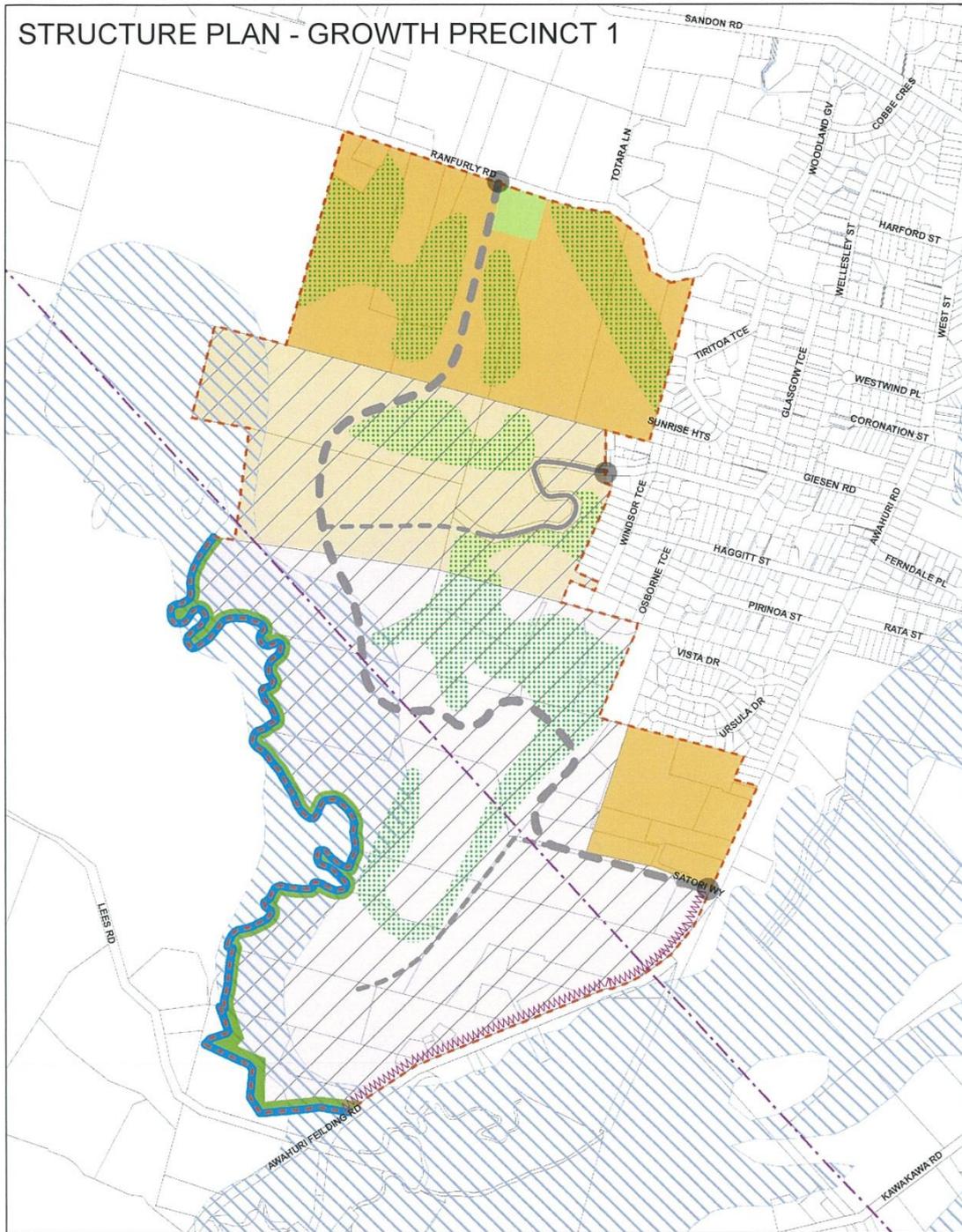


APPENDIX 8E SOUTH STREET SLIPLANE ACCESS



APPENDIX 9A STRUCTURE PLAN GROWTH PRECINCT 1

W09117_Precinct_1_Structure_Plan_A3



APPENDIX 9B STRUCTURE PLAN GROWTH PRECINCT 2

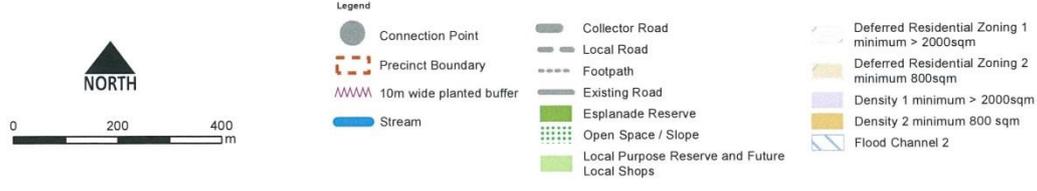
W09117_Precinct_2_Structure_Plan_A3



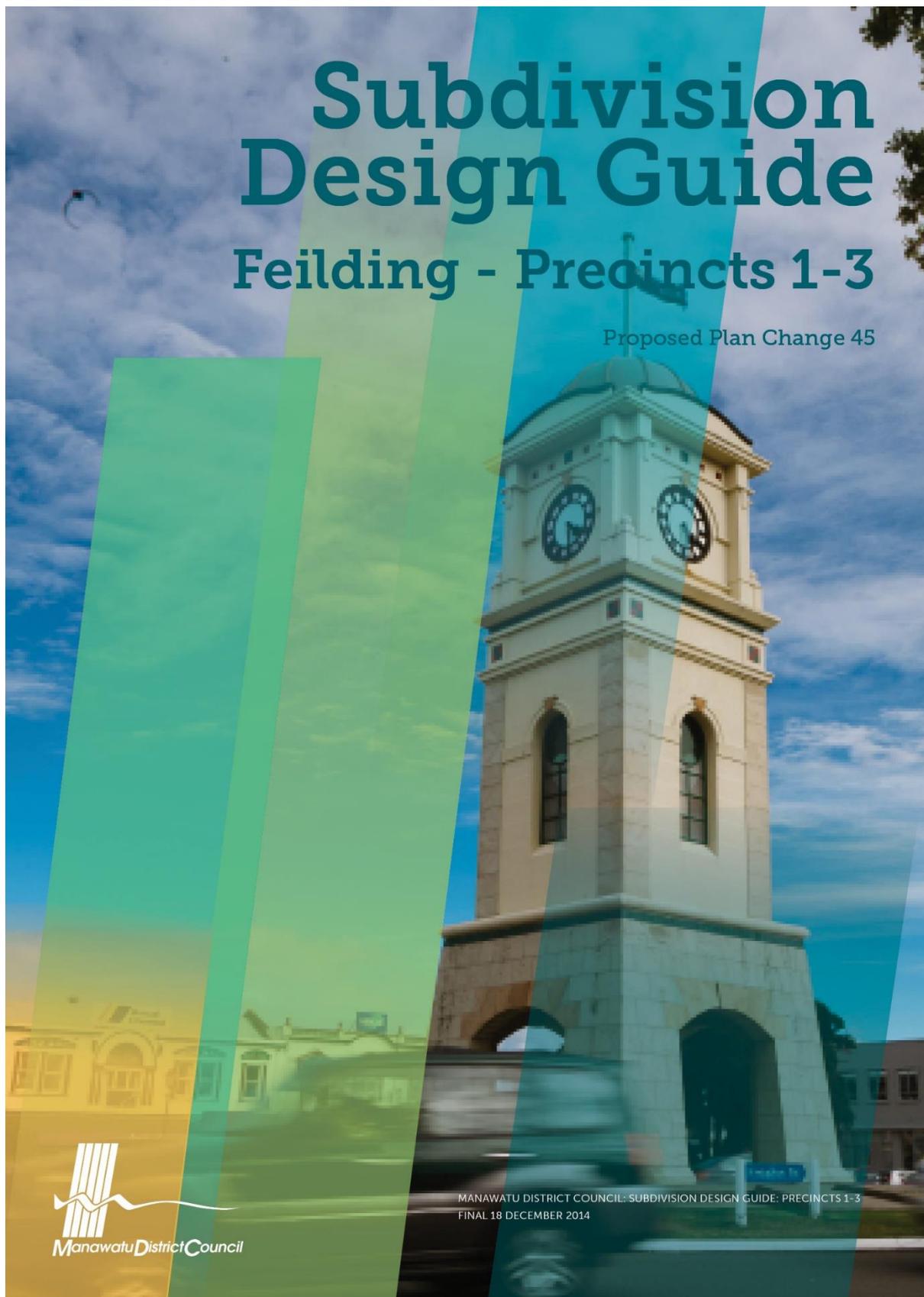
- Legend**
- Connection Point
 - Precinct Boundary
 - Stream
 - Collector Road
 - Local Road
 - Footpath
 - Existing Road
 - Esplanade Reserve
 - Open Space / Slope
 - Deferred Residential Zoning 1
minimum > 2000sqm
 - Deferred Residential Zoning 2
minimum 800sqm
 - Density 1 minimum > 2000 sqm
 - Density 2 minimum 800 sqm
 - Flood Channel 2

APPENDIX 9C STRUCTURE PLAN GROWTH PRECINCT 3

W09117_Precinct_3_Structure_Plan_A3



APPENDIX 10: SUBDIVISION DESIGN GUIDE



Subdivision Design Guide

Feilding - Precincts 1-3

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01 Introduction

The introduction to the Subdivision Design Guide provides an explanation as to its purpose, relationship to the District Plan and design process.

Subdivision Design Guide Purpose

The purpose of this guide is to give developers and subdivision designers a design process and guidelines on best practice subdivision and infrastructure design.

This guide sets out best practice design principles and illustrates their application in subdivision and infrastructure planning and design within the Feilding Growth areas known as Precincts 1-3 (refer Diagram 1).

The Design Guide provides a set of outcomes and guidelines to inform landowners, developers, potentially affected people and the wider community about subdivision expectations within the Feilding Growth areas.

District Plan Relationship

The Design Guide works in conjunction with the rules and standards in the Manawatu District Plan including the Structure Plans that provide a spatial plan for each of the Growth Precincts.

How it Should be Used

The Design Guide should be used by subdivision designers (be that landowners, surveyors, planners, engineers or others) from the earliest stages of the design process. It will be used by the Council in its assessment and decision making on applications under the District Plan for resource consents for subdivisions.

The Design Guide does not seek to impose rules on new development, or prescribe specific design solutions. Rather, it offers a flexible framework within which developers and surveyors can work. The Design Guide identifies key subdivision design principles to assist the integration of new subdivision development into the surrounding area and to enhance the character of the area.

Developers are encouraged to look beyond the minimum standards and consent requirements of the District Plan and engineering requirements and to explore opportunities that will enhance and create a better urban environment, for now and which will last well into the future.

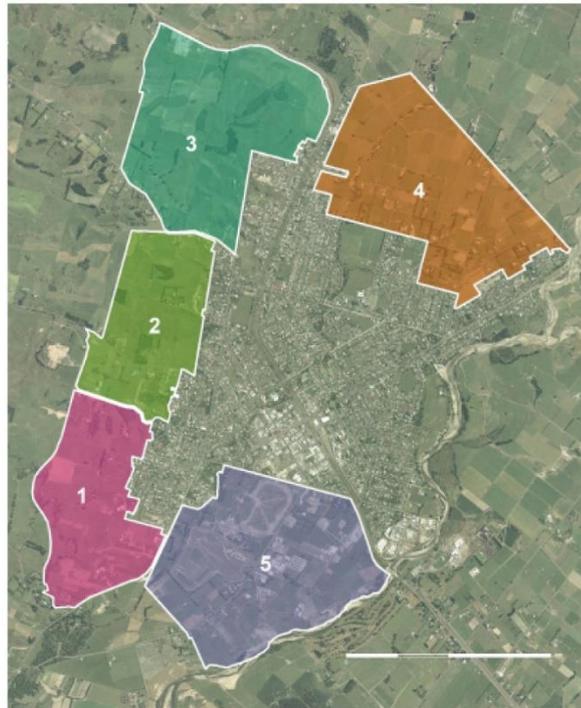


Diagram 1 showing locations and extent of Precincts 1-5

Design Process

To achieve the best outcomes in terms of design effectiveness and process efficiencies, the applicant and or/their advisers should consider the process described in Diagram 2. Diagram 2 illustrates the best approach to addressing design effectiveness and process efficiencies. Applicants and their advisers should consider this process when considering development.

Each of the process steps is described below as actions – these are not intended to be prescriptive, but are common to best practice subdivision design processes.

1. Research

- Be familiar with your site of interest and collect as much information as you can – aerial photos, cadastral plans, titles, any historical information about buildings, previous land uses, hazards such as flooding or slips, large trees, underground or overhead services etc.
- Read the Design Guide to understand what the Council is considering are important in subdivision design. This includes all outcomes, guidelines and landscape advisory notes.
- Look at the District Plan to see what the resource consent requirements are for both subdivision and land uses.
- In the District Plan there is a Structure Plan map. Look at this and locate your property of interest and see what the context is. Also look at any connections that need to be made, slope or open space areas, or buffers for example.
- Consider the professional assistance (eg surveyor, engineer, planner) you may need – each of these have professional institutes and have lists of people in our area to contact.

2. Communicate

- Meet with a Council officer to discuss your ideas. It may be that several different officers (eg to help with infrastructure enquiries, or roading) will need to assist. It may also be beneficial to have an initial meeting and then follow-up meetings as ideas evolve.
- Consider your neighbours' interests. Do you know them and what their plans are? There may be mutual benefits to you and your neighbours if there are road connections to be made for example.
- Council may need to process your subdivision application through a publicly notified process. It is usually good practice to at least know your neighbours' interests prior to that process as often there can be ways of adjusting subdivisions to reduce or eliminate any issues.



3. Assess

- There may be areas of the site that are constrained in some way eg by slope, proximity to incompatible uses, flooding hazard. Assess the site with a view to mapping and addressing these constraints.
- Assess the site and map for opportunities in the same way. There may be good views, flatter land, good connection points for streets or paths and proximity to a natural feature like a river for example.
- Overlay these constraints and opportunities on a map to see where the best locations for development areas are.
- If you are using a professional like a surveyor or planner they should do this with/for you. It is very useful to have this as background to support your subdivision application.

4. Design Options

- The position of streets and paths will be influential to the layout for lots and these will also be the likely position for infrastructure. An engineer or surveyor will usually need to be involved in this process.
- It would be advisable to see the Council again with a few options and get officers advice and comments. They will have some thoughts on how well the options satisfy the Design Guide intentions and District Plan rules and Structure Plans.

5. Document

- There are specific requirements that need to be satisfied when applying for a resource consent. Council will advise you of their information needs at your first meeting. It is important to follow this advice as Council will continue to ask for further information until it is satisfied that everything is complete. This will take more time and may add to processing costs for your application.
- Include in the documentation the information and research gathered, including photographs.
- The process of documentation is usually undertaken by a professional as they know the Council requirements and can provide an appropriate level of assessment.
- Submit the documentation to Council.

Outcomes

The outcomes sought by the application of the Design Guide for subdivision in the growth areas around Feilding are set out below. The subdivision and development outcomes sought are benefits in the form of:

- 1** An efficient design and consenting process which derives from early Council engagement and the clarity of Council's expectations as expressed by the guidelines.
- 2** Subdivision design that is responsive to existing on site constraints and opportunities.
- 3** Responsive house lot layouts which recognise the context of the area, or other potential development in the area which could generate conflicts between activities.
- 4** Developments which express the town's rural character and therefore have an identity and character which is unique to Feilding.
- 5** Efficient and cost effective infrastructure provision from clearer 'structure planning' for roads and other services that tie into Council's asset planning.
- 6** Good 'connectivity' within and between new development areas and the existing Feilding township which makes it easy and cost effective for people to move around by driving as well as walking and cycling.
- 7** Streets which are sized to suit the traffic use as well as encouraging walking and cycling. This will result in infrastructure which is cost effective and more attractive to live with and use than large wide unused roads.
- 8** Attractive entrances to the town of Feilding that derive from buffer planting on key entry roads.
- 9** Residential areas where houses all have a street frontage to encourage a healthy and safe community. Also areas where there are multiple opportunities for people to interact and passive surveillance of and from people using the street.
- 10** Safe and good quality open spaces which result from their careful siting, sizing, planting and the passive surveillance gained from adjoining land uses.
- 11** Amenity value of recreation and movement derived from parks, rivers and other open spaces connected as a network.
- 12** Cost effective and sustainable stormwater management through the provision of open stormwater swales in road design and on-site detention of peak flows.
- 13** Future proofing for the needs of future generations through the design of subdivisions to enable increased numbers of houses if required and small local commercial centres when the catchment is sufficient to support them.
- 14** Reduced risk of effects from natural hazards through designing carefully for sloping land areas or areas with flood potential.

Content

The guidelines for Precincts 1-3 focus on the provision of residential land uses.

The guide as it applies to Precincts 1-3 has sections which address:

- Context
- Street and Path Connections
- Density and Lot Layout
- Open Space and Natural Features
- Natural Hazards and Resilience
- Stormwater Management
- Utility Services Networks

For each of those sections there are up to 10 guidance points. The nature of subdivision design is that all of the points across all of the sections are interrelated and need to be considered together. The guidelines are illustrated with photographs and diagrams which are intended to be indicative only.

The Feilding Framework Plan

As background to these Design Guidelines and the District Plan provisions as they apply to the growth areas in Precincts 1-3, Council prepared a Feilding Framework Plan. This Framework Plan examined different forms of existing urban development in the town to understand what forms are most effective for the living environments. The Framework Plan also considered future growth projections and set out key principles of good urban design. An intended outcome from these guidelines is the achievement of those principles.

The Framework Plan also provided long term spatial plans for each of the Precincts that give indicative concepts for how the development could ultimately be provided for over time. The Framework Plan provides an indicative concept for testing infrastructure feasibility, potential yield of lot numbers, residential amenity opportunities, suitability of areas for development and for the purposes of costing of infrastructure.

Development Contributions

In terms of the costs of enabling the development within the Precincts through the provision of infrastructure, Council has determined that this infrastructure will be provided for as part of the Development Contributions Policy. The Structure Plans identify as 'deferred' those parts of the growth areas not considered necessary to meet projected demand over the long term. Services will not be provided to the deferred areas, but Council may consider subdivision applications within those deferred areas if the subdivider makes provision for those services independently of Council.

02 Context

The characteristics of the area around the land to be subdivided will vary from place to place. In order for the subdivision to integrate, connect and take advantage of those characteristics and mitigate any potential adverse effects that may arise from development, the design should be consistent with the following guidelines:

- C1 Consider the long-term future of the area around the subdivision and respond in design layout.
- C2 Consider the external and internal opportunities and constraints for the subdivision area as a deliberate part of the subdivision design process.
- C3 Ensure that at the rural interface, the subdivision design recognises the potential for adverse effects from incompatibility between residential amenity or activities and rural activities. For example, by positioning lots to enable an open space and/or planted buffer to be incorporated.
- C4 Consider that Feilding has a rural-town character and the subdivision design can take advantage of this distinctive attribute in the design of roads, or placement of building sites or open spaces. For example, it may be possible to direct roads to gain views towards rural land or house sites to get a rural aspect.
- C5 Consider the natural landforms in the wider landscape in the subdivision design. For example gaining long views out to hills or gaining the benefits of visual and open space amenity of the two rivers.
- C6 Ensure that subdivision design responds to the local climatic conditions. For example, organise lots so that buildings and outside areas can be positioned to have good sunlight access and shelter (be that from trees or building design) from prevailing winds.
- C7 Ensure that connection points for vehicles and walking/cycling and the adjacent areas (existing or zoned for growth) are provided for with the aim of enabling direct movement to local amenities. For example, the town centre.



Example of Framework Plan

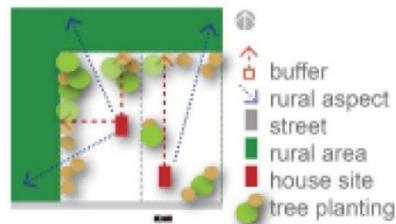


Diagram showing buffer and view opportunities



Example of rural aspect



Example of amenity of rivers

03 Street and Path Connections

The streets and path connections within the growth precincts of Feilding are important for moving people and goods between local destinations, and as public spaces that contribute to the visual and social amenity of the place. The Structure Plans identify the main streets (collectors and some local roads) which are intended to ensure connectivity between land in different ownerships. A more detailed street network (with frequent connections) is required to produce well connected residential subdivisions and the neighbourhoods these form. In order for these connections from subdivision to deliver on both function and amenity, the design should be consistent with the following guidelines:

- SP1 Ensure the street network shown on the Structure Plans is provided for in the first instance. Build on this connectivity, making sure street connections are integrated with the existing residential areas and can be extended to deferred zones in the future.
- SP2 Ensure the street type reflects the future anticipated role in the district network and as indicated on the Structure Plans. For example, only part of a street may need to be formed in the initial subdivision, but it may need to be added to in the future.
- SP3 Ensure that streets and paths are sized for the volume of their vehicle or pedestrian use, including vehicle type. Roads and streets that are too wide are an inefficient use of land, which generate larger stormwater runoff drainage needs, uncomfortably proportioned spaces and higher traffic speeds. For example, the collector and local road cross sections provide a generic guide.

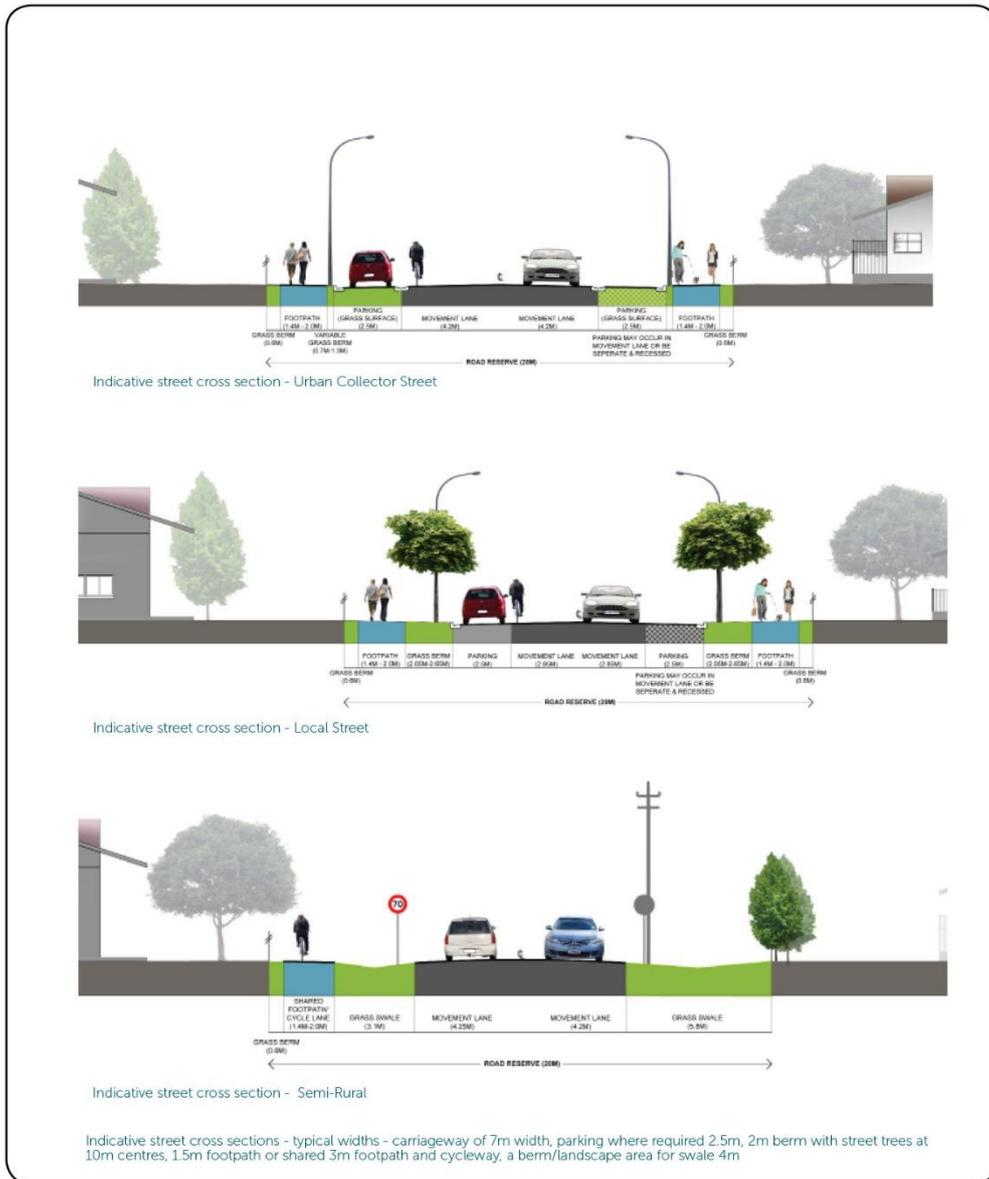
good



poor



The residential good example has the same road reserve width as the poor example. The good example has more amenity – grassed berm and street trees which give it a friendly scale. The poor example is very hard and the road area is over sized for the level of use by vehicles.



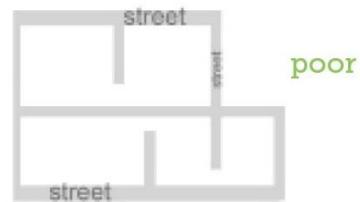
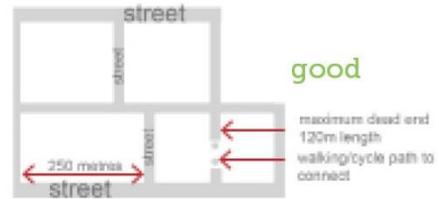
SP4 Ensure that there is good connections between streets. This enables a network that promotes efficient vehicle, walking and cycling movements.

SP5 Ensure that 'dead end streets' or cul-de-sacs are only used where the topography limits the ability to connect streets to others – in Precincts 1-3 there may be these situations. If these dead end streets are proposed for residential areas they should be no longer than 120m in length and preferably have a walking/cycle path connection from the end to another street.

SP6 Where a public street is not being provided (such as for a small number of lots) and private Right of Way access is being proposed ensure that all private way access is designed to have the same amenity considerations as a street including sufficient width for a path and trees.

SP7 Ensure that streets are designed to include cycling and walking paths with street tree planting in a grassed berm between the road and path. This provides visual amenity and a comfortable separation between activities. For example, the collector and local road cross sections provide a generic guide.

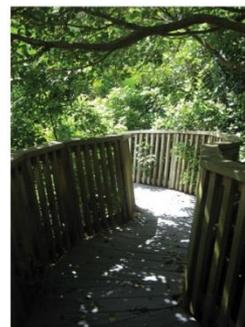
SP8 Ensure that where topographical constraints limit vehicle street connections, that a network of walking and cycle paths of a safe and comfortable size are provided. For example, between hill development areas or from hill development areas down to existing areas below.



Street network diagram - good connectivity and poor connectivity



Example shows path separated from road but still visible to provide passive surveillance

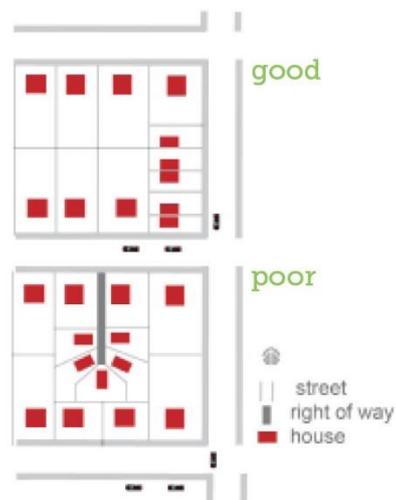


Example shows path connection that can connect between two topographically steep areas

04 Density and Lot Layout

The design of subdivisions, including the placement of streets (which forms the shape of blocks) and lots, is highly influential on the resultant quality of development once houses and other buildings are located there. Street layouts are described in Street and Path Connections above. To ensure the resultant density and layout of the development from subdivision delivers a quality place to live, the design should be consistent with the following guidelines:

- DL1 Ensure that all lots have frontage to a street (or a private way) with a width that is sufficient to enable the house to 'front' the street (or private way). No rear lots should be created.
- DL2 Ensure that for a cul-de-sac street, there is a maximum length of 120m and no more than 20 houses accessed from it. This will ensure that long lengths of disconnected 'dead end' streets are not prevalent in the subdivision design.
- DL3 Ensure that lots that have a boundary to an off road path, open space, river, or park are designed for the house to 'front' to that path, open space, stream or park with windows to a main living space. For example, orientating the local street alongside the path, open space, or stream to encourage house orientation towards it.
- DL4 Consider the provision of a range of lot sizes within the subdivision to provide for diversity in the house types and sizes to recognise the range of housing needs within Feilding.
- DL5 Ensure that larger (ie 2000m² or larger) lot layouts enable a future house to be positioned on that lot (or a further subdivision of that lot). For example, ensure a wide enough street frontage for a new house in the future.



Lot layout diagram - good example shows frontages for all and a two sizes of lots. poor example shows no frontage to small lots at rear.



Example shows frontage of residential properties to a park opposite - the street between the park and residential lots allows the good frontage.

DL6 Ensure that the slope of the land, including those areas identified on the Structure Plans as Open Space/Slope Areas, is considered in the lot configuration. It is noted that the identified areas are indicative only (ie there maybe other areas outside those shown) and are typically for areas with a slope of greater than 12 degrees. Development on land with a slope of up to 30 degrees may be possible, but erosion potential increases with slope. The guideline is to provide a house site and access that does not require large scale earthworks in the form of large height cuts. For example, buildings may have pile foundations or lots are provided at larger sizes so houses can avoid being built on steeper sloping land (refer also to the Horizons One Plan provisions).

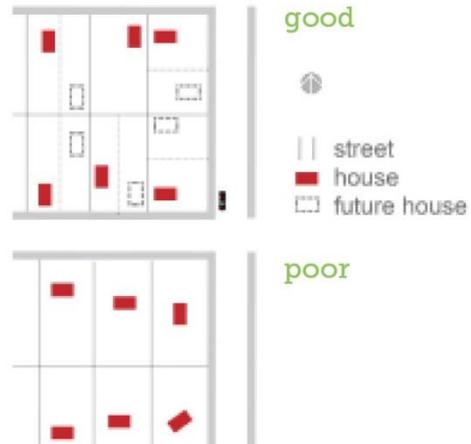


Diagram shows good arrangement of lots and house sites for the larger lot areas to enable later additional density. The poor example shows house sites not well located in terms of providing for future houses.

DL7 Consider the natural land forms in Precincts 1-3 in the positioning of lot boundaries and roads to avoid straight-line boundary fences or roads that cut unnaturally across the landscape. For example, arrange to follow contours or along gullies.

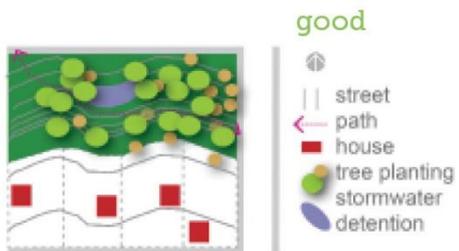


Diagram shows good arrangement of lots away from steeper land, less potential for fence lines cutting across contour, maintenance of vegetated slopes, ability to detain stormwater flow and a walking path link. The poor layout will require significant earthworks to create house locations and access, removes vegetation and will increase stormwater runoff.

05 Open Space and Natural Features

Precincts 1-3 include hillside land which is steep sloping and/or has existing vegetation which contributes to the visual amenity backdrop of Feilding. These hillside areas also contribute to the District’s ecological values, as well as stormwater runoff and erosion mitigation.

With the transition of currently rural land to residential uses in the Growth Precincts, there is also a need to consider the range of both formal and informal recreational and social needs of the people that will become resident and work there. In order for the resultant development from subdivision to benefit from the open space and natural features, as well as deliver a quality place to live, the subdivision design should be consistent with the following guidelines:

ON1 Ensure that public open space is provided for within the growth areas that will provide a local purpose reserve area for residents of the area. The Structure Plans have nominated a location for these in each of the higher density Precincts as required. Other public open space areas may be provided – for example smaller ‘pocket parks’ can add to the amenity of a new residential area provided these parks are well positioned, sized and shaped.



Good example has small street between open space and house front - this allows for low/no fences, provide passive surveillance. The poor example has park at back of house - this leads to fences being built

ON2 Ensure that public open space is located where it will have surveillance from houses, work places, passing vehicles or walkers/cyclists and is designed to be visually permeable from those streets and paths. For example, ensure that no fences are built, clear stemmed trees are used to form edges to the space to allow people to see out of and into the park, from surrounding streets.

ON3 Ensure that within the nominated locations for open spaces on the Structure Plans, that the subdivision layout provides for future local centre business (typically small local shops). Also ensure future development does not obscure the open space behind. For example, by the placement of roads to gain shop frontages and allowing for parking on the street.



Structure Plans show locations for larger open spaces and locations for local shops in the future.

- ON4 Ensure that open space is provided for in association with river corridors, gullies, and sloping land for conservation purposes, and as appropriate, for public access and recreation purposes. In some circumstances it is recognised that open space will be private.
- ON5 Ensure that public open spaces, such as those associated with the river corridors, gullies or on steeper slopes, are formed as a network of spaces that allow for active modes of movement (such as walking, cycling, jogging)
- ON6 Ensure that the provision and planting of buffer areas, shown on the Structure Plans, are designed to reflect their role as entry areas to the town and are comprised of large sized street trees that are either underplanted or able to be mown beneath.
- ON7 Ensure that the Crime Prevention through Environmental Design (CPTED) principles are provided for in the subdivision design of open spaces. These can be found on Council's website.

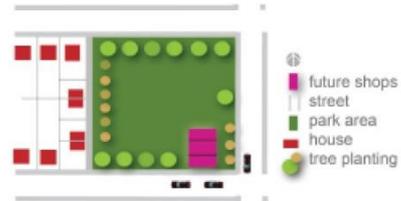


Diagram shows a new neighbourhood park with provision in future for shops. Note the small street at the park edge and smaller lots for houses to face the park



Example shows pathway beside waterbody in natural open space setting (photo Simon Devitt)



Example shows buffer planting of large street trees and underplanting of lower shrubs

06 Natural Hazards and Resilience

The growth areas of Feilding are located both on sloping and flat land where two watercourses (Makino Stream and Oroua River) flow. The natural hazards identified include flooding, liquefaction and erosion on the sloping areas. In order for the resultant development from subdivision to respond to these hazards and generate a resilient urban form, the subdivision design should be consistent with the following guidelines:

NR1 Ensure that the Open Space/Slope Areas, as shown on the Structure Plans, are recognised and provided for in the layout of the subdivision to maintain some sloping land as open space (refer to Open Space and Natural Features Guidelines). This helps to reduce erosion from runoff and peak flows into water courses in flood.

NR2 Ensure that stormwater runoff from roads, driveways and building roofs is managed (refer to Stormwater Guidelines) to minimise discharge peak flows. For example, the use of detention capacity in open spaces, rainwater tanks for each house lot, and swales in streets (refer to Streets and Path Connections Guidelines).

NR3 Ensure appropriate consideration is given to Horizons Regional Council flood hazard mapping, Building Act 2004, and any other relevant Regulations and Codes. Additional site investigations in the Precincts may be required to address these matters.

NR4 Ensure that infrastructure resilience is considered in subdivision design. For example, by interconnected street access, alternative service (eg water or power) provision, and non-mechanised infrastructure systems.



The Structure Plan identify approximately the sloping areas - these are face or gullies. The photograph show a gully which runs out towards the floodplain from the hill Precincts



The Feilding town sits on a flood plain. It is important to plan new development to recognise hazards and to minimise the extent to which new development may exacerbate them

07 Stormwater Management

Feilding has known stormwater management and flooding issues. Additional urbanisation can exacerbate this issue. The provision of extensive stormwater infrastructure adds to the cost of development. The use of “low impact” design techniques for stormwater management has the potential to be cost effective and minimise stormwater discharges. The subdivision design should be consistent with the following guidelines:

SM1 Ensure that subdivision design for stormwater run-off from the subdivision area is considered in the context of the whole Precinct and considered as a network – for example shared detention systems or network linkages with adjacent areas.

SM2 Ensure that stormwater neutrality is achieved in the subdivision. For example, through provision of a combination of open space areas, detention areas, swales, and other on-site management techniques.

If the following stormwater management techniques are utilised stormwater neutrality may be achieved within a subdivision:

- i) Providing 16m³ of property level on-site stormwater tank storage which discharges via orifice control to 10m of ‘french’ drain or soakway drain within each property; and
- ii) Roadside open drains to collect road runoff, directed to detention ponds located at subcatchment level to attenuate flows; and
- iii) Providing detention ponds with sufficient capacity to retain the road stormwater runoff.

Alternatively, the developer will need to apply a robust alternative method of stormwater management which limits any increases in flows to the Makino Stream and Oroua River to:

- i) A maximum impermeable area of less than 100m² per subdivision (including cumulative stages of the subdivision) contributing to the Makino Stream without mitigation; and
- ii) Pre-development levels in the 1% annual exceedance probability (AEP) plus climate change flood to 2090 to the Oroua River.

SM3 Ensure that stormwater networks being provided for as part of street design are incorporated into the subdivision design. For example, the collector and local road cross-sections provide a generic guide.

SM4 Consider the benefit to stream water quality from stormwater management by minimising hard surface areas (such as parking, driveways, roads etc) and the use of swales and detention areas that gives runoff some settlement and filtering time prior to discharge

SM5 Consider the management of roof rainwater and its potential for collection and use for garden watering.



Examples show the network process - collection of stormwater at source - to rainwater tanks from roofs and to swales from roads, the direction of that runoff to a filtering area and then its discharge finally through a re-vegetated local stream to the receiving water course.

08 Utility Services Networks

The Feilding growth precincts are intended to be more urban than rural in character. Being adjacent to the existing urban area the precincts can readily be connected with utility service extensions for waste water, water supply, stormwater and power, telephone and other utilities. Council plans the supply of its utility assets and any upgrading of capacity according to estimated demand and where this occurs in the network. In order for the design of utilities to be efficient and cost effective, the subdivision design should be consistent with the following guidelines:

- US1 Ensure that the utility provision as part of subdivision design coordinates with Council's wider network design provision.
- US2 Ensure the utility provision is planned for on a Precinct wide basis to provide for maximum efficiencies in the cost of implementation. This planning may include larger capacity infrastructure to provide for future connections.
- US3 Ensure that utility provision is for reticulated services including for waste water unless residential lots are larger than 5000m² in which case these may be able to be serviced on site (refer to Horizons One Plan).
- US4 Ensure provision of utilities by the subdivider/ developer where growth precincts are proposed to be advanced ahead of Council's asset planning and in the deferred areas of development as shown in Structure Plans.