

appendix 14

design standards

AP14 introduction



AP14.i The following standards apply to the subdivision of land in addition to the rules relating to the respective zones.

AP14.1 general



AP14.1.i As set out in the zone rules, if a subdivision complies with all relevant Plan provisions, it will be assessed as a controlled activity. The following standards, together with other relevant parts of the Plan, will then be used for setting consent conditions. Where a subdivision does not comply, and a consent for a discretionary or non-complying activity is needed, the following standards, together with other relevant parts of the Plan, including the objectives and performance criteria in Appendix 13 (engineering performance standards), will provide a guide in the assessment of any application, including setting consent conditions.

AP14.5.ii All services should avoid cross intersections and extend to property boundaries in a manner that will ensure the efficient use and development of any adjoining land, having regard to the provisions of this Plan.

AP14.1.iii Where any infrastructure assets are to be owned or maintained by the Nelson City Council, they must be constructed to comply with the Nelson City Council Engineering Standards as adopted or amended from time to time by resolution of the Council.

AP14.2 stormwater



AP14.2.i Stormwater runoff will be dealt with in the catchment in which it falls.

Ap14.2.ii All systems must be designed to accept the flow from upstream of the subdivision and must be of sufficient capacity to provide for maximum flows from possible future development indicated by zoning and overlays in this Plan.

AP14.2.iii Every allotment must be provided with a piped gravity outfall connected to an existing Council stormwater drain that is available and has the capacity to carry the potential volume of stormwater likely to emanate from the allotment following subdivision. (The capacity of the drain means the capacity of the length of the drain from the allotment to, and including, its outfall to a water body or coastal water.)

AP14.2.iv Rule AP14.2.iii does not apply in the Rural Zone or in the Conservation Zone.

AP14.3 sewerage



AP14.3.i Every allotment shall be provided with a piped gravity outfall connected to an existing Council sewer that is available and has the capacity to carry the potential volume of sewage likely to emanate from the allotment following subdivision. (The capacity of the sewer means the capacity of the length of the sewer from the allotment to, and including, the treatment facilities.)

AP14.3.ii Rule Ap14.3.i does not apply in the Rural Zone or in the Conservation Zone.

AP14.3.iii Every allotment created by subdivision in the Rural Zone or in the Conservation Zone must be provided with a means of disposing of sanitary sewage, within the net area of the allotment that avoids adverse effects on the environment or human health. Compliance with the NZ standards for on-site domestic wastewater management will help ensure adverse effects are avoided.

AP14.4 water



AP14.4.i Every allotment must be provided with a potable water supply which is sufficient for the anticipated use of the land following subdivision. For residential activities, a sufficient supply is considered to be 1m³ per day per dwelling (3 bedrooms), or the pro-rata equivalent for visitor accommodation based on the number of bedrooms. For stock purposes, a sufficient supply is considered to be the daily stock unit requirements at average carrying capacity (190l/ha per day). For irrigation, a sufficient supply is considered to be the specific crop requirements taking into account factors that influence requirements such as appropriate scheduling, rate of application, crop type, soil and site characteristics and application method.

AP14.4.ii Water intake structures for water takes shall be designed and constructed in a way that prevents fish entering the structures to the following standards:

- a) a maximum water velocity into the structure that is no greater than 0.5l/s, and
- b) the intake to be screened with mesh spacing that is no larger than 1.5mm in one dimension, and
- c) the intake screen to be located at least 0.5m into the water column.

AP14.4.iii Water meters in the Rural Zone shall be installed and maintained on the outlet of the pump for all consented abstractions so that:

- a) the meter can be read quarterly and daily use estimated by dividing the use by the number of days, and
- b) a quarterly return is provided to the Nelson City Council Consents Manager by no later than 10 working days after 28 February, 30 May, 30 August and 30 November each year, and
- c) the water meter shall be capable of measuring to an accuracy of at least plus or minus 5% and it is to display the water taken to within at least 1m³, and
- d) the water meter shall be installed to the manufacturer's specifications and maintained to the specified requirements and in a working condition at all times.

AP14.4.iv Water supply reticulation must be gravity fed and adequate for the likely supply requirements and fire fighting purposes.

AP14.4.v Every allotment connected to the Council water supply system must be equipped with an approved water meter assembly, located on the road side of a road boundary at a point where it is clear of vehicle and traffic movements and readily accessible for meter reading. Compliance with the Nelson City Council Engineering Standards for design and location of meter assemblies will be accepted as complying with this rule.

AP14.5 road standards



AP14.5.i Roads and rights of way must conform to the general road network standards in order to prevent traffic hazards and to enhance the efficiency of the network.

AP14.5.ii The minimum road, carriageway, footpath and other standards will be as set out in Table 14.5.1 overleaf (roading formation requirements). The road width will be extended if necessary to accommodate any structure or formation required by the construction of the road.

AP14.5.iii Note: Any new road which will require vehicles to cross a river must meet the requirements of the freshwater rules relating to vehicle crossings in rivers and bridges, culverts and fords.

AP14.6 power and telecommunication services



AP14.6.i Every site must be provided with electric power and telecommunication services, appropriate to the circumstances of the site.

AP14.6.ii Any power and telecommunication cables must be laid underground in all zones, except the Rural Zone and the Conservation Zone. (Junction boxes for underground cables are permitted above ground if they do not exceed 600mm high and 0.5m² in area.)

table 14.5.1 - roading formation requirements

Type	Description	Potential traffic Note AP14.n3	Lane width	Cycle lane width on road	Parking width	Carriageway width	Number of footpaths and width	Number of berms and width Note AP14.12		Minimum road reserve width Note AP14.n1	Maximum grade	Refer to notes (overleaf)
								For services	For landscape Note AP14.n9			
I	Arterial	>500 HCV/day or	4@ 3.5m+1.0m median	2@ 1.2	2@ 2m	21.4m	2 @ 3m Comm otherwise 2 @ 2m	N/A Comm otherwise 2 @ 1.6m	N/A Comm otherwise 2 @ 1m	20.4 m Comm otherwise 21.6m for 2 lanes	1 in 8	
		>10,000VPD	2@ 4.0m	2@ 1.2	2@ 2m	14.4m				30.6m for 4 lanes		
II	Principal	250-500 HCV/day or 5000 - 10,000VPD	2@ 3.5m	2@ 1.2	2@ 2m	13.4m	2 @ 2m	2 @ 1.6m	2 @ 1m	20.6m	1 in 8	
III	Collector or major Res or Comm or Indust	50-250 HCV/day or 1,000-5,000	2@ 3.0m	2@ 1.2	2@ 2m	12.4m	2 @ 1.4m against kerb	2 @ 1.6m	2 @ 1m	20.4m	1 in 8	
		VPD or >10,000m ² Ind land					2 @ 1.4m away from kerb	4 @ 1.1m		21.6m		
IV	Rural	<50 HCV/day	2@ 3.0m	N/A	2@ 0.5m unsealed shoulder	7m	N/A	2 @ 2m	N/A	12m Note*Ap14.n2	1 in 8	Note Ap14.n2
V	Minor Res or cul-de sac	>12 potential residential	2@ 2.5m	N/A	2@ 2m	9m	2 @ 1.4m against kerb	2 @ 1.6m	2 @ 1m	17m	1 in 8	Note Ap14.n5
		units 25-50 HCV/day					2 @ 1.1m away from kerb	4 @ 1.1m		17.6m		
VI	Minor Res or cul-de-sac on steep hillside	>12 potential residential units 25-50 HCV/day	2@ 2.5m	N/A	1@ 2m	7m	1 @ 1.4m against kerb	1 @ 1.6m + 1 @ 1.1m opposite path	1 @ 1m	13.1m	1 in 7	Note Ap14.n5 Note Ap14.n6

Note: Activities under the description column in excess of the potential traffic factor are a discretionary activity in terms of the relevant access rule in each zone.

Type	Description	Potential traffic Note AP14.n3	Lane width	Cycle lane width on road	Parking width	Carriageway width	Number of footpaths and width	Number of berms and width Note AP14.12		Minimum road reserve width Note AP14.n1	Maximum grade	Refer to notes (overleaf)
								For services	For landscape Note AP14.n9			
VII	Minor cul-de-sac	<12 potential residential units	2@ 2.5m	N/A	1@ 2m	7m	1 @ 1.4m	N/A	N/A	8.4m	1 in 7	Note Ap14.n5
VIII	Residential private access	5-6 potential residential units	5m	N/A	N/A	5m	N/A	N/A	N/A	5m	1 in 6 average over any 50m 1 in 5 max	
IX	Residential private access	2-4 potential residential units	2.9m	N/A	N/A	2.9m	N/A	N/A	N/A	3m Note*AP14n.10	(not average) over any 10m	Note Ap14.n4
X	Residential private access	1 potential residential unit or rural allotment <2,000m ²	2.6m unsealed	N/A	N/A	2.6m	N/A	0.4m	N/A	3m	1 in 5 1 in 4 with concrete surface	Note Ap14.n4 Note Ap14.n11
XI	Rural private access	1-6 potential residential units	4m unsealed	N/A	N/A	4m	2@ 0.5m shoulder (not footpath)	2@ 1m	N/A	7m Note Ap14.n2	1 in 5 1 in 4 with concrete surface	Note Ap14.n4 Note Ap14.n11
XII	Industrial/commercial private access	Single allotment <2000m ²	3m	N/A	N/A	3m	1@ 1.1m	N/A	1@ 1.6m adjoining Res Zone	5.7m adjoining Res Zone otherwise 4.1m	1 in 7	
XIII	Industrial/commercial private access	Land area 2,000 m ² to 10,000 m ²	2@ 3.0 m	N/A	N/A	6m	1@ 1.4m	N/A	1 x 1.6m adjoining Residential Zone	9m adjoining Residential Zone, otherwise 7.4m	1 in 8	
XIV	Commercial and Industrial road	Up to 50 HCV/day or 1,000 VPD	2@ 3m	N/A	2@ 2m	10m	3m fronting Commercial Zone	N/A	N/A	16m	1 in 8	
XV	Steep hillside private access	1-10 potential residential units	5m sealed	N/A	N/A	5m	2 @ 0.5m shoulder (not footpath)	N/A	N/A	7m	1 in 5	Note Ap14.n.4 Note Ap14.n.11

AP14.n notes

- AP14.n1 Additional road reserve width must be provided to:
- accommodate any retaining structure or slope necessary to support the road or adjacent property, or
 - achieve a complying horizontal alignment, or
 - accommodate any turning area required by AP14.n5
- AP14.n2 For each side of the road where kerb and channel is provided, a 2m parking lane will be required instead of a 0.5m unsealed shoulder. The berm may also be reduced to 1m.
- AP14.n3 In residential areas the number of potential residential units will be based on the relevant minimum allotment size as in the Residential Zone Rules, or the actual number of residential units proposed, whichever is the greater.
- HCV means heavy commercial vehicles.
 - VPD means vehicles per day.
- AP14.n4 Passing bays must be provided on any single lane access at intervals of 25m in an Industrial, Commercial, or Residential Zone and 60m in a Rural Zone. Passing bays may be used for vehicle access to an allotment, eg. the vehicle entrance to a garage.
- AP14.n5 An area must be formed at the end of the cul-de-sac to allow the 90 percentile two axle HCV to undertake a three point turn (refer to figure in Appendix 12 - tracking curves).
- AP14.n6 Steep hillside means a road formed on ground that has an average slope of greater than 20
- AP14.n7 RES and RESIDENTIAL means in a Residential Zone except in the case of Type X where rural allotment <math> < 2000\text{m}^2 </math> applies to such allotments in a Rural Zone.
- RURAL means in a Rural Zone
 - COMM means the Inner City Zone or the Suburban Commercial Zone
 - INDUST means an Industrial Zone
- AP14.n8 All dimensions are metres (m).
- AP14.n9 The width required for landscape is a continuous strip adjacent to the footpath and free of other services. As a controlled activity, this landscape berm width may be replaced (except in Types I, II, III) either by a central island with nominal dimensions of 5m by 20m and kerb extensions at intervals of 150m, or by an area nominally 3m wide by 5m long set back at intervals of 150m on each side of the road.
- AP14.n10 For 2 to 4 residential units this may be reduced to a width of 2.6m where the proposed access passes between an existing dwelling and an existing boundary of the site being developed. Provided also that the distance between that dwelling and that boundary is less than 3.3m.
- AP14.n11 Except as otherwise required in Appendix 11 (access standards), all private access must have a permanent surface for a minimum distance of 5m into the site from the legal boundary of the road.
- AP14.n12 The layout for services and landscaping must be in accordance with recognised sound engineering practice and relevant and compatible with approved practices, services and design used in Nelson City. Compliance with Nelson City Council Engineering Standards and achievement of the engineering performance standards set out in Appendix 13 will be taken as compliance with this clause. (Refer also AD13.3.ii - Nelson City Council engineering standards).
- AP14.n13 Where a road or access serves land in more than one zone, the requirements for footpaths and berms on each side of the road or access shall be as required for the adjoining zone. The requirements for lanes and parking shall be in accordance with the maximum required for any of the adjoining zones.



Table 14.5.2 acceptable techniques for building over piped sewers or stormwater drains

These are alternatives to the provisions of the rules in the rule tables. See rule “Building over or alongside drains and water mains”, in the rule tables (excluding the Rural, and the Conservation Zone).

Technique A	Technique B
Applicable in the following zones: Industrial, Suburban Commercial, Open Space and Recreation, and Inner City.	Applicable in the following zones: Industrial, Suburban Commercial, Open Space and Recreation, Inner City, and Residential.
Structures may be located over common private or public sewer or stormwater drains or pipes, if: <ul style="list-style-type: none">i) there are no changes in direction or junctions in the portion built over; andii) the drain or pipe is proven to be in good condition by internal inspection or a water test; andiii) the floor is constructed with lift out sections, and all foundations are designed to allow the entire drain or pipe to be readily exposed for maintenance and replacement work; andiv) where the diameter or width of the pipe or pipe equivalent (in the case of a drain) is greater than 300mm, the design and use of the structure is such that a 12 tonne excavator and trucks could readily gain access along the line of the pipe or drain for maintenance and replacement work; orv) where the diameter or width of the pipe or pipe equivalent (in the case of a drain) is 300mm or less, the design and use of the structure is such that an appropriately sized excavator could readily gain access along the line of the drain for maintenance and replacement work, or appropriate access is available for hand digging.	Structures may be located over common private or public sewer or stormwater drains or pipes, if: <ul style="list-style-type: none">i) the diameter or width of the pipe or pipe equivalent (in the case of a drain) is 150mm or less; andii) the length of pipe or drain built over is no more than 6 metres; andiii) there are no changes in direction or junctions in the portion built over; andiv) the length of pipe or drain built over is relaid using a continuous length of pipe without joints, sleeved inside a 225mm diameter Z class concrete pipe; andv) there is practical access and the foundations are designed to allow the pipe or drain to be readily exposed at both ends of the sleeve for maintenance and replacement work; andvi) there is a minimum 6m clear length at one end of the sleeve to allow replacement of the pipe or drain.