CHAPTER 6 OTHER DEVELOPMENT CODES

CHAPTER 6 - OTHER DEVELOPMENT CODES

PART 2 RECONFIGURING A LOT DESIGN CODES

Division 1 Preliminary

1.1 Codes for Reconfiguration of a Lot Development

The provisions of this part comprise the following codes:–

(1) Urban Residential Subdivision Design Code;

(2) Park Residential Subdivision Design Code;

(3) Rural Residential Subdivision Design Code;

(4) Industrial Subdivision Design Code;

(5) Commercial Subdivision Design Code;

(6) Rural Subdivision Design Code;

(7) Boundary Relocation Design Code;

(8) Subdivision by Lease Design Code;

(9) Access Easement Subdivision Design Code; and

(10) Subdivision in all Other Zones Design Code

Division 2 Urban Residential Subdivision Design Code

2.1 Overall Outcome

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Urban Residential Subdivision Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Neighbourhoods are safe and attractive;

(4) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(5) Lots have adequate ***site*** drainage to meet user requirements;

(6) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(7) Stormwater management solutions are integrated with other uses and the natural environment;

(8) Lots have adequate, safe, convenient and structured road access systems;

(9) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(10) Pedestrian and cyclist networks are safe, convenient and legible;

(11) The subdivision layout ensures that existing or potential public transport services are accommodated;

(12) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(13) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

2.2 Compliance with the Urban Residential Subdivision Design Code

Development that is consistent with the specific outcomes in Sections 2.3.1 to 2.3.9 complies with the Urban Residential Subdivision Design Code.

2.3 Development Requirements

The development requirements of this code relate to the following elements:-

(2.3.1) Lot Layout – Single Detached Housing

(2.3.2) Lot Layout – Detached Houses on Small Residential Lots

(2.3.3) Lot Layout – Community Titled Residential Development (not subdivision of existing or approved buildings)

(2.3.4) Stormwater Management

(2.3.5) Road Networks (excludes State-controlled Roads)

(2.3.6) Utilities

(2.3.7) Pedestrian and Cyclist Networks

(2.3.8) Public Transport

(2.3.9) Park

Note: ***The minimum lot sizes in this code may be affected by the Regulatory Provisions of the South East Queensland Regional Plan.***

Specific Outcomes for Assessable Development	Probable Solutions
2.3.1 Lot Layout – Single Detached Housing	
SO 1 Residential lots have appropriate area and dimensions for:- (1) siting and construction of a dwelling and ***ancillary outbuildings***; (2) the provision of private open space; (3) convenient and safe vehicle access; and (4) on ***site*** car parking.	**PS 1** All residential lots:- (1) contain a rectangular building envelope of 13m x 25m minimum, using standard setbacks; (2) provide for a private open space area of 80m² min & 2.5m minimum width; (3) have frontage access to a road not exceeding Collector standard (i.e. no frontage access to Trunk Collector Roads and Major Roads); and (4) accommodate car parking on ***site*** for 3 medium passenger vehicles with at least one within the building envelope. Accessways for rear lots:- (1) have a minimum width of 5m; (2) have a maximum length of 40m; (3) have a minimum length of 15m; and (4) are constructed and sealed to a minimum width of 2.5m **OR** All residential lots, except rear lots, have a minimum area of 600m² and contain a minimum rectangle of 15m x 25m. All residential rear lots have a minimum area of 800m² and contain a circle 25m in diameter. Accessways for rear lots:- (1) have a minimum width of 5m; (2) have a maximum length of 40m; (3) have a minimum length of 15m; and (4) are constructed and sealed to a minimum width of 2.5m
SO 2 Residential lot shape and dimensions take into account the slope of the land.	**PS 2** The residential lot depth and road frontage conforms to the following:-

Average Lot Slope* (%)	Minimum Lot Depth (m)	Minimum Lot Frontage (m)
< 16	not specified	not specified
16 to 25	40	18
25 to 40	45	20
> 40	50	22

** after bulk **site** earthworks (if carried out) and before lot earthworks/retaining walls - measured perpendicular to the road frontage*

SO 3 All lots have road frontage.

PS 3 All lots have road frontages conforming to the following:-

Location	Minimum Frontage (m)
Residential lots - all locations except the head of a cul de sac and the outside of a bend in the road with a deflection angle exceeding 60°	17
Residential lots - head of a cul de sac	10(1)

Specific Outcomes for Assessable Development	Probable Solutions
	Residential lots - outside of a bend in the road with a road centreline deflection angle exceeding 60° : 10(1)
	Residential lots - rear lots : 5(1) for a single rear lot; 4(1) for more than one rear lot served by a shared driveway
	Notes: *1. Subject to on street car parking requirements being met.* *2. No specific solutions are provided. Solutions will need to be adapted to suit the particular **site** access requirements, **site** constraints and features.*
SO 4 Residential lots do not contain major drainage flow paths.	**PS 4** The residential lots do not contain overland flow paths for the 100 year ARI storm event.
SO 5 Residential lots have adequate freeboard to major flood levels in rivers, creeks, ***watercourses*** and engineered open drains to facilitate dwelling construction without the need for levies or special dwelling design for flotation.	**PS 5** The residential lots are developed to the following finished surface levels: **Location** / **Minimum Development Level Requirements** / **Minimum Area above required Minimum Development Level** Adjacent rivers, creeks and ***watercourses*** : Q100 flood level + 750mm : 2000m² (where lot area is <2000m², then the whole lot area) Adjacent engineered channels : Q100 flood level + 500mm : 2000m² (where lot area is <2000m², then the whole lot area)
SO 6 Residential lot road frontages have sufficient width to allow easy and safe access.	**PS 6** Residential lots at the corner of Residential Streets (Collector and below) and Major Roads (Sub Arterial or Arterial) have a minimum frontage of 50m to the Minor Road.
SO 7 The layout is integrated with the surrounding environment, complement existing attractive streetscapes and landscapes, and provide for shared use of public facilities by adjoining communities.	**PS 7** No solution provided.
SO 8 The lot layout retains special features on ***site*** such as significant trees and vegetation.	**PS 8** No solution provided.
SO 9 Residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.	**PS 9** The residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and ***watercourses***. The residential lots are not located below the predicted 100 year storm tide surge level.
SO 10 Residential lots are not located on land which is prone to land slip or subsidence.	**PS 10** No solution provided.
SO 11 Residential lots are designed to facilitate the siting of dwellings to take advantage of microclimate benefits. **SO 12** Residential lots have appropriate siting, orientation and dimensions to allow a high level of solar access.	**PS 11 and PS 12** The majority of the lots are rectangular in shape rather than splayed. The majority of the long boundaries of the lots are within the following orientation ranges: (1) 20° west of true north to 30° east of true north (340°- 30°); (2) 20° north of true east to 30° south of true east (70° - 120°); (3) 20° east of true south to 30° west of true south (160° - 210°); and

Specific Outcomes for Assessable Development	Probable Solutions
	(4) 20° south of true west to 30° north of true west (250° - 300°). East-west lots are wider than the minimum determined by building envelope requirements to allow for good solar access as overshadowing of the north aspect is more likely in this situation, unless two ***storey*** construction has been restricted.
SO 13 Residential lots are not subjected to unreasonable noise impacts.	**PS 13** Traffic noise amelioration measures are provided to ensure residential lots are not exposed to long-term noise levels exceeding 63dB(A)$_{L10(18hours)}$ from Major Roads and transport corridors. These measures are determined in accordance with ***Council's*** Traffic Noise Policy. Appropriate property notes are placed on residential lots where the long-term noise levels exceed 55dB(A)$_{L10(18hours)}$ (adjusted for facade reflection). A noise assessment report is provided to establish the predicted noise levels for any development that is within 500m (straight line measure) of a Major Road or State controlled road. For significant noise sources, other than road traffic and railways, appropriate noise amelioration measures are provided to ensure residential lots are not exposed to long-term noise levels exceeding the background noise level plus 5dB(A) and 55dB(A)$_{L10(18hours)}$.
SO 14 Residential lots are not subjected to unreasonable air quality impacts.	**PS 14** The residential lots are not located closer than 100m (straight line measurement) to an existing or planned future sewerage pump station. No specific solutions are provided for residential development close to State controlled roads.
SO 15 Residential lot frontages are orientated to facilitate personal and property safety, surveillance of footpaths and public open spaces, and to deter crime and vandalism.	**PS 15** No solution provided.
SO 16 The layout ensures that residents exposure to electro-magnetic fields (from powerlines) exceeding 2mG is minimised.	**PS 16** Residential lots are not exposed to electro-magnetic fields (from powerlines >33kV) exceeding 2mG (average).
2.3.2 Lot Layout – Detached Houses on Small Residential Lots	
SO 17 Residential lots have appropriate area and dimensions for:- (1) siting and construction of a dwelling and ***ancillary outbuildings***; (2) the provision of private open space; (3) convenient and safe vehicle access; and (4) on ***site*** car parking.	**PS 17** All residential lots:- (1) contain a rectangular building envelope of 8m x 18m minimum with one side boundary at zero setback; (2) provide for a private open space area of 80m^2 min and 2.5m minimum width and with one area which can contain a circle with a diameter of 5m; (3) have frontage access to a road not exceeding Collector standard (i.e. no frontage access to Trunk Collector Roads and Major Roads); and (4) accommodate car parking on ***site*** for a minimum of 2 medium passenger vehicles with at least 50% of the lots accommodating 3 medium passenger vehicles on ***site***. Accessways for rear lots:- (1) have a minimum width of 4m; (2) have a maximum length of 40m; (3) have a minimum length of 15m; and (4) are constructed and sealed to a minimum width of 2.5m. **OR** All residential lots, except rear lots, have a minimum area of 320m^2 and contain a minimum rectangle of 9m x 25m. All residential rear lots have a minimum area of 500m^2 and contain a circle 18m in diameter.

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>Accessways for rear lots:-
(1) have a minimum width of 4m;
(2) have a maximum length of 40m;
(3) have a minimum length of 15m; and
(4) are constructed and sealed to a minimum width of 2.5m.</td></tr>
<tr><td>SO 18 Residential lot shape and dimensions take into account the slope of the land.</td><td>PS 18 The residential lot depth and road frontage conforms to the following:
<table>
<tr><th>Average Lot Slope* (%)</th><th>Minimum Lot Depth (m)</th><th>Minimum Lot Frontage (m)</th></tr>
<tr><td>< 10</td><td>not specified</td><td>not specified</td></tr>
<tr><td>>10</td><td>not suitable for detached houses on small residental lots</td><td>not suitable for detached houses on small residential lots</td></tr>
<tr><td colspan="3">* after bulk site earthworks (if carried out) and before lot earthworks/retaining walls - measured perpendicular to the road frontage.</td></tr>
</table>
<table>
<tr><th>Average Lot Slope* (%)</th><th>Minimum Lot Width (m)</th></tr>
<tr><td>< 10</td><td>not specified</td></tr>
<tr><td>> 10</td><td>not suitable for detached houses on small residential lots</td></tr>
<tr><td colspan="2">* Measured perpendicular to the side boundary</td></tr>
</table></td></tr>
<tr><td>SO 19 All lots have road frontage.</td><td>PS 19 All lots have road frontages conforming to the following:-
<table>
<tr><th>Location</th><th>Minimum Frontage (m)</th></tr>
<tr><td>Residential lots - all locations except the head of a cul de sac and the outside of a bend in the road with a deflection angle exceeding 60°.</td><td>10</td></tr>
<tr><td>Residential lots - head of a cul de sac</td><td>10*</td></tr>
<tr><td>Residential lots - outside of a bend in the road with a road centreline deflection angle exceeding 60°</td><td>10*</td></tr>
<tr><td>Residential lots - rear lots (hatchet lots where the building area is accessed from a road via a driveway in a narrow part of the lot which is not suitable for dwelling construction)</td><td>5* for a single rear lot
8* for more than one rear lot served by a shared driveway</td></tr>
<tr><td colspan="2">* Subject to on street car parking requirements being met – refer Section 2.4.0 of Council's Planning Scheme Policy PSP28 Civil Infrastructure Design, Part 1.</td></tr>
</table></td></tr>
<tr><td>SO 20 Residential lots do not contain major drainage flow paths.</td><td>PS 20 The residential lots do not contain overland flow paths for the 100 year ARI storm event.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td>SO 21 Residential lots have adequate freeboard to major flood levels in rivers, creeks, watercourses and engineered open drains to facilitate dwelling construction without the need for levies or special dwelling design for flotation.</td><td>PS 21 The residential lots are developed to the following finished surface levels:-
<table>
<tr><th>Location</th><th>Minimum Development Level Requirements</th><th>Minimum Area above Required Minimum Development Level</th></tr>
<tr><td>Adjacent rivers, creeks and watercourses</td><td>Q100 flood level + 750mm</td><td>2000m^2
(where lot area is <2000m^2, then the whole lot area)</td></tr>
<tr><td>Adjacent engineered channels</td><td>Q100 flood level + 500mm</td><td>2000m^2
(where lot area is <2000m^2, then the whole lot area)</td></tr>
</table></td></tr>
<tr><td>SO 22 Residential lot road frontages are of sufficient width to allow easy and safe access.</td><td>PS 22 Residential lots at the corner of Residential Streets (Collector and below) and Major Roads (Sub Arterial or Arterial) have a minimum 50m frontage to the Minor Road.</td></tr>
<tr><td>SO 23 The layout is integrated with the surrounding environment, complements existing attractive streetscapes and landscapes and provides for shared use of public facilities by adjoining communities.</td><td>PS 23 No solution provided.</td></tr>
<tr><td>SO 24 The lot layout retains special features such as regionally significant vegetation and views.</td><td>PS 24 No solution provided.</td></tr>
<tr><td>SO 25 Residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.</td><td>PS 25 The residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and watercourses.
The residential lots are not located below the predicted 100 year storm tide surge level.</td></tr>
<tr><td>SO 26 Residential lots are not located on land which is prone to land slip or subsidence.</td><td>PS 26 No solution provided.</td></tr>
<tr><td>SO 27 Residential lots are designed to facilitate the siting of dwellings to take advantage of microclimate.
SO 28 Residential lots have appropriate orientation and dimensions to allow a high level of solar access benefits.</td><td>PS 27 and PS 28 The majority of the lots are rectangular in shape rather than splayed.
The majority of the long boundaries of the lots are within the following orientation ranges:-
(1) 20^o west of true north to 30^o east of true north (340^o- 30^o);
(2) 20^o north of true east to 30^o south of true east (70^o - 120^o);
(3) 20^o east of true south to 30^o west of true south (160^o - 210^o); and
(4) 20^o south of true west to 30^o north of true west (250^o - 300^o).
East-west lots are wider than the minimum determined by building envelope requirements for good solar access as overshadowing of the north aspect is more likely in this situation, unless two storey construction has been restricted.</td></tr>
<tr><td>SO 29 Residential lots are not subjected to unreasonable noise impacts.</td><td>PS 29 Traffic noise amelioration measures are provided to ensure residential lots are not exposed to long-term noise levels exceeding 63dB(A)$_{L10(18hours)}$ from Major Roads and transport corridors. These measures are determined in accordance with Council's Traffic Noise Policy. Appropriate property notes are placed on residential lots where the long-term noise levels exceed 55dB(A)$_{L10(18hours)}$ (adjusted for facade reflection). A noise assessment report is provided to establish the predicted noise levels for any development that is within 500m (straight line measure) of a Major Road or State controlled road.
For significant noise sources, other than road traffic and railways, appropriate noise amelioration measures are provided to ensure residential lots are not exposed to long-term noise levels exceeding the background noise level plus 5dB(A) and 55dB(A)$_{L10(18hours)}$.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td>SO 30 Residential lots are not subjected to unreasonable air quality impacts.</td><td>PS 30 The residential lots are not located closer than 100m (straight line measurement) to an existing or planned future sewerage pump station. No specific solutions are provided for residential development close to State controlled roads.</td></tr>
<tr><td>SO 31 Residential lot frontages are orientated to facilitate personal and property safety, surveillance of footpaths and public open spaces, and to deter crime and vandalism.</td><td>PS 31 No solution provided.</td></tr>
<tr><td>SO 32 The layout ensures that residents exposure to electro-magnetic fields (from powerlines) exceeding 2mG is minimised.</td><td>PS 32 Residential lots are not exposed to electro-magnetic fields (from powerlines >33kV) exceeding 2mG (average).</td></tr>
<tr><td colspan="2">2.3.3 Lot Layout – Community Titled Residential Development (not subdivision of existing or approved buildings)</td></tr>
<tr><td>SO 33 Residential lots have appropriate area and dimensions for:-
(1) siting and construction of a dwelling and ancillary outbuildings;
(2) the provision of private open space;
(3) convenient and safe vehicle access; and
(4) on site car parking.</td><td>PS 33 All residential lots:-
(1) for attached housing: contain a rectangular building envelope of 8m x 12m minimum;
(2) for ground floor dwelling - provide for a private open space area of 40m² min (which can contain a circle 4m in diameter) being directly accessible from a living area of the dwelling; and
(3) accommodate car parking adjoining or adjacent to the dwelling for a minimum of 1 medium passenger vehicle for each dwelling unit. The car park is able to be driven into in forward gear.
OR
All residential lots, except those used for the purposes of a detached house, have a minimum area of 150m² and can contain a circle not less than 6m diameter.
All residential lots used for the purposes of a detached house have a minimum area of 250m² and can contain a circle not less than 9m diameter.</td></tr>
<tr><td>SO 34 Residential lot shape and dimensions take into account the slope of the land.</td><td>PS 34 No solution provided.</td></tr>
<tr><td>SO 35 Residential lots (excluding common areas) do not contain major drainage flow paths.</td><td>PS 35 The residential lots do not contain overland flow paths for the 100 year ARI storm event.</td></tr>
<tr><td>SO 36 Residential lots have adequate freeboard to major flood levels in rivers, creeks, watercourses and engineered open drains to facilitate dwelling construction without the need for levies or special dwelling design for flotation.</td><td>PS 36 The residential lots are developed to the following finished surface levels:-
<table>
<tr><th>Location</th><th>Minimum Development Level Requirements</th><th>Minimum Area above Required Minimum Development Level</th></tr>
<tr><td>Adjacent rivers, creeks and watercourses</td><td>Q100 flood level + 750mm</td><td>2000m²
(where lot area is <2000m², then the whole lot area)</td></tr>
<tr><td>Adjacent engineered channels</td><td>Q100 flood level + 500mm</td><td>2000m²
(where lot area is <2000m², then the whole lot area)</td></tr>
</table></td></tr>
<tr><td>SO 37 Site accesses are located to allow easy and safe access.</td><td>PS 37 Site access conforms with Council's Planning Scheme Policy PSP28 Civil Infrastructure Design, Part 1, Section 6.2.0 and DG 04.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td>SO 38 The site accommodates sufficient car parking to meet average visitor demands.
SO 39 Car parking is safe and convenient for residents and visitors.</td><td>PS 38 and PS 39 On site car parking is provided in accordance with the following:-<table><tr><th>Purpose</th><th>Minimum number of Car Parking Spaces</th></tr><tr><td>Accommodation Unit</td><td>1.25 spaces per unit</td></tr><tr><td>Low Density Multiple Dwellings</td><td>1.5 spaces per dwelling being 1 space fully enclosed and lockable plus an allowance of 0.5 space (rounded up) for visitors</td></tr><tr><td>Medium & High Density Multiple Dwellings</td><td>1.5 spaces per dwelling being 1 space fully enclosed and lockable plus an allowance of 0.5 space (rounded up) for visitors</td></tr></table></td></tr>
<tr><td>SO 40 The communal open space area meets the functional requirements of the user including a range of recreational uses, social activities and landscaping appropriate for the size of the development.</td><td>PS 40 No solution provided.</td></tr>
<tr><td>SO 41 The layout is integrated with the surrounding environment, complements existing attractive streetscapes and landscapes, and provides for shared use of public facilities by adjoining communities.</td><td>PS 41 No solution provided.</td></tr>
<tr><td>SO 42 The lot layout retains special features such as regionally significant vegetation and views.</td><td>PS 42 No solution provided.</td></tr>
<tr><td>SO 43 Residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.</td><td>PS 43 The residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and watercourses.
The residential lots are not located below the predicted 100 year storm tide surge level.</td></tr>
<tr><td>SO 44 Residential lots are not located on land which is prone to land slip or subsidence.</td><td>PS 44 The residential lots are not located on land which is prone to land slip or subsidence.</td></tr>
<tr><td>SO 45 Residential lots are designed to facilitate the siting of dwellings to take advantage of microclimate benefits.</td><td>PS 45 No solution provided.</td></tr>
<tr><td>SO 46 Residential lots have appropriate orientation and dimensions to allow a high level of solar access.</td><td>PS 46 No solution provided.</td></tr>
<tr><td>SO 47 Residential lots are not subjected to unreasonable noise impacts.</td><td>PS 47 Traffic noise amelioration measures are provided to ensure residential lots are not exposed to long-term noise levels exceeding 63dB(A)$_{L10(18hours)}$ from Major Roads and transport corridors. These measures are determined in accordance with Council's Traffic Noise Policy. Appropriate property notes are placed on residential lots where the long-term noise levels exceed 55dB(A)$_{L10(18hours)}$ (adjusted for facade reflection). A noise assessment report is provided to establish the predicted noise levels for any development that is within 500m (straight line measure) of a Major Road or State controlled road.
For significant noise sources, other than road traffic and railways, appropriate noise amelioration measures are provided to ensure residential lots are not exposed to long-term noise levels exceeding the background noise level plus 5 dB(A) and 55dB(A)$_{L10(18hours)}$.</td></tr>
<tr><td>SO 48 Residential lots are not subjected to unreasonable air quality impacts.</td><td>PS 48 The residential lots are not located closer than 100m (straight line measurement) to an existing or planned future sewerage pump station.
No specific solutions are provided for residential development close to State controlled roads.</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions
SO 49 The layout ensures that residents exposure to electro-magnetic fields (from powerlines) exceeding 2mG is minimised.	**PS 49** Residential lots are not exposed to electro-magnetic fields (from powerlines >33kV) exceeding 2mG (average).
2.3.4 Stormwater Management	
SO 50 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event.	**PS 50 and PS 51** The roads, drainage pathways, drainage features and ***waterways*** safely convey the stormwater flows for the 100 year ARI storm event without allowing the flows to encroach upon residential lots.
SO 51 Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon residential lots unless the lot contains an area not less than 2000m^2 which has not less than 750mm freeboard to the 100 year ARI (fully developed catchment) storm flood level.	Overland flow paths (for any storm event) from roads and public open space areas do not pass through residential lots. Drainage pathways are provided to accommodate overland flows from roads and public open space areas.
SO 52 Stormwater drainage pipes and ***structures*** through or within private land are protected by easements in favour of ***Council*** with sufficient area for practical access for maintenance.	**PS 52** Stormwater drainage infrastructure through or within private land is protected by easements in favour of ***Council*** with areas and dimensions conforming to ***Council's*** Standards.
SO 53 Stormwater management facilities (except drainage outlets) do not encroach upon riparian areas.	**PS 53** No solution provided.
SO 54 The stormwater quality management system minimises the environmental impact of stormwater on surface and underground receiving water quality.	**PS 54** No solution provided.
SO 55 The stormwater quality management system minimises the environmental impact of stormwater on natural ***waterway*** configuration.	**PS 55** No solution provided.
SO 56 The stormwater quality management system minimises the environmental impact of stormwater on existing natural wetlands and vegetation.	**PS 56** No solution provided.
SO 57 The stormwater quality management system optimises the inception, retention and removal of waterborne pollutants prior to discharge to receiving waters.	**PS 57** No solution provided.
SO 58 Community benefit is maximised through the retention of natural streams and vegetation.	**PS 58** Natural streams and vegetation are retained.
SO 59 Areas constructed as detention basins are adaptable for passive recreation.	**PS 59** No solution provided.

Specific Outcomes for Assessable Development	Probable Solutions

2.3.5 Road Networks (excludes State-controlled Roads)

SO 60 The road network has clear structure and component streets conforming to their function in the network.

SO 61 The road network has clear physical distinctions between each type of street. The distinctions are to be based on function, legibility, convenience, traffic volume, vehicle speeds, public safety and amenity.

SO 62 The road network accommodates the following primary functions:

(1) access to residences;
(2) car parking for visitors;
(3) social and activity space;
(4) stormwater drainage paths (minor and major storms);
(5) public transport on Collector Streets;
(6) utility services location; and
(7) setting and approach (streetscape and landscape) for adjoining residences.

SO 63 The road network is sufficient to accommodate adequate verge and carriageway width for the primary functions listed in specific outcomes above.

PS 60 to PS 63 The Residential Streets conform to the following:-

Item	Access Place (1)	Access Street (1)	Collector Street	Trunk Collector Street
Traffic Catchment (maximum)	20 lots	50 lots (2)	300 lots (2)(3)	900 lots (2)
Design Speed (maximum)	40km/h	40km/h	40km/h	60km/h
Carriageway Lanes	2 (4)	2	3	2
Carriageway Width	6m	6m	7.5m	9m
Verge Width (minimum)	3.5m (5)(6)	3.5m (5)(6)	3.5m (5)(6)	5m (6)
Reserve Width (minimum)	15m	15m	18m	24m (7)
Footpaths/Cycle paths	not required (8)	where > 40 lots served (8)	one side (8)	both sides (8)
Parking	0.5 space per lot (9)	0.5 space per lot (9)	0.5 space per lot (9)	0.5 space per lot (9)
Grade (min - max)	0.4% - 16% (10)	0.4% - 16% (10)	0.4% - 12% (11)	0.4% - 12% (11)

Notes:-

1. *Difference is in subdivision layout only, not in street design.*
2. *Based on 10 vpd per single detached dwelling residential lot.*
3. *Absolute maximum 350 lots.*
4. *Single lane with **Council** approval, maximum 12 lots.*
5. *Greater width required to verge with water main.*
6. *Greater width required where cycle paths provided.*
7. *Greater width required at intersections.*
8. *Footpath or cycle paths may be required in accordance with network design.*
9. *A car park is required within 25m of every residential lot.*
10. *20% absolute maximum grade may be permitted under special circumstances.*
11. *16% absolute maximum grade may be permitted under special circumstances.*

The Major Roads conform to the following:-

Item	Sub-Arterial	Arterial	Major Arterial	Freeway
Traffic Volume (typical)	12,000 vpd	30,000 vpd	as required	as required
Design Speed (minimum)	80km/h	100km/h	100km/h	100km/h
Carriageway Lanes	2	4	4 or more	4 or more

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>
<table>
<tr><td>Carriageway Width</td><td>10m (kerbed) (1)</td><td>2 x 8.5m (kerbed) (1)</td><td>as required by design</td><td>as required by design</td></tr>
<tr><td>Verge Width (minimum)</td><td>7.5m</td><td>8.5m</td><td>as required by design</td><td>as required by design</td></tr>
<tr><td>Reserve Width (minimum)</td><td>25m (2)</td><td>40m (2)</td><td>as required by design</td><td>as required by design</td></tr>
<tr><td>Footpaths/Cycle paths</td><td>both sides (3)</td><td>both sides (3)</td><td>not required</td><td>not required</td></tr>
<tr><td>Grade (minimum - maximum)</td><td>0.4% - 7% (4)</td><td>0.4% - 6% (4)</td><td>as required by design</td><td>as required by design</td></tr>
</table>
Notes:-
1. Does not include cycle lanes.
2. Greater width required at intersections.
3. Cycle paths may be required in accordance with network design.
4. Steeper grades may be permitted under special circumstances.
</td></tr>
<tr><td>SO 64 The road network creates convenient vehicular movement for residents between their homes and the Major Road network.</td><td>PS 64 The general maximum travel time in the Residential Street System between any residential lot and a Major Road is 120 seconds (absolute maximum 180 seconds).</td></tr>
<tr><td>SO 65 The road network has a high degree of “legibility” to road users</td><td>PS 65 Carriageway widths decrease with lower order streets. Threshold treatments are provided in Access Streets and Access Places that intersect with Collector Streets.</td></tr>
<tr><td>SO 66 The road network provides more than one access route (at all stages of development) for residential areas containing a significant number of residential lots.</td><td>PS 66 The residential area is served by more than one access route to the Major Road system when the number of residential lots exceeds 100 (absolute maximum allowed is 150 lots).</td></tr>
<tr><td>SO 67 Intersections along residential streets are spaced to create safe and convenient vehicle movements.</td><td>PS 67 Intersection spacing (centreline – centreline) along a through road conforms to the following:-
<table>
<tr><th rowspan="2">Intersecting Road Location</th><th></th><th colspan="3">Through Road</th><th></th><th></th></tr>
<tr><th>Access Street & Collector Street</th><th>Trunk Collector Street</th><th>Sub- Arterial Road (1)</th><th>Arterial Road</th><th>Major Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>60m</td><td>100m</td><td>300m</td><td>500m</td><td>1000m</td></tr>
<tr><td>On opposite sides of the through road</td><td>40m</td><td>60m</td><td>300m</td><td>500m</td><td>1000m</td></tr>
</table>
Notes:-
1. In the case of Sub-Arterial Roads, existing landholdings may require intersections at lesser spacing. In such cases the following absolute minimum spacings are used, but all turns access may not be permitted (i.e. left in/left out only):
<table>
<tr><td>Intersections on same side</td><td>100m</td></tr>
</table>
</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th colspan="2">Probable Solutions</th></tr>
<tr><td></td><td colspan="2">Intersections on opposite sides:-
• left-right stagger
• right-left stagger</td><td>100m
30m</td></tr>
<tr><td>SO 68 The alignment and geometry of roads that form identified bus routes allow for efficient and unimpeded movement of buses without facilitating high traffic speeds.</td><td colspan="2">PS 68 Bus routes have a minimum road width of 20m and carriageway width of 9.5m. The maximum grade of the bus route is 12%.</td></tr>
<tr><td>SO 69 The road network facilitates walking and cycling within the neighbourhood and to local activity centres.</td><td colspan="2">PS 69 Wherever practicable pathways are provided to link streets giving direct convenient pedestrian and cyclist access within the neighbourhood.</td></tr>
<tr><td>SO 70 All new Council controlled roads are fully constructed to meet user requirements with minimum maintenance costs.</td><td colspan="2">PS 70 All new Council controlled roads are fully constructed to Council standards.</td></tr>
<tr><td rowspan="4">SO 71 All Council controlled frontage roads are constructed to Council's standards.</td><td colspan="2">PS 71 All Council controlled frontage roads are constructed to Council standards as follows:-</td></tr>
<tr><td>Situation</td><td>Minimum Construction (1)</td></tr>
<tr><td>Frontage road unconstructed or gravel road only</td><td>For Access Place and Access Street: full carriageway and verges.
For Collector Street and Trunk Collector Street: verge adjoining new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.
For Major Roads: verge adjoining new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.</td></tr>
<tr><td>Frontage road sealed(2) but not constructed to Council's standard</td><td>For Access Place and Access Street: reconstruction of full carriageway and verges.
For Collector Street and Trunk Collector Street: reconstruction of verge adjoining new lots and carriageway (including near side kerb and channel) to a minimum sealed width of 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the remaining existing works.
For Major Roads: verge adjoining new lots and carriageway (including near side kerb and channel) to a minimum sealed width of 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the remaining existing works.</td></tr>
<tr><td>Frontage road(2) partially constructed to Council's standard</td><td>For Access Place and Access Street: construction of all remaining carriageway and verges.
For Collector Street and Trunk Collector Street: verge adjoining new lots and carriageway (including near side kerb and channel) to join existing works. In any event the minimum sealed width to be constructed is 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side where necessary. The works match into the existing works.
For Major Roads: verge adjoining new lots and carriageway (including near side kerb and channel) to join existing works. In any event, the minimum sealed width is 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side where necessary. The works match into the existing works.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>Notes:-
1. Construction includes all associated works (services, streetlighting and linemarking)
2. Testing of the existing pavement is carried out to confirm whether the existing works meet Council's standards.</td></tr>
<tr><td>SO 72 Sealed and flood free road access during minor storms is available to the site from the nearest Major Road.</td><td>PS 72 Sealed and flood free road access during minor storms is available to the site from the nearest Major Road.</td></tr>
<tr><td>SO 73 Access roads to the development remain trafficable during major storm events.</td><td>PS 73 Access roads to the development have sufficient longitudinal and cross drainage to remain safely trafficable during major storm (100 year ARI) events.</td></tr>
<tr><td>SO 74 Existing street car parking is retained at new road intersections with existing Collector Streets or existing Major Roads.</td><td>PS 74 Existing street car parking is retained at new road intersections with existing Collector Streets or existing Major Roads.</td></tr>
<tr><td>SO 75 Vehicular access to existing lots is retained at new road intersections with existing Collector Streets or existing Major Roads.</td><td>PS 75 Vehicular access to existing lots is retained at new road intersections with existing Collector Streets or existing Major Roads.</td></tr>
<tr><td>SO 76 The road network design takes into account:-
(1) streetscapes that may be created or already exist;
(2) protection of topography and vegetation;
(3) opportunities for views and vistas; and
(4) protection of natural drainage and open space systems.</td><td>PS 76 No solution provided.</td></tr>
<tr><td>SO 77 Traffic generated by a development is within the acceptable environmental capacity (traffic volume) of the roads and streets.</td><td>PS 77 The following environmental road capacities (traffic volumes) are not exceeded with the additional traffic from the development:-
<table>
<tr><th>Street Classification</th><th>Capacity
(desirable maximum)</th></tr>
<tr><td>Access Place</td><td>200vpd</td></tr>
<tr><td>Access Street</td><td>500vpd</td></tr>
<tr><td>Collector Street</td><td>3000vpd</td></tr>
<tr><td>Trunk Collector Street</td><td>9000vpd</td></tr>
</table></td></tr>
<tr><td>SO 78 Residential streets do not operate as through traffic routes for externally generated traffic while limiting the length of time local drivers need to spend in a low speed environment.</td><td>PS 78 The street layout discourages through traffic by the use of speed control and road alignment.</td></tr>
<tr><td>SO 79 Residential streets are designed to reduce traffic speeds and volume to acceptable levels with most dwellings fronting streets with low traffic volumes.</td><td>PS 79 Ninety percent (90%) of residential lots have a frontage traffic volume of less than 1000vpd. All residential lots have a frontage road maximum design speed of 40km/h.</td></tr>
<tr><td>SO 80 The road network provides for the cost-effective provision of public utilities.</td><td>PS 80 The roads accommodate appropriate corridors for all public utilities in accordance with Council's standards.</td></tr>
<tr><td colspan="2">2.3.6 Utilities</td></tr>
<tr><td>SO 81 All lots are provided with sewerage, water supply, underground electricity, street lighting and communications services.</td><td>PS 81 All lots (including park and community purposes lots) are provided with sewerage, water supply, underground electricity, street lighting and communications services.</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions
SO 82 Development only occurs in locations where there are adequate services for the desired use.	**PS 82** The development has adequate services for the desired use.
SO 83 The provision of ***public utilities*** including sewerage, water supply, electricity, street lighting and communications services, is cost effective over their life cycle and incorporate provisions to minimise adverse environmental impact in the short and long-term.	**PS 83** The provision of ***public utilities*** including sewerage, water supply, electricity, street lighting and communications services conforms to the standards of the relevant service authority.
SO 84 The sewerage transportation system for the proposed development is planned to conform to ***Council's*** broad infrastructure plan for the catchment.	**PS 84** The sewerage transportation system for the development conforms to ***Council's*** broad infrastructure plan for the catchment.
SO 85 The water supply system for the proposed development is planned to conform to ***Council's*** broad infrastructure plan for the water supply zone.	**PS 85** The water supply system for the development conforms to ***Council's*** broad infrastructure plan for the water supply zone.
SO 86 Adequate buffers are provided between utilities and dwellings to protect residential amenity and health. **SO 87** Sewerage pump stations are located to provide an adequate buffer to proposed or existing residential lots.	**PS 86 and PS 87** The layout ensures that residents' exposure to electro-magnetic fields (from powerlines >33kV) does not exceed 2mG (ultimate average). The residential lots are not located closer than 100m (straight line measurement) to an existing or planned future sewerage pump station.
SO 88 Water supply and sewerage networks are accessible, easy to maintain and cost effective based on life cycle costs.	**PS 88** Water supply and sewerage networks are accessible for maintenance of equipment. No specific solutions are provided with regard to cost effectiveness.
SO 89 Where ***Council*** plans to supply recycled water, the development makes provision for these future recycled water supply systems.	**PS 89** An appropriate service corridor is provided for future recycled water supply.
SO 90 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.	**PS 90** No solution provided.
2.3.7 Pedestrian and Cyclist Networks	
SO 91 The minor roads and pathway network provides pedestrian and cyclist routes with connections to adjoining minor roads and major roads, open spaces and activity centres. **SO 92** The pedestrian network is designed to provide the shortest and most convenient links between each residential precinct and major attractions such as schools, ***shops***, sporting facilities, bus routes (existing and planned) and railway stations.	**PS 91 and PS 92** Pathways are provided between roads to allow safe and convenient access for pedestrians and cyclists.
SO 93 Public access is provided to open space areas, rivers and water bodies when necessary to be consistent with and complement existing access arrangements and in accordance to the function of those areas.	**PS 93** No solution provided.

Specific Outcomes for Assessable Development	Probable Solutions
SO 94 The bikeway network is designed to provide for safe, attractive and convenient movement of cyclists between each residential precinct and major attractions such as schools, ***shops***, sporting facilities, bus routes (existing and planned) and railway stations. **SO 95** The pedestrian and cyclist networks are safe, attractive and efficient, running largely along public spaces (streets, park and open space) where a high level of surveillance is possible.	**PS 94 and PS 95** The network accords with ***Council's*** Standards and Bikeways Plan.
2.3.8 Public Transport	
SO 96 The majority of residential lots are within convenient walking distance of an existing or potential bus route. **SO 97** The road network provides for potential bus routes including safe convenient stops and, where necessary, bus turnaround areas.	**PS 96 and PS 97** Bus routes are incorporated into the development to ensure that 90% of the residential lots are within 400m (straight line measure) of the routes. Bus stops are provided at 400m maximum spacing and integrated with the street and pedestrian network.
SO 98 The street network caters for the extension of existing and future public transport routes to provide sufficient services that are convenient and accessible to the community.	**PS 98** No solution provided.
2.3.9 Park	
SO 99 Park and open space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes.*	**PS 99** No solution provided.

Division 3 Park Residential Subdivision Design Code

3.1 Overall Outcomes

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Park Residential Subdivision Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Neighbourhoods are safe and attractive;

(4) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(5) Lots have adequate ***site*** drainage to meet user requirements;

(6) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(7) Stormwater management solutions are integrated with other uses and the natural environment;

(8) Lots have adequate, safe, convenient and structured road access systems;

(9) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(10) Pedestrian and cyclist networks are safe, convenient and legible;

(11) The subdivision layout ensures that existing or potential public transport services are accommodated;

(12) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(13) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

3.2 Compliance with the Park Residential Subdivision Design Code

Development that is consistent with the specific outcomes in Sections 3.3.1 to 3.3.8 complies with the Park Residential Subdivision Design Code.

3.3 Development Requirements

The development requirements of this code relate to the following elements:-

(3.3.1) Lot Layout – Single Detached Housing

(3.3.2) Lot Layout – Community Titled Residential Development (not subdivision of existing or approved buildings)

(3.3.3) Stormwater Management

(3.3.4) Road Networks (excludes State-controlled Roads)

(3.3.5) Utilities

(3.3.6) Pedestrian and Cyclist Networks

(3.3.7) Public Transport

(3.3.8) Park

Note: ***The minimum lot sizes in this code may be affected by the Regulatory Provisions of the South East Queensland Regional Plan.***

Specific Outcomes for Assessable Development	Probable Solutions
3.3.1 Lot Layout – Single Detached Housing	
SO 1 Residential lots have appropriate area and dimensions for:- (1) siting and construction of a dwelling and ***ancillary outbuildings***; (2) siting and construction of an on-site sewerage facility in accordance with the relevant standards; (3) the provision of private open space; (4) convenient and safe vehicle access; and (5) on ***site*** car parking.	**PS 1** All residential lots:- (1) contain a certified building area of 40m x 30m minimum dimensions which is 750mm above the 100 year ARI flood level and has maximum slope, before ***site*** works, of 1 (V) in 6 (H). The certified building area is setback from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully a distance not less than that determined by projecting a line 1(V) in 1(H) from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully to the finished ground level or 15m back from the top bank, whichever is the greater; (2) provide for an area for an on-site sewerage facility (including spare effluent disposal area) in accordance with the relevant standards; (3) have a minimum outdoor private open space area of 2,000m² (clear of the building area, effluent treatment and disposal areas and rear lot accessways) with one area which contains a circle with a minimum diameter of 30m ; (4) have one constructed lot access point which has adequate road traffic sight distances; and (5) can accommodate car parking on ***site*** for 3 large passenger vehicles. Accessways for rear lots:- (1) have a minimum width of 5m; (2) have a maximum length of 150m; (3) have a minimum length of 50m; and (4) are constructed and sealed to a minimum width of 3m. **OR** All residential lots:- (1) have a minimum area of 6,000m²; (2) contain a minimum rectangle of 40m x 70m; (3) contain a certified building area of 40m x 30m minimum dimensions which is 750mm above the 100 year ARI flood level and has maximum slope, before ***site*** works, of 1 (V) in 6 (H). The certified building area is setback from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully a distance not less than that determined by projecting a line 1(V) in 1(H) from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully to the finished ground level or 15m back from the top bank, whichever is the greater; (4) provide for an area for an on-site sewerage facility (including spare effluent disposal area) in accordance with the relevant standards; (5) have one constructed lot access point which has adequate road traffic sight distances; and Accessways for rear lots:- (1) have a minimum width of 5m; (2) have a maximum length of 150m; (3) have a minimum length of 50m; and (4) are constructed and sealed to a minimum width of 3m.

Specific Outcomes for Assessable Development	Probable Solutions
SO 2 Residential lot shape and dimensions take into account user requirements and the ***site*** topography.	**PS 2** The residential lot shape allows all areas of the land to be easily accessed for maintenance. The dimensions of all residential lots satisfy the following ratio:- $L^2/A < 5$ where L = the horizontal distance in metres measured in a straight line between the midpoint of the road frontage, or end of the accessway for a rear lot, to the most distant point on the lot boundary; and A = the area of the lot in square metres.
SO 3 Residential lot road frontages have sufficient width to allow easy and safe access.	**PS 3** All lots have a minimum road frontage of 50m except for the blind end of a cul de sac where a minimum frontage of 15m is provided. Rear lots have a minimum frontage of 5m.
SO 4 The layout is integrated with the surrounding environment and complements existing attractive streetscapes and landscapes.	**PS 4** Certified building areas are not less than closer than 15m to one another. Certified building areas are located in existing cleared ***site***s.
SO 5 The lot layout retains special features such as regionally significant vegetation and views.	**PS 5** No solution provided.
SO 6 Certified building areas in residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.	**PS 6** The certified building areas in residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and ***watercourses***. The certified building areas in residential lots are not located below the predicted 100 year storm tide surge level.
SO 7 Certified building areas in residential lots are not located on land which is prone to land slip or subsidence.	**PS 7** No solution provided.
SO 8 Residential lots are not subjected to unreasonable noise impacts.	**PS 8** No solution provided.
SO 9 Residential lots are not subjected to unreasonable air quality impacts.	**PS 9** No solution provided.
SO 10 The layout (siting of certified building areas in residential lots) ensures that residents exposure to electro-magnetic fields from powerlines (33KV and greater) does not exceed 2mG (average).	**PS 10** No solution provided.
3.3.2 Lot Layout – Community Titled Residential Development (not subdivision of existing or approved buildings)	
SO 11 Residential lots (excluding common areas) have appropriate area and dimensions for:- (1) siting and construction of a dwelling and ***ancillary outbuildings***; (2) siting and construction of an on-site sewerage facility (including spare effluent disposal area); (3) the provision of private open space; (4) convenient and safe vehicle access; and (5) on ***site*** car parking.	**PS 11** All residential lots (excluding common areas):- (1) contain a certified building area of 40m x 30m minimum dimensions which is 750mm above the 100 year ARI flood level and has maximum slope, before ***site*** works, of 1 (V) in 6 (H). The certified building area is setback from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully a distance not less than that determined by projecting a line 1(V) in 1(H) from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully to the finished ground level or 15m back from the top bank, whichever is the greater; (2) provide for an area for an on-site sewerage facility (including spare effluent disposal area) in accordance with the relevant standards; (3) have a minimum outdoor private open space area of $800m^2$ (clear of the certified building area and effluent treatment and disposal areas) with one area which contains a circle with a minimum diameter of 20m ;

Specific Outcomes for Assessable Development	Probable Solutions
	(4) have one constructed access point; and (5) can accommodate car parking on ***site*** for 2 medium passenger vehicles.
SO 12 Lot shape and dimensions take into account the ***site*** topography.	**PS 12** The residential lot shape allows all areas of the lots to be easily accessed for maintenance.
SO 13 ***Site*** frontage has sufficient width to allow easy and safe access.	**PS 13** The ***site*** has a minimum road frontage of 25m except for the blind end of a cul de sac where a minimum frontage of 15m is provided. The ***site*** access is constructed and has adequate sight distances
SO 14 The ***site*** accommodates sufficient car parking to meet average visitor demands. **SO 15** Car parking is safe and convenient for residents and visitors.	**PS 14 and PS 15** Visitor car parking for each residential lot can be accommodated on the individual lots.
SO 16 The communal open space area meets the functional requirements of the user including a range of recreational uses, social activities and landscaping appropriate for the size of the development.	**PS 16** No solution provided.
SO 17 The layout is integrated with the surrounding environment and complements existing attractive streetscapes and landscapes.	**PS 17** Certified building areas are not less than closer than 15m to one another. Certified building areas are located in existing cleared ***sites***.
SO 18 The lot layout retains special features such as regionally significant vegetation and views.	**PS 18** The lot layout retains special features such as regionally significant vegetation and views.
SO 19 Certified building areas in residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.	**PS 19** The certified building areas in residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and ***watercourses***. The certified building areas in residential lots are not located below the predicted 100 year storm tide surge level.
SO 20 Certified building areas in residential lots are not located on land which is prone to land slip or subsidence.	**PS 20** No solution provided.
SO 21 Residential lots are not subjected to unreasonable noise impacts.	**PS 21** No solution provided.
SO 22 Residential lots are not subjected to unreasonable air quality impacts.	**PS 22** No solution provided.
SO 23 The layout (siting of certified building areas in residential lots) ensures that residents' exposure to electro-magnetic fields from powerlines (33KV and greater) does not exceed 2mG (average).	**PS 23** No solution provided.
3.3.3 Stormwater Management	
SO 24 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event. **SO 25** Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon certified building areas.	**PS 24 and PS 25** The roads, drainage pathways, drainage features and ***waterways*** safely convey the stormwater flows for the 100 year ARI storm event without allowing the flows to encroach upon certified building areas.

Specific Outcomes for Assessable Development	Probable Solutions
SO 26 Stormwater drainage pipes and ***structures*** through or within private land are protected by easements in favour of ***Council*** with sufficient area for practical access for maintenance.	**PS 26** Stormwater drainage infrastructure through or within private land is protected by easements in favour of ***Council*** with areas and dimensions conforming to ***Council*** standards.
SO 27 Stormwater management facilities (except drainage outlets) do not encroach upon riparian areas.	**PS 27** No solution provided.
SO 28 The stormwater quality management system minimises the environmental impact of stormwater on surface and underground receiving water quality.	**PS 28** No solution provided.
SO 29 The stormwater quality management system minimises the environmental impact of stormwater on natural ***waterway*** configuration.	**PS 29** No solution provided.
SO 30 The stormwater quality management system minimises the environmental impact of stormwater on existing natural wetlands and vegetation.	**PS 30** No solution provided.
SO 31 The stormwater quality management system optimises the inception, retention and removal of waterborne pollutants prior to discharge to receiving waters.	**PS 31** No solution provided.
SO 32 Community benefit is maximised through the retention of natural streams and vegetation.	**PS 32** Natural streams and vegetation are retained.
SO 33 Areas constructed as detention basins are adaptable for passive recreation.	**PS 33** Areas constructed as detention basins are adaptable for passive recreation.
3.3.4 Road Networks (excludes State-controlled roads)	
SO 34 The road network has clear structure and component streets conforming with their function in the network. **SO 35** The road network has clear physical distinctions between each type of street. The distinctions are to be based on function, legibility, convenience, traffic volumes, vehicle speeds, public safety and amenity. **SO 36** The road network includes adequate verge and carriageway width for the primary functions listed in specific outcomes above. **SO 37** The road network creates convenient safe movement for residents between their homes and the Major Road network.	**PS 34 – PS 37** The Residential Streets conform to the following:-

Item	Access Place	Access Street	Collector Street
Traffic Catchment (maximum)	50 lots (1)	100 lots	350 lots (2)
Maximum Street Length	900m	1200m (3)	1200m (3)
Design Speed (maximum)	45km/h	60km/h	60km/h
Carriageway Lanes	2 (4)	2	2
Carriageway Width	6m	7m	8m
Verge Width (minimum)	5m	5m	5m
Reserve Width (minimum)	20m	20m	25m
Footpaths/Cycle paths/ Bridle Paths	as required (5)	as required (5)	as required (5)
Parking	no provision (6)	no provision (6)	no provision (6)
Grade (minimum - maximum)	0.4% - 16% (7)	0.4% - 16%	0.4% - 12% (8)

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>
Notes:-
1. Theoretical limit only as maximum length controls in most cases.
2. May be increased by widening the reserve.
3. Maximum street lengths are interdependent. Essential criterion is maximum total travel time of 180 seconds
4. Single lane 3.5m carriageway with special Council approval, maximum 12 lots and maximum length of 300m.
5. As required by Council's network planning.
6. Parking bays may be required at cul-de-sac heads.
7. 20% absolute maximum grade may be permitted under special circumstances.
8. 16% absolute maximum grade may be permitted under special circumstances.
The Major Roads conform to the following:-
<table>
<tr><th>Item</th><th>Sub-Arterial</th><th>Arterial</th></tr>
<tr><td>Traffic Volume (typical)</td><td>12,000vpd</td><td>30,000vpd</td></tr>
<tr><td>Design Speed (minimum)</td><td>80km/h</td><td>100km/h</td></tr>
<tr><td>Carriageway Lanes</td><td>2</td><td>4</td></tr>
<tr><td>Reserve Width (minimum)</td><td>26m</td><td>40m</td></tr>
<tr><td>Maximum Grade</td><td>8%</td><td>6%</td></tr>
</table>
The general maximum travel time in the Residential Street System between any residential lot and a Major Road is 180 seconds.
External roads providing access to the site from the Major Road system have a minimum sealed width of 5.5m with a minimum shoulder width of 1.2m (both sides).
</td></tr>
<tr><td>SO 38 The road network provides more than one access route (at all stages of development) for residential areas containing a significant number of residential lots.</td><td>PS 38 The residential area is served by more than one access route to the Major Road system when the number of residential lots exceeds 100 (absolute maximum allowed is 150 lots).</td></tr>
<tr><td>SO 39 Intersections along residential streets are spaced to create safe and convenient vehicle movements.</td><td>
PS 39 Intersection spacing (centreline – centreline) along a through road conforms with the following:
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<tr><th>Access Street & Collector Street</th><th>Urban Sub-Arterial Road (1)</th><th>Urban Arterial Road</th><th>Rural Sub-Arterial Road (1)</th><th>Rural Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>100m</td><td>300m</td><td>500m</td><td>300m</td><td>500m</td></tr>
<tr><td>On opposite sides of the through road</td><td>100m</td><td>300m</td><td>500m</td><td>300m</td><td>500m</td></tr>
</table>
Notes:
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<tr><td>Intersections on same side</td><td>100m</td></tr>
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<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
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Specific Outcomes for Assessable Development	Probable Solutions
SO 44 The road network design takes into account::- (1) streetscapes that may be created or already exist; (2) protection of topography and vegetation; (3) opportunities for views and vistas; and (4) protection of natural drainage and open space systems.	**PS 44** Road designs incorporate retention of existing significant trees where ever practicable. Road designs minimise the heights of cut and fill of road formation to less than 2m where ever practicable. New roads are located to minimise the heights of cut and fill of road formation to less than 2m where ever possible. Road designs minimise the amount of filling and extent of filling in or adjacent existing natural gullies, ***waterways***, existing public open space areas and proposed public open space areas.
SO 45 Traffic generated by a development is within the acceptable environmental capacity (traffic volume) of the roads and streets.	**PS 45** The following environmental road capacities (traffic volumes) are not exceeded with the additional traffic from the development:- **Street Classification** — **Capacity (desirable maximum)** Access Place — 500vpd Access Street — 1000vpd Collector Street — 3500vpd
SO 46 Residential Streets do not operate as through traffic routes for externally generated traffic while limiting the length of time local drivers need to spend in a low speed environment.	**PS 46** The street layout discourages through traffic by the use of speed control and road alignment.
SO 47 Residential Streets are designed to reduce traffic speeds and volumes to acceptable levels.	**PS 47** All residential lots have a frontage road maximum design speeds as follows:- **Street Classification** — **Design Speed (maximum)** Access Place — 45kph Access Street — 60kph Collector Street — 60kph
SO 48 The road network provides for the cost-effective provision of ***public utilities***.	**PS 48** The roads accommodate appropriate corridors for all ***public utilities*** in accordance with ***Council*** standards.
3.3.5 Utilities	
SO 49 All lots are provided with water supply, underground electricity, street lighting and communications services.	**PS 49** No solution provided.
SO 50 Development only occurs in locations where there are adequate services for the desired use.	**PS 50** The development has adequate services for the desired use.
SO 51 The provision of ***public utilities*** including water supply, electricity, street lighting and communications services, is cost effective over their life cycle and incorporate provisions to minimise adverse environmental impact in the short and long-term.	**PS 51** The provision of ***public utilities*** including water supply, electricity, street lighting and communications services conforms with the standards of the relevant service authority.
SO 52 The water supply system for the proposed development is planned to conform with ***Council's*** broad infrastructure plan for the water supply zone.	**PS 52** The water supply system for the development conforms with ***Council's*** broad infrastructure plan for the water supply zone.
SO 53 Adequate buffers are provided between utilities and dwellings to protect residential amenity and health.	**PS 53** The layout ensures that residents exposure to electro-magnetic fields (from powerlines) does not exceed 2mG (average). The certified building areas are clear of the 2mG (average) electromagnetic fields from powerlines (>33kV).
SO 54 Water supply networks are accessible, easy to maintain and cost effective based on life cycle costs.	**PS 54** Water supply networks are accessible for maintenance of equipment. No specific solutions are provided with regard to cost effectiveness.

Specific Outcomes for Assessable Development	Probable Solutions
SO 55 Where ***Council*** plans to supply recycled water, the development makes provision for these future recycled water supply systems.	**PS 55** An appropriate service corridor is provided for future recycled water supply.
SO 56 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.	**PS 56** No solution provided.
3.3.6 Pedestrian and Cyclist Networks	
SO 57 The minor roads and pathway network provide pedestrian routes with connections to adjoining major roads, open spaces and activity centres. **SO 58** The minor roads and pathway network provide low speed, low volume, routes for cyclists with connections to adjoining minor roads and major roads, open spaces and activity centres. **SO 59** The pedestrian network is designed to provide the shortest and most convenient links between each residential precinct and major attractions such as schools, ***shops***, sporting facilities and bus routes.	**PS 57 to PS 59** Pathways are provided between roads to allow safe and convenient access for pedestrians and cyclists.
SO 60 Public access is provided to open space areas, rivers and water bodies as necessary to be consistent with and complement existing access arrangements and in accordance with the function of those areas.	**PS 60** No solution provided.
SO 61 The bikeway network is designed to provide for safe, attractive and convenient movement of cyclists between each residential precinct and major attractions such as schools, ***shops***, sporting facilities, bus routes (existing and planned) and railway stations. **SO 62** The pedestrian and cyclist networks are safe, attractive and efficient, running largely along public spaces (streets, park and open space) where a high level of surveillance is possible.	**PS 61 and PS 62** The bikeway network provides safe, attractive and convenient movement of cyclists between each residential precinct and major attractions such as schools, ***shops***, sporting facilities, bus routes (existing and planned) and railway stations. The network accords with ***Council's*** Bikeways Plan.
3.3.7 Public Transport	
SO 63 The majority of residential lots are within a reasonable walking distance of an existing or potential bus route. **SO 64** The road network provides for potential bus routes including safe convenient stops and, where necessary, bus turnaround areas.	**PS 63 and PS 64** Bus routes are incorporated into the development to ensure that 90% of the residential lots are within 700m (straight line measure) of the routes.

Specific Outcomes for Assessable Development	Probable Solutions
SO 65 The street network caters for the extension of existing and future public transport routes to provide sufficient services that are convenient and accessible to the community.	**PS 65** No solution provided.
3.3.8 Park	
SO 66 Park and open space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes.*	**PS 66** No solution provided.

Division 4 Rural Residential Subdivision Design Code

4.1 Overall Outcomes

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Rural Residential Subdivision Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Neighbourhoods are safe and attractive;

(4) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(5) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(6) Stormwater management solutions are integrated with other uses and the natural environment;

(7) Lots have adequate, safe, convenient and structured road access systems;

(8) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(9) Pedestrian and recreational trail networks are safe, convenient and legible;

(10) The subdivision layout ensures that existing or potential public transport services are accommodated;

(11) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(12) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

4.2 Compliance with the Rural Residential Subdivision Design Code

Development that is consistent with the specific outcomes in Sections 4.3.1 to 4.3.8 complies with the Rural Residential Subdivision Design Code.

4.3 Development Requirements

The development requirements of this code relate to the following elements:-

(4.3.1) Lot Layout – single detached housing

(4.3.2) Lot Layout – community titled residential development (not subdivision of existing or approved buildings)

(4.3.3) Stormwater management

(4.3.4) Road Networks (excludes State-controlled roads)

(4.3.5) Utilities

(4.3.6) Pedestrian, Cyclist and Horse Riding Networks

(4.3.7) Public Transport

(4.3.8) Park

Specific Outcomes for Assessable Development	Probable Solutions
4.3.1 Lot Layout – Single Detached Housing	
SO 1 Residential lots have appropriate area and dimensions for:- (1) siting and construction of a dwelling and ***ancillary outbuildings***; (2) siting and construction of an on-site sewerage facility in accordance with the relevant standards; (3) the provision of private open space; (4) provision of a small dam; (5) convenient and safe vehicle access; and (6) on ***site*** car parking.	**PS 1** All residential lots:- (1) contain a certified building area of 40m x 40m minimum dimensions which is 750mm above the 100 year ARI flood level and has maximum slope, before ***site*** works, of 1 (V) in 6 (H). The certified building area is setback from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully a distance not less than that determined by projecting a line 1(V) in 1(H) from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully to the finished ground level or 15m back from the top bank, whichever is the greater; (2) provide for an area for an on-site sewerage facility (including spare effluent disposal area) in accordance with the relevant standards; (3) have a minimum outdoor private open space area of 1.2ha (clear of the building area, effluent treatment and disposal areas and rear lot accessways) with one area which contains a circle with a minimum diameter of 75m ; (4) have a ***site*** which is suitable for construction of a small dam, 900m² in surface area; (5) have one constructed lot access point which has adequate road traffic sight distances; and (6) can accommodate car parking on ***site*** for 3 large passenger vehicles. Accessways for rear lots:- (1) have a minimum width of 10m; (2) have a maximum length of 300m; (3) have a minimum length of 50m; and (4) are constructed and sealed to a minimum width of 3m.
SO 2 Residential lot shape and dimensions take into account user requirements and the ***site*** topography.	**PS 2** The residential lot shape allows all areas of the land to be easily accessed for maintenance. The dimensions of all residential lots satisfy the following ratio:- $L^2/A < 5$ where L = the horizontal distance in metres measured in a straight line between the midpoint of the road frontage, or end of the accessway for a rear lot, to the most distant point on the lot boundary; and A = the area of the lot in square metres.
SO 3 Residential lot road frontages have sufficient width to allow easy and safe access.	**PS 3** All lots have a minimum road frontage of 50m except for the blind end of a cul de sac where a minimum frontage of 20m is provided. Rear lots have a minimum frontage of 10m.
SO 4 The layout is integrated with the surrounding environment and complements existing attractive streetscapes and landscapes.	**PS 4** Certified building areas are not less than closer than 30m to one another. Certified building areas are located in existing cleared ***sites***.
SO 5 The lot layout retains special features such as regionally significant vegetation and views.	**PS 5** No solution provided.
SO 6 Certified building areas in residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.	**PS 6** The certified building areas in residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and ***watercourses***. The certified building areas in residential lots are not located below the predicted 100 year storm tide surge level.

Specific Outcomes for Assessable Development	Probable Solutions
SO 7 Certified building areas in residential lots are not located on land which is prone to land slip or subsidence.	**PS 7** No solution provided.
SO 8 Residential lots are not subjected to unreasonable noise impacts.	**PS 8** No solution provided.
SO 9 Residential lots are not subjected to unreasonable air quality impacts.	**PS 9** No solution provided.
SO 10 The layout (siting of certified building areas in residential lots) ensures that residents exposure to electro-magnetic fields from powerlines (33KV and greater) does not exceed 2mG.	**PS 10** No solution provided.
4.3.2 Lot Layout – Community Titled Residential Development (not subdivision of existing or approved buildings)	
SO 11 Residential lots have appropriate area and dimensions for: (1) siting and construction of a dwelling and ***ancillary outbuildings***; (2) siting and construction of an on-site sewerage facility (including spare effluent disposal area); (3) the provision of private open space; (4) the provision of a small dam within the development; (5) convenient and safe vehicle access; and (6) on ***site*** car parking.	**PS 11** All residential lots: (1) contain a certified building area of 40m x 40m minimum dimensions which is 750mm above the 100 year ARI flood level and has maximum slope, before ***site*** works, of 1 (V) in 6 (H). The certified building area is setback from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully a distance not less than that determined by projecting a line 1(V) in 1(H) from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully to the finished ground level or 15m back from the top bank, whichever is the greater; (2) provide for an area for an on-site sewerage facility (including spare effluent disposal area) in accordance with the relevant standards; (3) have access to a small dam or dams with a combined surface area of 900m^2 per residential lot; (4) have a minimum outdoor private open space area of 2,000m^2 (clear of the certified building area and effluent treatment and disposal areas) with one area which contains a circle with a minimum diameter of 30m and not being part of the common property ; (5) have one constructed access point to the development; and (6) can accommodate car parking on each ***site*** for 2 medium passenger vehicles.
SO 12 Lot shape and dimensions take into account the ***site*** topography.	**PS 12** The residential lot shape allows all areas of the lots to be easily accessed for maintenance.
SO 13 ***Site*** frontage has sufficient width to allow easy and safe access.	**PS 13** The ***site*** has a minimum road frontage of 25m.
SO 14 The ***site*** accommodates sufficient car parking to meet average visitor demands. **SO 15** Car parking is safe and convenient for residents and visitors.	**PS 14 and PS 15** Visitor car parking for each residential lot can be accommodated on the individual lots.
SO 16 The communal open space area meets the functional requirements of the user including a range of recreational uses, social activities and landscaping appropriate for the size of the development.	**PS 16** No solution provided.
SO 17 The layout is integrated with the surrounding environment, complement existing attractive streetscapes and landscapes.	**PS 17** Certified building areas are not less than closer than 15m to one another. Certified building areas are located in existing cleared ***sites***.

Specific Outcomes for Assessable Development	Probable Solutions
SO 18 The lot layout retains special features such as regionally significant vegetation and views.	**PS 18** The lot layout retains special features such as regionally significant vegetation and views.
SO 19 Certified building areas in residential lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.	**PS 19** The certified building areas in residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and ***watercourses***. The certified building areas in residential lots are not located below the predicted 100 year storm tide surge level.
SO 20 Certified building areas in residential lots are not located on land which is prone to land slip or subsidence.	**PS 20** No solution provided.
SO 21 Residential lots are not subjected to unreasonable noise impacts.	**PS 21** No solution provided.
SO 22 Residential lots are not subjected to unreasonable air quality impacts.	**PS 22** No solution provided.
SO 23 The layout (siting of certified building areas in residential lots) ensures that residents exposure to electro-magnetic fields from powerlines (33KV and greater) does not exceed 2mG.	**PS 23** No solution provided.
4.3.3 Stormwater Management	
SO 24 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event. **SO 25** Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon certified building areas.	**PS 24 and PS 25** The roads, drainage pathways, drainage features and ***waterways*** safely convey the stormwater flows for the 100 year ARI storm event without allowing the flows to encroach upon certified building areas.
SO 26 Stormwater drainage pipes and ***structures*** through or within private land are protected by easements in favour of ***Council*** with sufficient area for practical access for maintenance.	**PS 26** Stormwater drainage infrastructure through or within private land is protected by easements in favour of ***Council*** with areas and dimensions conforming to ***Council*** Standards.
SO 27 Stormwater management facilities (except drainage outlets) do not encroach upon riparian areas.	**PS 27** No solution provided.
SO 28 The stormwater quality management system minimises the environmental impact of stormwater on surface and underground receiving water quality.	**PS 28** No solution provided.
SO 29 The stormwater quality management system minimises the environmental impact of stormwater on natural ***waterway*** configuration.	**PS 29** No solution provided.
SO 30 The stormwater quality management system minimises the environmental impact of stormwater on existing natural wetlands and vegetation.	**PS 30** No solution provided.
SO 31 The stormwater quality management system optimises the inception, retention and removal of waterborne pollutants prior to discharge to receiving waters.	**PS 31** No solution provided.
SO 32 Community benefit is maximised through the retention of natural streams and vegetation.	**PS 32** Natural streams and vegetation are retained.

Specific Outcomes for Assessable Development	Probable Solutions
SO 33 Areas constructed as detention basins are adaptable for passive recreation.	**PS 33** No solution provided.
4.3.4 Road Networks (excludes State-controlled Roads)	
SO 34 The road network has a clear structure and component streets conforming with their function in the network. **SO 35** The road network has clear physical distinctions between each type of street. The distinctions are to be based on function, legibility, convenience, traffic volumes, vehicle speeds, public safety and amenity. **SO 36** The road network accommodates the following primary functions:- (1) access to residences; (2) public transport on Collector Streets; (3) utility services location; and (4) setting and approach (streetscape & landscape) for adjoining residences. **SO 37** The road network includes adequate verge and carriageway width for the primary functions listed in specific outcomes above.	**PS 34 to PS 37** The Residential Streets conform to the following:

Item	Access Place	Access Street	Collector Street
Traffic Catchment (maximum)	50 lots (1)	100 lots	350 lots (2)
Maximum Street Length	900m	1200m (3)	1200m (3)
Design Speed (maximum)	45km/h	60km/h	60km/h
Carriageway Lanes	2 (4)	2	2
Carriageway Width	6m	7m	8m
Verge Width (minimum)	5m	5m	5m
Reserve Width (minimum)	20m	20m	25m
Footpaths/Cycle paths/ Bridle Paths	as required (5)	as required (5)	as required (5)
Parking	no provision (6)	no provision (6)	no provision (6)
Grade (minimum - maximum)	0.4% - 16% (7)	0.4% - 16%	0.4% - 12% (8)

Notes:-

1. Theoretical limit only as maximum length controls in most cases.

2. May be increased by widening the reserve.

3. Maximum street lengths are interdependent. Essential criterion is maximum total travel time of 180 seconds

*4. Single lane 3.5m carriageway with special **Council** approval, maximum 12 lots and maximum length of 300m.*

*5. As required by **Council's** network planning.*

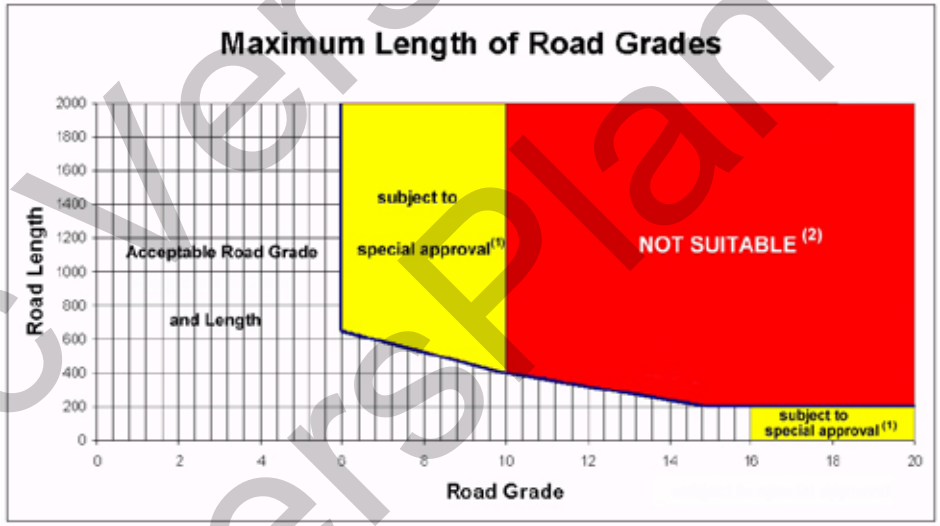
6. Parking bays may be required at cul-de-sac heads.

7. 20% absolute maximum grade may be permitted under special circumstances.

8. 16% absolute maximum grade may be permitted under special circumstances.

The Major Roads conform to the following:-

	Sub-Arterial	Arterial
Traffic Volume (typical)	12,000vpd	30,000vpd
Design Speed (minimum)	80km/h	100km/h
Carriageway Lanes	2	4
Reserve Width (minimum)	26m	40m
Maximum Grade (1)	8%	6%

Specific Outcomes for Assessable Development	Probable Solutions
	Notes:- *1. Grades over 10% must be used with caution due to problems related to slow climbing speeds and potentially high downhill speeds.*
	The combination of road length and grade for new Residential Streets conforms with the following chart:  **Figure 1** ***Notes***:- *1. It is recognised that special circumstances may arise where it may be acceptable to allow grades or lengths of grade. Special circumstances may include:-* • *where comparatively short lengths of grade lead to significant reductions in environmental impact or costs;* • *where absolute numbers of **heavy vehicles** are low;and* • *on local roads where the cost of achieving the higher standard cannot be justified in terms of the traffic volumes using the road.* *2. Existing roads may fall into this area in which case special design is required.* On Collector Roads and Major Roads where grades greater than 10% are combined with significant changes in horizontal alignment (particularly where the maximum speed difference between successive horizontal geometric elements exceeds 6%) then additional lane or shoulder width or curve widening is provided as necessary.
SO 38 The road network creates convenient safe vehicular movement for residents between their homes and the Major Road network.	**PS 38** The general maximum travel time in the Residential Street System between any residential lot and a Major Road is 180 seconds. External roads providing access to the ***site*** from the Major Road system have a minimum sealed width of 5.5m with a minimum shoulder width of 1.2m (both sides).

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<tr><td>SO 39 The road network provides more than one access route (at all stages of development) for residential areas containing a significant number of residential lots.</td><td>PS 39 The residential area is served by more than one access route to the Major Road system when the number of residential lots exceeds 100 (absolute maximum allowed is 150 lots).</td></tr>
<tr><td>SO 40 Intersections along residential streets are spaced to create safe and convenient vehicle movements.</td><td>PS 40 Intersection spacing (centreline – centreline) along a through road conforms with the following:-
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<tr><td>On same side of through road</td><td>100m</td><td>300m</td><td>500m</td><td>300m</td><td>500m</td></tr>
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Specific Outcomes for Assessable Development	Probable Solutions
SO 47 Residential Streets do not operate as through traffic routes for externally generated traffic while limiting the length of time local drivers need to spend in a low speed environment.	**PS 47** The street layout discourages through traffic by the use of speed control and road alignment.
SO 48 Residential Streets are designed to reduce traffic speeds and volumes to acceptable levels.	**PS 48** All residential lots have a frontage road maximum design speeds as follows:-
	Street Classification / **Design Speed (maximum)** Access Place — 45kph Access Street — 60kph Collector Street — 60kph
SO 49 The road network provides for the cost-effective provision of ***public utilities***.	**PS 49** The roads accommodate appropriate corridors for all ***public utilities*** in accordance with ***Council*** standards.
4.3.5 Utilities	
SO 50 All lots are provided with electricity, street lighting and communications services.	**PS 50** No solution provided.
SO 51 Development only occurs in locations where there are adequate services for the desired use.	**PS 51** The development has adequate services for the desired use.
SO 52 The provision of ***public utilities*** including electricity, street lighting and communications services, is cost effective over their life cycle and incorporate provisions to minimise adverse environmental impact in the short and long-term.	**PS 52** The provision of ***public utilities*** including electricity, street lighting and communications services conforms with the standards of the relevant service authority.
SO 53 Adequate buffers are provided between utilities and dwellings to protect residential amenity and health.	**PS 53** The layout ensures that residents' exposure to electro-magnetic fields (from powerlines) does not exceed 2mG (average). The certified building areas are clear of the 2mG (average) electromagnetic fields from powerlines (>33kV).
SO 54 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.	**PS 54** No solution provided.
4.3.6 Pedestrian, Cyclist and Horse Riding Networks	
SO 55 The minor roads and pathway network provide pedestrian and horse riding routes with connections to adjoining major roads, open spaces and activity centres. **SO 56** The minor roads and pathway network provide low speed, low volume, routes for cyclists and horse riding with connections to adjoining minor roads and major roads, open spaces and activity centres. **SO 57** The pedestrian network is designed to provide the shortest and most convenient links between each residential precinct and major attractions such as schools, ***shops***, sporting facilities and bus routes.	**PS 55 to PS 57** Pathways are provided between roads to allow safe and convenient access for pedestrians, cyclists and horse riders.

Specific Outcomes for Assessable Development	Probable Solutions
SO 58 Public access is provided to open space areas, rivers and water bodies as necessary to be consistent with and complement existing access arrangements and in accordance with the function of those areas.	**PS 58** No solution provided.
SO 59 The bikeway and recreational trail network is designed to provide for safe, attractive and convenient movement of cyclists and horse riders between each residential precinct and major attractions such as schools, ***shops***, sporting facilities, bus routes (existing and planned) and railway stations.	**PS 59** The bikeway and recreational trail network provides safe, attractive and convenient movement of cyclists between each residential precinct and major attractions such as schools, ***shops***, sporting facilities, bus routes (existing and planned) and railway stations.
4.3.7 Public Transport	
SO 60 The road network provides for potential bus routes including safe convenient stops and, where necessary, bus turnaround areas.	**PS 60** Bus routes are incorporated into the development to ensure that 90% of the residential lots are within 700m (straight line measure) of the routes.
SO 61 The street network caters for the extension of existing and future public transport routes to provide sufficient services that are convenient and accessible to the community.	**PS 61** The development provides for extension of existing and future bus routes.
4.3.8 Park	
SO 62 Park and open space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes.*	**PS 62** No solution provided.

Division 5 Industrial Subdivision Design Code

5.1 Overall Outcome

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Industrial Subdivision Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Neighbourhoods are safe and attractive;

(4) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(5) Lots have adequate ***site*** drainage to meet user requirements;

(6) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(7) Stormwater management solutions are integrated with other uses and the natural environment;

(8) Lots have adequate, safe, convenient and structured road access systems;

(9) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(10) Pedestrian and cyclist networks are safe, convenient and legible;

(11) The subdivision layout ensures that existing or potential public transport services are accommodated;

(12) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(13) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

5.2 Compliance with the Industrial Subdivision Design Code

Development that is consistent with the specific outcomes in Sections 5.3.1 to 5.3.7 complies with the Industrial Subdivision Design Code.

5.3 Development Requirements

The development requirements of this code relate to the following elements:-

(5.3.1) Lot Layout

(5.3.2) Stormwater Management

(5.3.3) Road Networks (excludes State-controlled Roads)

(5.3.4) Utilities

(5.3.5) Pedestrian and Cyclist Networks

(5.3.6) Public Transport

(5.3.7) Park

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td colspan="2">5.3.1 Lot Layout</td></tr>
<tr><td>SO 1 Industrial lots have appropriate area and dimensions to accommodate:-
(1) siting and construction of industrial buildings;
(2) outdoor storage areas;
(3) convenient and safe access;
(4) on-site car parking;
(5) service vehicle access and manoeuvring; and
(6) landscaping and buffer areas.</td><td>PS 1 All industrial lots (except corner lots) fronting Minor Roads have a minimum area of 2,500m^2.
All industrial lots (except corner lots) fronting Major Roads have a minimum area of 5,000m^2.
All industrial lots are regular in shape.
Industrial lots have the following road frontage:-
<table>
<tr><th>Location</th><th>Minimum Frontage</th></tr>
<tr><td>Industrial lots up to 2,999m^2 in area - all locations except lots at the head of a cul de sac & lots on the outside corner of a sharp bend or knuckle widening</td><td>75m</td></tr>
<tr><td>Industrial lots over 2,999m^2 in area - all locations except corner lots, lots at the head of a cul de sac & lots on the outside corner of a sharp bend</td><td>50m</td></tr>
<tr><td>Head of a cul de sac or knuckle widening</td><td>40m</td></tr>
<tr><td>Outside corner of a sharp bend (> 75^o deflection)</td><td>30m</td></tr>
</table></td></tr>
<tr><td>SO 2 Industrial lots do not contain major drainage flow paths from roads and public areas.</td><td>PS 2 The industrial lots do not contain overland flow paths for the 100 year ARI storm event.</td></tr>
<tr><td>SO 3 Industrial lots have adequate freeboard to major flow levels in rivers, creeks, watercourses and engineered open drains to facilitate building construction without the need for levies.</td><td>PS 3 The industrial lots are developed to the following finished surface levels:-
<table>
<tr><th>Location</th><th>Minimum Development Level</th><th>Minimum Area above Minimum Development Level</th></tr>
<tr><td>Adjacent rivers, creeks and watercourses</td><td>Q100 flood level + 750mm</td><td>4000m^2
(where lot area is < 4000m^2 then the whole lot area)</td></tr>
<tr><td>Adjacent engineered channels or open drains</td><td>Q100 flood level + 750mm</td><td>4000m^2
(where lot area is < 4000m^2 then the whole lot area)</td></tr>
</table></td></tr>
<tr><td>SO 4 The lot layout retains special features such as significant trees and vegetation.</td><td>PS 4 No solution provided.</td></tr>
<tr><td>SO 5 Industrial lots are not located on land which is prone to land slip or subsidence.</td><td>PS 5 No solution provided.</td></tr>
<tr><td colspan="2">5.3.2 Stormwater Management</td></tr>
<tr><td>SO 6 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event.
SO 7 Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon industrial lots.</td><td>PS 6 and PS 7 Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon industrial lots.
Overland flow paths (for any storm event) from roads and public open space areas do not pass through industrial lots. Drainage pathways are provided to accommodate overland flows from roads and public open space areas.</td></tr>
<tr><td>SO 8 Stormwater drainage pipes and structures through or within private land are protected by easements in favour of Council with sufficient area for practical access for maintenance.</td><td>PS 8 Stormwater drainage infrastructure through or within private land is protected by easements in favour of Council with areas and dimensions conforming to Council Standards.</td></tr>
<tr><td>SO 9 Stormwater management facilities (except drainage outlets) do not encroach upon riparian areas.</td><td>PS 9 No solution provided.</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions
SO 10 The stormwater quality management system minimises the environmental impact of stormwater on surface and underground receiving water quality.	**PS 10** No solution provided.
SO 11 The stormwater quality management system minimises the environmental impact of stormwater on natural ***waterway*** configuration.	**PS 11** No solution provided.
SO 12 The stormwater quality management system minimises the environmental impact of stormwater on existing natural wetlands and vegetation.	**PS 12** No solution provided.
SO 13 The stormwater quality management system optimises the inception, retention and removal of waterborne pollutants prior to discharge to receiving waters.	**PS 13** No solution provided.
SO 14 Community benefit is maximised through the retention of natural streams and vegetation.	**PS 14** Natural streams and vegetation are retained.
SO 15 Areas constructed as detention basins are adaptable for passive recreation.	**PS 15** No solution provided.
SO 16 Stormwater quality management devices are located on public land.	**PS 16** No solution provided.
5.3.3 Road Networks (excludes State-controlled roads)	
SO 17 The road networks have a clear structure and component streets conforming with their function in the network. **SO 18** The road network has clear physical distinctions between each type of street based on function, legibility, convenience, traffic volumes, vehicles speeds, public safety and amenity. **SO 19** Industrial roads provide the optimum combination of safety, amenity, convenience and economy. **SO 20** The road network accommodates the following primary functions:- (1) access to lots; (2) on street car parking; (3) stormwater drainage paths (minor and major storms); (4) public transport on Collector Roads and Major Roads; (5) utility services location; and (6) setting and approach (streetscape and landscape).	**PS 17 to PS 20** The Industrial roads conform to the following: **Item** / **Access Road** / **Collector Road** Maximum Traffic Catchment: 8ha / 30ha Minimum Design Speed: 40km/h / 60km/h Total Carriageway Width: 12m / 14m Minimum Verge Width: 4m / 4m Minimum Reserve Width: 20m / 24m Maximum Grade: 6% (desirable) 10% (absolute) / 6.0% (desirable) 8% (absolute) Minimum Grade: 0.4% / 0.4% Major Roads conform to the following: **Item** / **Sub-Arterial** / **Arterial** Traffic Volume (typical): 12,000vpd / 30,000vpd Design Speed (minimum): 80km/h / 100km/h

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>
<table>
<tr><td>Carriageway Lanes</td><td>2</td><td>4</td></tr>
<tr><td>Carriageway Width</td><td>10m (kerbed)(1)</td><td>2 x 8.5m (kerbed)(1)</td></tr>
<tr><td>Verge Width (minimum)</td><td>7.5m</td><td>8.5m</td></tr>
<tr><td>Reserve Width (minimum)</td><td>25m (2)</td><td>40m (2)</td></tr>
<tr><td>Footpaths/Cycle paths</td><td>Both sides (3)</td><td>Both sides (3)</td></tr>
<tr><td>Maximum Grade</td><td>7%</td><td>6%</td></tr>
<tr><td>Minimum Grade</td><td>0.4%</td><td>0.4%</td></tr>
</table>
Notes:-
1. Does not include cycle lanes.
2. Greater width required at intersections.
3. Cycle paths may be required in accordance with network design.
The roads accommodate appropriate corridors for all public utilities in accordance with Council standards.
</td></tr>
<tr><td>SO 21 Road intersections are spaced to create safe and convenient vehicle movements.</td><td>
PS 21 Intersection spacing (centreline – centreline) along a through road conforms with the following:-
<table>
<tr><th rowspan="2">Intersecting Road Location</th><th></th><th colspan="2">Through Road</th><th></th></tr>
<tr><th>Access Road</th><th>Collector Road</th><th>Sub-Arterial Road (1)</th><th>Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>60m</td><td>100m</td><td>300m</td><td>500m</td></tr>
<tr><td>On opposite side of through road, left – right stagger</td><td>60m</td><td>150m</td><td>300m</td><td>500m</td></tr>
<tr><td>On opposite side of through road, right – left stagger</td><td>40m</td><td>60m</td><td>300m</td><td>500m</td></tr>
</table>
Notes:-
1. In the case of Sub-Arterial Roads, existing landholdings may require intersection at a lesser spacing. In such cases the following absolute minimum spacings are used, but all turns access may not be permitted (i.e. left in/left out only):-
<table>
<tr><td>Intersections on same side</td><td>100m</td></tr>
<tr><td>Intersections on opposite sides:
• left – right stagger
• right – left stagger</td><td>
100m
30m</td></tr>
</table>
</td></tr>
<tr><td>SO 22 The road network facilitates walking and cycling within the area and to local facilities and public transport routes and stops.</td><td>PS 22 Wherever practicable pathways are provided to link roads giving direct convenient pedestrian and cyclist access within the area.</td></tr>
<tr><td>SO 23 All new Council controlled roads are fully constructed to meet user requirements with minimum maintenance costs.</td><td>PS 23 All new Council controlled roads are fully constructed to Council Standards.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td>SO 24 All Council controlled frontage roads are fully constructed to Council Planning Scheme Policy PSP28 Civil Infrastructure Design standards.</td><td>PS 24 All Council controlled frontage roads are fully constructed to Council Planning Scheme Policy PSP28 Civil Infrastructure Design standards as follows:-
<table>
<tr><th>Situation</th><th>Minimum Construction (1)</th></tr>
<tr><td>Where the existing frontage road is unconstructed or a gravel road only</td><td>For Access Roads the full carriageway and verges are provided (including all associated works);
For Collector Roads the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 9.5m plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side is provided (including all associated works).
For Major Roads the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 9.5m plus 2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side is provided (including all associated works).</td></tr>
<tr><td>Where the existing frontage road is sealed but not constructed to Council's Planning Scheme Policy PSP28 Civil Infrastructure Design standard (2)</td><td>For Access Roads the full carriageway and verges is reconstructed (including all associated works);
For Collector Roads the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 9.5m plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side is reconstructed (including all associated works). The works match into the remaining works.
For Major Roads the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 9.5m plus 2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side is reconstructed (including all associated works). The works match into the remaining works.</td></tr>
<tr><td>Where the existing frontage road is partially constructed to Council's Planning Scheme Policy PSP28 Civil Infrastructure Design standard (2)</td><td>For Access Roads construction of the full carriageway and verges is completed (including all associated works);
For Collector Roads the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 9.5m plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side is reconstructed (including all associated works). The works match into the remaining works.
for Major Roads the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 9.5m plus 2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side is reconstructed (including all associated works). The works match into the remaining works.</td></tr>
<tr><td colspan="2">Notes:-
1. Construction includes all associated works (services, streetlighting and linemarking).
2. Testing of the existing pavement is carried out to confirm whether the existing works meet Councils Planning Scheme Policy PSP28 Civil Infrastructure Design standard.</td></tr>
</table></td></tr>
<tr><td>SO 25 Sealed and flood free access during minor storms is available to the site from the nearest Major Road.</td><td>PS 25 Sealed (5.5m min. width) and flood free road access during minor storms (5 year ARI) is available to the site from the nearest Major Road.</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions
SO 26 Access roads to the development remain trafficable during major storm events.	**PS 26** Access roads to the development have sufficient longitudinal and cross drainage to remain safely trafficable during major storm events.
5.3.4 Utilities	
SO 27 All lots are provided with sewerage, water supply, underground electricity, street lighting and communications services.	**PS 27** All lots (including ***park*** and community purposes lots) are provided with sewerage, water supply, underground electricity, street lighting and communications services.
SO 28 Development only occurs in locations where there are adequate services for the desired use.	**PS 28** The development has adequate services for the desired use.
SO 29 The provision of ***public utilities*** including sewerage, water supply, electricity, street lighting and communications services, is cost effective over their life cycle and incorporates provisions to minimise adverse environmental impact in the short and long-term.	**PS 29** The provision of ***public utilities*** including sewerage, water supply, electricity, street lighting and communications services conforms with the standards of the relevant service authority.
SO 30 The sewerage transportation system for the proposed development is planned to conform with ***Council's*** broad infrastructure plan for the catchment.	**PS 30** The sewerage transportation system for the development conforms with ***Council's*** broad infrastructure plan for the catchment.
SO 31 The water supply system for the proposed development is planned to conform with ***Council's*** broad infrastructure plan for the water supply zone.	**PS 31** The water supply system for the development conforms with ***Council's*** broad infrastructure plan for the water supply zone.
SO 32 Water supply and sewerage networks are accessible, easy to maintain and cost effective based on life cycle costs.	**PS 32** Water supply and sewerage networks are accessible for maintenance of equipment. No specific solutions are provided with regard to cost effectiveness.
SO 33 Where ***Council*** plans to supply recycled water, the development makes provision for these future recycled water supply systems.	**PS 33** An appropriate service corridor is provided for future recycled water supply.
SO 34 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.	**PS 34** No solution provided.
5.3.5 Pedestrian and Cyclist Networks	
SO 35 The Minor Roads and pathway network provide pedestrian and cyclist route with connections to adjoining Minor Roads and Major Roads, open spaces and activity centres. **SO 36** The pedestrian network is designed to provide the shortest and most convenient links between industrial areas and residential areas, bus routes (existing and planned) and railway stations.	**PS 35 and PS 36** Pathways are provided between roads to allow safe and convenient access for pedestrians and cyclists.

Specific Outcomes for Assessable Development	Probable Solutions
SO 37 Public access is provided to open space areas, rivers and water bodies as necessary to be consistent with and complement existing access arrangements and in accordance with the function of those areas.	**PS 37** No solution provided.
SO 38 The bikeway network is designed to provide the shortest and most convenient links between industrial areas and residential areas, bus routes (existing and planned) and railway stations.	**PS 38** The bikeway network provides safe, attractive and convenient links between industrial areas and residential areas, bus routes (existing and planned) and railway stations. The network accords with ***Council's*** Bikeways Plan.
5.3.6 Public Transport	
SO 39 The majority of industrial lots are within convenient walking distance of an existing or potential bus route. **SO 40** The road network provides for potential bus routes including safe, convenient stops and, where necessary, bus turnaround areas.	**PS 39 and PS 40.** Bus routes are incorporated into the development to ensure that 90% of the lots are within 700m (straight line measure) of the routes. Bus stops are provided at 400m maximum spacing and integrated with the road and pedestrian network.
SO 41 The road network provides for the extension of existing and future public transport routes.	**PS41** No solution provided.
5.3.7 Park	
SO 42 Park and open space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes*.	**PS 42** No solution provided.

Division 6 Commercial Subdivision Design Code

6.1 Overall Outcome

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Commercial Subdivision Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Neighbourhoods are safe and attractive;

(4) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(5) Lots have adequate ***site*** drainage to meet user requirements;

(6) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(7) Stormwater management solutions are integrated with other uses and the natural environment;

(8) Lots have adequate, safe, convenient and structured road access systems;

(9) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(10) Pedestrian and cyclist networks are safe, convenient and legible;

(11) The subdivision layout ensures that existing or potential public transport services are accommodated;

(12) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(13) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

6.2 Compliance with the Commercial Subdivision Code

Development that is consistent with the specific outcomes in Sections 6.3.1 to 6.3.7 complies with the Commercial Subdivision Design Code.

6.3 Development Requirements

The development requirements of this code relate to the following elements:-

(6.3.1) Lot layout

(6.3.2) Stormwater management

(6.3.3) Road networks (excludes State-controlled roads)

(6.3.4) Utilities

(6.3.5) Pedestrian and cyclist networks

(6.3.6) Public transport

(6.3.7) Park

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td colspan="2">6.3.1 Lot Layout</td></tr>
<tr><td>SO 1 Commercial lots have appropriate area and dimensions to accommodate:-
(1) siting and construction of buildings;
(2) convenient and safe access;
(3) on-site car parking;
(4) service vehicle access and manoeuvring;
(5) on-site open space areas;
(6) on-site stormwater management; and
(7) landscaping and buffer areas.</td><td>PS 1 All commercial lots have a minimum area as follows:-
<table><tr><th>Zone</th><th>Minimum Area</th></tr><tr><td>Central Business</td><td>To suit the proposed site design taking into account the matters listed in the specific outcome.</td></tr><tr><td>Commercial</td><td>1,000m^2</td></tr><tr><td>Local Business</td><td>800m^2</td></tr></table>All commercial lots are regular in shape.
Commercial lots have the following road frontage:-
<table><tr><th>Zone</th><th>Minimum Frontage</th></tr><tr><td>Central Business</td><td>To suit the proposed site design taking into account the matters listed in the specific outcome.</td></tr><tr><td>Commercial</td><td>25m</td></tr><tr><td>Local Business</td><td>20m</td></tr></table></td></tr>
<tr><td>SO 2 Commercial lots do not contain major drainage flow paths.</td><td>PS 2 The commercial lots do not contain overland flow paths for the 100 year ARI storm event.</td></tr>
<tr><td>SO 3 Commercial lots have adequate freeboard to major flow levels in rivers, creeks, watercourses and engineered open drains to facilitate building construction without the need for levies.</td><td>PS 3 The commercial lots are developed to the following finished surface levels:-
<table><tr><th>Location</th><th>Minimum Development Level</th><th>Minimum Area above Minimum Development Level</th></tr><tr><td>Adjacent rivers, creeks and watercourses</td><td>Q100 flood level + 750mm</td><td>2000m^2
(where lot area is < 2000m^2 then the whole lot area)</td></tr><tr><td>Adjacent engineered channels or open drains</td><td>Q100 flood level + 750mm</td><td>2000m^2
(where lot area is < 2000m^2 then the whole lot area)</td></tr></table></td></tr>
<tr><td>SO 4 Commercial lots are not located on land which is prone to land slip or subsidence.</td><td>PS 4 No solutions provided.</td></tr>
<tr><td colspan="2">6.3.2 Stormwater Management</td></tr>
<tr><td>SO 5 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event.
SO 6 Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon commercial lots.</td><td>PS 5 and PS 6 Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon commercial lots.
Overland flow paths (for any storm event) from roads and public open space areas do not pass through commercial lots. Drainage pathways are provided to accommodate overland flows from roads and public open space areas.</td></tr>
<tr><td>SO 7 Stormwater drainage pipes and structures through or within private land are protected by easements in favour of Council with sufficient area for practical access for maintenance.</td><td>PS 7 Stormwater drainage infrastructure through or within private land is protected by easements in favour of Council with areas and dimensions conforming to Council standards.</td></tr>
<tr><td>SO 8 Stormwater management facilities (except drainage outlets) do not encroach upon riparian areas.</td><td>PS 8 No solution provided.</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions
SO 9 The stormwater quality management system minimises the environmental impact of stormwater on surface and underground receiving water quality.	**PS 9** No solution provided.
SO 10 The stormwater quality management system minimises the environmental impact of stormwater on natural ***waterway*** configuration.	**PS 10** No solution provided.
SO 11 The stormwater quality management system minimises the environmental impact of stormwater on existing natural wetlands and vegetation.	**PS 11** No solution provided.
SO 12 The stormwater quality management system optimises the inception, retention and removal of waterborne pollutants prior to discharge to receiving waters.	**PS 12** No solution provided.
SO 13 Community benefit is maximised through the retention of natural streams and vegetation.	**PS 13** Natural streams and vegetation are retained
SO 14 Areas constructed as detention basins are adaptable for passive recreation.	**PS 14** No solution provided.
6.3.3 Road Networks (excludes State-controlled roads)	
SO 15 The road network has clear structure and component streets conforming with their function in the network. **SO 16** The road network has clear physical distinctions between each type of street based on function, legibility, convenience, traffic volumes, vehicles speeds, public safety and amenity. **SO 17** Commercial roads provide the optimum combination of safety, amenity, convenience and economy. **SO 18** The road network accommodates the following primary functions:- (1) access to lots; (2) on street car parking; (3) stormwater drainage paths (minor and major storms); (4) public transport on Collector Roads and Major Roads; (5) utility services location; and (6) setting and approach (streetscape and landscape).	**PS 15 to PS 18** The commercial roads conform to the following:-

Item	Collector Road	Trunk Collector Road	Major Road
Max. Traffic Volume for Frontage Access	3500vpd	9000vpd	May not suitable (1)
Design Speed	40km/h (max.)	60km/h (max.)	60km/h
Minimum verge width	3.5m or 4.275m (2) (3)	5.5m (3)	7.5m
Minimum Parking Lane width (includes provision for cycles)	4.2m (4)	4.2m (4)	4.2m (4)
Minimum Through Lane Width	3.5m	3.5m	3.5m
Minimum Median Widths:			
providing for sheltered turn lane	6m	6m	6m
providing for pedestrian refuge	2.5m	2.5m	2.5m
providing for traffic signals or lighting poles	2m	2m	2m
providing for small signs	1.5m	1.5m	1.5m
Minimum Road Reserve Width	15.4m plus verge and median requirements	15.4m plus verge and median requirements	15.4m plus verge and median requirements
Footpaths/Cycle paths	1.5m wide (both sides) (5)	1.5m wide (both sides) (5)	2m wide (both sides) (5)
Maximum Grade	12%	12%	6.0%
Minimum Grade	0.4%	0.4%	0.4%

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>Notes:-
1. Subject to appropriate design for Major Developments. For traffic volumes exceeding 12,000 vpd service roads are provided. For minor infill developments, frontage access may be permitted where there is no reasonable alternative available.
2. Collector Street verges containing or intended to contain water mains require a minimum width of 4.275m.
3. Greater width is required at bus bays.
4. Allows for parking and cycling.
5. Greater widths will be required for cycle paths – refer to Council's Bikeways Plan.
The roads accommodate appropriate corridors for all public utilities in accordance with Council standards.
The road design is integrated with the site design.</td></tr>
<tr><td>SO 19 Road intersections are spaced to create safe and convenient vehicle movements.</td><td>PS 19 Intersection spacing (centreline – centreline) along a through road conforms with the following:
<table>
<tr><th rowspan="2">Intersecting Road Location</th><th colspan="4">Through Road</th></tr>
<tr><th>Access Street & Collector Street</th><th>Trunk Collector Street</th><th>Sub-Arterial Road (1)</th><th>Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>60m</td><td>100m</td><td>300m</td><td>500m</td></tr>
<tr><td>On opposite side of through road</td><td>40m</td><td>60m</td><td>300m</td><td>500m</td></tr>
</table>
Notes:-
1. In the case of Sub-Arterial Roads, existing landholdings may require intersection at a lesser spacing. In such cases the following absolute minimum spacing is used, but all turns access may not be permitted (i.e. left in/left out only):-
<table>
<tr><td>Intersections on same side</td><td>100m</td></tr>
<tr><td>Intersections on opposite sides:-
• left – right stagger
• right – left stagger</td><td>
100m
30m</td></tr>
</table></td></tr>
<tr><td>SO 20 The road network facilitates walking and cycling within the area and to local facilities and public transport routes and stops.</td><td>PS 20 Pathways are provided to link roads giving direct convenient pedestrian and cyclist access within the area.</td></tr>
<tr><td>SO 21 All new Council controlled roads are fully constructed to meet user requirements with minimum maintenance costs.</td><td>PS 21 All new Council controlled roads are fully constructed to Council Standards.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td>SO 22 All Council controlled frontage roads are fully constructed to Council's Planning Scheme Policy PSP28 Civil Infrastructure Design standards.</td><td>PS 22 All Council controlled frontage roads are fully constructed to Council Planning Scheme Policy PSP28 Civil Infrastructure Design standards as follows:
<table>
<tr><th>Situation</th><th>Minimum Construction (1)</th></tr>
<tr><td>Where the existing frontage road is unconstructed or a gravel road only</td><td>For Access Streets: the full carriageway and verges are provided.
For Collector Streets: the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum width containing near side parking lane, through lanes each way, median (as required) plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.
For Major Roads: the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum width containing near side parking lane, service streets (as required), through lanes each way, median (as required) plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.</td></tr>
<tr><td>Where the existing frontage road is sealed but not constructed to Council's Planning Scheme Policy PSP28 Civil Infrastructure Design standard (2)</td><td>For Access Streets: the full carriageway and verges are provided.
For Collector Streets: the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum width containing near side parking lane, through lanes each way, median (as required) plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.
For Major Roads: the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum width containing near side parking lane, service streets (as required), through lanes each way, median (as required) plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side</td></tr>
<tr><td>Where the existing frontage road is partially constructed to Council's Planning Scheme Policy PSP28 Civil Infrastructure Design standard (2)</td><td>For Access Streets: construction of the full carriageway and verges is completed.
For Collector Streets and Trunk Collector Streets: complete the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum width containing near side parking lane, through lanes each way, median (as required) plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the existing works.
For Major Roads: complete the verge adjoining the new lots, carriageway (including near side kerb and channel) to a minimum width containing near side parking lane, service streets (as required), through lanes each way, median (as required) plus 1.2m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the existing works.</td></tr>
<tr><td colspan="2">Notes:-
1. Construction includes all associated works (services, streetlighting and linemarking).
2. Testing of the existing pavement is carried out to confirm whether the existing works meet Council's Planning Scheme Policy PSP28 Civil Infrastructure Design standard.</td></tr>
</table></td></tr>
<tr><td>SO 23 Sealed and flood free access during minor storms is available to the site from the nearest Major Road.</td><td>PS 23 No solution provided.</td></tr>
<tr><td>SO 24 Access roads to the development remain trafficable during major storm events.</td><td>PS 24 Access roads to the development have sufficient longitudinal and cross drainage to remain safely trafficable during major storm events.</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td>SO 25 The road network design takes into account::-
(1) streetscapes that may be created or already exist;
(2) protection of topography and vegetation;
(3) opportunities for views and vistas; and
(4) protection of natural drainage and open spaces systems.</td><td>PS 25 The road design network provides for:-
(1) streetscapes that may be created or already exist;
(2) protection of topography and vegetation;
(3) opportunities for views and vistas; and
(4) protection of natural drainage and open spaces systems.</td></tr>
<tr><td rowspan="5">SO 26 Traffic generated by a development is within the acceptable environmental capacity (traffic volume) of the roads and streets.</td><td>PS 26 The following environmental road capacities (traffic volumes) are not exceeded with the additional traffic from the development:-</td></tr>
<tr><td>Street Classification</td><td>Capacity (desirable maximum)</td></tr>
<tr><td>Access Street</td><td>500 vpd</td></tr>
<tr><td>Collector Street</td><td>3000 vpd</td></tr>
<tr><td>Trunk Collector</td><td>9000 vpd</td></tr>
<tr><td colspan="2">6.3.4 Utilities</td></tr>
<tr><td>SO 27 All lots are provided with sewerage, water supply, underground electricity, street lighting and communications services.</td><td>PS 27 No solution provided.</td></tr>
<tr><td>SO 28 Development only occurs in locations where there are adequate services for the desired use.</td><td>PS 28 The development has adequate services for the desired use.</td></tr>
<tr><td>SO 29 The provision of public utilities including sewerage, water supply, electricity, street lighting and communications services, is cost effective over their life cycle and incorporate provisions to minimise adverse environmental impact in the short and long-term.</td><td>PS 29 The provision of public utilities including sewerage, water supply, electricity, street lighting and communications services conforms with the standards of the relevant service authority.</td></tr>
<tr><td>SO 30 The sewerage transportation system for the proposed development is planned to conform with Council's broad infrastructure plan for the catchment.</td><td>PS 30 The sewerage transportation system for the development conforms with Council's broad infrastructure plan for the catchment.</td></tr>
<tr><td>SO 31 The water supply system for the proposed development is planned to conform with Council's broad infrastructure plan for the water supply zone.</td><td>PS 31 The water supply system for the development conforms with Council's broad infrastructure plan for the water supply zone.</td></tr>
<tr><td>SO 32 Water supply and sewerage networks is accessible, easy to maintain and cost effective based on life cycle costs.</td><td>PS 32 Water supply and sewerage networks are accessible for maintenance of equipment. No specific solutions are provided with regard to cost effectiveness.</td></tr>
<tr><td>SO 33 Where Council plans to supply recycled water, developments make provision for these future recycled water supply systems.</td><td>PS 33 An appropriate service corridor is provided for future recycled water supply.</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions
SO 34 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out at no cost to ***Council*** prior to the approval of the plan of subdivision.	**PS 34** No solution provided.
6.3.5 Pedestrian and Cyclist Networks	
SO 35 The pathway network provides pedestrian and cyclist route with connections to adjoining Minor Roads and Major Roads, open spaces and activity centres. **SO 36** The pedestrian network is designed to provide the shortest and most convenient links between commercial areas and residential areas, bus routes (existing and planned) and railway stations.	**PS 35 and PS 36** Pathways are provided between roads to allow safe and convenient access for pedestrians and cyclists.
SO 37 Public access is provided to open space areas, rivers and water bodies as necessary to be consistent with and complement existing access arrangements and in accordance with the function of those areas.	**PS 37** No solution provided.
SO 38 The bikeway network is designed to provide the shortest and most convenient links between commercial areas and residential areas, bus routes (existing and planned) and railway stations.	**PS 38** The bikeway network provides safe, attractive and convenient links between commercial areas and residential areas, bus routes (existing and planned) and railway stations. The network accords with ***Council's*** Bikeways Plan.
6.3.6 Public Transport	
SO 39 The commercial lots are within convenient walking distance of an existing or potential bus route. **SO 40** The road network provides for potential bus routes including safe, convenient stops and, where necessary, bus turnaround areas.	**PS 39 and PS 40** Bus routes are incorporated into the development to ensure that all commercial lots are within 400m (straight line measure) of the routes. Bus stops are provided at 400m maximum spacing and integrated with the road and pedestrian network.
SO 41 The road network provides for the extension of existing and future public transport routes.	**PS 41** The development provides for extension of existing and future public transport routes.
6.3.7 Park	
SO 42 Park and open space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes*.	**PS 42** No solution provided.

Division 7 Rural Subdivision Design Code

7.1 Overall Outcome

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Rural Subdivision Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(4) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(5) Stormwater management solutions are integrated with other uses and the natural environment;

(6) Lots have adequate, safe, convenient and structured road access systems;

(7) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(8) Pedestrian and recreational trails networks are safe, convenient and legible;

(9) The subdivision layout ensures that existing or potential public transport services are accommodated;

(10) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(11) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

7.2 Compliance with the Rural Subdivision Design Code

Development that is consistent with the specific outcomes in Sections 7.3.1 to 7.3.7 complies with the Rural Subdivision Design Code.

7.3 Development Requirements

The development requirements of this code relate to the following elements:-

(7.3.1) Lot Layout

(7.3.2) Stormwater Management

(7.3.3) Road networks (excludes State-controlled roads)

(7.3.4) Utilities

(7.3.5) Pedestrian and Horse Riding Networks

(7.3.6) Public Transport

(7.3.7) Park

Note: ***The minimum lot sizes in this code may be affected by the Regulatory Provisions of the South East Queensland Regional Plan.***

Specific Outcomes for Assessable Development	Probable Solutions
7.3.1 Lot Layout	
SO 1 Rural lots have appropriate area and dimensions for:- (1) rural uses; (2) siting and construction of a dwelling and ***ancillary outbuildings***; (3) siting and construction of an on-site sewerage facility in accordance with the relevant standards; and (4) convenient and safe vehicle access	**PS 1** All residential lots: (1) have a minimum area of 16ha; (2) contain a certified building area of 40m x 40m minimum dimensions which is 750mm above the 100 year ARI flood level and has maximum slope, before ***site*** works, of 1 (V) in 6 (H). The certified building area is setback from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully a distance not less than that determined by projecting a line 1(V) in 1(H) from the toe of a cut batter or bottom of a bank of a ***waterway*** or gully to the finished ground level or 15m back from the top bank, whichever is the greater; (3) provide for an area for an on-site sewerage facility (including spare effluent disposal area) in accordance with the relevant standards; (4) have a ***site*** which is suitable for construction of a small dam, 900m² in surface area; and (5) have one constructed lot access point which has adequate road traffic sight distances.
SO 2 Residential lot shape and dimensions take into account user requirements and the ***site*** topography.	**PS 2** The residential lot shape allows all areas of the land to be easily accessed for maintenance. The dimensions of all residential lots satisfy the following ratio:- $L^2/A < 5$ where L = the horizontal distance in metres measured in a straight line between the midpoint of the road frontage, or end of the accessway for a rear lot, to the most distant point on the lot boundary; and A = the area of the lot in square metres.
SO 3 Residential lot road frontages have sufficient width to allow easy and safe access.	**PS 3** All lots have a minimum road frontage of 100m except for the blind end of a cul de sac where a minimum frontage of 50m is provided.
SO 4 The lot layout retains special features such as regionally significant vegetation and views.	**PS 4** The lot layout retains special features such as regionally significant vegetation and views.
SO 5 Certified building areas in rural lots are located outside flood prone land, flood plains, tidal areas and areas below storm tide levels.	**PS 5** The certified building areas in residential lots are not located below the ultimate (post development) Q100 flood level of natural drainage features including rivers, streams and ***watercourses***. The certified building areas in residential lots are not located below the predicted 100 year storm tide surge level.
SO 6 Certified building areas in residential lots are not located on land which is prone to land slip or subsidence.	**PS 6** No solution provided.
SO 7 The layout (siting of certified building areas in residential lots) ensures that residents exposure to electro-magnetic fields from powerlines (33KV and greater) does not exceed 2mG.	**PS 7** No solution provided.
7.3.2 Stormwater Management	
SO 8 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event. **SO 9** Overland flow paths conveying stormwater flows for the 100 year ARI storm event (and greater) do not pass through or encroach upon certified building areas.	**PS 8 and PS 9** The roads, drainage pathways, drainage features and ***waterways*** safely convey the stormwater flows for the 100 year ARI storm event without allowing the flows to encroach upon or discharge towards certified building areas.

Specific Outcomes for Assessable Development	Probable Solutions
SO 10 Stormwater drainage pipes and ***structures*** through or within private land are protected by easements in favour of ***Council*** with sufficient area for practical access for maintenance.	**PS 10** Stormwater drainage infrastructure through or within private land is protected by easements in favour of ***Council*** with areas and dimensions conforming to ***Council*** standards.
SO 11 Stormwater management facilities (except drainage outlets) do not encroach upon riparian areas.	**PS 11** No solution provided.
SO 12 The stormwater quality management system minimises the environmental impact of stormwater on surface and underground receiving water quality.	**PS 12** No solution provided.
SO 13 The stormwater quality management system minimises the environmental impact of stormwater on natural ***waterway*** configuration.	**PS 13** No solution provided.
SO 14 The stormwater quality management system minimises the environmental impact of stormwater on existing natural wetlands and vegetation.	**PS 14** No solution provided.
SO 15 The stormwater quality management system optimises the inception, retention and removal of waterborne pollutants prior to discharge to receiving waters.	**PS 15** No solution provided.
7.3.3 Road Networks (excludes State-controlled roads)	
SO 16 The road network has a clear structure and component streets conforming with their function in the network. **SO 17** The road network has clear physical distinctions between each type of street. The distinctions are to be based on function, convenience, traffic volumes, vehicle speeds, public safety and amenity. **SO 18** The road network accommodates the following primary functions:- (1) access to properties and premises; (2) utility services location; and (3) setting and approach (streetscape and landscape). **SO 19** The road network is sufficient to accommodate adequate verge and carriageway width for the primary functions listed in specific outcomes above. **SO 20** The road network creates convenient safe movement between their properties or premises and the Major Road network	**PS 16 to PS 20** The Rural Roads conform to the following:

Item	Rural Access Road	Rural Collector Road
Traffic Catchment (maximum)	15 lots	100 lots
Design Speed (minimum) (1)	60km/h	60km/h
Carriageway Lanes	1	2
Carriageway Width	3.5m	6m
Formation Width (minimum)	8.5m	9m
Reserve Width (minimum)	20m	20m
Grade (minimum - maximum)	0.4% - 10% (2)	0.4% - 10% (2)

Notes:-

1. *In rugged topography, or constrained situations, a lower design speed may be approved with the absolute minimum design speed not less than 20km/h below those given in the table.*
2. *Grades over 10% must be used with caution due to problems related to slow climbing speeds and potentially high downhill speeds.*

Specific Outcomes for Assessable Development	Probable Solutions

The Major Roads conform to the following:-

Item	Sub-Arterial	Arterial
Design Speed (minimum)(1)	80km/h	100km/h
Traffic Volume (typical)	12,000vpd	30,000vpd
Design Speed (minimum)(1)	80km/h	100km/h
Carriageway Lanes	2	4
Reserve Width (minimum)	26m	40m
Maximum Grade	8% (2)	6% (2)

Notes:-

1. *In rugged topography, or constrained situations, a lower design speed may be approved with the absolute minimum design speed not less than 20km/h below those given in the table.*
2. *Grades over 10% must be used with caution due to problems related to slow climbing speeds and potentially high downhill speeds.*

The combination of road length and grade for new roads conforms with the following chart:-

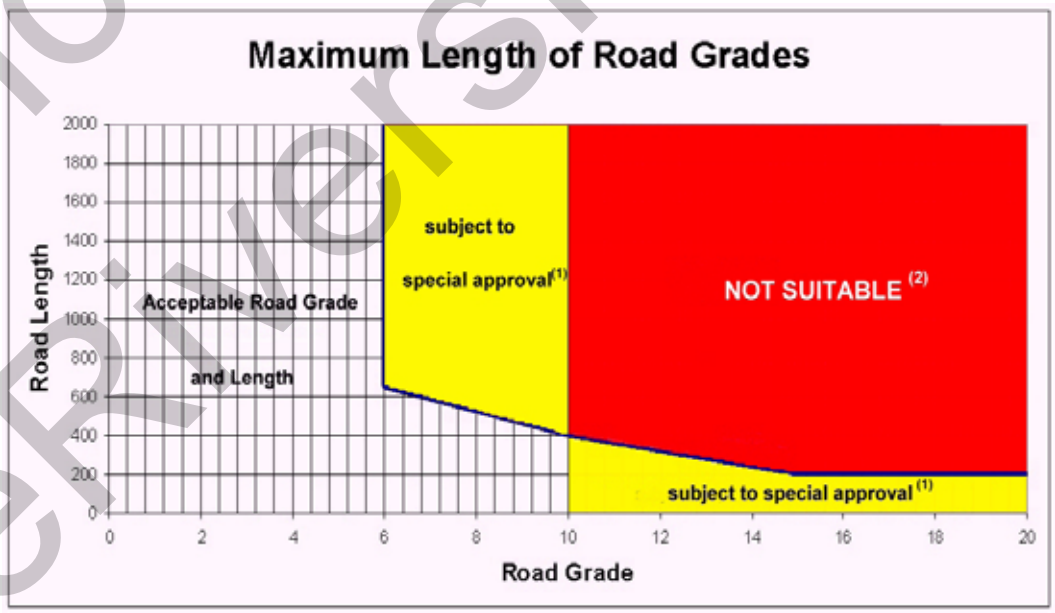

Figure 1

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>

Notes:-

1. *It is recognised that special circumstances may arise where it may be acceptable to allow grades or lengths of grade. Special circumstances may include:-*
   - *where comparatively short lengths of grade lead to significant reductions in environmental impact or costs;*
   - *where absolute numbers of **heavy vehicles** are low;*
   - *on local roads where the cost of achieving the higher standard cannot be justified in terms of the traffic volumes using the road.*
2. *Existing roads may fall into this area in which case special design is required.*

On Collector Roads and Major Roads where grades greater than 10% are combined with significant changes in horizontal alignment (particularly where the maximum speed difference between successive horizontal geometric elements exceeds 6%), then additional lane or shoulder width or curve widening is provided as necessary.
</td></tr>
<tr><td>SO 21 Intersections along roads are spaced to create safe and convenient vehicle movements.</td><td>
PS 21 Intersection spacing (centreline – centreline) along a through road conforms with the following:-
<table>
<tr><th rowspan="2">Intersecting Road Location</th><th colspan="4">Through Road</th></tr>
<tr><th>Access Road</th><th>Collector Road</th><th>Rural Sub- Arterial Road (1)</th><th>Rural Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>100m</td><td>100m</td><td>300m</td><td>500m</td></tr>
<tr><td>On opposite sides of the through road</td><td>100m</td><td>100m</td><td>300m</td><td>500m</td></tr>
</table>
Notes:-
1. *In the case of Sub-Arterial Roads, existing landholdings may require intersections at lesser spacing. In such cases the following absolute minimum spacing is used, but all turns access may not be permitted (i.e. left in/left out only):-*
<table>
<tr><td>Intersections on same side</td><td>100m</td></tr>
<tr><td>Intersections on opposite sides:
• left-right stagger
• right-left stagger</td><td>
100m
30m</td></tr>
</table>
</td></tr>
<tr><td>SO 22 All new Council controlled roads are fully constructed to meet user requirements with minimum maintenance costs.</td><td>PS 22 All new Council controlled roads are fully constructed to Council standards.</td></tr>
<tr><td>SO 23 All Council controlled frontage roads are constructed to Council standards.</td><td>
PS 23 All Council controlled frontage roads are constructed to Council standards as follows:
<table>
<tr><th>Situation</th><th>Minimum Construction (1)</th></tr>
<tr><td>Frontage road unconstructed or gravel road only</td><td>For Access Roads: full carriageway and verges.
For Collector Roads: verge adjoining new lots, carriageway to a minimum sealed width of 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.
For Major Roads: verge adjoining new lots, carriageway to a minimum sealed width of 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.</td></tr>
</table>
</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions	
	Frontage road sealed [2] but not constructed to ***Council*** standard	For Access Roads: reconstruction of full carriageway and verges. For Collector Roads: reconstruction of verge adjoining new lots and carriageway to a minimum sealed width of 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the remaining existing works. For Major Roads: verge adjoining new lots and carriageway to a minimum sealed width of 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the remaining existing works.
	Frontage road [2] partially constructed to ***Council*** standards.	For Access Roads: construction of all remaining carriageway and verges. For Collector Roads: verge adjoining new lots and carriageway to join existing works. In any event the minimum sealed width to be constructed is 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side where necessary. The works match into the existing works. For Major Roads: verge adjoining new lots and carriageway to join existing works. In any event the minimum sealed width is 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side where necessary. The works match into the existing works.
	Notes:- *1. Construction includes all associated works (services, streetlighting and linemarking)* *2. Testing of the existing pavement is carried out to confirm whether the existing works meet **Council** standards.*	
SO 24 Sealed and flood free road access during minor storms is available to the ***site*** from the nearest Major Road.	**PS 24** Sealed (5.5m min. width) and flood free road access during minor storms (5 year ARI) is available to the ***site*** from the nearest Major Road.	
SO 25 Access roads to the development remain trafficable during major storm events.	**PS 25** Access roads to the development have sufficient longitudinal and cross drainage to remain safely trafficable during major storm (100 year ARI) events.	
SO 26 The road network design takes into account: (1) streetscapes that may be created or already exist; (2) protection of topography and vegetation; (3) opportunities for views and vistas; and (4) protection of natural drainage and open space systems.	**PS 26** Road designs incorporate retention of existing significant trees where ever practicable. Road designs minimise the heights of cut and fill of road formation to less than 2m where ever practicable. New roads are located to minimise the heights of cut and fill of road formation to less than 2m. Road designs minimise the amount of filling and extent of filling in or adjacent existing natural gullies, ***waterways***, existing public open space areas and proposed public open space areas.	
SO 27 The road network provides for the cost-effective provision of ***public utilities***.	**PS 27** The roads accommodate appropriate corridors for all ***public utilities*** in accordance with ***Council*** standards.	
7.3.4 Utilities		
SO 28 All lots are provided with electricity and communications services.	**PS 28** All lots are provided with electricity and communications services.	
SO 29 Development only occurs in locations where there are adequate services for the desired use.	**PS 29** The development has adequate services for the desired use.	
SO 30 The provision of ***public utilities*** including electricity, street lighting (if required) and communications services, is cost effective over their life cycle and incorporate provisions to minimise adverse environmental impact in the short and long-term.	**PS 30** The provision of ***public utilities*** including electricity, street lighting (if required at a hazard) and communications services conforms with the standards of the relevant service authority.	

Specific Outcomes for Assessable Development	Probable Solutions
SO 31 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.	**PS 31** No solution provided.
7.3.5 Pedestrian and Horse Riding Networks	
SO 32 Public access is provided to open space areas, rivers and water bodies as necessary to be consistent with and complement existing access arrangements and in accordance to the function of those areas.	**PS 32** No solution provided.
SO 33 The minor roads and pathway network provide horse riding routes with connections to adjoining major roads, open spaces and activity centres. **SO 34** The recreational trail network is designed to provide for safe, attractive and convenient movement of pedestrians and horse riders between rural areas and major attractions such as schools, ***shops***, sporting facilities and bus routes (existing and planned).	**PS 33 and PS 34** Pathways are provided between roads in accordance with ***Council's*** Recreational Trails Plan.
7.3.6 Public Transport	
SO 35 The road design provides for the extension of existing bus routes or potential bus routes including safe convenient stops and, where necessary, bus turnaround areas.	**PS 35** No solution provided.
SO 36 The road network caters for the extension of existing and future public transport routes to provide sufficient services that are convenient and accessible to the community.	**PS 36** The development provides for extension of existing and future bus routes.
7.3.7 Park	
SO 37 Park and Open Space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes*.	**PS 37** No solution provided.

Division 8 Boundary Relocation Design Code

8.1 Overall Outcome

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Boundary Relocation Design Code are the following:-

(1) Existing public utility services provision and access is maintained with the new lots; and

(2) Lots have improved the size, shape or utility over the *existing useful lots*[1]*;* or

(3) Lots facilitate boundary adjustments for large multi-stage developments; or

(4) The new lot boundaries rectify encroachments of buildings, ***structures*** or accesses onto properties.

8.2 Compliance with the Boundary Relocation Design Code

Development that is consistent with the specific outcomes in Section 8.3 complies with the Boundary Relocation Design Code.

8.3 Development Requirements

Specific Outcomes for Assessable Development	Probable Solutions
SO 1 The size, shape or utility of the new lots are improved over that of the existing lots.	**PS 1** No solution provided.
SO 2 Where the boundary relocation is in conjunction with staged subdivision development and for the purposes of managing the stage areas then the new lots are provided appropriate access to a constructed road.	**PS 2.1** Each new lot has a minimum frontage of 20m. **PS 2.2** Each new lot has vehicular access (minimum gravel pavement 3m wide) to the lot frontage from a constructed road abutting the lot.
SO 3 Where the boundary relocation is not in conjunction with staged subdivision development (for the purposes of managing the stage areas) then the new lot area, dimensions and shape conform to the relevant subdivision code for the zone unless the existing lots do not conform.	**PS 3** The new lot area, dimensions and shape conform to the relevant subdivision code for the zone (except where the existing lots currently do not conform to the relevant subdivision code for the zone).
SO 4 New lots have all the public utility services that are currently available to the existing lots.	**PS 4.1** Where the existing lots have access to ***Council's*** reticulated water supply system this service is relocated or extended as necessary to ensure it is available to the new lots. **PS 4.2** All private water services are relocated, as necessary, to ensure they located within the lot being served. **PS 4.3** Where the existing lots have access to ***Council's*** sewerage system this service is relocated or extended as necessary to ensure it is available to the new lots. **PS 4.4** All private sewerage services are relocated, as necessary, to ensure they located within the lot being served. **PS 4.5** Where the existing lots have access to telecommunications lines this service is relocated or extended as necessary to ensure it is available to the new lots.
SO 5 On-site sewerage facilities are located fully within the new lots in accordance with the relevant statutory requirements and not detrimentally affect adjacent lots.	**PS 5.1** On-site sewerage facilities are relocated to be fully within the new lots in accordance with the relevant statutory requirements. **PS 5.2** Existing on-site sewerage facilities are upgraded as necessary to operate properly (as designed).
SO 6 The proposal does not detrimentally affect the amenity of the neighbourhood.	**PS 6** No solution provided.
SO 7 Where the boundary relocation is not in conjunction with staged subdivision development (for the purposes of managing the stage areas) and the proposal is over urban residential lots then the areas of the new lots are not significantly different in area to the existing lots.	**PS 7** The areas of each new lot are not more than 40% larger or smaller than the existing lot.
SO 8 All new lots have electricity supply.	**PS 8** All new lots have electricity supply available to the frontage.
SO 9 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out at no cost to ***Council*** prior to the approval of the plan of subdivision.	**PS 9** No solution provided.

[1] "Existing Useful Lot" for residential purposes means a lot that conforms to the following criteria:

(1) Urban residential (not community titled) – the lot contains an existing dwelling or can contain minimum rectangle 10m x 20m or can be demonstrated to be able to contain a suitable dwelling without setback relaxation.

(2) Urban residential (community titled) - the lot contains an existing dwelling or can contain minimum rectangle 20m x 40m or can be demonstrated to be able to contain a suitable dwelling without setback relaxation.

(3) Non-Urban residential – the lot contains an existing dwelling or can be demonstrated to be ble to contain a suitable dwelling without setback relaxation surrounded by 600m^2 of private open space with a minimum width at any point of 12m.

Division 9 Subdivision by Lease Design Code

9.1 Overall Outcome

Subdivisions by lease (> 10 years):-

(1) Have appropriate lease areas;
(2) Have adequate access to a road; and
(3) Have adequate service utilities.

9.2 Compliance with the Subdivision by Lease Design Code

Development that is consistent with the specific outcomes in Section 9.3 complies with the Subdivision by Lease Design Code.

9.3 Development Requirements

Specific Outcomes for Assessable Development	Probable Solutions
9.3.1 Lease Areas	
SO 1 Lease areas have appropriate size and shape to meet user requirements.	**PS 1** No solution provided.
SO 2 All lease areas have access to a road.	**PS 2** No solution provided.
SO 3 All lease areas have adequate service utilities to satisfy user requirements.	**PS 3** No solution provided.

Division 10 Access Easement Subdivision Design Code

10.1 Access Easement Subdivision Design Code

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Access Easement Design Code are the following:

(1) Access easements to a road include properly constructed driveways;
(2) Access easements to a road have safe access points onto the road;
(3) Access easements to a road minimise impacts on the amenity if adjacent residents;
(4) Access easements to a road minimise impacts on existing infrastructure; and
(5) Access easements to a road minimise impacts on the environment.

10.2 Compliance with the Access Easement Subdivision Design Code

Development that is consistent with the specific outcomes in Section 10.3 complies with the Access Easement Design Code.

10.3 Development Requirements

Specific Outcomes for Assessable Development	Probable Solutions
SO 1 Access easements contain a driveway constructed to suit the user's needs.	**PS 1** No solution provided.
SO 2 The access point onto the road is located with appropriate grading, verge cross section and safe sight distance for accessing vehicles, through traffic and pedestrians on the verge.	**PS 2** The sight distance available between a vehicle leaving the lot at the driveway access point and a vehicle approaching on the frontage road is equal to the *Safe Intersection Sight Distance* (determined appropriate for the classification of the frontage road – refer Austroads Guide to Traffic Engineering Practice – Part 5, Intersections at Grade).
SO 3 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.	**PS 3** No solution provided.
SO 4 Clearing of existing vegetation for construction of the driveway is minimised as far as practicable.	**PS 4** The driveway is located in existing cleared areas.
SO 5 The easement covers all works associated with the access.	**PS 5** The easement covers all driveway construction including cut and fill batters, drainage works and utility services.

Division 11 Subdivision in All Other Zones Design Code

11.1 Overall Outcome

The overall outcomes are the purpose of this code.

The overall outcomes sought by the Subdivision in All Other Zones Design Code are the following:

(1) Lots meet user requirements;

(2) Lot design and subdivision layout provides land owners or occupiers of the lots with a high degree of safety and amenity;

(3) Neighbourhoods are safe and attractive;

(4) Lot design and subdivision layout adequately protects people and the built environment from flooding;

(5) Lots have adequate ***site*** drainage to meet user requirements;

(6) Stormwater runoff from development is properly managed to minimise its impact on land uses downstream and on adjacent properties, the natural and built environment and receiving waters;

(7) Stormwater management solutions are integrated with other uses whilst protecting the natural environment.;

(8) Lots have adequate, safe, convenient and structured road access systems;

(9) Lots have all necessary utility services to meet user requirements provided in a timely, cost effective, coordinated and efficient manner;

(10) Pedestrian and cyclist networks are safe, convenient and legible;

(11) The subdivision layout ensures that existing or potential public transport services are accommodated;

(12) Lot layout reduces the level of fire risk associated with building in areas which are assessed to have a medium to high bushfire hazard; and

(13) To provide public open space that meets user requirements for outdoor recreational and social activities and for landscaping that contributes to the identity, environmental health and safety of the community.

11.2 Compliance with the Subdivision in All Other Zones Design Code

Development that is consistent with the specific outcomes in Sections 11.3.1 to 11.3.7 complies with the Subdivision in all Other Zones Design Code.

11.3 Development Requirements

The development requirements of this code relate to the following elements:-

(11.3.1) Lot Layout

(11.3.2) Stormwater Management

(11.3.3) Road Networks (excludes State-controlled roads)

(11.3.4) Utilities

(11.3.5) Pedestrian and Cyclist Networks

(11.3.6) Public Transport

(11.3.7) Park

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td colspan="2">11.3.1 Lot Layout</td></tr>
<tr><td>SO 1 Lots have appropriate area and dimensions to meet user requirements.</td><td>PS 1 No solution provided.</td></tr>
<tr><td rowspan="13">SO 2 All lots have adequate road frontage for easy and safe access.</td><td>PS 2 Lots have a minimum frontage in the following zones:-</td></tr>
<tr><td>
<table>
<tr><th>Zone</th><th>Minimum Frontage</th></tr>
<tr><td>Special Residential, urban</td><td>25m</td></tr>
<tr><td>Special Residential, non urban</td><td>50m</td></tr>
<tr><td>Special Residential, blind end of a cul de sac, all areas</td><td>15m</td></tr>
<tr><td>Neighbourhood Facilities</td><td>20m</td></tr>
<tr><td>Home Industry</td><td>25m</td></tr>
<tr><td>Future Urban</td><td>25m</td></tr>
<tr><td>Conservation</td><td>20m</td></tr>
<tr><td>Park and Open Space</td><td>15m</td></tr>
<tr><td>Sports and Recreation</td><td>20m</td></tr>
<tr><td>Special Facilities</td><td>15m</td></tr>
<tr><td>Special Purposes</td><td>15m</td></tr>
</table>
</td></tr>
<tr><td>SO 3 The lot layout retains special or unique features that exist.</td><td>PS 3 No solution provided.</td></tr>
<tr><td>SO 4 Privately owned lots are not located on land which is prone to land slip or erosion.</td><td>PS 4 No solution provided.</td></tr>
<tr><td colspan="2">11.3.2 Stormwater Management</td></tr>
<tr><td>SO 5 There is sufficient area with appropriate freeboard to major flood events in rivers, creeks, watercourses and engineered open drains, contained within each lot, to facilitate the required uses on the land without the need for levies or specially designed floating structures.</td><td>PS 5 The lots are developed to the following finished levels:-
<table>
<tr><th>Zones</th><th>Location</th><th>Minimum Development Level Requirements</th><th>Minimum Area above Required Minimum Development Level</th></tr>
<tr><td rowspan="2">Special Residential (urban style), Neighbourhood Facilities, Home Industry and Future Urban</td><td>Adjacent rivers, creeks and watercourses</td><td>Q100 flood level + 750mm</td><td>2000m^2
(where lot area is <2000m^2, then the whole lot area)</td></tr>
<tr><td>Adjacent engineered channels</td><td>Q100 flood level + 500mm</td><td>2000m^2
(where lot area is <2000m^2, then the whole lot area)</td></tr>
</table>
</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions			
	Special Residential (non-urban style)	Adjacent rivers, creeks and ***watercourses***	Q100 flood level + 750mm	1500m^2 (where lot area is <1500m^2, then the whole lot area)
		Adjacent engineered channels	Q100 flood level + 500mm	1500m^2 (where lot area is <1500m^2, then the whole lot area)
	Conservation, Park & Open Space, Sports & Recreation, Special Facilities and Special Purposes	Adjacent rivers, creeks and ***watercourses***	No solution provided	No solution provided
		Adjacent engineered channels	No solution provided	No solution provided
SO 6 The major drainage system has the capacity to safely convey stormwater flows for the 100 year ARI storm event.	**PS 6** No solution provided.			
SO 7 Overland flow paths from roads, reserves and other public lands do not pass through private urban style lots.	**PS 7** No solution provided.			
SO 8 Stormwater drainage pipes and ***structures*** through or within private land are protected by easements in favour of ***Council*** with sufficient area for practical access for maintenance.	**PS 8** Stormwater drainage infrastructure through or within private land is protected by easements in favour of ***Council*** with areas and dimensions conforming to ***Council*** standards.			
SO 9 The stormwater management system minimises impacts from development on the following:- (1) downstream & adjacent properties; (2) surface & subsurface receiving waters; (3) riparian areas; (4) natural ***waterway*** configuration; (5) existing natural wetlands; and (6) significant natural vegetation.	**PS 9** No solution provided.			
SO 10 The development incorporates water sensitive design elements in order to maximise the use of non-engineered (structural) solutions.	**PS 10** No solution provided.			

Specific Outcomes for Assessable Development	Probable Solutions

11.3.3 Road Networks (excludes State-controlled roads)

SO 11 The road network accommodates the following primary functions:-

(1) access to lots (vehicles, pedestrians & cyclists);
(2) on-street car parking;
(3) stormwater drainage paths;
(4) utility services location;
(5) setting and approach; and
(6) public transport on higher order roads.

SO 12 The road network has a clear structure and component streets conforming to their function in the network.

PS 11 and PS 12. Streets in the Special Residential (urban style), Neighbourhood Facilities, Home Industry and Future Urban ***zones*** conform to the following:-

The Residential Streets conform to the following:-

Item	Access Place (1)	Access Street (1)	Collector Street	Trunk Collector Street
Traffic Catchment (maximum)	20 lots	50 lots (2)	300 lots (2)(3)	900 lots (2)
Design Speed (maximum)	40km/h	40km/h	40km/h	60km/h
Carriageway Lanes	2 (4)	2	3	2
Carriageway Width	6m	6m	7.5m	9m
Verge Width (minimum)	3.5m (5)(6)	3.5m (5)(6)	3.5m (5)(6)	5m (6)
Reserve Width (minimum)	15m	15m	18m	24m (7)
Footpaths/Cycle paths	not required (8)	where > 40 lots served (8)	one side (8)	both sides (8)
Parking	0.5 space per lot (9)	0.5 space per lot (9)	0.5 space per lot (9)	0.5 space per lot (9)
Grade (minimum - maximum)	0.4% - 16% (10)	0.4% - 16% (10)	0.4% - 12% (11)	0.4% - 12% (11)

Notes:-

1. *Difference is in subdivision layout only, not in street design.*
2. *Based on 10 vpd per single detached dwelling residential lot.*
3. *Absolute maximum 350 lots.*
4. *Single lane with **Council** approval, maximum 12 lots.*
5. *Greater width required to verge with water main.*
6. *Greater width required where cycle paths provided.*
7. *Greater width required at intersections.*
8. *Footpath or cycle paths may be required in accordance with network design.*
9. *A car park is required within 25m of every residential lot.*
10. *20% absolute maximum grade may be permitted under special circumstances.*
11. *16% absolute maximum grade may be permitted under special circumstances.*

Specific Outcomes for Assessable Development	Probable Solutions

The Major Roads conform to the following:-

Item	Sub-Arterial	Arterial	Major Arterial	Freeway
Traffic Volume (typical)	12,000vpd	30,000vpd	as required	as required
Design Speed (minimum)	80km/h	100km/h	100km/h	100km/h
Carriageway Lanes	2	4	4 or more	4 or more
Carriageway Width	10m (kerbed) (1)	2 x 8.5m (kerbed) (1)	as required by design	as required by design
Verge Width (minimum)	7.5m	8.5m	as required by design	as required by design
Reserve Width (minimum)	25m (2)	40m (2)	as required by design	as required by design
Footpaths/Cycle paths	both sides (3)	both Sides (3)	not required	not required
Grade (minimum - maximum)	0.4% - 7% (4)	0.4% - 6% (4)	as required by design	as required by design

Notes:-

1. Does not include cycle lanes.

2. Greater width required at intersections.

3. Cycle paths may be required in accordance with network design.

4. Steeper grades may be permitted under special circumstances.

Streets in the Special Residential (non-urban style) zone conform to the following:-

The Residential Streets conform to the following:-

Item	Access Place	Access Street	Collector Street
Traffic Catchment (maximum)	50 lots (1)	100 lots	350 lots (2)
Maximum Street Length	900m	1200m (3)	1200m (3)
Design Speed (maximum)	45km/h	60km/h	60km/h
Carriageway Lanes	2 (4)	2	2
Carriageway Width	6m	7m	8m
Verge Width (minimum)	5m	5m	3.5m
Reserve Width (minimum)	20m	20m	25m
Footpaths/Cycle paths/Bridle Paths	as required (5)	as required (5)	as required (5)
Parking	no provision (6)	no provision (6)	no provision (6)
Grade (minimum - maximum)	0.4% - 16% (7)	0.4% - 16%	0.4% - 12% (8)

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>
Notes:-
1. Theoretical limit only as maximum length controls in most cases.
2. May be increased by widening the reserve.
3. Maximum street lengths are interdependent. Essential criterion is maximum total travel time of 180 seconds
4. Single lane 3.5m carriageway with special Council approval, maximum 12 lots and maximum length of 300m.
5. As required by Council's network planning.
6. Parking bays may be required at cul-de-sac heads.
7. 20% absolute maximum grade may be permitted under special circumstances.
8. 16% absolute maximum grade may be permitted under special circumstances.

The Major Roads conform to the following:-
<table>
<tr><th>Item</th><th>Sub-Arterial</th><th>Arterial</th></tr>
<tr><td>Traffic Volume (typical)</td><td>12,000vpd</td><td>30,000vpd</td></tr>
<tr><td>Design Speed (minimum)</td><td>80km/h</td><td>100km/h</td></tr>
<tr><td>Carriageway Lanes</td><td>2</td><td>4</td></tr>
<tr><td>Reserve Width (minimum)</td><td>26m</td><td>40m</td></tr>
<tr><td>Maximum Grade</td><td>8%</td><td>6%</td></tr>
</table>
Streets in the Conservation, Park & Open Space, Sports & Recreation, Special Facilities and Special Purposes zones conform to requirements of the adjoining zones.
</td></tr>
<tr><td>SO 13 The road network provides safe and convenient movement between lots and the Major Road network.</td><td>PS 13 No solution provided.</td></tr>
<tr><td>SO 14 Intersections are spaced to create safe and convenient vehicle movements.</td><td>
PS 14 Intersection spacing (centreline – centreline) along a through road conforms with the following:-
(1) Streets in the Special Residential (urban style), Neighbourhood Facilities, Home Industry and Future Urban zones:-
<table>
<tr><th rowspan="2">Intersecting Road Location</th><th colspan="5">Through Road</th></tr>
<tr><th>Access Street & Collector Street</th><th>Trunk Collector Street</th><th>Sub- Arterial Road (1)</th><th>Arterial Road</th><th>Major Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>60m</td><td>100m</td><td>300m</td><td>500m</td><td>1000m</td></tr>
<tr><td>On opposite sides of the through road</td><td>40m</td><td>60m</td><td>300m</td><td>500m</td><td>1000m</td></tr>
</table>
Notes:-
1. In the case of Sub-Arterial Roads, existing landholdings may require intersections at a lesser spacing. In such cases the following absolute minimum spacings are used, but all turns access may not be permitted (i.e. left in/left out only):-
</td></tr>
</table>

<table>
<tr><th>Specific Outcomes for Assessable Development</th><th>Probable Solutions</th></tr>
<tr><td></td><td>
<table>
<tr><td>Intersections on same side</td><td>100m</td></tr>
<tr><td>Intersections on opposite sides:-
• left-right stagger
• right-left stagger</td><td>
100m
30m</td></tr>
</table>
(2) Streets in the Special Residential (non-urban style) zone:-
<table>
<tr><th rowspan="2">Intersecting Road Location</th><th colspan="5">Through Road</th></tr>
<tr><th>Access Street & Collector Street</th><th>Urban Sub-Arterial Road (1)</th><th>Urban Arterial Road</th><th>Rural Sub-Arterial Road (1)</th><th>Rural Arterial Road</th></tr>
<tr><td>On same side of through road</td><td>100m</td><td>300m</td><td>500m</td><td>300m</td><td>500m</td></tr>
<tr><td>On opposite sides of the through road</td><td>100m</td><td>300m</td><td>500m</td><td>300m</td><td>500m</td></tr>
</table>
Notes:-
1. In the case of Sub-Arterial Roads, existing landholdings may require intersections at a lesser spacing. In such cases the following absolute minimum spacings are used, but all turns access may not be permitted (i.e. left in/left out only):-
<table>
<tr><td>Intersections on same side</td><td>100m</td></tr>
<tr><td>Intersections on opposite sides:-
• left-right stagger
• right-left stagger</td><td>
100m
30m</td></tr>
</table>
(3) Streets in the Conservation, Park & Open Space, Sports & Recreation, Special Facilities and Special Purposes ***zones*** conform to requirements of the adjoining ***zones***.
</td></tr>
<tr><td>SO 15 All new ***Council*** controlled roads are fully constructed to meet user requirements with minimum maintenance costs.</td><td>PS 15 All new ***Council*** controlled roads are fully constructed to ***Council*** standards.</td></tr>
<tr><td>SO 16 All ***Council*** controlled frontage roads are constructed to ***Council*** standards</td><td>PS 16 All ***Council*** controlled frontage roads are constructed to ***Council*** standards as follows:-
<table>
<tr><th>Situation</th><th>Minimum Construction (1)</th></tr>
<tr><td>Frontage road unconstructed or gravel road only</td><td>For Access Place and Access Street: full carriageway and verges.
For Collector Street and Trunk Collector Street: verge adjoining new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.
For Major Roads: verge adjoining new lots, carriageway (including near side kerb and channel) to a minimum sealed width of 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side.</td></tr>
</table>
</td></tr>
</table>

Specific Outcomes for Assessable Development	Probable Solutions	
	Frontage road sealed[(2)] but not constructed to ***Council*** standards	For Access Place and Access Street: reconstruction of full carriageway and verges. For Collector Street and Trunk Collector Street: reconstruction of verge adjoining new lots and carriageway (including near side kerb and channel) to a minimum sealed width of 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the remaining existing works. For Major Roads: verge adjoining new lots and carriageway (including near side kerb and channel) to a minimum sealed width of 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side. The works match into the remaining existing works.
	Frontage road[(2)] partially constructed to ***Council*** standards	For Access Place and Access Street: construction of all remaining carriageway and verges. For Collector Street and Trunk Collector Street: verge adjoining new lots and carriageway (including near side kerb and channel) to join existing works. In any event the minimum sealed width to be constructed is 6m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side where necessary. The works match into the existing works. For Major Roads: verge adjoining new lots and carriageway (including near side kerb and channel) to join existing works. In any event the minimum sealed width is 7m plus 1.5m wide (full depth pavement) gravel shoulder and table drainage to the opposite side where necessary. The works match into the existing works.
	Notes:- *1. Construction includes all associated works (services, streetlighting and linemarking).* *2. Testing of the existing pavement is carried out to confirm whether the existing works meet **Council** standards.*	
SO 17 Sealed and flood free access during minor storms is available between the ***site*** and the nearest Major Road.	**PS 17** Sealed and flood free access during minor storms is available to the ***site*** from the nearest Major Road.	
SO 18 Access to the lots remains trafficable during major storm events.	**PS 18** Access roads to the development have sufficient longitudinal and cross drainage to remain safely trafficable during major storm events.	
11.3.4 Utilities		
SO 19 The following utilities are provided:-	**PS 19** No solution provided.	

Locality	Utilities Provided
Major Employment Centres	Water supply, sewerage, underground electricity, street lighting and communications services conduits
Urban	Water supply, sewerage, underground electricity, street lighting and communications services conduits

Specific Outcomes for Assessable Development		Probable Solutions
Catchment	Water supply (if available), electricity, street lighting and communications services	
Village	Water supply, sewerage, underground electricity, street lighting and communications services conduits	
Park Residential	Water supply, electricity, street lighting and communications services	
Rural Living	Electricity, street lighting and communications services	
Mountain Summit and Forests	Electricity, street lighting and communications services	
Coast and River Lands	Water supply (if available), electricity, street lighting and communications services	
Urban Corridor	Water supply, sewerage, underground electricity, street lighting and communications services conduits	
SO 20 The provision of ***public utilities*** including sewerage, water supply, electricity, street lighting and communications services conforms to the standards of the relevant service authority.		**PS 20** No solution provided.
SO 21 Development only occurs in locations where adequate services are available for the desired use.		**PS 21** The development has adequate services for the desired use.
SO 22 The water supply system is designed to conform with ***Council's*** broad infrastructure planning for the water supply zone.		**PS 22** No solution provided.
SO 23 The sewerage transportation system is planned to conform with ***Council's*** broad infrastructure planning for the catchment		**PS 23** No solution provided.
SO 24 Any alteration or relocation in connection with or arising from the development to any service, installation, plant, equipment or other item belonging to or under the control of the telecommunications authority, electricity authorities, the ***Council*** or other person engaged in the provision of public utility services is carried out prior to the approval of the plan of subdivision.		**PS 24** No solution provided.
11.3.5 Pedestrian and Cyclist Networks		
SO 25 The pedestrian network is designed to provide the shortest and most convenient links between industrial areas and residential areas, bus routes (existing and planned) and railway stations.		**PS 25** No solution provided.

Specific Outcomes for Assessable Development	Probable Solutions
SO 26 Public access is provided to open space areas, rivers and water bodies as necessary to be consistent with and complement existing access arrangements and in accordance with the function of those areas.	**PS 26** No solution provided.
SO 27 The bikeway network is designed to provide the shortest and most convenient links between industrial areas and residential areas, bus routes (existing and planned) and railway stations.	**PS 27** The bikeway network provides safe, attractive and convenient links between industrial areas and residential areas, bus routes (existing and planned) and railway stations. The network accords with ***Council's*** Bikeways Plan.
11.3.6 Public Transport	
SO 28 The majority of residential lots are within convenient walking distance of an existing or potential bus route. **SO 29** The road network provides for potential bus routes including safe, convenient stops and, where necessary, bus turnaround areas.	**PS 28 and PS 29** Bus routes are incorporated into the development to ensure that 90% of the residential lots are within 700m (straight line measure) of the routes. Bus stops are provided at 400m maximum spacing and integrated with the road and pedestrian network.
SO 30 The road network provides for the extension of existing and future public transport routes.	**PS 30** The development provides for extension of existing and future public transport routes.
11.3.7 Park	
SO 31 Park and open space is provided for in accordance with *Planning Scheme Policy PSP26 Development Contributions for Trunk Infrastructure - Local Community Purposes*.	**PS 31** No solution provided.