FloodWise Property Report

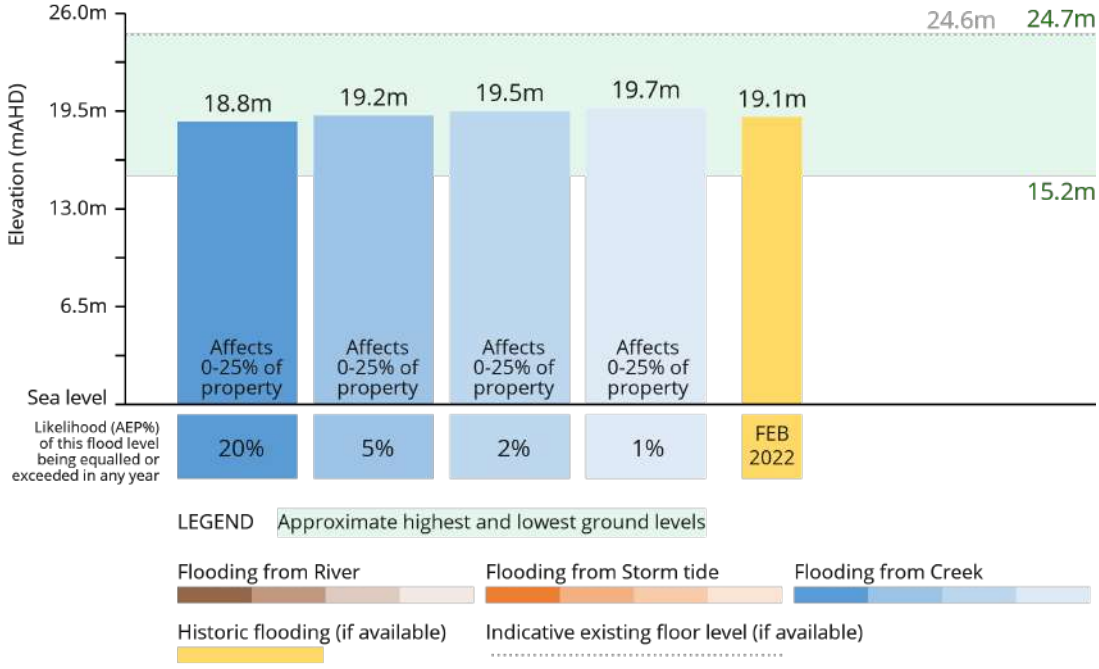
12 CLOVERDALE RD, DOOLANDELLA 4077
Lot 103 on RP90234

Dedicated to a better Brisbane

THE PURPOSE OF THIS REPORT IS FOR BUILDING AND DEVELOPMENT

Brisbane City Council's FloodWise Property Report **provides technical flood planning information** including estimated flood levels, habitable floor level requirements and more. **This report uses the adopted flood planning information in CityPlan**, that guides how land in Brisbane is used and developed for the future. Find out more about planning and building. To understand how to be **resilient and prepare for floods**, visit Council's Be Prepared webpage. Find more information about how to read a FloodWise Property Report.

Graph showing only the highest source/type of flooding for 1%, 2%, 5% and 20% likelihoods. Also shows historic flood levels. Other flood types and levels may be present and will be listed in the Flood Planning Information table below. This graph does not include overland flow flooding. If applicable, overland flow information is shown in the Planning and Development Information section below. **NOTE:** See Useful Definitions section to explain terminology.



Combined 1% AEP for river, creek and storm tide flood extent (if applicable). Aerial map shows river and creek flooding extent from the adopted CityPlan. Read more about CityPlan.

Are you resilient and ready for flood?

- Sign up to the Brisbane Severe Weather Alert at **brisbane.qld.gov.au/beprepared**
- Visit bom.gov.au for the latest weather updates.
- Have an evacuation plan, emergency kit and important phone numbers ready.
- Observe where water flows from and to during heavy rain.
- Consider how flood-resilient building techniques will have you home faster and with less damage.

Life threatening emergencies
000 Police/fire/ambulance
(mobiles **000** and **112**)

State Emergency Service (SES) **132 500**
Energex **13 19 62**
Brisbane City Council **3403 8888**

Technical Summary

This section of the FloodWise Property Report contains more detailed flood information for this property so **surveyors, builders, certifiers, architects, and engineers can plan and build** in accordance with Council's planning scheme.

Find more information about planning and building in Brisbane or talk to a Development Services Planning Information Officer via Council's Contact Centre on (07) 3403 8888.

Property Information Summary

The following table provides a summary of flood information for this property. More detailed flood level information is provided in the following sections of this report.

Property Summary	Level (mAHD) / Comment	Data Quality Code
Minimum ground level	15.2	C
Maximum ground level	24.7	C
Indicative existing floor level	24.6	C
Source of highest flooding	Creek/Waterway	

Flood Planning Information

The table below displays the peak estimated flood levels by probability for this property. Estimated flood level data should be used in conjunction with applicable planning scheme requirements - Refer to Flood Planning and Development Information section below for further information.

Note this table does not include overland flow. If overland flow is applicable to this property, refer to the Flood Planning and Development section below for further information.

Likelihood / Description	Level (mAHD)	Source
20%	18.8	Creek/Waterway (OXLEY STABLE CREEK)
5%	19.2	Creek/Waterway (OXLEY STABLE CREEK)
2%	19.5	Creek/Waterway (OXLEY STABLE CREEK)
1%	19.7	Creek/Waterway (OXLEY STABLE CREEK)
0.2%	19.9	Creek/Waterway (OXLEY CREEK)
FEB2022	19.1	Brisbane River and Creek/Waterway
Minimum Habitable Floor Level (dwelling house)	N/A*	

* Council does not have this data available. Customers are recommended to engage a Registered Professional Engineer of QLD for further advice.

Flood Planning and Development Information

This section of the FloodWise Property Report contains information about Council's planning scheme overlays. Overlays identify areas within the planning scheme that reflect distinct themes that may include constrained land and/or areas sensitive to the effects of development.

Flood overlay code

The Flood overlay code of Council's planning scheme uses the following information to provide guidelines when developing properties. The table below summarises the flood planning areas (FPAs) that apply to this property. Development guidelines for the FPAs are explained in Council's planning scheme.

Flood planning areas (FPA)		
River	**Creek / waterway**	**Overland flow**
	FPA1	Applicable
	FPA2	
	FPA3	
	FPA4	
	FPA5	

To find more information about Council's flood planning areas (FPAs) for Brisbane River and Creek/waterway flooding to guide future building and development in flood prone areas, please review Council's Flood Planning Provisions.

Coastal hazard overlay code

The Coastal hazard overlay code of Council's planning scheme uses the following information to provide guidelines when conducting new developments. The table below summarises the coastal hazard categories that apply to this property. Development guidelines for the following Coastal hazard overlay sub-categories are explained in Council's planning scheme.

Coastal hazard overlay sub-categories
There are currently no Coastal hazard overlay sub-categories that apply to this property.

Note: Where land is identified within one for more flood planning areas on the Flood overlay or is identified within one of the Storm tide inundation area sub-categories on the Coastal hazard overlay, the assessment criteria that provides the highest level of protection from any source of flooding applies.

Property development flags
Waterway corridor - This property may also be located within a mapped waterway corridor as identified in the Waterway corridors overlay map of Council's planning scheme. Please consider this in conjunction with Council's planning scheme requirements.
Overland flow path - Mapping indicates this property may be located within an overland flow path. Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. It is recommended you consult a Registered Professional Engineer of Queensland (RPEQ) to determine this property's habitable floor level and flooding depth. Please refer to Council's planning scheme for further information.
Large allotment - This property is either a Large Allotment of over 1000 square metres or is located within a Large Allotment. Flood levels may vary significantly across allotments of this size. Further investigations may be warranted in determining the variation in flood levels and the minimum habitable floor level across the site. For more information or advice, please consult a Registered Professional Engineer of Queensland (RPEQ).

Other Property Information

This property is in a Referable Dam Area

This property has been flagged within a Referable Dam Area. Residents within these areas may receive an emergency alert from Queensland Government during declared dam emergencies. Council encourages residents to **be prepared, have an emergency plan and be emergency ready**.

Dams are important infrastructure used for water storage and flood mitigation. Dams are designed to mitigate flooding by temporarily detaining water during storm events and releasing that water in a controlled way to reduce downstream flooding.

All dams in the Brisbane Local Government Area are ungated which means the water is not controlled through the operation of gates. These dams are designed to spill when the water level is higher than the spillway level.

Some dams are deemed 'referable dams' under Queensland Government legislation. This is determined by an assessment that shows in the unlikely event of a dam failure, there is a potential risk of two of more people being impacted by downstream flooding.
Find more information on **Referable dams** and to sign up for **Early Warning Alert Service**.

Useful Flood Information Definitions

Australian Height Datum (AHD) - The reference level for defining ground levels in Australia. The level of 0.0m AHD is approximately mean sea level.

Annual Exceedance Probability (AEP) - The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

- **0.2% AEP** - A flood event of this size is considered rare but may still occur. A flood of size or larger has a 1 in 500 chance or a 0.2% probability of occurring in any year.
- **1% AEP** - A flood of this size or larger has a 1 in 100 chance or a 1% probability of occurring in any year.
- **2% AEP** - A flood of this size or larger has a 1 in 50 chance or a 2% probability of occurring in any year.
- **5% AEP** - A flood of this size or larger has a 1 in 20 chance or a 5% probability of occurring in any year.
- **20% AEP** - A flood of this size or larger has a 1 in 5 chance or a 20% probability of occurring in any year.

Data quality

- **Data Quality Code A** - Level data based on recent surveyor report or approved as-constructed drawings.
- **Data Quality Code B** - Level data based on ground-based mobile survey or similar.
- **Data Quality Code C** - Level data derived from Airborne Laser Scanning or LiDAR information.

Defined Flood Level (DFL) - The DFL is used for commercial and industrial development. The Defined flood level (DFL) for Brisbane River flooding is a level of 3.7m AHD at the Brisbane City Gauge based on a flow of 6,800 m /s. DFL is only applicable for non-residential uses affected by Brisbane River flooding.

Flood planning area (FPA) - Council has developed five Flood planning areas (FPAs) as part of City Plan Flood overlay mapping for Brisbane River, Creek/waterway flooding and Overland flow to guide future building and development in flood prone areas. Storm tide flooding is mapped separately. The FPAs are designed to recognise the flood hazard for different flooding types. Flood hazard is a combination of frequency of flooding, the flood depth, and the speed at which the water is travelling. Find more information here.

Maximum and minimum ground level - Highest and lowest ground levels on the property based on available ground level information. A Registered Surveyor can confirm exact ground levels.

Minimum habitable floor level (dwelling house) - The minimum level in metres AHD at which habitable areas of development (generally including bedrooms, living rooms, kitchen, study, family, and rumpus rooms) must be constructed as required by the Brisbane City Plan.

Indicative existing floor level - The approximate level in metres AHD of the lowest habitable floor in the existing building. This data is sourced from a range of sources with varying accuracy levels.

Property - A property will contain 1 or more lots. The multiple lot warning is shown if you have selected a property that contains multiple lots.

Residential flood level (RFL) - This flood level for the Brisbane River equates to the 1% annual exceedance probability (AEP) flood level.

To learn more, visit Brisbane City Council's Flood Information Hub

Brisbane City Council's Online Flood Tools

Council provides several online flood tools:

- to guide planning and development
- to help residents and businesses understand their flood risk and prepare for flooding.

Council's online flood tools for planning and development purposes include:

- **FloodWise Property Report**
- **Flood Overlay Code**

For more information on Council's planning scheme and online flood tools for planning and development:

- phone (07) 3403 8888 and ask to talk to a Development Services Planning Information Officer

- visit brisbane.qld.gov.au/planning-building

Council's Planning Scheme - The City Plan (planning scheme) has been prepared in accordance with the Sustainable Planning Act as a framework for managing development in a way that advances the purpose of the Act. In seeking to achieve this purpose, the planning scheme sets out the Council's intention for future development in the planning scheme area, over the next 20 years.

Disclaimer

1. Defined flood levels and residential flood levels, minimum habitable floor levels and indicative existing floor levels are determined from the best available information to Council at the date of issue. These levels, for a particular property, may change if more detailed information becomes available or changes are made in the method of calculating levels.
2. Council makes no warranty or representation regarding the accuracy or completeness of a FloodWise Property Report. Council disclaims any responsibility or liability in relation to the use or reliance by any person on a FloodWise Property Report.

Planning to build or renovate?

For information, guidelines, tools and resources to help you track, plan or apply for your development visit brisbane.qld.gov.au/planning-building

You can also find the Brisbane City Plan 2014 and Neighbourhood Plans as well as other information and training videos to help, with your building and development plans.

FloodWise Property Report

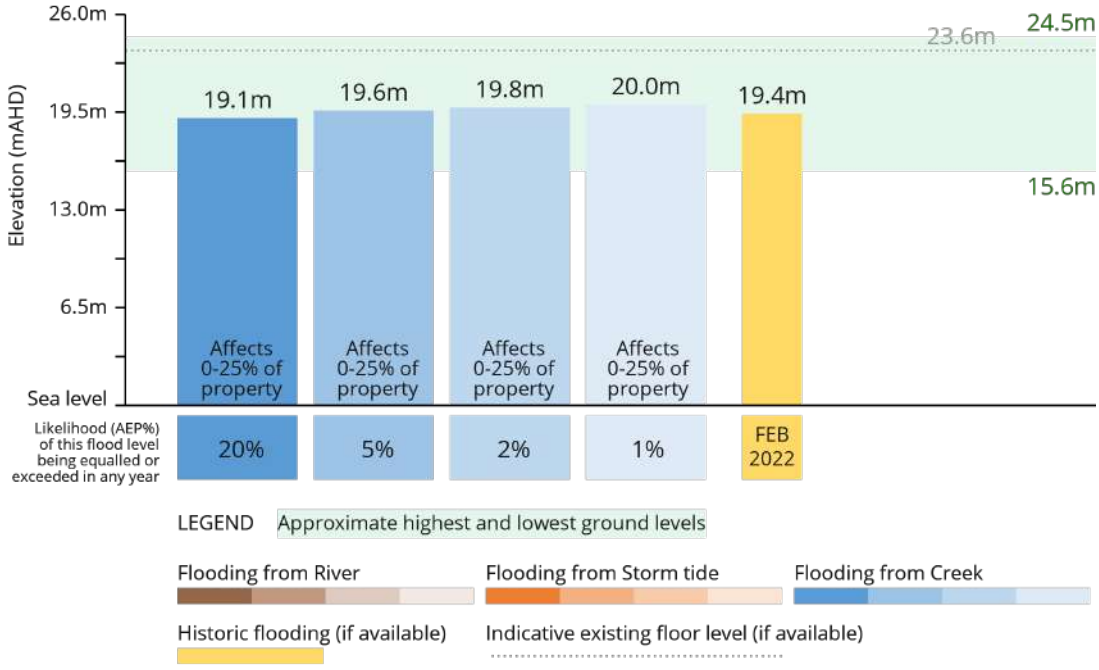
18 CLOVERDALE RD, DOOLANDELLA 4077
Lot 102 on RP90234

Dedicated to a better Brisbane

THE PURPOSE OF THIS REPORT IS FOR BUILDING AND DEVELOPMENT

Brisbane City Council's FloodWise Property Report **provides technical flood planning information** including estimated flood levels, habitable floor level requirements and more. **This report uses the adopted flood planning information in CityPlan**, that guides how land in Brisbane is used and developed for the future. Find out more about planning and building. To understand how to be **resilient and prepare for floods**, visit Council's Be Prepared webpage. Find more information about how to read a FloodWise Property Report.

Graph showing only the highest source/type of flooding for 1%, 2%, 5% and 20% likelihoods. Also shows historic flood levels. Other flood types and levels may be present and will be listed in the Flood Planning Information table below. This graph does not include overland flow flooding. If applicable, overland flow information is shown in the Planning and Development Information section below. **NOTE:** See Useful Definitions section to explain terminology.



Combined 1% AEP for river, creek and storm tide flood extent (if applicable). Aerial map shows river and creek flooding extent from the adopted CityPlan. Read more about CityPlan.

Are you resilient and ready for flood?

- Sign up to the Brisbane Severe Weather Alert at **brisbane.qld.gov.au/beprepared**
- Visit bom.gov.au for the latest weather updates.
- Have an evacuation plan, emergency kit and important phone numbers ready.
- Observe where water flows from and to during heavy rain.
- Consider how flood-resilient building techniques will have you home faster and with less damage.

Life threatening emergencies
000 Police/fire/ambulance
(mobiles **000** and **112**)

State Emergency Service (SES) **132 500**
Energex **13 19 62**
Brisbane City Council **3403 8888**

Technical Summary

This section of the FloodWise Property Report contains more detailed flood information for this property so **surveyors, builders, certifiers, architects, and engineers can plan and build** in accordance with Council's planning scheme.

Find more information about planning and building in Brisbane or talk to a Development Services Planning Information Officer via Council's Contact Centre on (07) 3403 8888.

Property Information Summary

The following table provides a summary of flood information for this property. More detailed flood level information is provided in the following sections of this report.

Property Summary	Level (mAHD) / Comment	Data Quality Code
Minimum ground level	15.6	C
Maximum ground level	24.5	C
Indicative existing floor level	23.6	C
Source of highest flooding	Creek/Waterway	

Flood Planning Information

The table below displays the peak estimated flood levels by probability for this property. Estimated flood level data should be used in conjunction with applicable planning scheme requirements - Refer to Flood Planning and Development Information section below for further information.

Note this table does not include overland flow. If overland flow is applicable to this property, refer to the Flood Planning and Development section below for further information.

Likelihood / Description	Level (mAHD)	Source
20%	19.1	Creek/Waterway (OXLEY STABLE CREEK)
5%	19.6	Creek/Waterway (OXLEY STABLE CREEK)
2%	19.8	Creek/Waterway (OXLEY STABLE CREEK)
1%	20.0	Creek/Waterway (OXLEY STABLE CREEK)
0.2%	20.2	Creek/Waterway (OXLEY CREEK)
FEB2022	19.4	Brisbane River and Creek/Waterway
Minimum Habitable Floor Level (dwelling house)	N/A*	

* Council does not have this data available. Customers are recommended to engage a Registered Professional Engineer of QLD for further advice.

Flood Planning and Development Information

This section of the FloodWise Property Report contains information about Council's planning scheme overlays. Overlays identify areas within the planning scheme that reflect distinct themes that may include constrained land and/or areas sensitive to the effects of development.

Flood overlay code

The Flood overlay code of Council's planning scheme uses the following information to provide guidelines when developing properties. The table below summarises the flood planning areas (FPAs) that apply to this property. Development guidelines for the FPAs are explained in Council's planning scheme.

Flood planning areas (FPA)		
River	**Creek / waterway**	**Overland flow**
	FPA1	Applicable
	FPA2	
	FPA3	
	FPA4	
	FPA5	

To find more information about Council's flood planning areas (FPAs) for Brisbane River and Creek/waterway flooding to guide future building and development in flood prone areas, please review Council's Flood Planning Provisions.

Coastal hazard overlay code

The Coastal hazard overlay code of Council's planning scheme uses the following information to provide guidelines when conducting new developments. The table below summarises the coastal hazard categories that apply to this property. Development guidelines for the following Coastal hazard overlay sub-categories are explained in Council's planning scheme.

Coastal hazard overlay sub-categories
There are currently no Coastal hazard overlay sub-categories that apply to this property.

Note: Where land is identified within one for more flood planning areas on the Flood overlay or is identified within one of the Storm tide inundation area sub-categories on the Coastal hazard overlay, the assessment criteria that provides the highest level of protection from any source of flooding applies.

Property development flags
Waterway corridor - This property may also be located within a mapped waterway corridor as identified in the Waterway corridors overlay map of Council's planning scheme. Please consider this in conjunction with Council's planning scheme requirements.
Overland flow path - Mapping indicates this property may be located within an overland flow path. Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. It is recommended you consult a Registered Professional Engineer of Queensland (RPEQ) to determine this property's habitable floor level and flooding depth. Please refer to Council's planning scheme for further information.
Large allotment - This property is either a Large Allotment of over 1000 square metres or is located within a Large Allotment. Flood levels may vary significantly across allotments of this size. Further investigations may be warranted in determining the variation in flood levels and the minimum habitable floor level across the site. For more information or advice, please consult a Registered Professional Engineer of Queensland (RPEQ).

Other Property Information

This property is in a Referable Dam Area

This property has been flagged within a Referable Dam Area. Residents within these areas may receive an emergency alert from Queensland Government during declared dam emergencies. Council encourages residents to **be prepared, have an emergency plan and be emergency ready**.

Dams are important infrastructure used for water storage and flood mitigation. Dams are designed to mitigate flooding by temporarily detaining water during storm events and releasing that water in a controlled way to reduce downstream flooding.

All dams in the Brisbane Local Government Area are ungated which means the water is not controlled through the operation of gates. These dams are designed to spill when the water level is higher than the spillway level.

Some dams are deemed 'referable dams' under Queensland Government legislation. This is determined by an assessment that shows in the unlikely event of a dam failure, there is a potential risk of two of more people being impacted by downstream flooding.
Find more information on **Referable dams** and to sign up for **Early Warning Alert Service**.

Useful Flood Information Definitions

Australian Height Datum (AHD) - The reference level for defining ground levels in Australia. The level of 0.0m AHD is approximately mean sea level.

Annual Exceedance Probability (AEP) - The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

- **0.2% AEP** - A flood event of this size is considered rare but may still occur. A flood of size or larger has a 1 in 500 chance or a 0.2% probability of occurring in any year.
- **1% AEP** - A flood of this size or larger has a 1 in 100 chance or a 1% probability of occurring in any year.
- **2% AEP** - A flood of this size or larger has a 1 in 50 chance or a 2% probability of occurring in any year.
- **5% AEP** - A flood of this size or larger has a 1 in 20 chance or a 5% probability of occurring in any year.
- **20% AEP** - A flood of this size or larger has a 1 in 5 chance or a 20% probability of occurring in any year.

Data quality

- **Data Quality Code A** - Level data based on recent surveyor report or approved as-constructed drawings.
- **Data Quality Code B** - Level data based on ground-based mobile survey or similar.
- **Data Quality Code C** - Level data derived from Airborne Laser Scanning or LiDAR information.

Defined Flood Level (DFL) - The DFL is used for commercial and industrial development. The Defined flood level (DFL) for Brisbane River flooding is a level of 3.7m AHD at the Brisbane City Gauge based on a flow of 6,800 m /s. DFL is only applicable for non-residential uses affected by Brisbane River flooding.

Flood planning area (FPA) - Council has developed five Flood planning areas (FPAs) as part of City Plan Flood overlay mapping for Brisbane River, Creek/waterway flooding and Overland flow to guide future building and development in flood prone areas. Storm tide flooding is mapped separately. The FPAs are designed to recognise the flood hazard for different flooding types. Flood hazard is a combination of frequency of flooding, the flood depth, and the speed at which the water is travelling. Find more information here.

Maximum and minimum ground level - Highest and lowest ground levels on the property based on available ground level information. A Registered Surveyor can confirm exact ground levels.

Minimum habitable floor level (dwelling house) - The minimum level in metres AHD at which habitable areas of development (generally including bedrooms, living rooms, kitchen, study, family, and rumpus rooms) must be constructed as required by the Brisbane City Plan.

Indicative existing floor level - The approximate level in metres AHD of the lowest habitable floor in the existing building. This data is sourced from a range of sources with varying accuracy levels.

Property - A property will contain 1 or more lots. The multiple lot warning is shown if you have selected a property that contains multiple lots.

Residential flood level (RFL) - This flood level for the Brisbane River equates to the 1% annual exceedance probability (AEP) flood level.

To learn more, visit Brisbane City Council's Flood Information Hub

Brisbane City Council's Online Flood Tools

Council provides several online flood tools:

- to guide planning and development
- to help residents and businesses understand their flood risk and prepare for flooding.

Council's online flood tools for planning and development purposes include:

- **FloodWise Property Report**
- **Flood Overlay Code**

For more information on Council's planning scheme and online flood tools for planning and development:

- phone (07) 3403 8888 and ask to talk to a Development Services Planning Information Officer

- visit brisbane.qld.gov.au/planning-building

Council's Planning Scheme - The City Plan (planning scheme) has been prepared in accordance with the Sustainable Planning Act as a framework for managing development in a way that advances the purpose of the Act. In seeking to achieve this purpose, the planning scheme sets out the Council's intention for future development in the planning scheme area, over the next 20 years.

Disclaimer

1. Defined flood levels and residential flood levels, minimum habitable floor levels and indicative existing floor levels are determined from the best available information to Council at the date of issue. These levels, for a particular property, may change if more detailed information becomes available or changes are made in the method of calculating levels.
2. Council makes no warranty or representation regarding the accuracy or completeness of a FloodWise Property Report. Council disclaims any responsibility or liability in relation to the use or reliance by any person on a FloodWise Property Report.

Planning to build or renovate?

For information, guidelines, tools and resources to help you track, plan or apply for your development visit brisbane.qld.gov.au/planning-building

You can also find the Brisbane City Plan 2014 and Neighbourhood Plans as well as other information and training videos to help, with your building and development plans.

FloodWise Property Report

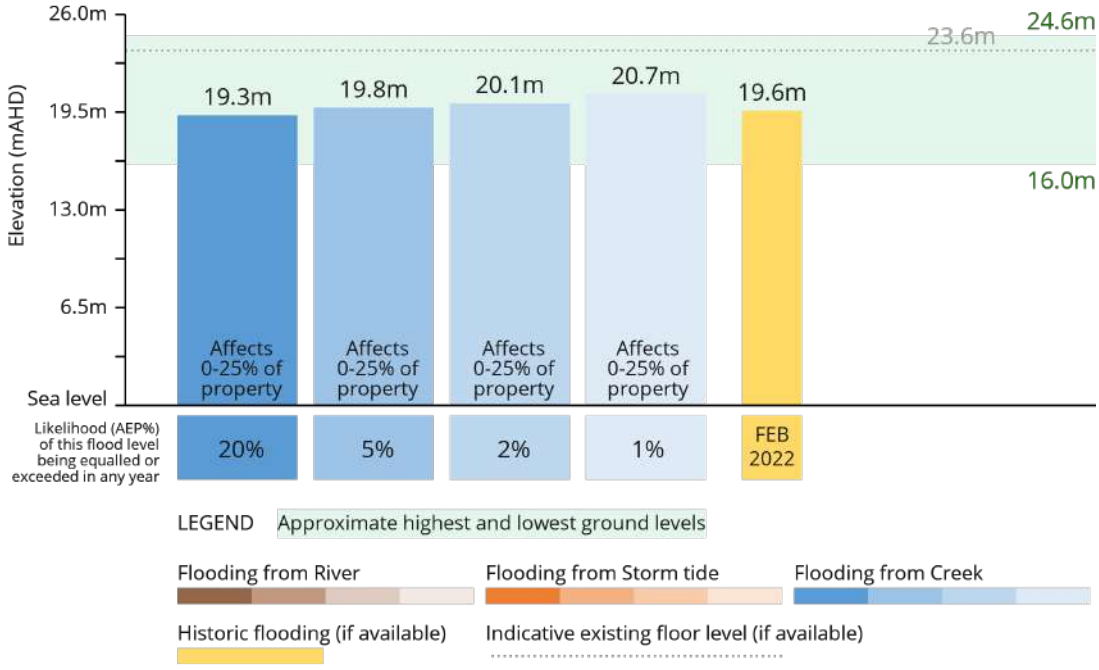
26 CLOVERDALE RD, DOOLANDELLA 4077
Lot 101 on RP90234

Dedicated to a better Brisbane

THE PURPOSE OF THIS REPORT IS FOR BUILDING AND DEVELOPMENT

Brisbane City Council's FloodWise Property Report **provides technical flood planning information** including estimated flood levels, habitable floor level requirements and more. **This report uses the adopted flood planning information in CityPlan**, that guides how land in Brisbane is used and developed for the future. Find out more about planning and building. To understand how to be **resilient and prepare for floods**, visit Council's Be Prepared webpage. Find more information about how to read a FloodWise Property Report.

Graph showing only the highest source/type of flooding for 1%, 2%, 5% and 20% likelihoods. Also shows historic flood levels. Other flood types and levels may be present and will be listed in the Flood Planning Information table below. This graph does not include overland flow flooding. If applicable, overland flow information is shown in the Planning and Development Information section below. **NOTE:** See Useful Definitions section to explain terminology.



Combined 1% AEP for river, creek and storm tide flood extent (if applicable). Aerial map shows river and creek flooding extent from the adopted CityPlan. Read more about CityPlan.

Are you resilient and ready for flood?

- Sign up to the Brisbane Severe Weather Alert at **brisbane.qld.gov.au/beprepared**
- Visit bom.gov.au for the latest weather updates.
- Have an evacuation plan, emergency kit and important phone numbers ready.
- Observe where water flows from and to during heavy rain.
- Consider how flood-resilient building techniques will have you home faster and with less damage.

Life threatening emergencies
000 Police/fire/ambulance
(mobiles **000** and **112**)

State Emergency Service (SES) **132 500**
Energex **13 19 62**
Brisbane City Council **3403 8888**

Technical Summary

This section of the FloodWise Property Report contains more detailed flood information for this property so **surveyors, builders, certifiers, architects, and engineers can plan and build** in accordance with Council's planning scheme.

Find more information about planning and building in Brisbane or talk to a Development Services Planning Information Officer via Council's Contact Centre on (07) 3403 8888.

Property Information Summary

The following table provides a summary of flood information for this property. More detailed flood level information is provided in the following sections of this report.

Property Summary	Level (mAHD) / Comment	Data Quality Code
Minimum ground level	16.0	C
Maximum ground level	24.6	C
Indicative existing floor level	23.6	C
Source of highest flooding	Creek/Waterway	

Flood Planning Information

The table below displays the peak estimated flood levels by probability for this property. Estimated flood level data should be used in conjunction with applicable planning scheme requirements - Refer to Flood Planning and Development Information section below for further information.

Note this table does not include overland flow. If overland flow is applicable to this property, refer to the Flood Planning and Development section below for further information.

Likelihood / Description	Level (mAHD)	Source
20%	19.3	Creek/Waterway (OXLEY STABLE CREEK)
5%	19.8	Creek/Waterway (OXLEY STABLE CREEK)
2%	20.1	Creek/Waterway (OXLEY STABLE CREEK)
1%	20.7	Creek/Waterway (OXLEY STABLE CREEK)
0.2%	20.5	Creek/Waterway (OXLEY CREEK)
FEB2022	19.6	Brisbane River and Creek/Waterway
Minimum Habitable Floor Level (dwelling house)	N/A*	

* Council does not have this data available. Customers are recommended to engage a Registered Professional Engineer of QLD for further advice.

Flood Planning and Development Information

This section of the FloodWise Property Report contains information about Council's planning scheme overlays. Overlays identify areas within the planning scheme that reflect distinct themes that may include constrained land and/or areas sensitive to the effects of development.

Flood overlay code

The Flood overlay code of Council's planning scheme uses the following information to provide guidelines when developing properties. The table below summarises the flood planning areas (FPAs) that apply to this property. Development guidelines for the FPAs are explained in Council's planning scheme.

Flood planning areas (FPA)		
River	**Creek / waterway**	**Overland flow**
	FPA1	Applicable
	FPA2	
	FPA3	
	FPA4	
	FPA5	

To find more information about Council's flood planning areas (FPAs) for Brisbane River and Creek/waterway flooding to guide future building and development in flood prone areas, please review Council's Flood Planning Provisions.

Coastal hazard overlay code

The Coastal hazard overlay code of Council's planning scheme uses the following information to provide guidelines when conducting new developments. The table below summarises the coastal hazard categories that apply to this property. Development guidelines for the following Coastal hazard overlay sub-categories are explained in Council's planning scheme.

Coastal hazard overlay sub-categories
There are currently no Coastal hazard overlay sub-categories that apply to this property.

Note: Where land is identified within one for more flood planning areas on the Flood overlay or is identified within one of the Storm tide inundation area sub-categories on the Coastal hazard overlay, the assessment criteria that provides the highest level of protection from any source of flooding applies.

Property development flags
Waterway corridor - This property may also be located within a mapped waterway corridor as identified in the Waterway corridors overlay map of Council's planning scheme. Please consider this in conjunction with Council's planning scheme requirements.
Overland flow path - Mapping indicates this property may be located within an overland flow path. Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded and/or when the overland flow path is blocked. It is recommended you consult a Registered Professional Engineer of Queensland (RPEQ) to determine this property's habitable floor level and flooding depth. Please refer to Council's planning scheme for further information.
Large allotment - This property is either a Large Allotment of over 1000 square metres or is located within a Large Allotment. Flood levels may vary significantly across allotments of this size. Further investigations may be warranted in determining the variation in flood levels and the minimum habitable floor level across the site. For more information or advice, please consult a Registered Professional Engineer of Queensland (RPEQ).

Other Property Information

This property is in a Referable Dam Area

This property has been flagged within a Referable Dam Area. Residents within these areas may receive an emergency alert from Queensland Government during declared dam emergencies. Council encourages residents to **be prepared, have an emergency plan and be emergency ready**.

Dams are important infrastructure used for water storage and flood mitigation. Dams are designed to mitigate flooding by temporarily detaining water during storm events and releasing that water in a controlled way to reduce downstream flooding.

All dams in the Brisbane Local Government Area are ungated which means the water is not controlled through the operation of gates. These dams are designed to spill when the water level is higher than the spillway level.

Some dams are deemed 'referable dams' under Queensland Government legislation. This is determined by an assessment that shows in the unlikely event of a dam failure, there is a potential risk of two of more people being impacted by downstream flooding.
Find more information on **Referable dams** and to sign up for **Early Warning Alert Service**.

Useful Flood Information Definitions

Australian Height Datum (AHD) - The reference level for defining ground levels in Australia. The level of 0.0m AHD is approximately mean sea level.

Annual Exceedance Probability (AEP) - The probability of a flood event of a given size occurring in any one year, usually expressed as a percentage annual chance.

- **0.2% AEP** - A flood event of this size is considered rare but may still occur. A flood of size or larger has a 1 in 500 chance or a 0.2% probability of occurring in any year.
- **1% AEP** - A flood of this size or larger has a 1 in 100 chance or a 1% probability of occurring in any year.
- **2% AEP** - A flood of this size or larger has a 1 in 50 chance or a 2% probability of occurring in any year.
- **5% AEP** - A flood of this size or larger has a 1 in 20 chance or a 5% probability of occurring in any year.
- **20% AEP** - A flood of this size or larger has a 1 in 5 chance or a 20% probability of occurring in any year.

Data quality

- **Data Quality Code A** - Level data based on recent surveyor report or approved as-constructed drawings.
- **Data Quality Code B** - Level data based on ground-based mobile survey or similar.
- **Data Quality Code C** - Level data derived from Airborne Laser Scanning or LiDAR information.

Defined Flood Level (DFL) - The DFL is used for commercial and industrial development. The Defined flood level (DFL) for Brisbane River flooding is a level of 3.7m AHD at the Brisbane City Gauge based on a flow of 6,800 m /s. DFL is only applicable for non-residential uses affected by Brisbane River flooding.

Flood planning area (FPA) - Council has developed five Flood planning areas (FPAs) as part of City Plan Flood overlay mapping for Brisbane River, Creek/waterway flooding and Overland flow to guide future building and development in flood prone areas. Storm tide flooding is mapped separately. The FPAs are designed to recognise the flood hazard for different flooding types. Flood hazard is a combination of frequency of flooding, the flood depth, and the speed at which the water is travelling. Find more information here.

Maximum and minimum ground level - Highest and lowest ground levels on the property based on available ground level information. A Registered Surveyor can confirm exact ground levels.

Minimum habitable floor level (dwelling house) - The minimum level in metres AHD at which habitable areas of development (generally including bedrooms, living rooms, kitchen, study, family, and rumpus rooms) must be constructed as required by the Brisbane City Plan.

Indicative existing floor level - The approximate level in metres AHD of the lowest habitable floor in the existing building. This data is sourced from a range of sources with varying accuracy levels.

Property - A property will contain 1 or more lots. The multiple lot warning is shown if you have selected a property that contains multiple lots.

Residential flood level (RFL) - This flood level for the Brisbane River equates to the 1% annual exceedance probability (AEP) flood level.

To learn more, visit Brisbane City Council's Flood Information Hub

Brisbane City Council's Online Flood Tools

Council provides several online flood tools:

- to guide planning and development
- to help residents and businesses understand their flood risk and prepare for flooding.

Council's online flood tools for planning and development purposes include:

- **FloodWise Property Report**
- **Flood Overlay Code**

For more information on Council's planning scheme and online flood tools for planning and development:

- phone (07) 3403 8888 and ask to talk to a Development Services Planning Information Officer

- visit brisbane.qld.gov.au/planning-building

Council's Planning Scheme - The City Plan (planning scheme) has been prepared in accordance with the Sustainable Planning Act as a framework for managing development in a way that advances the purpose of the Act. In seeking to achieve this purpose, the planning scheme sets out the Council's intention for future development in the planning scheme area, over the next 20 years.

Disclaimer

1. Defined flood levels and residential flood levels, minimum habitable floor levels and indicative existing floor levels are determined from the best available information to Council at the date of issue. These levels, for a particular property, may change if more detailed information becomes available or changes are made in the method of calculating levels.
2. Council makes no warranty or representation regarding the accuracy or completeness of a FloodWise Property Report. Council disclaims any responsibility or liability in relation to the use or reliance by any person on a FloodWise Property Report.

Planning to build or renovate?

For information, guidelines, tools and resources to help you track, plan or apply for your development visit brisbane.qld.gov.au/planning-building

You can also find the Brisbane City Plan 2014 and Neighbourhood Plans as well as other information and training videos to help, with your building and development plans.

TRAFFIC IMPACT ASSESSMENT REPORT

Proposed Residential Development
12-26 Cloverdale Road, Doolandella

Lots 101-103 on RP90234

For QLD International Investment Pty Ltd

5 June 2023

File No: K3426-0015-B

DOCUMENT CONTROL SHEET

Title:	Traffic Impact Assessment Report
Document No:	K3426- 0015-B
Original Date of Issue:	27 May 2022
Project Manager:	Aaron Pianta
Author:	Aga Szewczak
Client:	QLD International Investment Pty Ltd
Client Contact:	Stewart Somers
Client Reference:	12-26 Cloverdale Road, Doolandella
Synopsis:	This report examines the existing transport infrastructure and traffic impacts for the proposed development of the site onto the local road network. This report has been prepared to demonstrate compliance with all relevant standards, guidelines and codes.

Reviewed by RPEQ	Reg. No.	Signed	Date
Andrew Pilkington	26707		5 June 2023

Revision/Checking History			
Revision No	**Date**	**Checked By**	**Issued By**
Draft	27 May 2022	Jason Webster	Jason Webster
A	20 June 2022	Aaron Pianta	Aaron Pianta
B	5 June 2023	Daley Curran	Andrew Pilkington

Distribution		
Recipient	**No of Copies**	**Method**
QLD International Investment Pty Ltd - Stewart Somers	1	PDF
Nexus Urban Consulting Pty Ltd – Mr Stewart Somers	1	PDF

The information contained within this report is provided in good faith in the belief that no information, opinions or recommendations made are misleading. All comments and opinions given in this report are based on information supplied by the client, their agent and third parties.

CONTENTS

1.0 INTRODUCTION 1
1.1 Background 1
1.2 Scope 1
2.0 EXISTING CONDITIONS 2
2.1 Location 2
2.2 Vegetation and Land Use 3
2.3 Existing Road Network 4
2.4 Cloverdale Road 4
3.0 PROPOSED DEVELOPMENT 5
3.1 Vehicular Access 6
3.2 Cloverdale Road Frontage Roadworks 7
3.3 Proposed Intersection Spacing 8
3.4 Individual Lots Access Driveway Location 8
3.5 Internal Roads 9
3.6 Public Transport & Other Road Uses 10
3.7 Waste Collection 11
4.0 TRAFFIC DEMANDS 12
4.1 Proposed Development Trip Generation 12
4.2 Existing Residential Development within Lot 0 on SP287112 13
4.3 Post Development Traffic at Proposed Cloverdale Road Priority Intersection 13
5.0 SUMMARY AND CONCLUSIONS 14

FIGURES

Figure 1 Subject Site (Source: BCC City Plan 2014) 1
Figure 2 Locality Plan (Source: Google Maps) 2
Figure 3 Aerial Image of the Site (Source: Nearmap – Image taken 24 September 2021) 3
Figure 4 Site Location within Doolandella Neighbourhood Plan (Source: BCC City Plan 2014) 4
Figure 6 Cloverdale Road West from the Priority Intersection with Blunder Road (Source: Google Maps) 5
Figure 7 Proposed Development Layout Plan 5
Figure 8 Proposed Site Access Arrangements 6
Figure 9 Proposed Cloverdale Road Upgrade Works 7
Figure 10 Residential Driveway Prohibited Locations (Source: IPWEA std drg RS-049) 8
Figure 11 Proposed Road Hierarchy 9
Figure 12 BCC Neighbourhood Road Minor (Non-bus route) Cross Section (Source: BCC Std Drg BSD-1022) 10
Figure 13 BCC Local Road Standard Cross Section (Source: BCC Std Drg BSD-1022) 10
Figure 14 BCC Brisbane Bicycle Network Overlay Map 11

APPENDICES

Appendix A: Intrax, Proposed Reconfiguration (Ref: S152485)
Appendix B: OSKA Consulting Group; Cloverdale Road Upgrade Works Overall Plan and Typical Section (Ref: OSK3426/P014/C)
Appendix C: OSKA Consulting Group; Swept Path Analysis (Ref: OSK3426/P015/B)
Appendix D: OSKA Consulting Group; Civil Services Concept Plan (Ref: OSK3426/P010/B)
Appendix E: BCC Subdivision Code Response Section B (Ref: OSK3426-0021)

1.0 INTRODUCTION

1.1 Background

OSKA Civil Consultants has been commissioned by QLD International Investment Pty Ltd to prepare a Traffic Impact Assessment (TIA) report to support a Development Application (DA) to Brisbane City Council (BCC) for the proposed Residential Development situated at 12-26 Cloverdale Road, Doolandella. The subject site is described as Lots 101-103 on RP90234. The subject site is located in the Doolandella suburb within the EC Emerging Community zone as shown in *Figure 1* below.

Figure 1 Subject Site (Source: BCC City Plan 2014)

The proposed development consists of 40 residential dwellings. As per Brisbane City Council City Plan *SC6.31 Transport, access, parking and servicing planning scheme policy*, transport impact assessment report is required as the proposed development is:

- more than 1ha in the Emerging community's zone; and
- the number of lots is 20 or more.

This TIA report has been prepared to assess the traffic impact of the proposed development and to demonstrate compliance with all relevant standards, guidelines and codes.

1.2 Scope

The structure of this report is summarised below:

Section 2: Describes the existing conditions on the transportation network surrounding the development site;

Section 3: Outlines the relevant characteristics of the proposed development including a description of access arrangements and transport infrastructure proposed to serve the site;

Section 5: Estimates the number of additional trips that would be generated by the proposed development and identifies where these trips would be travelling to and from;

Section 6: Assesses the impact of these additional trips upon the surrounding road network;

Section 7: Presents a summary of the report and identifies the main conclusions that can be drawn from the Traffic Impact Assessment report.

2.0 EXISTING CONDITIONS

2.1 Location

The subject site is located at 12-26 Cloverdale Road, Doolandella. The site fronts Cloverdale Road to the north, the existing medium density residential development to the east and is surrounded by a vacant lot to the west and Blunder Creek to the south. The site covers a total combined area of 6.34ha, with details as summarised in *Table 1* and as located in *Figure 2*.

Table 1: Site Description

Client	Lot and Property Description	Street Address
QLD International Investment Pty Ltd	*Lots 101-103 on RP90234*	*12-26 Cloverdale Road, Doolandella*

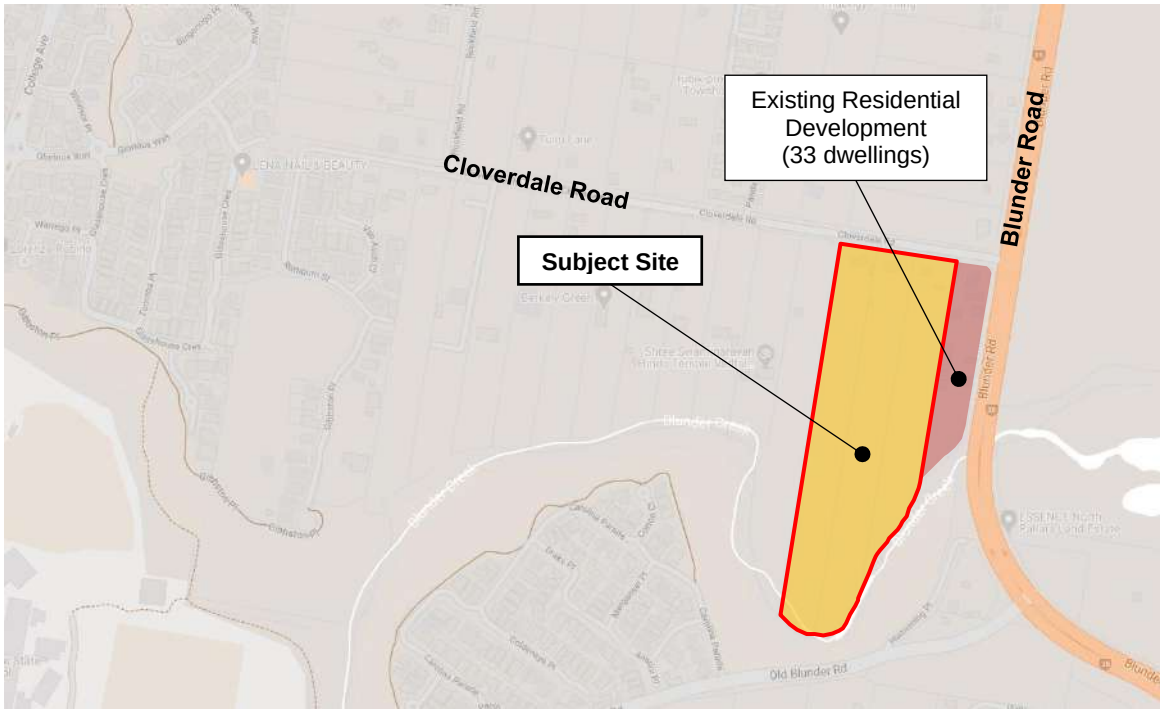


Figure 2 Locality Plan (Source: Google Maps)

Brisbane CBD, represented by Albert Street, is approximately 21km north of the centre of the application site and can be accessed via Blunder Road (State Road 35) located just 200m to the east of the proposed development via the Cloverdale Road / Blunder Road priority intersection.

Doolandella is an outer western suburb in the City of Brisbane with approximately 4,817 population (2016 census) located in close proximity to the Logan Motorway to the south, which provides access to Logan and the M1 Pacific Motorway to the east and the Ipswich Motorway to the west.

2.2 Vegetation and Land Use

The subject site currently consists of existing single dwelling houses. The southern parcel of the site is covered by dense native vegetation. Access to the site is gained from the north via Cloverdale Road. An aerial photograph of the subject site is shown in *Figure 3.*

Figure 3 Aerial Image of the Site (Source: Nearmap – Image taken 24 September 2021)

The site location in relation to the approved Doolandella Neighbourhood Plan is shown in *Figure 4*. The surrounding land use pattern in the future will generally be characterised by residential developments with Doolandella Neighbourhood Centre located to the north of the subject site.

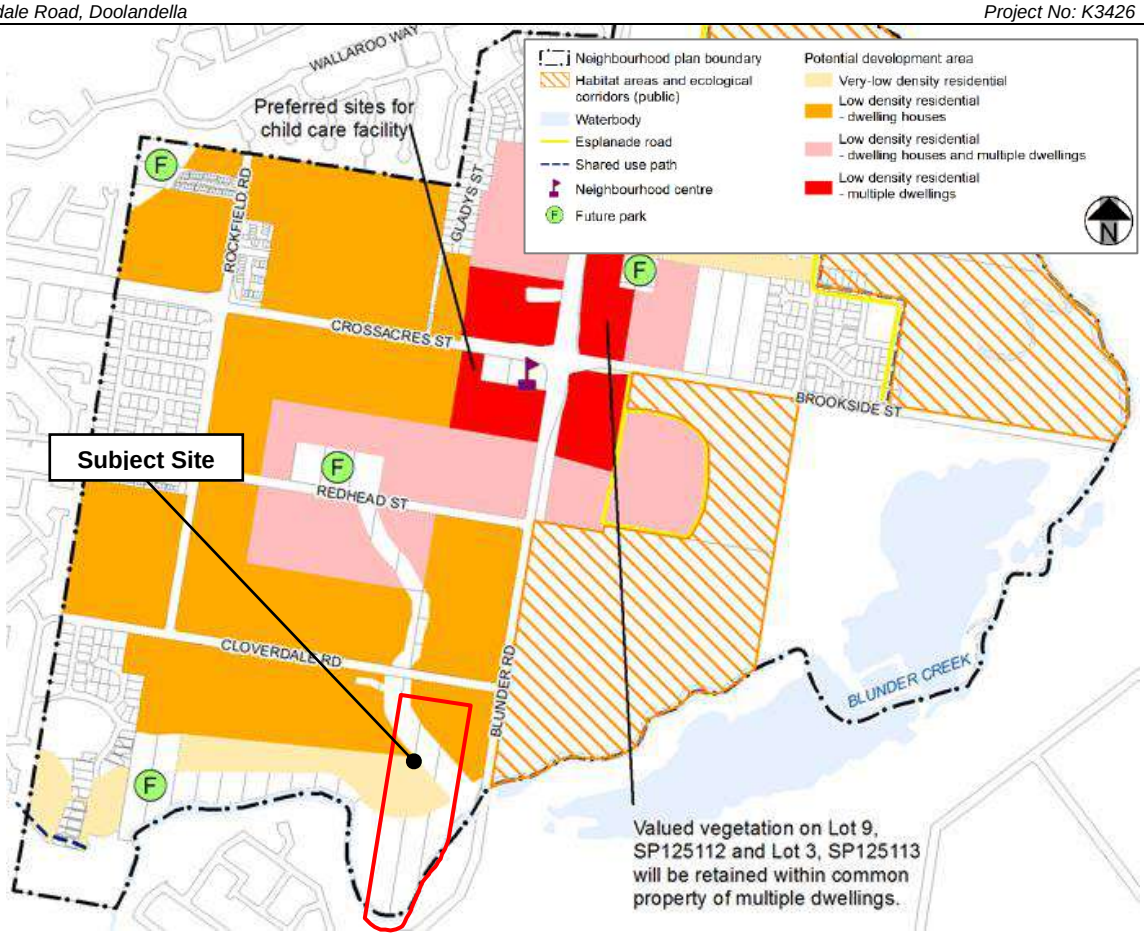


Figure 4 Site Location within Doolandella Neighbourhood Plan (Source: BCC City Plan 2014)

2.3 Existing Road Network

The road network in the vicinity of the subject site includes Cloverdale Road and Blunder Road and are administered by Brisbane City Council. Road hierarchy and characteristics of these roads is provided in Table 2.

Table 2: Local Road Network Hierarchy

Road	Speed Limit	Lanes	Classification	Management
Cloverdale Road	*50kph*	*2 (undivided)*	*Neighbourhood Road*	*BCC*
Blunder Road	*70kph*	*4 (divided)*	*Arterial Road*	*BCC*

2.4 Cloverdale Road

Cloverdale Road is a two-way council-controlled roadway, aligned in the west-east direction in the vicinity of the subject site, providing access to Blunder Road to the east and Rockfield Road to the west. Cloverdale Road interacts with Blunder Road in a form of a priority intersection. Cloverdale Road is subject to a 50km/h speed limit.

A photograph of the Cloverdale Road cross-section is presented below in *Figure 6.*

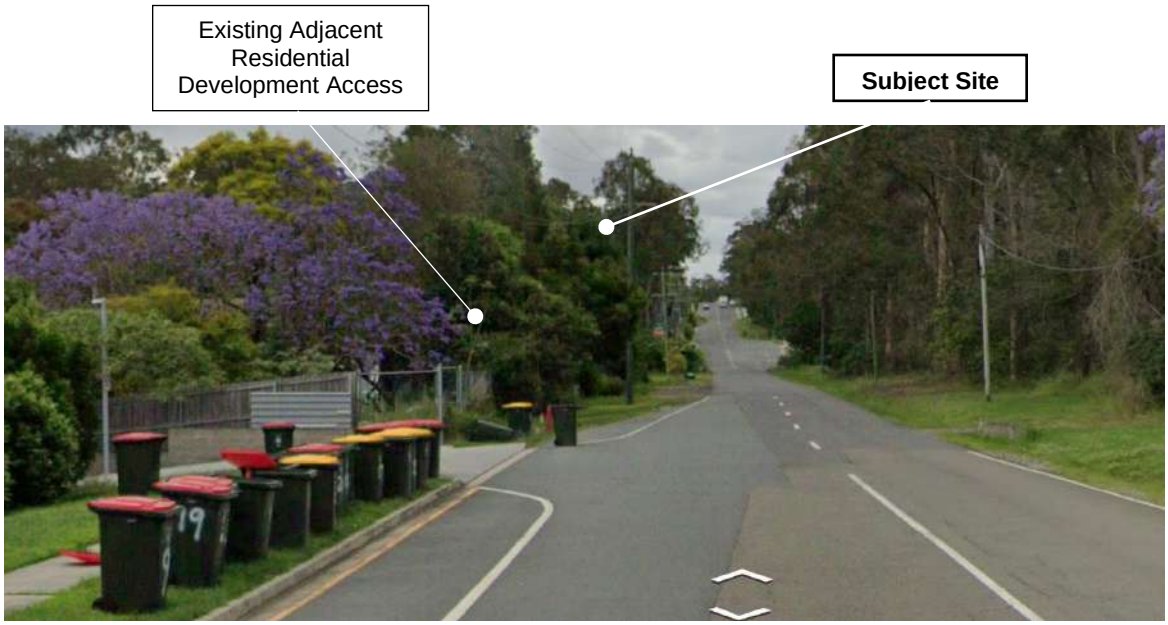


Figure 5 Cloverdale Road West from the Priority Intersection with Blunder Road (Source: Google Maps)

Table 2 provides a summary of Cloverdale Road close to the subject site.

Table 3: Summary of Road Classification

Road	Form	Function
Cloverdale Road	*2-lanes undivided local controlled road* *20.0m Road Reserve* *In sections upgraded to 11.5m wide pavement and 3.75m wide verge including 1.2m wide footpaths* *Carrying less than 3,000 vehicles per day* *50 km/h speed limit*	*Classified as a Neighbourhood Street Minor Road with primarily function to provide access to residential buildings and local access streets*

3.0 PROPOSED DEVELOPMENT

The proposed development consists of 36 detached residential dwellings as shown in *Figure 7.*

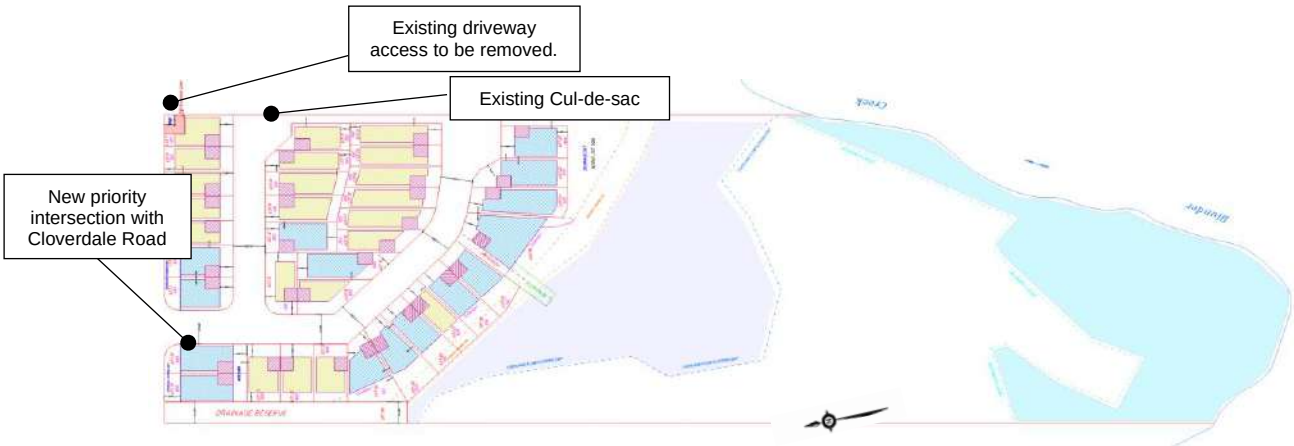


Figure 6 Proposed Development Layout Plan

3.1 Vehicular Access

The proposed site access strategy includes a new priority intersection with Cloverdale Road and a new public road from Cloverdale Road connecting to the existing cul-de-sac head to the east within Lot 0 on SP287112. The proposed intersection will also service the existing residential development to the east and the existing access driveway will be removed to reduce access impacts on Cloverdale Road.

The layout of the access intersection is shown in *Figure 8* and has the following parameters:

- The proposed priority intersection provides a flood-free access
- Minor Road Carriageway Width: 7.5m
- Intersection Radii: 8m
- Intersection Safe Intersection Sight Distance in line with Austroads *"Guide to Road Design Part 4A Unsignalised and Signalised Intersections":* Based on 60km/h Design Speed, 2.0s reaction time and 0.36 deceleration coefficient. Refer to Table 4 for details.
- As per PO4 of the Subdivision code, a 6m x 6m x 3 equal chord truncation has been provided at the Cloverdale Road intersection with the proposed internal road
- The Cloverdale Road site access arrangements will provide access for all vehicle types that are envisaged to use the development. This includes cars, vans (regular access) and BCC refuse vehicles (occasional access). The site access arrangements as proposed are adequate to accommodate vehicles based on swept path analysis as shown in Appendix C.

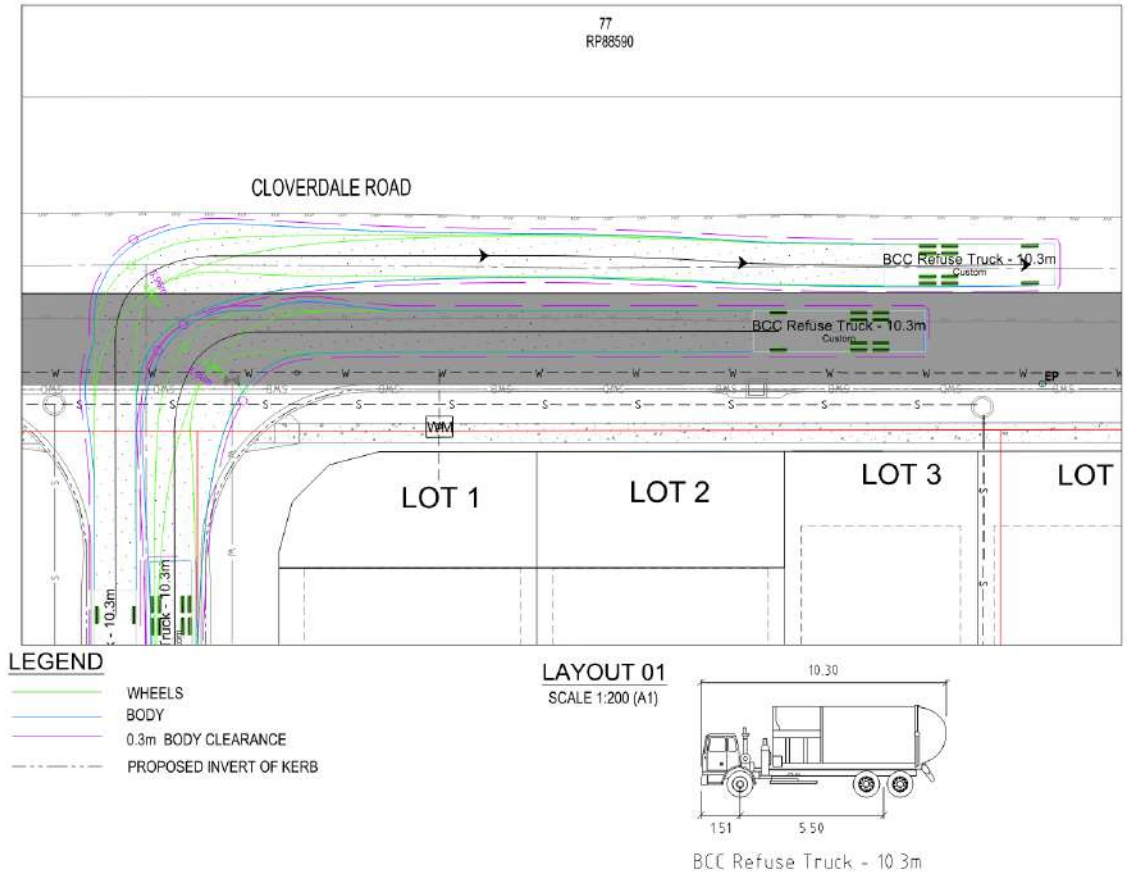


Figure 7 Proposed Site Access Arrangements

Table 4: Cloverdale Road Site Access Site Distance

Site Distance	Minimum Distance Eastern Approach (<-1% longitudinal grade)	Minimum Distance Western Approach (-2% longitudinal grade)	Eastern Approach	Western Approach
Approach Site Distance (ASD)	*73m*	*75m*	*164m*	*155m*
Safe Intersection Site Distance (SISD)	*123m*	*125m*	*164m*	*155m*

3.2 Cloverdale Road Frontage Roadworks

The proposed Cloverdale Road site frontage road upgrade works include the following:

- 3.75m wide verge in accordance with the Streetscape hierarchy overlay code
- Kerb and channel connecting to the existing infrastructure to the east including land dedication to achieve the full 3.75m wide verge
- 1.2m wide footpath on the southern side of the road connecting to the existing pedestrian facilities to the west;
- Pavement widening on the southern side of the road as per *Figure 9* below (Refer to Appendix B)

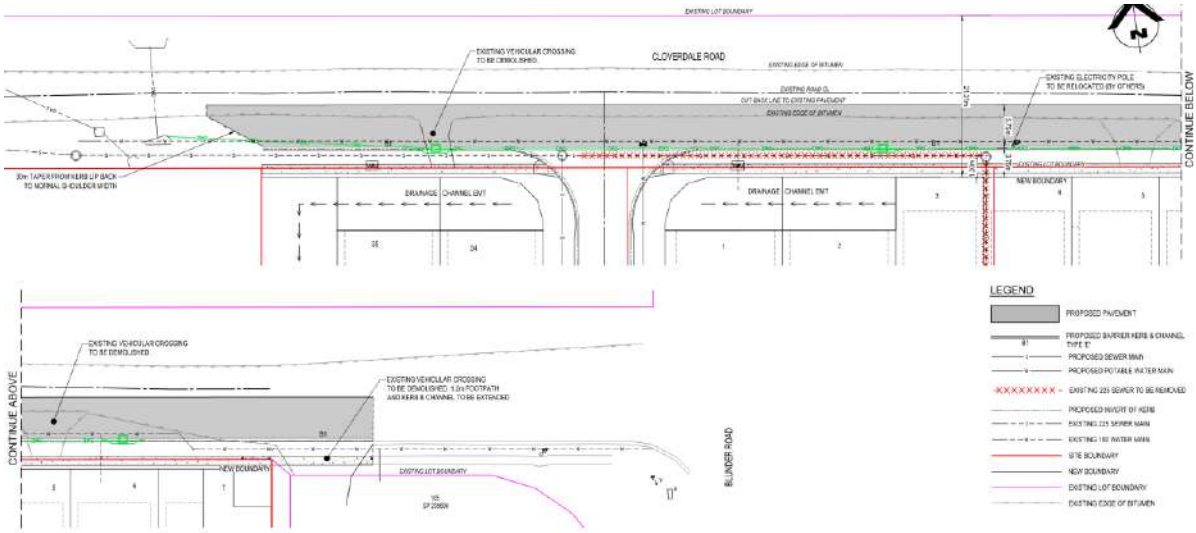


Figure 8 Proposed Cloverdale Road Upgrade Works

3.3 Proposed Intersection Spacing

The proposed site access intersection with Cloverdale Road is located approximately 155m west from the existing Cloverdale Road / Blunter Road priority intersection and approximately 164m east from the existing Cloverdale Road / Panda Street priority intersection. The above intersection spacing is adequate for Cloverdale Road, which is a Minor Neighbourhood Road and benefits from a 50km/h speed limit.

The above intersection spacing is in line with BCC *SC6.16 Infrastructure design planning scheme policy / Chapter 3 Road Corridor Design* for Neighbourhood Roads as follows:

- 100m if intersections are located on the same side of through street;
- 60m if intersections are located on opposite sides of through street.

The proposed internal intersection is located approximately 50m south from the proposed Cloverdale Road site access intersection. The above ensures that there is adequate queueing storage available at the southern approach to the intersection able to accommodate up to 8 vehicles. In addition, the above intersection spacing is in line with BCC *SC6.16 Infrastructure design planning scheme policy / Chapter 3 Road Corridor Design* for Local Roads as follows:

- 60m if intersections are located on the same side of through street;
- 40m if intersections are located on opposite sides of through street.

3.4 Individual Lots Access Driveway Location

As per IPWEA standard drawing RS-49, residential dwelling driveways should not be located within areas shown in *Figure 10.*

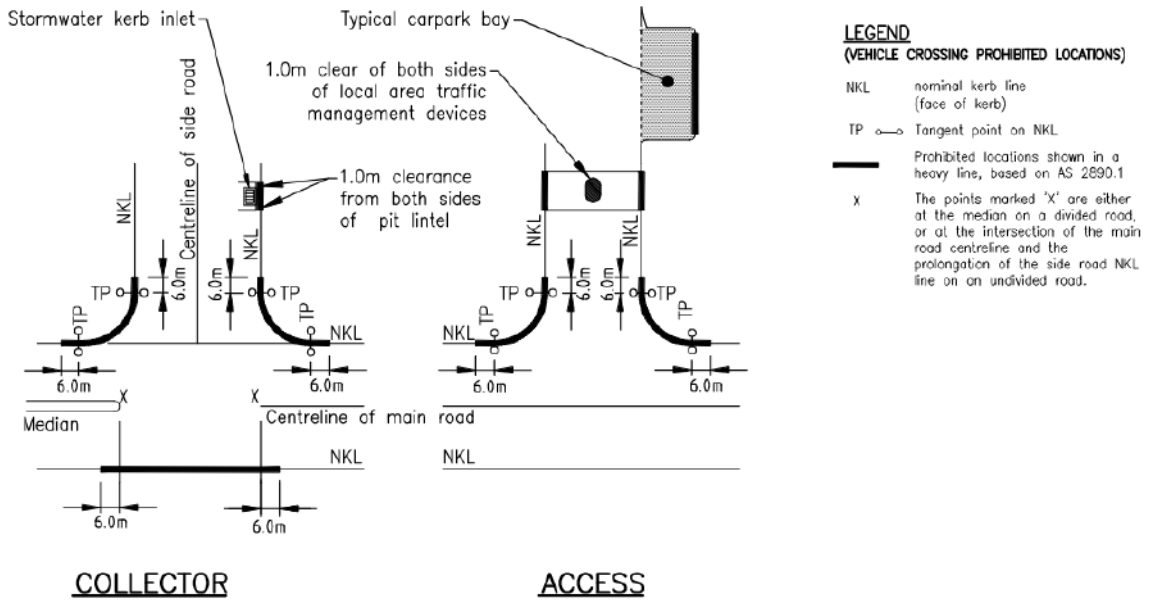


Figure 9 Residential Driveway Prohibited Locations (Source: IPWEA std drg RS-049)

As per *SC6.31 Transport, access, parking and servicing planning scheme policy Table 5 – Standard Driveway Location*, access driveways along minor roads shall be located a minimum 6m from the tangent point of an intersection road. In addition, all lots shall be accessed via internal minor roads. No driveways are permitted to Cloverdale Road.

Lots 34 & 35 will be accessed from the new road via a combined access driveway. Lot 1 will be accessed from the southern frontage, and lot 13 will be accessed from the northern frontage.

The proposed development layout shows that all proposed lots have sufficient frontage to meet the required separations from adjacent driveways and intersections in accordance with TAPS Policy.

3.5 Internal Roads

BCC's IDPSP state that a road hierarchy consistent with that outlined in Table 5 and represented in Figure 11 be provided within the subdivision.

Table 5: Internal Road Hierarchy

Road	Traffic (vpd)	Maximum Number of Lots	Classification
Local Access	*0-1000vpd*	*0-100 lots*	*Access to Residential dwellings*

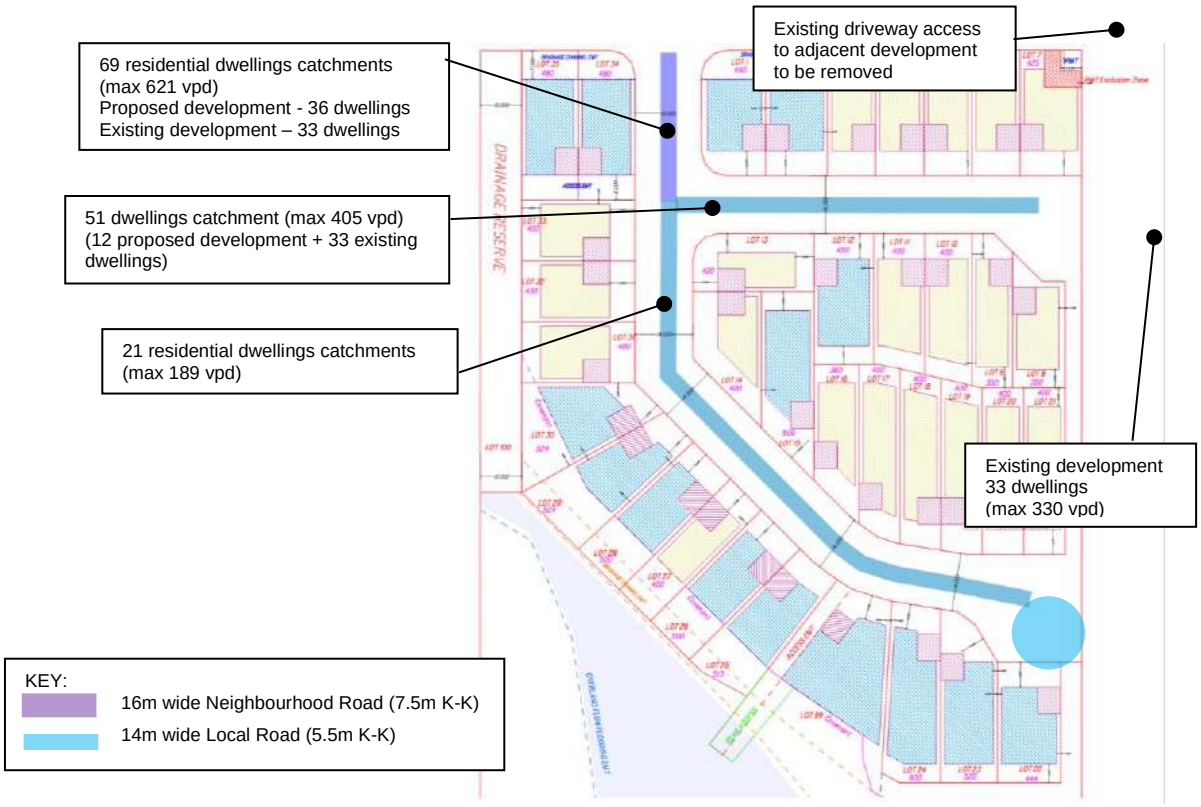


Figure 10 Proposed Road Hierarchy

To facilitate two-way movements at the approach to the proposed access intersection with Cloverdale Road, Neighbourhood Road Minor (Non-bus) was adopted as shown in *Figure 11*. *Figure 12* indicates the adopted Neighbourhood Road cross-section.

As per SC6.*16 Infrastructure design planning scheme policy / Chapter 3 Road Corridor Design,* the Neighbourhood Road maximum design speed is 40km/h and recommended traffic volumes are between 1,000-3,000vpd.

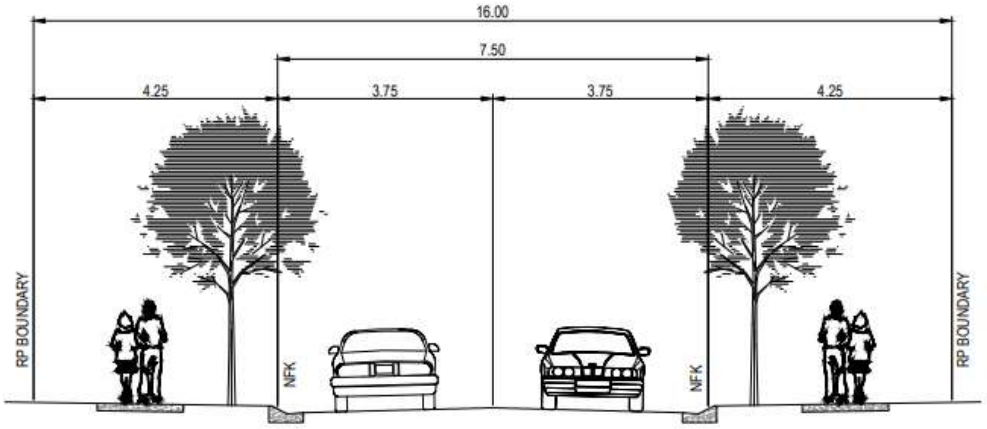


Figure 11 BCC Neighbourhood Road Minor (Non-bus route) Cross Section (Source: BCC Std Drg BSD-1022)

Typical characteristics of the Local Road type include carrying less than 1,000 vehicles per day and speed limits of up to 40 kilometres per hour. In addition, Local Street has 1 moving lane and 1 parking lane. The typical local road cross-section adopted are indicated in *Figure 13.*

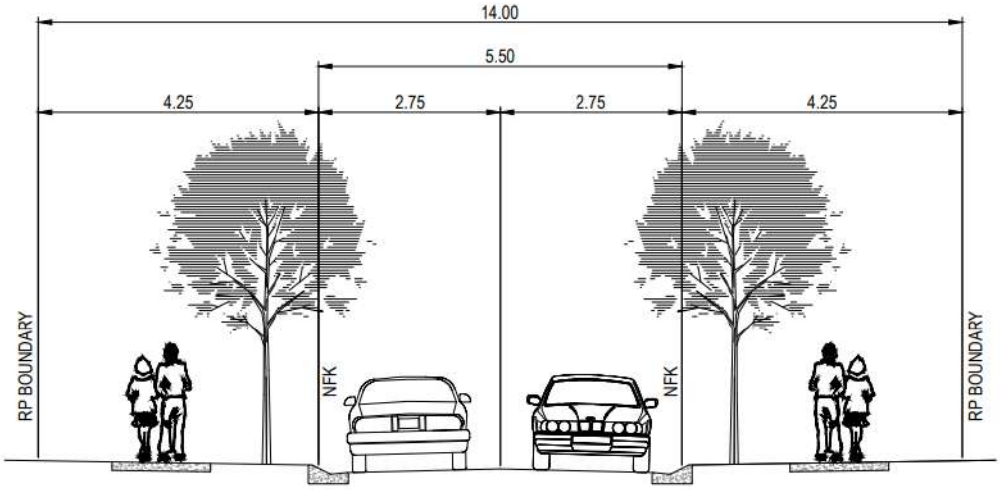


Figure 12 BCC Local Road Standard Cross Section (Source: BCC Std Drg BSD-1022)

The proposed horizontal curve radii (minimum centrelines) are 14.0m, which is above the minimum 12.75m radius required for the Local Street in line with the *Table 3.3.3.A—Design standards for minor roads* in the Schedule 6 Planning scheme policies - SC6.16 Infrastructure design planning scheme policy - Chapter 3 Road corridor design.

3.6 Public Transport & Other Road Uses

Along the eastern approach of Cloverdale Road, a 1.2m wide pedestrian path has been provided on the southern side of carriageway, while to the west there are no formal pedestrian facilities. A 1.2m wide pedestrian path will be provided on Cloverdale Road along the southern side of Cloverdale Road as part of the road frontage upgrade works.

Along the eastern boundary of the subject site, a pedestrian access path from Cloverdale Road to the existing cul-de-sac head exists, this is to be retained as part of the proposed development and extended south to the new cul de sac head (adjacent to lot 8 & 21).

New internal roads will be provided with 1.2m wide footpaths on both sides of the road in accordance with the BCC local road standard cross section.

The Brisbane Bicycle Network Overlay map for Doolandella is shown in *Figure 14* below.

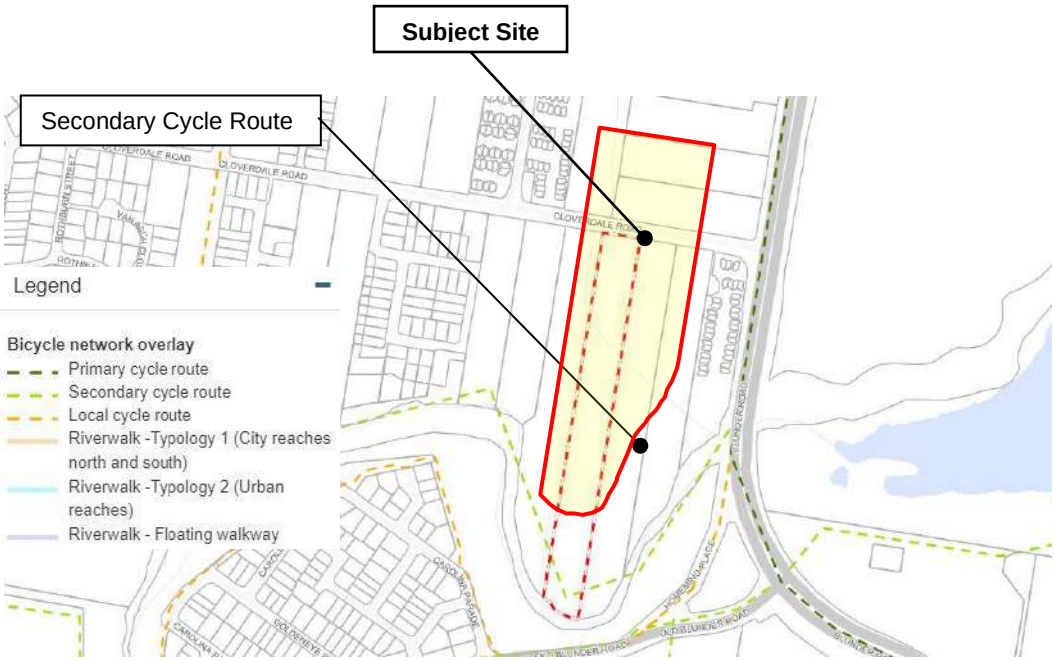


Figure 13 BCC Brisbane Bicycle Network Overlay Map

As per Bicycle Network Overlay, Secondary Cycle Route is planned along the Blunder Creek. The proposed development layout includes easement required for the secondary bicycle route corridor. The exact alignment and width of the corridor will be agreed with BCC at a later date.

3.7 Waste Collection

The proposed Waste Collection for the site includes the refuse vehicle kerbside collection as per Section 4 of Council's Refuse Planning Scheme Policy.

The Side-loading collection vehicle will service the site as per *Schedule 6 Planning Scheme Policies / SC6.26 Refuse Planning Scheme Policy*. Side-loading collection vehicle is the most commonly used vehicle for domestic garbage and recycling collections with the following specifications:

- Length overall – 10.3m
- Wheelbase – 5.5m
- Rear overhang – 3.3m
- Turning circle kerb to kerb – R9.0m
- Turning circle wall to wall – R10.5m
- Front of vehicle to collection arm – 3.8m
- Maximum reach of side arm – 3.0m
- Travel width – 2.5m
- Travel height – 4m
- Operational height – 4.5m

Swept path analysis was undertaken to ensure the site can be adequately serviced by the 10.3m BCC refuse design vehicle entering and exiting the site in a forward gear.

Refer to Appendix C for the swept path analysis (ref. OSK3426/P015/B).

Indicative bin pad locations have also bee provided to illustrate that there is adequate area to allow for domestic refuse bins to be located on within the verge adjacent to lots.

Refer to Appendix D for the Civil Services Concept Plan for details (ref. OSK3426/P010/B).

4.0 TRAFFIC DEMANDS

This section sets out the trip generation and distribution for the proposed development.

4.1 Proposed Development Trip Generation

The trip rates for the proposed development have been sourced from the RTA *"Guide to Traffic Generating Developments"* for dwelling house land use. The extracted trip rates are presented in *Table 6* below.

Table 6: Dwelling House Trip Rates

Land Use	Peak Trip Generation		
Residential	*AM Peak*	*PM Peak*	*Daily*
	0.85 per dwelling	*0.85 per dwelling*	*9.0 per dwelling*

Trip distribution has been allowed as follows:

- Morning peak hour 20% enter and 80% departure;
- Evening peak hour 70% enter and 30% departure;
- Daily 50% enter and 50% departure

Table 7 shows that the proposed development is likely to generate approximately 31 additional vehicle trip movements in the AM and PM peak hours. The above equates to approximately one (1) vehicle trip every two (2) minutes during peak hours which is considered a negligible increase in traffic. Based on the above, the SIDRA analysis is not warranted.

Table 7:: Proposed Development Trip Generation

Time	Number of units	Trip Generation per dwelling	Total Trips	Arrivals	Departures
AM Peak	*36*	*0.85*	*31*	*6*	*25*
PM Peak			*31*	*22*	*9*
Daily		*9.0*	*324*	*162*	*162*

4.2 Existing Residential Development within Lot 0 on SP287112

The proposed site access strategy includes a new priority intersection with Cloverdale Road and a new public road from Cloverdale Road connecting to the existing cul-de-sac head to the east within Lot 0 on SP287112 (Refer *Figure 11*). As such, the proposed priority intersection will also cater for the existing 33 residential dwellings located to the east. *Table 8* shows the existing residential development within Lot 0 on SP287112 trip generation.

Table 8: Existing Development Trip Generation

Time	Number of units	Trip Generation per dwelling	Total Trips	Arrivals	Departures
AM Peak	*33*	*0.85*	*29*	*5*	*24*
PM Peak			*29*	*21*	*8*
Daily		*9.0*	*297*	*148*	*148*

In summary, the existing residential development generates approximately 29 two-way vehicular trips during AM and PM Peak.

4.3 Post Development Traffic at Proposed Cloverdale Road Priority Intersection

Table 9 below shows a total trip generation from the existing and proposed residential sites.

Table 9: Existing and Proposed Development Trip Generation

Time	*Number of units*	*Trip Generation per dwelling*	*Total Trips*	*Arrivals*	*Departures*
AM Peak	*69*	*0.85*	*59*	*12*	*47*
PM Peak			*59*	*41*	*18*
Daily		*9.0*	*621*	*310*	*310*

As shown in *Table 9*, the post-development traffic at the proposed new priority intersection with Cloverdale Road will include 12 arrivals and 47 departures in the AM Peak and 41 arrivals and 18 departures during PM Peak. The above equates to approximately one (1) vehicle trip every minute during peak hours which is considered a negligible increase in traffic. Based on the above, the SIDRA analysis is not warranted.

5.0 SUMMARY AND CONCLUSIONS

This Traffic Impact Assessment (TIA) report has been prepared by OSKA Civil Consultants to support a proposed residential development at 12-26 Cloverdale Road in Doolandella. The TIA has been prepared based on best practice and the guidance set out in the Department of Transport and Main Road (DTMR) publication *Guide to Traffic Impact Assessment.*

Proposed Development

The proposed indicative development is attached as Appendix A in this report and comprises approximately 36 residential lots.

Site Access and Internal Layout

Vehicular access to the subject site is proposed by the provision of a simple priority T-intersection from Cloverdale Road that complies with Austroads design standards. The proposed vehicular access will not only cater for the proposed development (36 residential lots) but also cater for the existing development over Lot 0 on SP287112 consisting of 33 residential dwellings.

The proposed pedestrian access from Cloverdale Road to the existing cul-de-sac along the eastern boundary line ensures good permeability through the site for sustainable modes of travel. Internal roads have been designed in line with BCC standards and include footpaths on both sides of the road.

Trip Generation and Distribution

The proposed development is forecast to generate 39 two-way vehicular trips during morning and evening peak hours. The above equates to approximately one (1) vehicle trip every 2 minutes during peak hours which is considered a negligible increase in traffic. Based on the above, the SIDRA analysis is not warranted.

Off-Site Highway Improvements

As part of the proposed development, BCC has requested that Cloverdale Road to be upgraded with a minimum 3.75m wide verge including a 1.2m wide footpath for the subject site frontage to Cloverdale Road (southern side of the road), kerb and channel and necessary road widening to facilitate the above. Where the existing verge is less than 3.75m in width, land dedication is proposed to achieve the minimum 3.75m.

Summary and Conclusions

The TIA concludes that the site is suitable for residential development and that there are no transportation reasons why the site should not be developed, providing that the range of transport measures identified in this report are implemented.

APPENDIX

A

Intrax Consulting Group, Proposed Reconfiguration of Lot Application Over Lots 101-103 on RP90234

SHEET 1

Scale 1: 750 @ A1 — Lengths are in Metres.

5 0 5 10 20 30 40 50 60 70 80 90 100 110

Scale 1: 1500 @ A3 — Lengths are in Metres.

10 0 20 40 60 80 100 120 140 160 180 200 220

REV.	AMENDMENT	DATE
C-3	WIDENING OF EASEMENT	15/02/2022
C-4	ALTERATION OF BUSH LOT FRONTAGE	05/05/2022
C-5	REALIGNMENT OF POTENTIAL ACTIVE TRANSPORT ROUTE	05/07/2022
D-1	REDESIGN	05/06/2023

Intrax
Ground Floor D2, 643 Kessels Rd,
Upper Mt Gravatt QLD 4122
Ph 1300 INTRAX (1300 468 729)
reception.qld@intrax.com.au
www.intrax.com.au
Intrax Consulting Group
VIC | NSW | SA | QLD

PROPOSED RECONFIGURATION OF LOT APPLICATION OVER

LOTS 101-103 ON RP90234

12, 18 & 26 CLOVERDALE ROAD

LOCALITY OF DOOLANDELLA LOCAL AUTHORITY OF BRISBANE C.C.

HORIZONTAL DATUM:	MGA, Zone 56
VERTICAL DATUM:	AHD
ORIGIN:	3814002-1
CONTOUR INTERVAL:	0.25 m

SCALE:	1:750
DATE:	5/06/2023
SHEET NO.	1 OF 2
	S152485

SURVEYED:	
DRAWN:	Stanfield's
CHECKED:	
APPROVED:	
REVISION:	(D-1)

D A1

REV.	AMENDMENT	DATE
C-3	WIDENING OF EASEMENT	15/02/2022
C-4	ALTERATION OF BUSH LOT FRONTAGE	05/05/2022
C-5	REALIGNMENT OF POTENTIAL ACTIVE TRANSPORT ROUTE	05/07/2022
D-1	REDESIGN	5/6/2023

Intrax
Ground Floor D2, 643 Kessels Rd,
Upper Mt Gravatt QLD 4122
Ph: 1300 MYINTRAX (1300 469 728)
reception@intrax.com.au
www.intrax.com.au
Intrax Consulting Group
VIC | NSW | SA | QLD

PROPOSED RECONFIGURATION OF LOT APPLICATION OVER

LOTS 101-103 ON RP90234
12, 18 & 26 CLOVERDALE ROAD
LOCALITY OF DOOLANDELLA LOCAL AUTHORITY OF BRISBANE C.C.

This plan was prepared as a proposed subdivision and should not be used for any other purpose. The dimensions,areas and total number of lots shown hereon are subject to field survey and also to the requirements of Council and any other authority which may have requirements under any relevant legislation. In particular,no reliance should be placed on the information on this plan for any financial dealings involving the land. This note is an integral part of this plan.

HORIZONTAL DATUM:	MGA, Zone 56
VERTICAL DATUM:	AHD
ORIGIN:	3814002-1
CONTOUR INTERVAL:	0.25 m

SCALE:	1:400
DATE:	5/6/2023
SHEET NO.	2 OF 2
REVISION:	(D-1)
DRAWN:	Stanfield's
CHECKED:	
APPROVED:	
SURVEYED:	

S152485

D

A1

Scale 1: 400 @ A1 – Lengths are in Metres.
Scale 1: 800 @ A3 – Lengths are in Metres.

LEGEND

- PP — Denotes Power Pole
- Denotes Development Boundary
- Denotes Existing Lot Boundaries
- Denotes Option for Future Bikeway
- Denotes Watercourse
- Denotes Drainage Easement
- Denotes Access Easement
- Denotes Overland Flow Flooding Easement
- Denotes Creek Flooding Easement
- Denotes Covenant
- Denotes Building Envelope
- Denotes Garage Built to Boundary
- Denotes New Road
- Denotes Existing Road
- Denotes Drainage Reserve
- Denotes Bio-retention Basin
- Denotes Detached House Lots (35 Dwellings)
- Denotes Environmental Protection Zone (1 Dwelling)

(36 Dwellings Total)

SHEET 2

APPENDIX

B

OSKA Consulting Group; Cloverdale Road Upgrade Works Overall Plan and Typical Section (Ref: OSK3426/P014/C)

78
RP 90234

77
RP88590

EXISTING LOT BOUNDARY

EXISTING VEHICULAR CROSSING
TO BE DEMOLISHED.

CLOVERDALE ROAD

EXISTING EDGE OF BITUMEN

EXISTING ROAD CL

CUT-BACK LINE TO EXISTING PAVEMENT

EXISTING EDGE OF BITUMEN

EXISTING ELECTRICITY POLE
TO BE RELOCATED (BY OTHERS)

21.31m

5.75m

3.75m

1.20m

EXISTING LOT BOUNDARY

NEW BOUNDARY

30m TAPER FROM KERB LIP BACK
TO NORMAL SHOULDER WIDTH

DRAINAGE CHANNEL EMT

DRAINAGE CHANNEL EMT

35

34

1

2

3

4

5

CONTINUE BELOW

CONTINUE ABOVE

EXISTING VEHICULAR CROSSING
TO BE DEMOLISHED.

EXISTING VEHICULAR CROSSING
TO BE DEMOLISHED. 1.2m FOOTPATH
AND KERB & CHANNEL TO BE EXTENDED

NEW BOUNDARY

EXISTING LOT BOUNDARY

5

6

7

105
SP 235699

BLUNDER ROAD

CONTROL LINE
CLOVERDALE RD

21.32m
NEW ROAD RESERVE

20.00m
EXISTING ROAD RESERVE

3.75m
NEW VERGE

7.33m

3.15m

1.20m
FOOTPATH

5.75m

6.30m
EXISTING CARRIAGEWAY

6.61m

7.09m

PROPOSED
DEVELOPMENT

NEW RP BDY

RP BDY

2.50%

VARIES

CUT BACK LINE

RP BDY

LOT 77
RP88590

DESIGN SURFACE

BARRIER KERB &
CHANNEL TYPE 'E'

PAVEMENT TO BE
CONFIRMED IN
DETAILED DESIGN

EXISTING SURFACE

CLOVERDALE ROAD - UPGRADE WORKS
TYPICAL SECTION

SCALE 1:50 (A1)

LEGEND

- PROPOSED PAVEMENT
- B1 — PROPOSED BARRIER KERB & CHANNEL TYPE 'E'
- S — PROPOSED SEWER MAIN
- W — PROPOSED POTABLE WATER MAIN
- XXXXXXXX — EXISTING 225 SEWER TO BE REMOVED
- PROPOSED INVERT OF KERB
- S — EXISTING 225 SEWER MAIN
- W — EXISTING 150 WATER MAIN
- SITE BOUNDARY
- NEW BOUNDARY
- EXISTING LOT BOUNDARY
- EXISTING EDGE OF BITUMEN

CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS

REPORT ISSUE
NOT FOR CONSTRUCTION

1:50 AT A1
1:100 AT A3
0 1 2 3 4 5m

ISSUE No.	DATE	AMENDMENT
C	15-05-23	ISSUED FOR REPORT
B	26-04-23	ISSUED FOR REPORT
A	10-05-22	ISSUED FOR REPORT

OSKA CONSULTING GROUP

CLIENT: QLD INTERNATIONAL INVESTMENT PTY LTD

PROJECT: PROPOSED RESIDENTIAL SUBDIVISION
12,18 & 26 CLOVERDALE ROAD
DOOLANDELLA

DESIGN	DRAWN	APPROVED
HK	HK	

TITLE: CLOVERDALE ROAD UPGRADE WORKS
OVERALL PLAN AND TYPICAL SECTION

SCALE: 1:200 AT A1
1:400 AT A3
0 5 10 15 20m

PROJECT NO. OSK3426

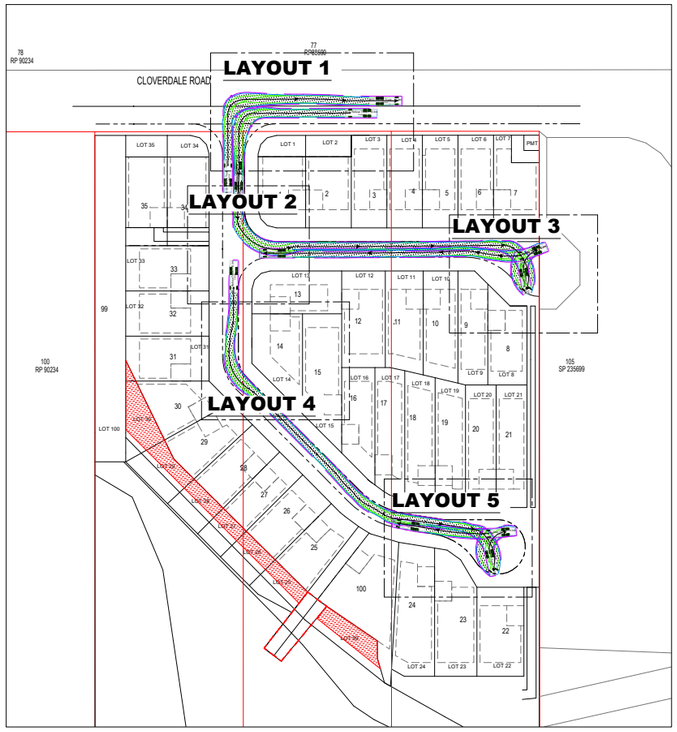
DWG NO. P014

ISSUE C

APPENDIX

C

OSKA Consulting Group; Swept Path Analysis (Ref: OSK3426/P015/B)

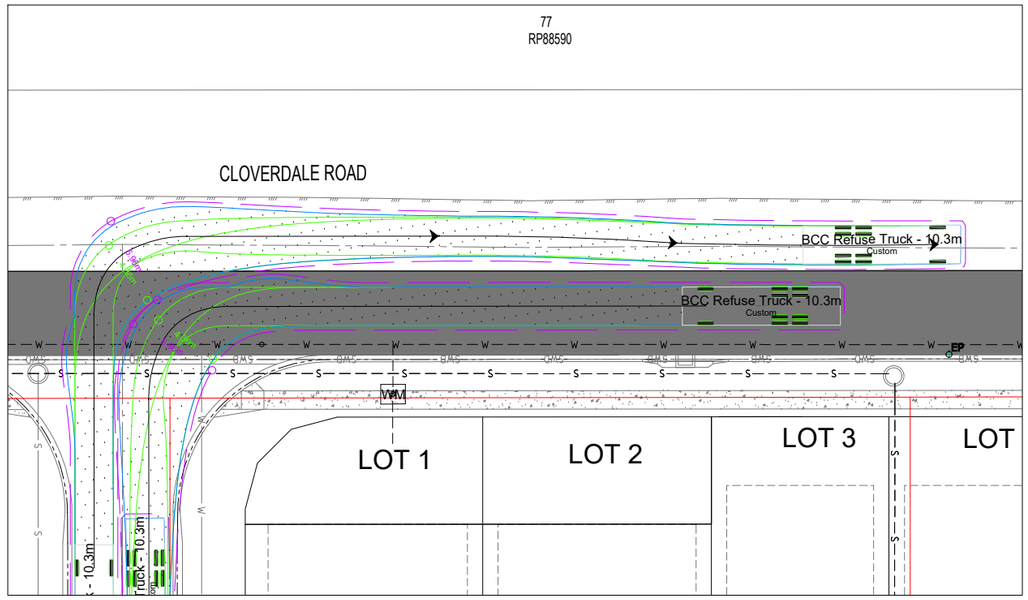


SWEPT PATH ANALYSIS - KEY PLAN

SCALE 1:1000 (A1)

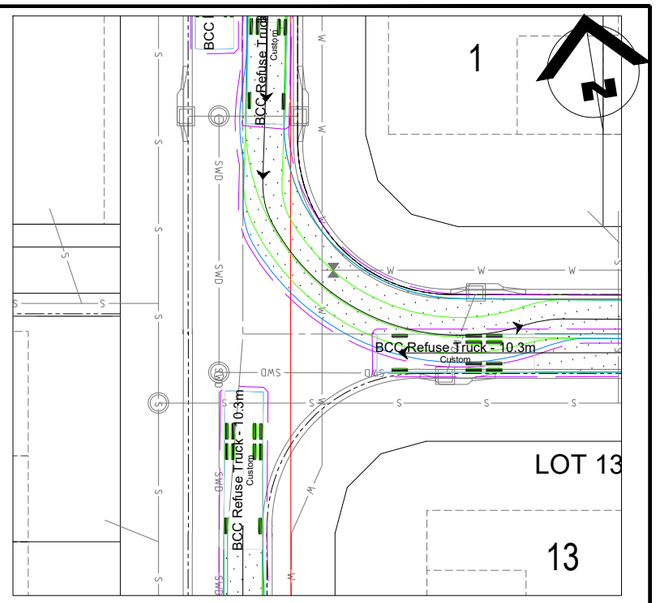
1:1000 AT A1
1:2000 AT A3

0 20 40 60 80 100m



LAYOUT 01

SCALE 1:200 (A1)

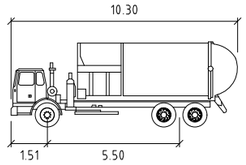


LAYOUT 02

SCALE 1:200 (A1)

LEGEND

- WHEELS
- BODY
- 0.3m BODY CLEARANCE
- PROPOSED INVERT OF KERB

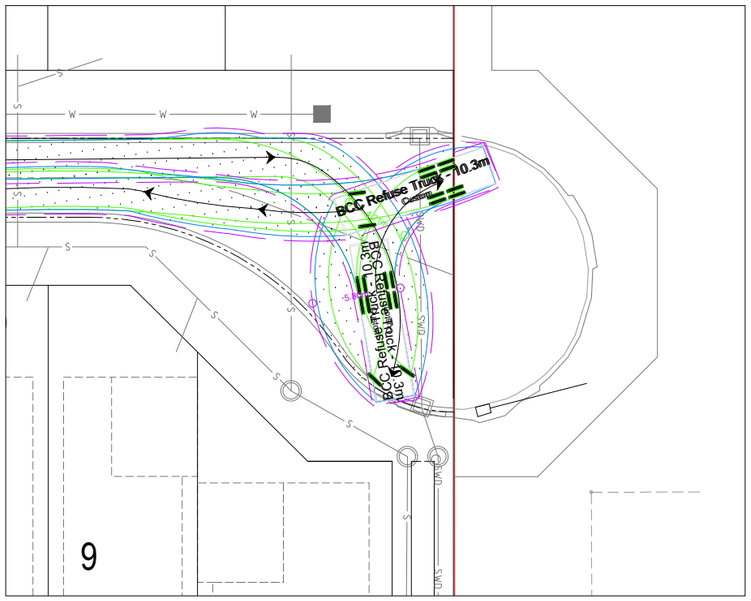


BCC Refuse Truck - 10.3m

	meters
Width	: 2.50
Track	: 2.50
Lock to Lock Time	: 6.0
Steering Angle	: 43.1

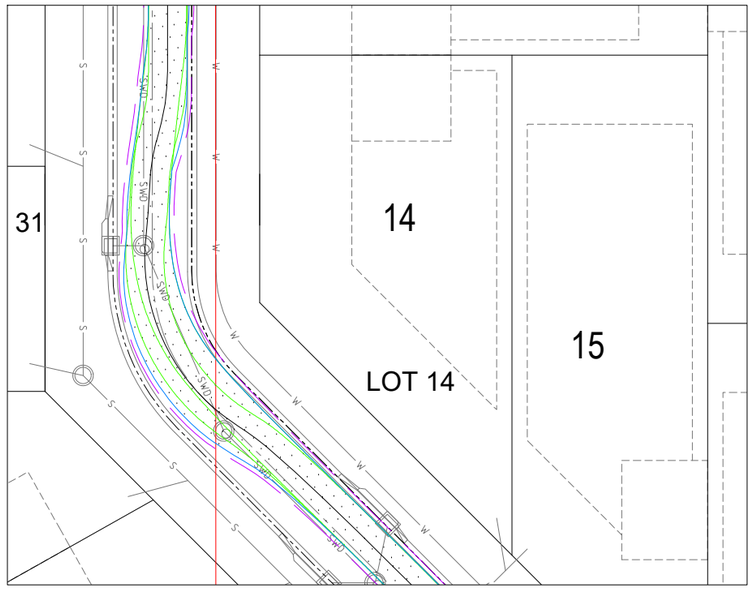
REPORT ISSUE

NOT FOR CONSTRUCTION



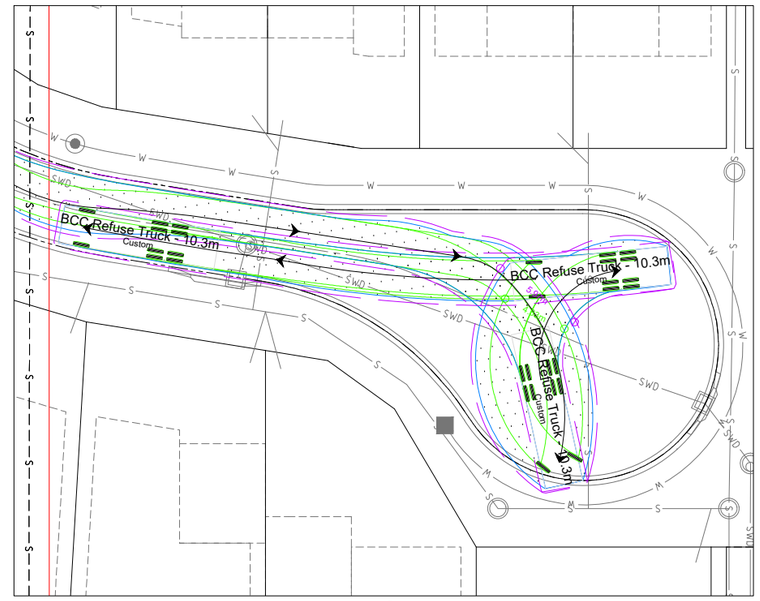
LAYOUT 03

SCALE 1:200 (A1)



LAYOUT 04

SCALE 1:200 (A1)



LAYOUT 05

SCALE 1:200 (A1)

ISSUE No.	DATE	AMENDMENT
B	15.05-23	ISSUED FOR REPORT
A	19.05.22	ISSUED FOR REPORT

OSKA CONSULTING GROUP

CLIENT: QLD INTERNATIONAL INVESTMENT PTY LTD

PROJECT: PROPOSED RESIDENTIAL SUBDIVISION
12,18 & 26 CLOVERDALE ROAD
DOOLANDELLA

DESIGN	DRAWN	APPROVED
AJP	JV	AJP

TITLE: SWEPT PATH ANALYSIS

SCALE: 1:200 AT A1, 1:400 AT A3 — 0 5 10 15 20m

PROJECT NO.: OSK3426

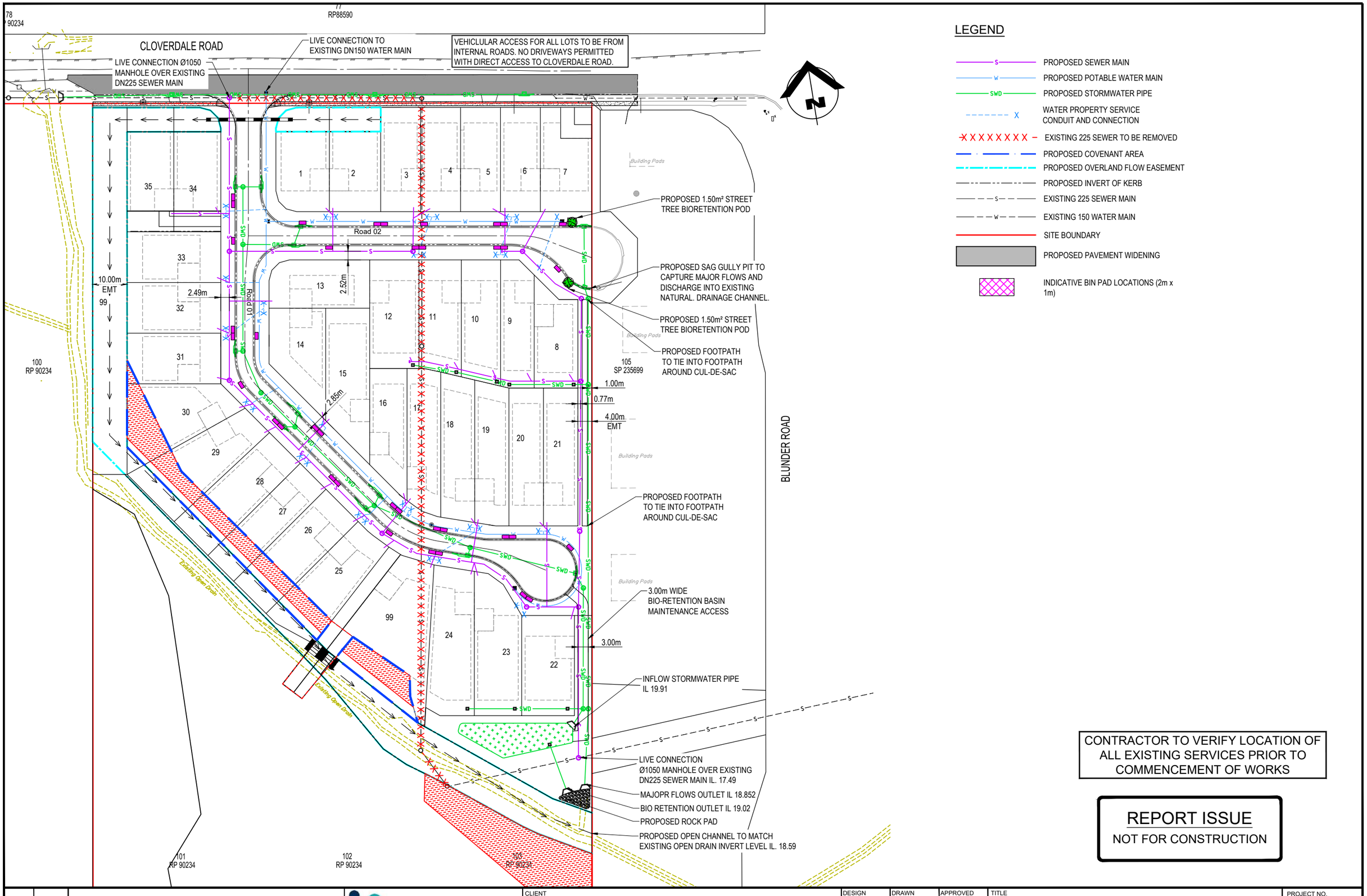
DWG NO.: P015

ISSUE: B

APPENDIX

D

OSKA Consulting Group; Civil Services Concept Plan (Ref: OSK3426/P010/B)



LEGEND

- PROPOSED SEWER MAIN
- PROPOSED POTABLE WATER MAIN
- PROPOSED STORMWATER PIPE
- WATER PROPERTY SERVICE CONDUIT AND CONNECTION
- EXISTING 225 SEWER TO BE REMOVED
- PROPOSED COVENANT AREA
- PROPOSED OVERLAND FLOW EASEMENT
- PROPOSED INVERT OF KERB
- EXISTING 225 SEWER MAIN
- EXISTING 150 WATER MAIN
- SITE BOUNDARY
- PROPOSED PAVEMENT WIDENING
- INDICATIVE BIN PAD LOCATIONS (2m x 1m)

CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING SERVICES PRIOR TO COMMENCEMENT OF WORKS

REPORT ISSUE
NOT FOR CONSTRUCTION

ISSUE No.	DATE	AMENDMENT
B	18-05-23	ISSUED FOR REPORT
A	10-05-22	ISSUED FOR REPORT

OSKA CONSULTING GROUP

CLIENT: QLD INTERNATIONAL INVESTMENT PTY LTD

PROJECT: PROPOSED RESIDENTIAL SUBDIVISION
12,18 & 26 CLOVERDALE ROAD
DOOLANDELLA

DESIGN	DRAWN	APPROVED
JV	JV	AP

TITLE: CIVIL SERVICES CONCEPT PLAN

SCALE: 1:500 AT A1, 1:1000 AT A3 (0 10 20 30 40 50m)

PROJECT NO.: OSK3426

DWG NO.: P010

ISSUE: B

APPENDIX

E

BCC Subdivision Code Response Section B (Ref: OSK3426-0021)

9.4.10.3 Performance outcomes and acceptable outcomes

Table 9.4.10.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section B—Transport, traffic and movement outcomes for reconfiguring a lot involving: a. 10 or more lots; or b. road reserve or new road; or c. cycle or pedestrian routes.		
PO9 Development ensures that the transport network and all its component elements is designed to: a. facilitate the efficient and cost-effective provision and maintenance of infrastructure; b. deliver the intended functional outcome of each element; c. have a clear hierarchical structure using the existing network classification; d. provide a high level of internal accessibility and external connectivity for local vehicle, pedestrian and bicycle networks and where relevant, public transport and freight networks. Note—A traffic impact assessment may be required in accordance with the Transport, access, parking and servicing planning scheme policy to demonstrate this performance outcome is satisfied. Note—The transport network is any element that provides for the movement of vehicles, pedestrians or cyclists other than the internal function and operation of a site and may include public space, publicly accessible private space or private space if through movement or public access is intended.	**AO9** Development provides a transport network that: a. is designed and constructed in compliance with the Infrastructure design planning scheme policy and the Transport, access, parking and servicing planning scheme policy; b. completes, aligns and integrates with the relevant components of the surrounding transport network identified through: i. the Road hierarchy overlay map; ii. the Bicycle network overlay map; iii. the Streetscape hierarchy overlay map; iv. any other overlay, neighbourhood plan, preliminary approval, development approval, structure plan or other plans agreed by the Council, over the subject site or land adjoining and in the locality of the subject site; v. a traffic impact assessment report in accordance with the Transport, access, parking and servicing planning scheme policy and the report outcomes as agreed by the Council; c. when resulting in a stub road for a proposed future road connection, provides a turn-around area or easement in compliance with the	AO. The proposed development complies with acceptable outcomes.

	Refuse planning scheme policy and the Infrastructure design planning scheme policy. Note—The majority of relevant standards identified in the planning scheme are located in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy. Note—This outcome can be demonstrated through an application that: • is accompanied by sufficient information (including computer modelling input and output data) to allow the proposed development to be properly assessed against the requirements of this code and the standards and guidelines of the Transport, access, parking and servicing planning scheme policy; • is certified by a Registered Professional Engineer Queensland that all plans, documents and dimensioned drawings comply with the requirements of this code and/or the standards and guidelines of the Transport, access, parking and servicing planning scheme policy and that any computer modelling input and output data is accurate, reasonable and carried out in accordance with sound traffic engineering practices.	
PO10 Development provides permeable, connected, attractive and safe pedestrian and bicycle networks that: a. are designed to provide permeability for pedestrians and cyclists having regard to the surrounding area and existing and future networks; b. are safe, suitably shaded and embellished, attractive and efficient; c. link destinations such as major developments, public transport stops and parks along the safest, most direct and convenient routes; d. provide routes that are on areas of least slope and avoid potential hazards such as flooding; e. run predominantly along public spaces including streets or parks that are fronted by dwellings;	**AO10.1** Development provides a pedestrian and bicycle network that connects into the broader network of proposed and existing pathways, that: a. is in compliance with the Infrastructure design planning scheme policy and any overlay, neighbourhood plan, preliminary approval, development approval that applies to the site or structure plan relevant to the site; or b. uses a pedestrian and bicycle accessibility grid-based network throughout the development where no overlay, neighbourhood plan, preliminary approval, development approval or structure plan applies. Note—The Infrastructure design code requires the creation of footpaths and bikeways in compliance with the standards and specifications in the transport network and road corridor design sections of the Infrastructure design planning scheme policy, where in the road reserve or through a park. **AO10.2**	AO The development provides a pedestrian network that connects into broader network in compliance with the IDPSP. The development considers the bicycle network in accrodnace with the IDPSP.

f. are located where there is casual surveillance, avoiding an area with a major break in surveillance and an unlit area at night; g. are widened at potential vehicle conflict points. Note—While the road layout may include no through roads such as cul-de-sacs in limited circumstances, the pedestrian and bicycle network may not. Note—Pedestrian and bicycle networks should be designed in conjunction with the design of the road network and lot layout.	Development provides pathway links outside the road corridor that: a. comply with the Infrastructure design planning scheme policy; b. incorporate key elements of crime prevention through environmental design, including: i. having a maximum length of 40m; ii. providing a direct line of sight between ends of the link; iii. connecting between the road network and the park where development is located between them. Note—For guidance in achieving the key elements of crime prevention through environmental design, refer to the Crime prevention through environmental design planning scheme policy. Note—A minimum of 50% of any park frontage should be to a minor road.	

PO11 Development provides a road reserve and carriageway that is of sufficient design, width and arrangement to preserve the function of the road hierarchy and address all impacts on the road network, including: a. safe and efficient movement of users, including vehicles, cyclists and pedestrians; b. vehicle parking; c. access to properties, including accommodation of the largest design service vehicle; d. construction and maintenance of public utilities; e. landscaping, street trees and shading; f. safety and visibility; g. integrated pedestrian and cyclist movement and safety; h. noise reduction; i. required design vehicles; j. utility services.	**AO11** Development provides a road reserve and carriageway that is designed in compliance with its road hierarchy classification within the Infrastructure design planning scheme policy.	AO Development provides road reserves in compliance with the IDPSP.

PO12 Development provides a road network that: a. includes a minor road network that creates convenient and safe movement between uses and to major roads; b. positively contributes to and enhances the bicycle network and streetscape hierarchy; c. caters for the expected vehicle, pedestrian and cyclist use; d. utilises geometry consistent with the standards relevant for the road hierarchy; e. provides safe vehicular access to each lot where direct lot access is allowed; f. prevents the needs for traffic-calming devices and ensures speed management is achieved by geometric design and arrangement of roads and paths; g. provides safe pedestrian and cyclist crossings; h. minimises the need for earthworks; i. provides minor roads adjoining and overlooking the public parks network; j. enables the creation of lots that facilitate sufficient solar access for potential dwellings, buildings, structures and activity areas; k. maximises the quality of the public realm, provision of street trees and availability of on-street parking.	**AO12.1** Development provides a road network which is designed and constructed in compliance with the Infrastructure design planning scheme policy. **AO12.2** Development provides a minor road frontage for a minimum 50% of any park edge where involving new park or adjoining the site of an existing or approved park. **AO12.3** Development provides road network that: a. is generally orientated on a modified grid pattern that allows for topographic constraints; b. facilitates the following orientation wherever possible: i. generally north-south roads, to allow lots to have their long axes typically orientated east-west; ii. generally east-west roads, to allow lots to have their long axes typically orientated north-south.	AO 12.1 Development provides road network in compliance with the IDPSP. AO12.2 – N/A AO12.3 - Yes
PO13 Development provides connected road, pedestrian and bicycle networks.	**AO13** Development involving new road ensures that a no through road is included only where: a. physical features obstruct road network continuity; b. it is demonstrated that there is no alternative road layout, option or arrangement to provide for road continuity;	PO – Development exceeds 200 vehicle movements per day, however, is required to provide no through roads as physical features obstruct the network ie. Drainage reserve & existing cul de sac head.

	c. connections with a direct line of sight are provided to existing, proposed or potential through-streets for pedestrians and cyclists at the end of any no through road; d. a manoeuvring area is dedicated for the road stub at the end of a no through minor road, in compliance with the standards in the Infrastructure design planning scheme policy and the Transport, access, parking and servicing planning scheme policy; e. if for residential development, a no through road: i. accommodates a maximum of 200 vehicle movements per day; ii. provides a visible manoeuvring area from the no through road entrance; iii. is no longer than 150m. f. if for industrial development, a no through road accommodates a maximum of 1,000 vehicle movements per day. Note—Physical features that might obstruct road network connectivity include waterways, parks or significant land use change. The road layout should be designed to overcome the constraint or alternative arrangements such as infrastructure solutions should be provided. If no practical option exists, then this must be demonstrated in the development application.	
PO14 Development maximises opportunities to provide on-street car parking where: a. in compliance with the intended function of the road; b. taking into consideration kerb space requirements for: i. bus stops, passenger set down, servicing and traffic control devices; ii. street trees and landscaping; iii. street furniture and public signage; iv. utilities and other infrastructure.	**AO14** Development provides on-street car parking in compliance with the Infrastructure design planning scheme policy and Transport, access, parking and servicing planning scheme policy.	AO – Development provides on-street car parking in compliance with IDPSP.

PO15 Development provides intersection designs that ensure: a. safety, efficient function and visibility for vehicles, pedestrians and cyclists; b. verge areas that provide sufficient space for safe pedestrian movement; c. sufficient space for infrastructure and traffic management.	**AO15** Development provides intersections that are designed in compliance with the Infrastructure design planning scheme policy.	AO – Development provides intersections in compliance with IDPSP.
PO16 Development provides a transport network that caters for the extension of existing or future public transport routes and infrastructure including safe pedestrian set-down and pick-up facilities.	**AO16** Development provides bus infrastructure and intersections that are designed in compliance with the Infrastructure design planning scheme policy and the Transport, access, parking and servicing planning scheme policy.	N/a – No bus infrastructure is proposed within the development.
PO17 Development provides a transport network that is: a. designed to operate safely for users, pedestrians and cyclists; b. ensures emergency access or evacuation in emergencies.	**AO17** Development provides a secondary road access if access to lots is used by more than 1,000 vehicles per day. Note—The secondary access is to provide emergency vehicles with an alternative route where the primary route may be heavily trafficked and the effectiveness of emergency response is reduced.	N/a – Development does not exceed 1,000 vehicles per day.