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APPLICATION REF
A006663191

A&E Direct Consulting Pty Ltd
477 Boundary Street Springhill
Brisbane, Queensland 4000
ABN: 24 943 522 768

Request for Information Response	
Date	Tuesday, April 28, 2026
Application Ref No.	A006663191
Project Name	194B Old Northern Road, Everton Park
Author	Eugene Chand
Approved By	Ahmed Gadalla
Revision	A

Appendices 01 – Brisbane City Council RFI

Appendices 02 – Filling and Excavation Code Response

Appendices 03 – Transport Access Parking and Servicing Code Response

Appendices 04 – Stormwater Code Response

Appendices 05 – Flood Overlay Code Response

Purpose

This document contains the Request for Information and code assessment responses for the abovementioned development. The responses are as per the appendices.

Introduction

This report has been prepared to support the lodgement of a development application to approve the construction of a new residential development at 194B Old Northern Road, Everton Park, QLD 4053. The development is proposed to take place over the following parcel of land:

Existing Site

Local Government Area	Brisbane City Council
Property Address	194B Old Northern Road, Everton Park, QLD 4053
Property Description	Lot 515 on SP105444
Site Area	728m^2.

Ahmed Gadalla
BEng (Hons) (Civil), NER, MIEAust, RPEQ (35699), RPEV
Director | Principal Civil Engineer

Appendix 01:
Brisbane City Council RFI

Brisbane City Council ABN 72 002 765 795

City Planning and Economic Development Services
Development Services
Brisbane Square, 266 George Street, Brisbane Qld 4000
GPO Box 1434 Brisbane QLD 4001
T 07 3403 8888
brisbane.qld.gov.au

Dedicated to a better Brisbane

4 November 2025

Pace Planning Pty Ltd
9 Panorama Ridge Road
BUDERIM QLD 4556

ATTENTION: Brooke Wildin
Application Reference: A006663191
Address of Site: 194B OLD NORTHERN RD EVERTON PARK QLD 4053

Dear Brooke,

RE: Further advice

An assessment of the information request response has been undertaken and it has been determined that several matters remaining outstanding. The proposed development requires further amendments and improvements in order to progress further. Units 5 and 6 appear to have three floor levels of development but only two have been provided. Please provide the following:

Setbacks, building height and built form

1. The proposed development continues to seek multiple performance outcomes in terms of setbacks, building separation, bulk and scale, deep planting, landscaping and visual privacy concerns. The proposed side boundary setbacks do not achieve adequate separation distances with existing and future development on adjoining sites, to minimise direct overlooking. Submit amended plans as below:
   a. Amend the proposed site layout to achieve 6m rear boundary setback by reducing front setback to comply with PO3,PO7, PO11 and PO17 of the Multiple dwelling code and achieve compliant deep planting outcomes as noted in item 9 of this correspondence;
   b. Reduce the extent of the balcony along the northern boundary at the first floor level up to the wall to achieve minimum side boundary setback of 2.25m as per PO3 and PO7 of the Multiple dwelling code; and
   c. Sill heights of windows at minimum height of 1.5m above floor level or fixed obscure glazing for part of windows below 1.5m along the northern wall.

2. The proposed height of units 5 and 6 continue to present as 3 storeys due to the intermediate floor as previously raised. The introduction of the suspended ceiling does not address the concern of additional floor space and continues to contribute to the height, bulk and scale of the development due to the 5.1m height of the garage level for the units. The sections for unit 5 and 6 also appear to show incorrect levels for the garage/ entry levels compared to the elevation and plans.
   a. Show on amended plans all proposed floor level plans for units 5 and 6 expressed in metres AHD. Additionally, reduce the height of units 5 and 6 to fit within the context of a 2 storey development consistent with other units; and
   b. Submit additional cross sections of the building specifically along the north south orientation for all units including units 5 and 6.

3. The proposal does not incorporate appropriate balconies and window elements to Old Northern Road for unit 1 and therefore does not adequately address AO11.3 / PO11 and AO31.1 / PO31 of the Multiple dwelling code. The proposal does not reinforce the street edge and desired character of the area or contribute to the form and detail of the building. Provide amended plans to incorporate balcony elements facing the street.

Flooding

4. The updated Flood Assessment Report provided does not suitably address the items raised in the Information request and the following matters remain outstanding:

   a. Submit a revised Flood Report signed by an RPEQ to include an assessment against the Flood overlay code, including assessment of the parking, and the proposed filling and bin store enclosure within the areas impacted by flooding from a freeboard perspective, in accordance with the Flood overlay code.

   b. The filling and excavation plans are to be included within the revised flood report to ensure that the proposed earthworks are assessed and confirm to not cause any impacts upon upslope, downslope and adjacent properties

      NOTE*:* The parking spaces are to comply with the minimum freeboard specified within the AO5.1/PO5 of the Flood overlay code PO5, AO5.1 and Table 8.2.11.3.D; whilst the proposed filling and bin store within the flooding areas must be demonstrated to not cause impacts.

   c. Submit a revised flood report utilising the IFD values contained within the *City Plan 2014* Infrastructure Design Planning Scheme Policy Chapter 7 Stormwater, to prepare revised modelling and calculations of the overland flow flooding impacting the site: in accordance with PO3 of the Flood overlay code.

   d. The revised flood report is to amend the Flood Awareness Mapping shown in Figure 2 to the *City Plan 2014* Flood Overlay Mapping.

   e. A catchment plan is to be provided, confirming the upstream and site catchment areas; with modelling for the catchment is to be based upon the rational method calculation.

   f. Submit a revised detailed survey plan clearly identifying and showing underground assets, and the surface levels of the overland flow path under the motorway will be required to allow for Council to fully assess the application, in accordance with the PO3, PO5 & PO7 of the Flood overlay code

   g. Provide an assessment of the underground drainage capacity and confirm whether this capacity is utilised in the model. Underground drainage flows and capacities must be provided / considered for the events.

   h. Provide commentary on the apparent contradictions on the flood extents between the detailed survey plan, and the flood modelling figures. Implement the required changes as required to ensure that the flood modelling outcomes are accurate.

   i. Provide additional / amended flood modelling figures with modelling windows which extend to include results for all downstream areas, including the road and overpass of Old Northern Road as a minimum.

   j. Submit revised plans showing unit levels amended as required, based on the revised modelling outcomes, to achieve minimum flood immunity levels; as per PO5 and PO7 of the Flood overlay code, and Table 8.2.11.3.L.

   4.1. The revised Flood Report is to assess the development access, and confirm that the safe vehicle, pedestrian movement, and emergency services access to adjoining roads is provided; in accordance with the PO11 of the Flood overlay code.

NOTE: To suitably address the access requirements of the flood overlay code, an assessment of 10% AEP flooding is required, in addition to the time of inundation for the 10% and 1% AEP flood events.

Refuse servicing and Manoeuvring

5. The proposed plans continue to show an arrangement which does not provide sufficient space to allow for an RCV to stand and service the site whilst clear of the aisle. Relocation of the bin storeroom to the left of the loading bay would appear to allow for an RCV to stand suitably clear of the aisle and conform with PO18 & PO19 of the TAPS Code and PO8 of the Infrastructure design code.

   a. Submit revised RPEQ signed swept path plans showing both an MRV and RCV to access, and exit the site in a forward gear, whilst manoeuvring into the service bay in a safe and efficient manner without conflicting with obstructions or landscaping;

   b. Submit revised plans showing a 11.75m length service and refuse collection bay to allow for an MRV, and RCV to service the site in a safe manner, providing for a 1.5m length clear space to the rear of a 10.3m length rear loading RCV; and

   c. Show on amended plans the internal dimensions of the bins storage room to accommodate bulk bins for 40L general waste and 1440L recycling waste as previously requested.

Driveway access and parking

6. Submit a revised traffic report signed by an RPEQ containing updated swept path plans and architectural plans as / if required to demonstrate that the development will accommodate safe and efficient access and manoeuvring, addressing the following items; in accordance with the PO3 & PO9 of the TAPS code, and the TAPS Planning Scheme Policy Table 9.

   a. Include the external road lanes and pavement markings within the road pavement of Old Northern Road.

   b. The entry manoeuvre is to be contained within the kerbside road lane, without encroachment into the adjoining road lane.

   c. The location, and orientation of the MRV and RCV throughout a single manoeuvre must be maintained, to demonstrate a complete manoeuvre onto the site, within the site, and out of the site.

   d. The exit manoeuvre is to be demonstrated to be able to be contained and be positioned centrally within the kerbside lane as soon as possible, to prevent blockage of the adjacent right turning lane in the situation that the kerbside lane is queued several vehicles back from the roundabout.

   e. The swept path plans / driveway must be amended to allow for the chassis (body) of the vehicle to be wholly contained within the driveway, as pedestrians may be queued / waiting on the footpath.

   f. A minimum 0.5m clearance envelope must be shown on the swept path plans to account for variation in conditions and driver inputs.

   g. Utilise the correct RCV design vehicle specifications to prepare the swept path plan, as per BSD-3008 and the Refuse Planning Scheme Policy Table 3.

7. It is acknowledged that the plans have implemented a re-allocation of resident and vehicle car parking spaces to achieve the minimum number of resident car parking spaces. However, the updated plans now include a PWD space without providing an adjacent shared space. Submit revised plans showing an adjacent shared space provided for the proposed PWD parking bay; in accordance with the TAPS code PO14, and the Australian Standard AS2890.6.

8. It is noted that the proposed resident bicycle parking spaces within the garages of the units, would require an additional 0.5m garage length to accommodate the width of the bicycle parking envelope as per AS2890.3. Submit revised plans showing the internal garage length increased by 0.5m to 6.5m, to accommodate the proposed resident bicycle parking spaces within the garages; in accordance with PO4 & PO5 of the TAPS code. Alternatively, a communal bike rack can be provided externally for all units.

Deep Planting

9. The provided plans indicate several inconsistencies regarding the deep planting outcomes, specifically, the architectural plans indicate a communal open space area while the landscape plans indicate the area partly as deep planting and communal open space. Both options do not allow for the provision of large subtropical shade trees, and results only in 6.1% deep planting area and therefore not complying with PO28 and PO29 of the Multiple dwelling code. Submit amended plans with consistent design as follows:

    a. Increase deep planting at the rear of the site as noted in item 1.a, changes to refuse storage area as per item 5 of this letter to provide compliant deep planting;

    b. Deep planting areas is to be provided as a large consolidated landscaped area supporting the provision of additional large subtropical shade trees and understorey planting; and

    c. The extent of hardscape including pavers and gravel is to be reduced and additional opportunities for softscape provided in the communal open area.

Planting Design

10. The provided Landscape Concept Plan indicates low stock sizes and densities that do not achieve the functional and aesthetic outcomes of the landscape work for the life of the development in accordance with PO7 and PO8 of the Landscape work code. Furthermore, areas indicated on the Architectural plans are not represented on the Landscape Concept Plan including proposed planting species. In accordance with PO7 and PO8 of the Landscape work code provide an amended Landscape Concept Plan that:

    a. Includes the provision of understorey landscaping within areas proposed as deep planting to achieve full coverage of the mulched areas within 2 years;

    b. Indicates all trees are to be a minimum pot size of 45L;

    c. Indicates all screening shrubs along the boundaries are to be a minimum pot size of 300mm;

    d. Indicates the proposed plant species and stock sizes within the containerised planters adjacent to each dwelling pedestrian entrance.

Pedestrian access

11. The proposed plans continue to show the pedestrian access to the site within the width of the driveway. The proposed location of the letterboxes is not positioned adjacent to a paved pedestrian entry path and therefore do not appear to be accessible for wheelchair users. Submit revised plans showing a safe pedestrian access which is separate to the driveway, provided from the footpath of Old Northern Road and location of mailboxes in a safe and suitable location in accordance with PO12 of the Multiple dwelling code.

Access Easement

12. Please note that an access easement as previously requested to the adjacent Lot 514 on SP105444, to facilitate safe access to this adjoining property in accordance with PO1 of the Road hierarchy overlay code will be conditioned.

Street Trees

13. Please note that the removal of 4 x street trees and the shrub near the northern boundary along the frontage is supported by Council's Public Space Operations – Arborist team. No net loss of canopy replacement street trees will be conditioned.

Stormwater

14. It is noted that the development has been referred to and is currently under assessment by SARA as the lawful point of discharge will be to a State Road Corridor. However, for information purposes and future reference, please note that the proposed arrangement does not conform to Council's standard drawing BSD-8113. Provide confirmation that approval from the Department of Transport and Main Roads has been obtained for the proposed lawful point of discharge to the state road, connection to any state stormwater assets, and detention requirements.

Email your response to DSPlanningSupport@bribsane.qld.gov.au quoting the application reference number A006663191.

Please phone me on the telephone number below if you have any queries regarding this matter.

Yours sincerely

Kayal Chandrasekar
A/ Senior Urban Planner
Planning Services South
Phone: 34030086
Email: Kayal.Chandrasekar@brisbane.qld.gov.au
Development Services
Brisbane City Council

Flooding

4. *The updated Flood Assessment Report provided does not suitably address the items raised in the Information request and the following matters remain outstanding:*
   a. *Submit a revised Flood Report signed by an RPEQ to include an assessment against the Flood overlay code, including assessment of the parking, and the proposed filling and bin store enclosure within the areas impacted by flooding from a freeboard perspective, in accordance with the Flood overlay code.*
   b. *The filling and excavation plans are to be included within the revised flood report to ensure that the proposed earthworks are assessed and confirm to not cause any impacts upon upslope, downslope and adjacent properties*

NOTE: *The parking spaces are to comply with the minimum freeboard specified within the AO5.1/PO5 of the Flood overlay code PO5, AO5.1 and Table 8.2.11.3.D; whilst the proposed filling and bin store within the flooding areas must be demonstrated to not cause impacts.*

   c. *Submit a revised flood report utilising the IFD values contained within the City Plan 2014 infrastructure Design Planning Scheme Policy Chapter 7 Stormwater, to prepare revised modelling and calculations of the overland flow flooding impacting the site: in accordance with PO3 of the Flood overlay code.*
   d. *The revised flood report is to amend the Flood Awareness Mapping shown in Figure 2 to the City Plan 2014 Flood Overlay Mapping.*
   e. *A catchment plan is to be provided, confirming the upstream and site catchment areas; with modelling for the catchment is to be based upon the rational method calculation.*
   f. *Submit a revised detailed survey plan clearly identifying and showing underground assets, and the surface levels of the overland flow path under the motorway will be required to allow for Council to fully assess the application, in accordance with the PO3, PO5 & PO7 of the Flood overlay code*
   g. *Provide an assessment of the underground drainage capacity and confirm whether this capacity is utilised in the model. Underground drainage flows and capacities must be provided/considered for the events.*
   h. *Provide commentary on the apparent contradictions on the flood extents between the detailed survey plan, and the flood modelling figures. Implement the required changes as required to ensure that the flood modelling outcomes are accurate.*
   i. *Provide additional / amended flood modelling figures with modelling windows which extend to include results for all downstream areas, including the road and overpass of Old Northern Road as a minimum.*
   j. *Submit revised plans showing unit levels amended as required, based on the revised modelling outcomes, to achieve minimum flood immunity levels; as per PO5 and PO7 of the Flood overlay code, and Table 8.2.11.3.L.*

4.1 The revised Flood Report is to assess the development access, and confirm that the safe vehicle, pedestrian movement, and emergency services access to adjoining roads is provided; in accordance with the PO11 of the Flood overlay code.

NOTE: To suitably address the access requirements of the flood overlay code, an assessment of 10% AEP flooding is required, in addition to the time of inundation for the 10% and 1% AEP flood events.

A&E Response

Please read this RFI response in conjunction with the code responses.

a. A comprehensive assessment against the Flood Overlay Code has been completed and is detailed in (Appendix 05)
b. Filling and excavation plans have been incorporated into the revised Flood Report as Appendix B – Civil Layout. The proposed earthworks have been assessed to confirm no adverse flooding impacts on upslope, downslope, or adjacent properties.
c. The Flood Report has been revised to utilise IFD values sourced from the City Plan 2014 Infrastructure Design Planning Scheme Policy, Chapter 7 – Stormwater. Updated overland flow flood modelling and calculations have been prepared accordingly, in compliance with PO3 of the Flood Overlay Code.
d. Figure 3-3 of the revised Flood Report has been updated to reflect the City Plan 2014 Flood Overlay Mapping, replacing the previously referenced Flood Awareness Mapping.
e. A catchment plan (Flood Report Appendix C) has been prepared and included within the revised Flood Report, clearly identifying both the upstream and site catchment areas.
f. Pre-development surface level mapping has been provided, including identification of the overland flow path beneath the motorway, to enable Council to undertake a full assessment. The TuFlow hydraulic model has also been provided to support this assessment, in accordance with PO3, PO5, and PO7 of the Flood Overlay Code.
g. Underground drainage network data sourced from Brisbane City Council's ArcGIS REST servers, supplemented by data from neighbouring studies, has been used to construct the 1D stormwater network. Drainage capacity has been assessed and incorporated into the flood model for the relevant storm events refer to section 6.1.4 for Boundary Conditions.
h. Flood modelling figures have been reviewed and amended to resolve the apparent contradictions between the detailed survey plan and the modelled flood extents. Revised figures have been provided to ensure accuracy and consistency across all documentation.
i. Additional flood modelling figures have been provided with extended modelling windows that capture downstream areas, including Old Northern Road.
j. Unit floor levels have been reviewed and amended in line with the revised flood modelling outcomes to achieve minimum flood immunity levels, as required under PO5, PO7, and Table 8.2.11.3.L of the Flood Overlay Code.

The revised flood modelling confirms that the overland flow path through the site cannot be feasibly diverted, and that the existing flow path does not provide safe passage for pedestrians or vehicles during flood events. Based on this assessment, a shelter-in-place strategy is recommended. It is noted that the proposed development does not alter the existing overland flow conditions, and all habitable areas and access points within the development are designed to be flood immune and are located outside the primary overland flow path. An assessment of the 10% AEP flood event, including time of inundation for both the 10% through to 1% AEP events, has been undertaken in accordance with PO11 of the Flood Overlay Code.

Refuse servicing and Manoeuvring.

5. *The proposed plans continue to show an arrangement that does not provide sufficient space to allow for an RCV to stand and service the site whilst clear of the aisle. Relocation of the bin storeroom to the left of the loading bay would appear to allow an RCV to stand suitably clear of the aisle and to conform with PO18 & PO19 of the TAPS Code and PO8 of the Infrastructure design code.*
    a. *Submit revised RPEQ signed swept path plans showing both an MRV and RCV to access, and exit the site in a forward gear, whilst manoeuvring into the service bay safely and efficiently without conflicting with obstructions or landscaping;*
    b. *Submit revised plans showing an 11.75m length service and refuse collection bay to allow for an MRV, and RCV to service the site safely, providing for a 1.5m length clear space to the rear of a 10.3m length rear loading RCV; and*
    c. *Show on amended plans the internal dimensions of the bins storage room to accommodate bulk bins for 40L general waste and 1440L recycling waste as previously requested.*

A&E Response

a. Revised RPEQ signed swept path plans have been prepared and are submitted herewith as Drawing No. 2406003-902. The swept paths demonstrate that both the Medium Rigid Vehicle (MRV) and Refuse Collection Vehicle (RCV) can access and exit the site in forward gear whilst maneuvering into the service bay safely and efficiently.

b. The MRV loading area is currently 11.75m in length, assuming that requirements are for a 10.3m RCV with a rear loader for 1.5m. There will be a slight protrusion into the driveway; however, there is enough maneuvering area for cars to enter and exit. This waste collection activity occurs only once per week, and the maximum time is 5 minutes, so there wouldn't be an added nuisance for the residents.

c. The bin area dimensions have been provided as 2.2m wide and 5.8m long to accommodate 240L general waste and 1440L recycling waste bins.

Driveway access and parking

6. *Submit a revised traffic report signed by an RPEQ containing updated swept path plans and architectural plans as/if required, to demonstrate that the development will accommodate safe and efficient access and manoeuvring, addressing the following items: in accordance with the PO3 & PO9 of the TAPS code, and the TAPS Planning Scheme Policy Table 9.*
    a. *Include the external road lanes and pavement markings within the road pavement of Old Northern Road.*
    b. *The entry manoeuvre is to be contained within the kerbside road lane, without encroachment into the adjoining road lane.*
    c. *The location and orientation of the MRV and RCV throughout a single manoeuvre must be maintained to demonstrate a complete manoeuvre onto the site, within the site, and out of the site.*
    d. *The exit manoeuvre is to be demonstrated to be able to be contained and be positioned centrally within the kerbside lane as soon as possible, to prevent blockage of the adjacent right turning lane in the situation that the kerbside lane is queued several vehicles back from the roundabout.*
    e. *The swept path plans / driveway must be amended to allow for the chassis (body) of the vehicle to be wholly contained within the driveway, as pedestrians may be queued /waiting on the footpath.*
    f. *A minimum 0.5m clearance envelope must be shown on the swept path plans to account for variation in conditions and driver inputs.*
    g. *Utilise the correct RCV design vehicle specifications to prepare the swept path plan, as per BSD-3008 and the Refuse Planning Scheme Policy Table 3.*

A&E Response

a. The external road lanes and pavement markings along Old Northern Road have been incorporated into the updated swept path drawings. Please refer to Drawing No. 2406003-902 for full details.

b. It is acknowledged that the swept paths indicate a minor encroachment into the neighbouring lane (travelling in the same direction) on Old Northern Road during the entry manoeuver. The encroachment is a direct consequence of existing site constraints, specifically the stormwater infrastructure requirements and crossover width limitations, which cannot be further modified without compromising other approved design elements. The manoeuver involves slow-speed traffic movements occurring at a maximum frequency of once per week, and it is considered that any impact on the general traffic network would be negligible and would not result in an unreasonable nuisance to road users.

c. The location and orientation of both the MRV and RCV have been maintained and demonstrated throughout a single complete manoeuvre sequence, including entry onto the site, manoeuvring within the site, and exit from the site. Please refer to Drawing No. 2406003-902 for the full swept path sequence.

d. As noted in the response to item 5b above, the exit manoeuvre has been designed to position the vehicle within the kerbside lane as promptly and safely as possible following exit from the site. This arrangement is intended to minimise the potential for blocking the adjacent right-turning lane if the kerbside lane queues back from the roundabout. Please refer to Drawing No. 2406003-902 for further details.

e. The MRV loading bay arrangement has been amended to ensure that the chassis and body of the vehicle remain wholly contained within the driveway throughout the manoeuvre, ensuring

that pedestrians queued or waiting on the adjoining footpath are not impeded or placed at risk. The revised arrangement is reflected in the updated drawings.

f. A 0.5m clearance envelope has been incorporated into the updated swept path plans to account for variation in conditions and driver inputs, as requested. Please refer to Drawing No. 2406003-902.

g. The swept path plans have been updated to utilise the correct RCV design vehicle specifications in accordance with BSD-3008 and the Refuse Planning Scheme Policy Table 3. Drawing No. 2406003-902 now incorporates the BSD-3008 Sheet 1 ACCO 2350 Rear Loading Pup Refuse Truck as the applicable design vehicle.

7. *It is acknowledged that the plans have implemented a reallocation of resident and vehicle car parking spaces to achieve the minimum number of resident car parking spaces. However, the updated plans now include a PWD space but do not provide an adjacent shared space. Submit revised plans showing an adjacent shared space provided for the proposed PWD parking bay, in accordance with the TAPS code PO14, and the Australian Standard AS2890.6.*

A&E Response

The PWD has been removed to accommodate the sweep path of the RCV and MRV standing bay, as well as the orientation of the new bin area. We are still providing 14 resident parking spaces and 2 visitor parking spaces, arranged in tandem to ensure compliance.

8. *It is noted that the proposed resident bicycle parking spaces within the garages of the units would require an additional 0.5m garage length to accommodate the width of the bicycle parking envelope as per AS2890.3. Submit revised plans showing the internal garage length increased by 0.5m to 6.5m, to accommodate the proposed resident bicycle parking spaces within the garages; in accordance with PO4 & PO5 of the TAPS code. Alternatively, a communal bike rack can be provided externally for all units.*

A&E Response

The garages have been updated, and parking spaces have been marked. Additionally, two bike spaces have also been provided.

Stormwater

9. *It is noted that the development has been referred to and is currently under assessment by SARA, as the lawful point of discharge will be to a State Road Corridor. However, for information purposes and future reference, please note that the proposed arrangement does not conform to Council's standard drawing BSD-8113. Provide confirmation that approval from the Department of Transport and Main Roads has been obtained for the proposed lawful point of discharge to the state road, connection to any state stormwater assets, and detention requirements.*

A&E Response

The proposed stormwater arrangement discharges to a new gully pit along Old Northern Road. It is acknowledged that this arrangement does not conform to the Council's standard drawing BSD-8113.

The lawful point of discharge remains at the front of the site; however, strict compliance with BSD-8113 is not considered feasible in this instance due to existing site constraints. Specifically, the combination of the on-site detention tank, the proposed vehicle crossover and waste collection turning movement area, and the existing pram crossing infrastructure does not provide sufficient space to accommodate the placement of stormwater assets in accordance with the standard drawing.

Given these constraints, approval is sought in principle for the proposed arrangement detailed in the submitted Stormwater Management Plan (SWMP). It is noted that the proposal remains subject to SARA assessment and approval, and that any conditions imposed by the Department of Transport and Main Roads (TMR) will be complied with.

And request that this matter be reviewed in the context of the SARA referral outcome.

Appendix 02:

Filling and Excavation Code Response

Table 9.4.3.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	A&E Comments
PO1 Development for filling or excavation minimises visual impacts from retaining walls and earthworks.	AO1 Development ensures that the total height of any cut and fill, whether or not retained, does not exceed: a. 2.5m in a zone in the Industry zones category; b. 1m in all other zones, or if adjoining a sensitive zone.	The development minimises visual impacts from retaining walls and earthworks by utilising the natural topography of the site. Refer to A&E Direct Consulting Drawing Numbers 2406003-030 & 031 for reference.
PO2 Development of a retaining wall proposed as a result of filling or excavation: a. is designed and constructed to be fit for purpose; b. does not impact adversely on significant vegetation; c. is capable of easy maintenance. Editor's note—A retaining wall also needs to comply with the Building Regulation and embankment gradients will need to comply with the Building Regulation. Note—Guidance on the protection of native vegetation is included in the Biodiversity areas planning scheme policy.	AO2.1 Development of a retaining structure, including footings, surface drainage and subsoil drainage: a. is wholly contained within the site; b. if the total height to be retained is greater than 1m, then: i. the retaining wall at the property boundary is no greater than 1m above the ground level; ii. all further terracing from the 1m high boundary retaining wall is 1 vertical unit:1 horizontal unit; iii. the distance between each successive retaining wall (back of lower wall to face of higher wall) is no less than 1m horizontally to incorporate planting areas. AO2.2 Development of a retaining wall over 1m in height protects significant vegetation on the site and on adjoining land and is designed and constructed in accordance with the structures standards in the Infrastructure design planning scheme policy and certified by a Registered Professional Engineer Queensland. AO2.3 Development provides a retaining wall finish that presents to adjoining land that is maintenance free if the setback is less than 750mm from the boundary.	Due to site specific constraints (including topography, overland flow paths, and the need to achieve practical driveway access and manoeuvrability within the development), certain retaining walls exceed the nominal maximum height of 1.5m. These instances have been clearly notated on the drawings and will be subject to detailed structural assessment and certification by a RPEQ to ensure compliance with relevant standards, including the Infrastructure design planning scheme policy. The proposed cut and fill levels represent the most efficient and practical design response to balance site functionality, flooding requirements, and minimisation of earthworks impacts. Refer to A&E Direct Consulting Drawing No. 2406003-010 for the location of all retaining walls and Drawing No. 2406003-031 for detailed sections of the proposed retaining walls, including notations where heights exceed 1.5m. All retaining walls over 1m in height have been designed to protect significant vegetation on the site and adjoining land, with no adverse impacts anticipated. They incorporate a maintenance-free finish (e.g., durable, non-vegetated surfaces) where presented to adjoining land, particularly if setbacks are less than 750mm from the boundary.

	AO2.4 Development for filling only uses clean fill that does not include any construction rubble, debris, weed seed or viable parts of plant species listed as an undesirable plant species in the Planting species planning scheme policy.	No adjoining properties will be impacted by the proposed earthworks levels. All fill material will comprise clean fill only and will not include any construction rubble, debris, weed seed, or viable parts of plant species listed as undesirable in the Planting species planning scheme policy. Furthermore, all filling operations will be undertaken under Level 1 supervision to ensure quality control and compliance.
PO3 Development ensures that a rock anchor is designed and constructed to be fit for purpose.	AO3 Development ensures that a rock anchor: a. is constructed in accordance with the standards in the Infrastructure design planning scheme policy; b. where it extends beyond the property boundary, is supported by a letter of consent from the adjoining land and building owners.	N/A
PO4 Development protects all services and public utilities.	AO4 Development protects services and public utilities and ensures that any alteration or relocation of services or public utilities meets the standard design specifications of the responsible service authorities.	Filling will not affect the infrastructure within the lot. There is a proposal to fill in the verge, existing services have been identified, and the civil contractor will manage any impacts to existing services.
PO5 Development provides surface and sub-surface drainage to prevent water seepage, concentration of run-off or ponding of stormwater on adjacent land.	AO5 Development ensures all flows and subsoil drainage are directed to a lawful point of discharge of a surface water diversion drain, including to the top or toe of a retaining wall in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	The earthworks layout plan 2406003-030 shows earthworks designed to prevent water ponding. This includes the top or toe of a retaining wall in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy, and to redirect runoff toward the LPD.
PO6 Development ensures that the design and construction of all open drainage works is undertaken in accordance with natural channel design principles, being the development of a	AO6 Filling or excavation does not involve the construction of open drainage.	N/A

stormwater conveyance system for major flows, by using a vegetated open channel or drain that approximates the features and functions of a natural waterway to enhance or improve riparian values of those stormwater conveyance systems. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines.		
PO7 Development for filling or excavation: a. does not degrade water quality or adversely affect environmental values in receiving waters; b. ensures site sediment and erosion control standards are best practice.	AO7.1 Development for filling or excavation provides water quality treatment that complies with the stormwater drainage section of the Infrastructure design planning scheme policy. AO7.2 Development provides erosion and sediment control standards that are in accordance with the stormwater drainage section of the Infrastructure design planning scheme policy.	The development does not degrade water quality or adversely affect environmental values in receiving waters. Refer to Site Specific Stormwater Management Report by A&E Direct Consulting The development ensures site sediment and erosion control standards are best practice.
PO8 Development for filling or excavation is conducted such that adverse impacts at a sensitive use due to noise and dust are prevented or minimised. Note—A noise and dust impact management plan prepared in accordance with the Management plans planning scheme policy can assist in demonstrating achievement of this performance outcome.	AO8.1 Development ensures that no dust emissions extend beyond the boundary of the site, including dust from construction vehicles entering and leaving the site. AO8.2 Development for filling or excavation activity only occurs between the hours of 6:30am and 6:30pm Monday to Saturday, excluding public holidays.	The development will be conducted such that adverse impacts at a sensitive use due to noise and dust are prevented and minimised. Filling and excavation activity will only occur between the hours of 6:30am and 6:30pm Monday to Saturday, excluding public holidays. Once a contractor has been procured a detailed Construction management plan can be submitted to council for review prior to construction.
PO9 Development ensures that vibration generated by the filling or excavation operation does not exceed the vibration criteria in Table 9.4.3.3.B, Table 9.4.3.3.C, Table 9.4.3.3.D and Table 9.4.3.3.E. Note—A noise management report prepared in accordance with the Noise impact assessment planning scheme policy can assist in demonstrating achievement of this performance outcome.	AO9 Development involving filling or excavation does not cause a ground-borne vibration beyond the boundary of the site.	The development ensures that filling or excavation does not cause a ground-borne vibration beyond the boundary of the site. Once a contractor has been procured a detailed Construction management plan can be submitted to council for review prior to construction.

PO10 Development ensures that heavy trucks hauling material to and from the site do not affect the amenity of established areas and limits environmental nuisance impact on adjacent land.	AO10 Development ensures that heavy trucks hauling material to and from the site: a. occur for a maximum of 3 weeks; b. use a major road to access the site; c. only use a minor road for the shortest-most-direct route that has the least amount of environmental nuisance if there is no major road alternative.	The development ensures that the proposed haulage routes will be utilised and not affect the amenity of established areas and limits environmental nuisance impact on adjacent land. This will also be documented in the Construction management plan.
PO11 Development for filling or excavation protects the environment and community health and wellbeing from exposure to contaminated land and contaminated material.	AO11 Development does not involve: a. excavation on land previously occupied by a notifiable activity or on land listed on the Environmental Management Register or the Contaminated Land Register; b. filling with material containing a contaminant.	A CMP can be provided at civil contractor selection to demonstrate any impacts to health and safety and mitigation measures employed.
PO12 Development provides for: a. landscaping for water conservation purposes; b. water sensitive urban design measures which are employed within the landscape design to maximise stormwater use; c. drainage and stormwater measures to reduce any adverse impacts on the landscape; d. stormwater harvesting to be maximised and any adverse impacts of stormwater minimised; e. reticulated irrigation to all artificial growing environments. Note—The Landscape design planning scheme policy provides guidance on information to be provided to demonstrate compliance with the performance outcome and acceptable outcomes.	AO12.1 Development provides drainage for artificial growing environments which is connected to the stormwater drain. AO12.2 Development ensures that the maximum site stormwater harvest capacity is utilised to meet the irrigation demand of the development before alternative irrigation sources are utilised and is in compliance with the standards in the Landscape design planning scheme policy. AO12.3 Development provides areas of pavement, turf, landscaping and mulched garden beds which are drained. Note—This may be achieved through the provision and/or treatment of swales, spoon drains, field gullies, sub-surface drainage and stormwater connections. AO12.4	The submitted landscape plans has been reviewed and created by an AILA landscape Architect. The stormwater report and catchment plans show drainage areas, however no stormwater harvesting is proposed for this development.

	Development provides a reticulated irrigation system to all landscaping areas in accordance with the Landscape design planning scheme policy.	
PO13 Development ensures cutting and filling for the development of canals or artificial waterways avoids adverse impacts on coastal resources and processes.	AO13 Development does not involve the creation of canals or artificial waterways.	N/A

Note—

(1) Day is 7am to 10pm and night is 10pm to 7am.

(2) Examples include hospital operating theatres and precision laboratories where sensitive operations are occurring.

(3) Situations exist where vibration above the preferred values can be acceptable, particularly for temporary or short-term events. Further guidance is given in the Noise impact assessment planning scheme policy.

Appendix 03:

Transport Access Parking and Servicing Code Response

Performance outcomes	Acceptable outcomes	Comments
PO1 Development is designed: a. to include a technically competent and accurate response to the transport and traffic elements of the development; b. in accordance with the standards in the Transport, access, parking and servicing planning scheme policy; c. to ensure the efficient operation and safety of the development and its surrounds. Note—The acceptable outcome and performance outcome can be demonstrated through a development 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 the standards and guidelines of the Transport, access, parking and servicing planning scheme policy; ensures that any computer modelling input and output data are accurate, reasonable and carried out in accordance with sound traffic engineering practices.	**AO1** Development complies with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with PO1 • **Access** Refer to Section 6 of the Traffic Impact Assessment (TIA). The proposed driveway configuration is considered acceptable from a traffic engineering perspective. The proposed driveway location complies with Council's TAPS Policy and / or AS2890.1. Available sight distances at the driveway access comply with the Council's TAPS Policy and / or AS2890.1. • **Car Parking** Refer to Section 5.1 of the TIA. The proposed car parking provisions are acceptable from a traffic engineering perspective and are not expected to significantly impact the surrounding road network. • **Site Layout** Refer to Section 5.3 of the TIA. The proposed car park layout arrangements generally comply with the Council's TAPS Policy, AS2890 and / or are acceptable from a traffic engineering perspective. • **Servicing** Refer to Section 7 of the TIA. The proposed servicing provisions are considered acceptable from a traffic engineering perspective.
PO2 Development of a major size incorporates on-site provision for integration with the public transport network and the management of vehicles, public transport, pedestrians and cyclists, including providing appropriate pedestrian and cyclist linkages to adjoining uses, public areas and the transport network consistent with the planning by the Queensland Government and Council.	**AO2** No acceptable outcome is prescribed.	N/A
PO3 Development provides vehicle access that is located and designed so as to have no significant impact on the safety,	**AO3.1** Development provides site access that is located and designed in compliance with the	Complies with PO1 • Refer to Section 6 of the TIA. • The proposed driveway configuration is considered acceptable from a traffic engineering perspective.

Performance outcomes	Acceptable outcomes	Comments
efficiency, function, convenience of use or capacity of the road network.	standards in the Transport, access, parking and servicing planning scheme policy. **AO3.2** Development provides an easement for a vehicular access benefiting all adjoining landowners and the Council if the vehicular access services more than an individual development or premises.	• The proposed driveway location complies with Council's TAPS Policy and / or AS2890.1. • Available sight distances at the driveway access comply with the Council's TAPS Policy and / or AS2890.1.
PO4 Development provides walking and cycle routes through the site which: a. link to the external network and pedestrian and cyclist destinations such as schools, shopping centres, open space, public transport stations, shops and local activity centres along the safest, most direct and convenient routes; b. encourage walking and cycling; c. ensure pedestrian and cyclist safety; d. provide a direct and legible network. Note—The Infrastructure design planning scheme policy provides additional guidance on how to comply with this performance outcome.	**AO4.1** Development provides walking and cycle routes which are constructed on the carriageway or through the site to: a. create a walking or cycle route along the full frontage of the site; b. connect to public transport and existing cycle and walking routes at the frontage or boundary of the site. **AO4.2** Development provides walking and cycle routes that are constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy. **AO4.3** Development provides walking and cycle routes which do not include a potential entrapment area, blind corner or sudden change in level that restrict sightlines.	N/A

Performance outcomes	Acceptable outcomes	Comments
PO5 Development provides secure and convenient bicycle parking which: a. for visitors is obvious and located close to the building's main entrance; b. for employees is conveniently located to provide secure and convenient access between the bicycle storage area, end-of-trip facilities and the main area of the building; c. is easily and safely accessible from outside the site; d. does not impact adversely on visual amenity; e. does not impede the movement of pedestrians or other vehicles; f. is designed to comply with a recognised standard for the construction of bicycle facilities. Note—For a performance outcome relating to the number of bicycle parking spaces provided, the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.	**AO5.1** Development provides on-site bicycle parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. **AO5.2** Development provides bicycle parking spaces for employees which are co-located with end-of-trip facilities (shower cubicles and lockers) in compliance with the Transport, access, parking and servicing planning scheme policy and AS 2890.3-1993 Bicycle parking facilities. **AO5.3** Development ensures that the location of visitor bicycle parking is discernible either by direct view or using signs from the street. **AO5.4** Development provides visitor bicycle parking which does not impede pedestrian movement. **AO5.5** Development provides bicycle parking which is constructed in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with PO5** Refer to Section 5.2 of the TIA. The proposed bicycle parking provision is considered acceptable from a traffic engineering perspective.
PO6 Development provides shower cubicles and lockers in sufficient numbers to meet the needs and volume of predicted pedestrian and cyclist users. Note—For a performance outcome the application must demonstrate how the needs of the intended users of the site differ from the standard rates in the Transport, access, parking and servicing planning scheme policy.	**AO6** Development provides shower cubicles and lockers for pedestrians and cyclists in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	N/A
PO7 Development provides pedestrian and cyclist access to the site which is designed to provide safe movement and avoid	**AO7** Development provides pedestrian and cycle access that is designed and constructed in	**Complies with PO7** • Refer to the proposed development plans. • The development includes pedestrian access.

Performance outcomes	Acceptable outcomes	Comments
unnecessary conflict between pedestrians, cyclists and motor vehicles.	compliance with the site access design guidelines, pedestrian facilities standards and cyclist facilities standards in the Transport, access, parking and servicing planning scheme policy.	• The proposed access arrangements are not expected to result in significant safety issues.
PO8 Development provides pedestrian and cyclist access to and from the site which is located to take advantage of safe crossing points of the adjacent road system, key destinations and public transport facilities.	**AO8** No acceptable outcome is prescribed.	**Complies with PO8** See response to PO7.
PO9 Development provides access driveways in the road area that are located, designed and controlled to: a. minimise adverse impacts on the safety and operation of the transport network, including the movement of pedestrians and cyclists; ensure the amenity of adjacent premises, from impacts such as noise and light.	**AO9.1** No acceptable outcome for access is prescribed, for a major development (as described in the Transport, access, parking and servicing planning scheme policy).	**Complies with PO9** • Refer to Section 6 of the TIA. • The proposed access arrangement is considered acceptable. It is not expected to significantly impact the safety, efficiency, function, convenience of use, or capacity of the road network.
	AO9.2 Development which is not a major development (as described in the Transport, access, parking and servicing planning scheme policy) provides a single site access driveway in the road area to the lowest order road to which the site has frontage.	
	AO9.3 Development ensures that sight distances to and from all proposed access driveways in the road area and intersections are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	
	AO9.4 Development provides access driveways in the road area which: a. are located, designed and controlled in compliance with the standards in the Transport, access, parking and servicing planning scheme policy; **b.** are not provided through a bus stop, taxi rank or pedestrian crossing or refuge.	

Performance outcomes	Acceptable outcomes	Comments
	AO9.5 Development makes provision for shared access arrangements particularly where it is necessary to limit access points to a major road.	
PO10 Redevelopment provides for: a. the closure of all access driveways in the road area that no longer comply with the standards in the Transport, access, parking and servicing planning scheme policy; the reinstatement of adjacent footpaths.	**AO10** No acceptable outcome is prescribed.	Will comply with PO10 All unused driveways will be removed as part of the development.
PO11 Development provides that an internal approach to an access driveway in the road area is designed and located to provide for the safety of pedestrians and cyclists using paths adjacent to the frontage of the site, and motorists.	**AO11.1** Development provides sight distances to and from all proposed access driveways in the road area and intersections which are in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	Complies with AO11.1 Refer to Section 6.2 of the TIA The sight distances at the proposed site access comply with Council's TAPS Policy. AO11.2 – Not Applicable
	AO11.2 Development ensures that convex mirrors are only used in a site: a) as a secondary support at access driveways; **b)** b. in addition to acceptable sight splays that comply with the sight distances standards in the Transport, access, parking and servicing planning scheme policy.	
PO12 Development in the City core and City frame as identified in Figure a provides car parking spaces at rates to discourage private car use and encourage walking, cycling and the use of public transport.	**AO12** Development in the City core and City frame as identified in Figure a provides maximum car-parking rates in compliance with the standards in the Transport, access, parking and servicing planning scheme policy. Note—For accepted development subject to compliance with identified requirements	N/A

Performance outcomes	Acceptable outcomes	Comments
	including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.	
PO13 Development outside of the City core and City frame as identified in Figure a provides on-site car parking spaces to accommodate the design peak parking demand without any overflow of car parking to an adjacent premises or adjacent street.	**AO13** Development outside of the City core and City frame as identified in Figure a: a. provides on-site car parking spaces in compliance with the standards in the Transport, access, parking and servicing planning scheme policy; or b. for accepted development subject to compliance with identified requirements, does not result in on-street car parking if no parking standard is identified in the Transport, access, parking and servicing planning scheme policy. Note—For accepted development subject to compliance with identified requirements including an existing premises, no reduction to existing car parking is required to comply with a maximum car-parking rate in the Transport, access, parking and servicing planning scheme policy.	• Complies with PO13 • Refer to Section 5.1 of the TIA. • The proposed car parking provisions are considered acceptable from a traffic engineering perspective and are not expected to result in any significant impacts on the surrounding road network.
PO14 Development ensures that the number of car parking spaces and design of the car parking area: a. meet the combined design peak parking demand for residential, visitor and business parking; b. allow for the temporal sharing of car-parking spaces for uses with different peak parking demands. Note—In order to demonstrate that adequate car parking is provided, a traffic impact assessment prepared in compliance with the Transport, access, parking and servicing planning	**AO14.1** Development provides a number of car parking spaces on site equalling the sum of the maximum design peak parking demand for the individual uses at any point in time. **AO14.2** Development involving mixed use provides a non-residential car parking area with shared	• Complies with PO14 • Refer to Section 5.1 of the TIA. • The proposed car parking provisions are considered acceptable from a traffic engineering perspective and are not expected to result in any significant impacts on the surrounding road network.

Performance outcomes	Acceptable outcomes	Comments
scheme policy is to identify the appropriate number of car parking spaces to be provided.	parking for all the businesses in the development.	
PO15 Development provides a car park layout which allows for on-site vehicle parking that: a. is clearly defined, safe and easily accessible; b. is designed to contain potential adverse impacts within the site; c. does not detract from the aesthetics or amenity of an area; d. discourages on-street parking if parking has an adverse traffic management safety or amenity impact; is consistent with safe and convenient pedestrian and cyclist movement.	**AO15** Development provides parking bays, queue areas and manoeuvring areas which are designed for the design service vehicle to the standards in the Transport, access, parking and servicing planning scheme policy.	• Complies with AO15 • Refer to Section 5.3 of the TIA. • The proposed car park layout arrangements generally comply with the Council's TAPS Policy, AS2890 and / or are acceptable from a traffic engineering perspective.
PO16 Development creates a safe environment by incorporating the key elements of crime prevention through environmental design.	**AO16** Development incorporates the key elements of crime prevention through environmental design in its layout, building and structure design and landscaping by: a. facilitating casual surveillance opportunities and including good sightlines to publicly accessible areas such as car parks, pathways, public toilets and communal areas; b. defining different uses and ownerships through design and restricting access from non-residential uses into private residential dwellings; c. promoting safety and minimising opportunities for graffiti and vandalism through exterior building design and orientation of buildings and use of active frontages; d. ensuring publicly accessible areas such as car parks, pathways, public	Refer to Architecture & Town Planning Reports

Performance outcomes	Acceptable outcomes	Comments
	toilets and communal areas are well lit; e. including way-finding cues; f. minimising predictable routes and entrapment locations near public spaces such as car parks, public toilets, ATMs and communal areas. 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.	
PO17 Development minimises the potential for graffiti and vandalism through access control, canvas reduction and easy maintenance selection.	**AO17** Development incorporates graffiti and vandalism prevention techniques in its layout, building and structure design and landscaping, by: a. denying access to potential canvases through access control techniques; b. reducing potential canvases through canvas reduction techniques; c. ensuring graffiti can be readily and quickly removed through easy maintenance selection techniques. Note—For guidance on graffiti and vandalism prevention techniques, refer to the Graffiti prevention planning scheme policy.	Refer to Architecture & Town Planning Reports
PO18 Development is serviced by an adequate number and size of service vehicles.	**AO18** Development ensures that the number and size of design service vehicles selected for the site is in compliance with the standards in the Transport, access, parking and servicing planning scheme policy.	• Complies with PO18 • Refer to Section 7 of the TIA. • The proposed servicing provisions are considered acceptable from a traffic engineering perspective.
PO19 Development layout provides for services which: a. are wholly within the site, other than service vehicle manoeuvring areas which may overhang the verge on a minor road where use of the footpath is not adversely affected; b. are clearly defined, safe and easily accessible;	**AO19.1** Development ensures that a service bay is provided on site: a. is provided and designed to comply with the design vehicle table and service area design standards in the Transport, access, parking and servicing planning scheme policy;	• Complies with PO19 • Refer to Section 7 of the TIA. • The proposed servicing provisions are considered acceptable from a traffic engineering perspective.

Performance outcomes	Acceptable outcomes	Comments
c. are designed to contain potential adverse impacts of servicing within the site; do not detract from the aesthetics or amenity of the surrounding area.	is located away from street frontages and screened from adjoining premises.	
	AO19.2 Development provides on-site servicing facilities and associated on-site vehicle manoeuvring areas which are designed in compliance with the service area design standards in the Transport, access, parking and servicing planning scheme policy.	
	AO19.3 Development provides service areas for refuse collection in compliance with the standards in the Refuse planning scheme policy, Transport, access, parking and servicing planning scheme policy and the Infrastructure design planning scheme policy.	
PO20 Development provides service vehicle access routes to and from the site which minimise the impact on: a. amenity and safety in residential areas; streets not constructed to a standard that accommodate increased heavy vehicle movements	**AO20** Development ensures that service vehicles use the shortest and most direct route to the major road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy.	**Complies with AO20** The development ensures that service vehicles use the shortest and most direct route to the major road network.
If for development which is required to be serviced by a b-double (Austroad class 10 vehicle), multi-combination vehicle, over-dimensioned vehicle or any other vehicle identified by the Queensland Government as requiring a permit to operate on the road (freight-dependent development)		

Performance outcomes	Acceptable outcomes	Comments
PO21 Development which is freight-dependent development ensures that the traffic generated by the development does not impact on: a. the operation of the transport network; b. the safety and amenity of a residential area; a road not constructed to accommodate a non-standard vehicle such as a road only constructed to accommodate a vehicle that has a legal right of access to all roads including Austroads vehicles classes 1—9.	**AO21.1** Development which is freight-dependent development is located on a site which: a) has frontage to or direct access to the freight network in the Road hierarchy overlay via roads in a zone in the Industry zones category; or b) can be serviced by a route that can act as a primary freight access route and connect to an existing primary freight route without impacting on the safe operation of the road network in compliance with the heavy vehicle standards in the Transport, access, parking and servicing planning scheme policy. **AO21.2** Development which is freight-dependent development provides any necessary upgrade to a road used as an access route in compliance with the Infrastructure design planning scheme policy.	N/A

Appendix 04:
Stormwater Code Response

9.4.9.3 Performance outcomes and acceptable outcomes

Table 9.4.9.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for a material change of use, reconfiguring a lot, operational work or building work Note—Compliance with the performance outcomes and acceptable outcomes in this section should be demonstrated by the submission of a site-based stormwater management plan for high risk development only.		
PO1 Development provides a stormwater management system which achieves the integrated management of stormwater to: a. minimise flooding; b. protect environmental values of receiving waters; c. maximise the use of water sensitive urban design; d. minimise safety risk to all persons; e. maximise the use of natural waterway corridors and natural channel design principles. Editor's note—The stormwater management system to be developed to address PO1 is not intended to require management of stormwater quality.	AO1 Development provides a stormwater management system designed in compliance with the Infrastructure design planning scheme policy.	Please refer to the stormwater management plan for details
PO2 Development ensures that the stormwater management system and site work does not adversely impact flooding or drainage characteristics of premises which are up slope, down slope or adjacent to the site.	AO2.1 Development does not result in an increase in flood level or flood hazard on up slope, down slope or adjacent premises. AO2.2 Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	The stormwater management plan has been created for the site specific drainage requirements. Flood hazards have been discussed within the Flood Report.
PO3 Development ensures that the stormwater management system does not direct stormwater run-off through existing or proposed lots and	AO3.1 Development ensures that the location of the stormwater drainage system is contained within a road reserve, drainage reserve, public pathway, park or waterway corridor.	The Development does not direct stormwater through existing or proposed lots. Pipe and pit system with detention is proposed.

property where it is likely to adversely affect the safety of, or cause nuisance to properties.	AO3.2 Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	
	AO3.3 Development obtains a lawful point of discharge in compliance with the standards in the Infrastructure design planning scheme policy.	
	AO3.4 Where on private land, all underground stormwater infrastructure is secured by a drainage easement.	
PO4 Development provides a stormwater management system which has sufficient capacity to safely convey run-off taking into account increased run-off from impervious surfaces and flooding in local catchments.	AO4.1 Development provides a stormwater conveyance system which is designed to safely convey flows in compliance with the standards in the Infrastructure design planning scheme policy. AO4.2 Development provides sufficient area to convey run-off which will comply with the standards in the Infrastructure design planning scheme policy.	
PO5 Development designs stormwater channels, creek modification works, bridges, culverts and major drains to protect and enhance the value of the waterway corridor or drainage path for fauna movement.	AO5 Development ensures the design of stormwater channels, creek modifications or other infrastructure, permits terrestrial and aquatic fauna movement.	NA
PO6 Development ensures that location and design of stormwater detention and water quality treatment: c. minimises risk to people and property; d. provides for safe access and maintenance;	AO6.1 Development locates stormwater detention and water quality treatment: d. outside of a waterway corridor; e. offline to any catchment not contained within the development.	Refer to Stormwater management Plan for detention tank location

e. minimises ecological impacts to creeks and waterways.	AO6.2 Development providing for stormwater detention and water quality treatment devices are designed in compliance with the standards in the Infrastructure design planning scheme policy.	
PO7 Development is designed, including any car parking areas and channel works to: c. reduce property damage; d. provide safe access to the site during the defined flood event.	AO7.1 Development (including any ancillary structures and car parking areas) is located above minimum flood immunity levels in Table 9.4.9.3.B, Table 9.4.9.3.C, Table 9.4.9.3.D, Table 9.4.9.3.E and Table 9.4.9.3.F. Note—Compliance with this acceptable outcome can be demonstrated by the submission of a hydraulic and hydrology report identifying flood levels and development design levels (as part of a site-based stormwater management plan). AO7.2 Development including the road network provides a stormwater management system that provides safe pedestrian and vehicle access in accordance with the standards in the Infrastructure design planning scheme policy.	The proposed development design provides Overland Flow path immunity levels in accordance with the Infrastructure design planning scheme policy. Refer to flood report for details. No access to the site is achieved in a 1% AEP event. Pre or Post development. Therefore Shelter in Place is recommended in a 1% AEP event.
PO8 Development designs stormwater channels, creek modification works and the drainage network to protect and enhance the environmental values of the waterway corridor or drainage path.	AO8.1 Development ensures natural waterway corridors and drainage paths are retained. AO8.2 Development provides the required hydraulic conveyance of the drainage channel and floodway, while maximising its potential to maximise environmental benefits and minimise scour. Editor's note—Guidance on natural channel design principles can be found in the Council's publication Natural channel design guidelines. AO8.3 Development provides stormwater outlets into waterways, creeks, wetlands and overland flow	The development does not alter the overland flow path and site runoff is to be managed by an internal pipe and pit system. External Overland flows have been reviewed in the flood report. The proposed development does not include any channel or creek modification works

	paths with energy dissipation to minimise scour in compliance with the standards in the Infrastructure design planning scheme policy.	
	AO8.4 Development ensures that the design of modifications to the existing design of new stormwater channels, creeks and major drains is in compliance with the standards in the Infrastructure design planning scheme policy.	
PO9 Development is designed to manage run-off and peak flows by minimising large areas of impervious material and maximising opportunities for capture and re-use.	AO9 No acceptable outcome is prescribed.	The impervious area have been minimised as practically possible. Areas for driveway, carparking and bin collection are compliance items that are required to be provided.
PO10 Development ensures that there is sufficient site area to accommodate an effective stormwater management system. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.	AO10 No acceptable outcome is prescribed.	The proposed development ensures there is sufficient site area to accommodate an effective stormwater management system. This is demonstrated in the Stormwater management plan.
PO11 Development provides for the orderly development of stormwater infrastructure within a catchment, having regard to the: c. existing capacity of stormwater infrastructure within and external to the site, and any planned stormwater infrastructure upgrades; d. safe management of stormwater discharge from existing and future up-slope development; e. implication for adjacent and down-slope development.	AO11.1 Development with up-slope external catchment areas provides a drainage connection sized for ultimate catchment conditions that is directed to a lawful point of discharge. AO11.2 Development ensures that existing stormwater infrastructure that is undersized is upgraded in compliance with the Infrastructure design planning scheme policy.	The proposed development stormwater designs are in accordance with the Infrastructure design planning scheme policy. There is an additional pipe and pit proposed on old northern road, this will be significant if any development on 196 old northern road would request to have a future connection.

PO12 Development provides stormwater infrastructure which: c. remains fit for purpose for the life of the development and maintains full functionality in the design flood event; d. can be safely accessed and maintained cost effectively; e. ensures no structural damage to existing stormwater infrastructure.	AO12.1 The stormwater management system is designed in compliance with the Infrastructure design planning scheme policy. AO12.2 Development provides a clear area with a minimum of 2m radius from the centre of an existing manhole cover and with a minimum height clearance of 2.5m.	The proposed development stormwater designs are in accordance with the Infrastructure design planning scheme policy.
PO13 Development ensures that all reasonable and practicable measures are taken to manage the impacts of erosion, turbidity and sedimentation, both within and external to the development site from construction activities, including vegetation clearing, earthworks, civil construction, installation of services, rehabilitation, revegetation and landscaping to protect: d. the environmental values and water quality objectives of waters; e. waterway hydrology; f. the maintenance and serviceability of stormwater infrastructure. Note—The Infrastructure design planning scheme policy outlines the appropriate measures to be taken into account to achieve the performance outcome.	AO13 No acceptable outcome is prescribed.	The ESCP shall be preparedprior to construction and submitted to BCC for approval.
PO14 Development ensures that: c. unnecessary disturbance to soil, waterways or drainage channels is avoided; d. all soil surfaces remain effectively stabilised against erosion in the short and long term.	AO14 No acceptable outcome is prescribed.	A detailed Erosion Sediment Control Plan will be prepared in accordance with Brisbane City Council Guidelines and prior to commencing construction.

PO15 Development does not increase: f. the concentration of total suspended solids or other contaminants in stormwater flows during site construction; g. run-off which causes erosion either on site or off site.	AO15 No acceptable outcome is prescribed.	A detailed Erosion Sediment Control Plan will be prepared in accordance with Brisbane City Council Guidelines and prior to commencing construction.
Section B—Additional performance outcomes and acceptable outcomes which apply to high-risk development, being one or more of the following: a. a material change of use for an urban purpose which involves greater than 2,500m^2 of land that: i. will result in an impervious area greater than 25% of the net developable area; or ii. will result in 6 or more dwellings. b. reconfiguring a lot for an urban purpose that involves greater than 2,500m^2 of land and will result in 6 or more lots; c. operational work for an urban purpose which involves disturbing greater than 2,500m^2 of land.		
PO16 Development ensures that the entry and transport of contaminants into stormwater is avoided or minimised to protect receiving water environmental values. Note—Prescribed water contaminants are defined in the *Environmental Protection Act 1994*. Note—Compliance with the performance outcome should be demonstrated by the submission of a site-based stormwater management plan for high-risk development only.	AO16 Development provides a stormwater management system which is designed in compliance with the standards in the Infrastructure design planning scheme policy.	The proposed development stormwater designs are in accordance with the Infrastructure design planning scheme policy.
PO17 Development ensures that: a. the discharge of wastewater to a waterway or external to the site is avoided; or b. if the discharge cannot practicably be avoided, the development minimises wastewater discharge through re-use, recycling, recovery and treatment. Note—The preparation of a wastewater management plan can assist in demonstrating achievement of this performance outcome.	AO17 No acceptable outcome is prescribed.	The development discharges all wastewater into existing infrastructure surrounding the site.

Editor's note—This code does not deal with sewerage which is the subject of the Wastewater code.		
Section C—Additional performance outcomes and acceptable outcomes for assessable development for a material change of use or reconfiguring a lot		
PO18 Development protects stormwater infrastructure to ensure the following are not compromised: a. the long term infrastructure for the stormwater network in the Long term infrastructure plans; b. the existing and planned infrastructure for the stormwater network in the Local government infrastructure plan; c. the provision of long term, existing and planned infrastructure for the stormwater network which: i. is required to service the development or an existing and future urban development in the planning scheme area; or ii. is in the interests of rational development or the efficient and orderly planning of the general area in which the site is situated. Editor's note—A condition which requires a proposed development to keep permanent improvements and structures associated with the approved development clear of the area of long term infrastructure, may be imposed.	AO18 Development protects stormwater infrastructure in compliance with the following: a. for long term infrastructure for the stormwater network, the Long term infrastructure plans; b. for existing and planned infrastructure for the stormwater network, the Local government infrastructure plan; c. the standards for stormwater drainage in the Infrastructure design planning scheme policy.	The proposed development stormwater designs are in accordance with the Infrastructure design planning scheme policy.
PO19 Development provides for the payment of extra trunk infrastructure costs for the following: a. for development completely or partly outside the priority infrastructure area in the Local government infrastructure plan; b. for development completely inside the priority infrastructure area in the Local government infrastructure plan involving:	AO19 No acceptable outcome is prescribed.	NA

i. trunk infrastructure that is to be provided earlier than planned in the Local government infrastructure plan; ii. long term infrastructure for the stormwater network which is made necessary by development that is not assumed future urban development; iii. other infrastructure for the stormwater network associated with development that is not assumed future urban development which is made necessary by the development. Editor's note—The payment of extra trunk infrastructure costs for development completely inside the priority infrastructure area in the Local government infrastructure plan is to be worked out in accordance with the Charges Resolution. Editor's note—See section 130 Imposing Development conditions (Conditions for extra trunk infrastructure costs) of the *Planning Act 2016*.		

Table 9.4.9.3.B—Categories of flood planning levels

Flooding type[1]	Minimum design floor or pavement levels (m AHD)[2] (refer to Table 9.4.9.3.C for assignment of these categories)				
	Category A	Category B	Category C	Category D	Category E
Waterway[A] or open channel	1% AEP flood level + 500mm	1% AEP flood level + 300mm	1% AEP flood level	1% AEP flood level	5% AEP flood level
Overland flow flooding[B]	2% AEP flood level +500mm	2% AEP flood level +300mm	2% AEP flood level	2% AEP flood level	5% AEP flood level

Notes—

[1] Where the site is subject to more than one type of flooding that is overland flow flooding, creek or waterway flooding or river flooding, the minimum flood immunity level is the highest level determined from these sources.

[2] Where flood levels are not available from Council's Floodwise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note [A] A waterway, including any indicated on the planning scheme maps, is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks, typically with a catchment area greater than 30ha.

Note [B] 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. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

Note—The flood immunity level in some older inner-city areas is often controlled by local ponding.

Table 9.4.9.3.C—Flood planning level categories for development types

BCA building classification(1)	Development types and design levels, assigned design floor or pavement levels	Category Refer to Table 8.2.11.3.L
Class 1—4	Habitable room	Category A
	Non-habitable room including patio and courtyard	Category B
	Non-habitable part of a Class 2 or Class 3 building excluding the essential services(2) control room	Category B
	Parking located in the building undercroft of a multiple dwelling	Category C
	Carport(4), unroofed car park; vehicular manoeuvring area	Category D
	Essential electrical services(2) of a Class 2 or Class 3 building only	Category A(6)
	Basement parking entry(3)	Category C + 300mm
Class 5, Class 6, or Class 8	Building floor level	Category C
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D

	Basement parking entry[3]	Category C
	Essential electrical services[2]	Class 8 — Category C[6] Class 5 & 6 — Category A[6]
Class 7a	Refer to the relevant building class specified in this table	
Class 7b	Building floor level	Category C
	Vehicular access and manoeuvring area	Category D
	Essential electrical services[2]	Category C
Class 9	Building floor level	Category A
	Building floor level for habitable rooms in Class 9a or 9c where for a residential care facility	0.2% AEP flood
	Garage or car park located in the building undercroft[3]	Category C
	Carport[4] or unroofed car park	Category D
	Vehicular access and manoeuvring areas	Category D
	Essential electrical services[2]	Category A
Class 10a	Car parking facility	Refer to the relevant building class specified in this table
	Shed[5] or the like	Category D
Class 10b	Swimming pool	Category E
	Associated mechanical and electrical pool equipment	Category C
	Other structures	Flood immunity standard does not apply

Notes—

[1] Refer to the Building Code of Australia for definitions of building classifications.

[2] Essential services include any room used for fire control panel, telephone PABX, sensitive substation equipment including transformers, low voltage switch gear, high-voltage switch gear, battery chargers, protection control and communication equipment, low voltage cables, high-voltage cables and lift controls.

(3) Basement car parks must be suitably waterproofed and all air vents, air-conditioning ducts, pedestrian access and entry and exit ramps at the car park entrance have flood immunity in accordance with this table.

(4) A shelter for a motor vehicle, which has a roof and one or more open sides, and which can be built against the side of a building.

(5) A slight or rough structure built for shelter and storage; or a large strongly built structure, often open at the sides or end.

(6) Where essential services are proposed in a basement below the specified flood planning level, the flood immunity of all air vents, air-conditioning ducts, pedestrian access, lift shafts and entry/exit ramps at the basement entrance and any other openings into that basement must conform to Category A for Residential development, and the relevant basement entry level of all other uses. This will require a waterproof basement design to prevent floodwaters entering the basement to ensure flood immunity.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—Where a building has a combination of uses that includes a component of class 2, 3 or 9, the essential services for that building shall comply with the requirements of the building class with the greatest flood immunity requirement.

Note—Use classes for residential development also include basement storage.

Table 9.4.9.3.D—Flood planning levels for a new road

Flooding type(1)	Minimum design levels at the crown of the road (m AHD) (2)	
	Residential development	Industrial or commercial development
Waterway(A) or open channel	1% AEP flood level	2% AEP flood level
Overland flow flooding(B)	2% AEP flood level	2% AEP flood level

Notes—

(1) Where the site is subject to more than 1 type of flooding, the minimum flood planning level is the highest level determined from these sources. It should be noted that the flooding planning level in some older areas is often controlled by local ponding.

(2) Where flood levels are not available from Council's Floodwise Property Report, such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note (A) A waterway including any indicated on the planning scheme maps is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks typically with a catchment area greater than 30ha.

Note (B) 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. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Note—A flood event with an AEP of 5% is the equivalent of a 20 year ARI flood event.

Table 9.4.9.3.E—Flood planning levels for essential community infrastructure

Type of essential community infrastructure	Minimum design levels
Emergency services	0.2% AEP flood
Emergency services, where for an emergency shelter	0.5% AEP flood
Emergency services, where for police facilities	0.5% AEP flood
Hospital and health care service, where associated with a hospital	0.2% AEP flood
Community facility where involving storage of valuable records or items of historic or cultural significance (e.g. galleries and libraries)	0.5% AEP flood
State-controlled roads Major or minor electricity infrastructure not otherwise listed in this table Utility installation where for rail transport services Air service Telecommunications facility	No specific recommended level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.
Power stations (as defined in the *Electricity Act 1994*) or renewable energy facility.	0.2% AEP flood
Major electricity infrastructure where a major switch yard	0.2% AEP flood
Substations	0.5% AEP flood
Utility installation where for a sewage treatment plant	DFE
Utility installation where for a water treatment plant	0.5% AEP flood

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.

Note—A flood event with an AEP of 0.5% is the equivalent of a 200 year ARI flood event.

Table 9.4.9.3.F—Flood planning levels for reconfiguring a lot

Flooding type[1]	Minimum lot levels (m AHD)[2]	
	Residential	Other than residential

Waterway[A] or open channel	1% AEP flood level + 300mm	1% AEP flood level
Overland flow flooding[B]	1% AEP flood level + 300mm	2% AEP flood level

Notes—

[1] Where the site is subject to more than one type of flooding, the minimum flood immunity level is the highest level determined from these sources.

[2] Where flood levels are not available from Council's Floodwise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies to estimate the relevant flood level.

Note [A] A waterway including any indicated on the planning scheme maps is defined as any element of a river, creek, stream, gully or drainage channel, including the bed and banks typically with a catchment area greater than 30ha.

Note [B] Overland flow flooding usually occurs when the capacity of the underground piped drainage system is exceeded or when the overland flow path is blocked. Localised overland flow paths generally traverse along roadways, and in the older established areas, through private properties within existing low points and gullies. A localised overland flow path is not characterised by well-defined bed and banks and the contributing catchment is generally less than 30ha.

Note—A flood event with an AEP of 1% is the equivalent of a 100 year ARI flood event.

Note—A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

Appendix 05:

Flood Overlay Code Response

8.2.11 Flood overlay code

8.2.11.1 Application

1. This code applies to assessing development in the Flood overlay, if:
    a. accepted development subject to compliance with identified requirements, where acceptable outcomes of this code are identified requirements in a table of assessment for an overlay (section 5.10); or
    b. assessable development where this code is an applicable code identified in the assessment benchmarks column of a table of assessment for an overlay (section 5.10); or
    c. impact assessable development.
2. Land in the Flood overlay is identified on the Flood overlay map and is included in the following sub-categories:
    a. Brisbane River flood planning area 1 sub-category;
    b. Brisbane River flood planning area 2a sub-category;
    c. Brisbane River flood planning area 2b sub-category;
    d. Brisbane River flood planning area 3 sub-category;
    e. Brisbane River flood planning area 4 sub-category;
    f. Brisbane River flood planning area 5 sub-category;
    g. Creek/waterway flood planning area 1 sub-category;
    h. Creek/waterway flood planning area 2 sub-category;
    i. Creek/waterway flood planning area 3 sub-category;
    j. Creek/waterway flood planning area 4 sub-category;
    k. Creek/waterway flood planning area 5 sub-category;
    l. Overland flow flood planning area sub-category.

Editor's note—For the purposes of the overlay, the Pine and South Pine rivers are treated as Creek/waterway flood planning area sub-categories.

Note—The Flood overlay is a 'natural hazard area' for the purpose of the State Planning Policy. Within this area, susceptibility to flooding has been identified. The natural hazard area identified on the Flood overlay map may not reflect the full extent of the flood affected area.

3. When using this code, reference should be made to section 1.5 and section 5.3.3.

Note—The following purpose, overall outcomes, performance outcomes and acceptable outcomes comprise the assessment benchmarks of this code.

Note—Where this code includes performance outcomes or acceptable outcomes that relate to:

- management of flood hazard or hydraulic hazard, guidance is provided in the Flood planning scheme policy;
- filling or excavation within the Creek/waterway flood planning area sub-categories, guidance is provided in the Compensatory earthworks planning scheme policy;
- handling or storage of hazardous materials, guidance is provided in the Management of hazardous chemicals in flood affected areas planning scheme policy;
- standards and specifications for public assets in a park, guidance is provided in the Infrastructure design planning scheme policy;
- standards and specifications for stormwater drainage assets, guidance is provided in the Infrastructure design planning scheme policy.

Editor's note—For a proposal to be accepted development subject to compliance with identified requirements, it must meet all the identified acceptable outcomes of this code that relate to the applicable sub-category and any other applicable code. Where it does not meet all identified acceptable outcomes, the proposal becomes assessable development and a development application is required. Where a development application is required, only the specific acceptable outcomes that the proposal fails to meet need to be assessed against the corresponding assessable acceptable outcomes or performance outcomes and relevant overall outcomes. Other identified acceptable outcomes that are met are not assessed as part of the development application.

8.2.11.2 Purpose

f. The purpose of the Flood overlay code is to:
    a. Implement the policy direction in the Strategic framework, in particular:
        i. Theme 2: Brisbane's outstanding lifestyle, and Element 2.3 — Brisbane's healthy and safe communities;
        ii. Theme 4: Brisbane's highly effective transport and infrastructure networks, and Element 4.3 — Brisbane's coordinated infrastructure planning and delivery.
    b. Provide for the assessment of the suitability of development in the Flood overlay.

f. The purpose of the Flood overlay code will be achieved through the following overall outcomes:
    a. Development minimises exposure of people and property to unacceptable risk from flood hazard in all flood events.

b. Development and infrastructure mitigates the flood risk through its location, siting, design, construction and operation whilst maintaining amenity.
c. Development does not unduly burden the city's counter-disaster response capacity, including emergency services access during a flood emergency.
d. Development provides for efficient evacuation and access for evacuation resources including emergency services during flood events, or otherwise plans for the prospect and impact of isolation or hindered evacuation during flooding.
e. Development involving essential community infrastructure remains functional during and immediately after flood events.
f. Development ensures that emergency management plans respond to the number and capacity of future users of the development to safely participate in emergency measures such as evacuation.
g. Development ensures that essential building services or services essential for the development are designed, located and operated to minimise the flood risk to people, minimise damage to property, disruption to building function, and re-establishment time after a flood event.
h. Development involving hazardous materials manufactured, handled or stored in bulk does not adversely impact on public safety and the environment as a result of the impacts of floodwater.
i. Development does not, directly or cumulatively, cause or increase adverse impacts on other properties or land within the floodplain from flooding.
j. Development and infrastructure mitigates the impacts of hydraulic hazard due to predictable future increases in rainfall intensity on flooding.
k. Development prioritises, in order, the safety of people, protection of public infrastructure and protection of private property, in the management of the economic, social and environmental impacts of flooding.

8.2.11.3 Performance outcomes and acceptable outcomes

Table 8.2.11.3.A—Performance outcomes and acceptable outcomes

Performance outcomes	Acceptable outcomes	Comments
Section A—If for accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development for a dwelling house including any secondary dwelling Note—Development for a dwelling house does not require assessment against any other sections of this code.		
PO1 Development involving any habitable or non-habitable part of a dwelling house, including any secondary dwelling, is located and designed to: f. minimise the risk to people from flood hazard; g. achieve acceptable flood immunity; h. minimise property impacts from a flood event up to and including the defined flood event; i. minimise disruption to residents, recovery time and rebuilding or restoration costs after	**AO1.1** Development for a dwelling house including any secondary dwelling: e. is not located in the Brisbane River flood planning area 1, 2a or 2b sub-categories or the Creek/waterway flood planning area 1 or 2 sub-categories; or f. is only located in these sub-categories, if a Registered Professional Engineer Queensland certifies that the dwelling house and any secondary dwelling are structurally designed to be able to resist hydrostatic and	NA

a flood event up to and including the defined flood event.	hydrodynamic loads associated with flooding up to and including the defined flood event. **AO1.2** Development for a dwelling house and any secondary dwelling complies with the minimum flood planning levels in Table 8.2.11.3.B. Note—If located in an area that has no flood level information available from the Council such as an overland flow path, a Registered Professional Engineer of Queensland with expertise in undertaking flood studies is to certify that the flood level and development levels for the dwelling house and any secondary dwelling achieve the required flood planning levels in Table 8.2.11.3.B.	
	AO1.3 Development involving a building undercroft complies with the minimum clearance requirements in Table 8.2.11.3.E. Editor's note—For creek/waterway, storm-tide and river flooding, applicable flood planning information is available from Council's FloodWise Property Report. Note—The Flood planning scheme policy provides guidance on undercroft design.	
PO2 Development within the Creek/waterway flood planning area sub-categories or Overland flow flood planning area sub-category: f. maintains the conveyance of flood waters to allow flow and debris to pass predominantly unimpeded through the site; g. does not concentrate, intensify or divert floodwater onto upstream, downstream or adjacent properties; h. will not result in a material increase in flood levels or flood hazard on upstream, downstream or adjacent properties.	**AO2** Development: f. is not located within the Creek/waterway flood planning area 1, 2 or 3 sub-categories or the Overland flow flood planning area sub-category; or g. provides an open undercroft area from natural ground level to habitable floor level for any area inundated by the defined flood event; or Note—This undercroft area is not suitable for providing non-habitable rooms, secure storage of valuables, or future enclosing for storage or car parking. The clear area may include structural elements such as columns and floor substructure. The Flood planning scheme policy provides guidance on undercroft design.	The 1/2D TUFLOW hydraulic modelling presented in the revised report demonstrates that the proposed development does not concentrate, intensify, or divert overland floodwaters onto neighbouring properties. The maximum modelled increase in flood level at any affected location is approximately 10mm (0.010m), which is within the generally accepted tolerance of 0.02m consistently applied in Brisbane City Council flood impact assessments. The post-development flood impact maps (Appendix G of the revised report) confirm that the development does not result in a material increase in flood level or flood hazard on upstream, downstream, or adjacent properties.

	Editor's note—An open undercroft design may be achieved through a 'valance' treatment around the perimeter of an otherwise internally clear undercroft. Editor's note—For Creek/waterway, storm-tide and river flooding, applicable flood planning information is available from Council's FloodWise Property Report. g. a flood study from a Registered Professional Engineer Queensland with expertise in undertaking flood studies certifies that the development in the Creek/waterway flood planning area or Overland flow flood planning area sub-categories will not result in a material increase in flood level or flood hazard on upstream, downstream or adjacent properties. Note—Flood studies demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy and ensure that where an undercroft is required to manage flood impacts it complies with Table 8.2.11.3.E.	Compliance is demonstrated by the RPEQ certified flood study submitted with this response.
Section B—If accepted development subject to compliance with identified requirements (acceptable outcomes only) or assessable development other than for a dwelling house or reconfiguring a lot Note—If development that is accepted development subject to compliance with identified requirements complies with the acceptable outcomes of this part, no further assessment against this code is required.		
PO3 Development: e. is compatible with flood hazard in a defined flood event; f. minimises the risk to people from flood hazard; g. does not reduce the ability of evacuation resources including emergency services to access and evacuate the site in a flood emergency, with consideration to the scale of the development; h. minimises impacts on property from flooding;	**AO3** Development for a material change of use is identified in Table 8.2.11.3.C as compatible with the flood hazard in the relevant flood planning area.	PO3 requires that development is compatible with the flood hazard in the relevant flood planning area, minimises risk to people, minimises property impacts, minimises disruption to residents and recovery time, and does not reduce the capacity of evacuation resources. The proposed development is a Class 1–4 residential multiple dwelling. In accordance with Table 8.2.11.3.C, residential development is identified as compatible with the Overland Flow flood planning area sub-category, subject to meeting all other relevant requirements. The revised report demonstrates that the development

i. minimises disruption to residents, business or site operations and recovery time due to flooding; j. minimises the need to rebuild structures after a flood event greater than the defined flood event. Note—Where Table 8.2.11.3.C identifies that a flood risk assessment is required, compliance with this performance outcome can be achieved by submitting a flood risk assessment, which may be included within a flood study, addressing the criteria within this performance solution. Preparing flood risk assessments and flood studies is required to be in accordance with the Flood planning scheme policy. Note—An emergency management plan prepared in accordance with the Flood planning scheme policy, which sets out procedures for evacuation due to flooding may be used to demonstrate compliance with this performance outcome.		design, siting, and proposed floor levels are consistent with the flood hazard characteristics of the site, and that the risk to people and property has been minimised to an acceptable level through appropriate floor level immunity, earthworks design, and the preparation of a Flood Emergency Action Plan. Compliance is further demonstrated by the submission of a flood study prepared and certified by a suitably qualified RPEQ with expertise in flood assessment.
PO4 Development for a park ensures that the design of a park and location of structures and facilities responds to the flood hazard and balances the safety of intended users with: h. maintaining continuity of operations; i. impacts of flooding on asset life and ongoing maintenance costs; j. efficient recovery after flood events; k. recreational benefits to the city; l. availability of suitable land within the park.	**AO4.1** Development involving a building or structure in a park complies with the flood planning levels specified in Table 8.2.11.3.D. **AO4.2** Development involving a building or structure in a park where Table 8.2.11.3.D does not apply: d. is not located within the 20% AEP flood extent of any creek/waterway or overland flow path; or e. is located above the 20% AEP flood level of any creek/waterway or overland flow path.	NA
Section C—If accepted development subject to compliance with identified requirements (acceptable outcomes only) for a park or assessable development other than for a dwelling house		
PO5 Development is located and designed to: c. minimise the risk to people from flood hazard on the site;	**AO5.1** Development complies with the flood planning levels specified in Table 8.2.11.3.D. Note—If located in an area with no Council-derived flood levels such as an overland flow path, a Registered Professional Engineer Queensland with expertise in undertaking flood studies	The proposed development is subject to overland flow flooding. The applicable flood planning levels under Table 8.2.11.3.L for overland flow flooding are:

<table>
<tr>
<td>d. minimise flood damage to the development and contents of buildings up to the defined flood event;
e. provide suitable amenity;
f. minimise disruption to residents, recovery time and the need to rebuild structures after a flood event up to and including the defined flood event.</td>
<td>is to derive the applicable flood level and certify that the development meets the required flood planning levels in Table 8.2.11.3.D. The study is to demonstrate that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.

AO5.2
Development is:
d. not located in the:
i. Brisbane River flood planning area 1, 2a, or 2b sub-categories;
ii. Creek/waterway flood planning area 1 or 2 sub-categories;
iii. Overland flow flood planning area sub-category; or
e. only located in these sub-categories if a Registered Professional Engineer Queensland with expertise in undertaking flood studies certifies that:
i. the development design, siting and any mitigation measures will ensure the development is structurally adequate to resist hydrostatic, hydrodynamic and debris impact loads associated with flooding up to the defined flood event; and
ii. the risk to people is managed to an acceptable level.</td>
<td>
<table>
<tr><th>Development Element</th><th>BCA Classification</th><th>Table 8.2.11.3.D Category</th><th>Minimum Flood Planning Level (Overland Flow)</th></tr>
<tr><td>Habitable rooms (residential units)</td><td>Class 1–4</td><td>Category A</td><td>2% AEP flood level + 500mm</td></tr>
<tr><td>Non-habitable rooms (laundry, storage)</td><td>Class 1–4</td><td>Category B</td><td>2% AEP flood level + 300mm</td></tr>
<tr><td>Parking in building undercroft</td><td>Class 1–4 multiple dwelling</td><td>Category C</td><td>2% AEP flood level</td></tr>
<tr><td>Carport / unroofed car park / vehicular manoeuvring area</td><td>Class 1–4</td><td>Category D</td><td>2% AEP flood level</td></tr>
<tr><td>Bin store enclosure (non-critical ancillary structure)</td><td>Class 1–4</td><td>Category B</td><td>2% AEP flood level + 300mm</td></tr>
</table>
The revised hydraulic modelling confirms the 2% AEP overland flow flood level across the site. The proposed habitable floor levels for all residential units have been confirmed at a minimum of the 2% AEP flood level plus 500mm, in compliance with Category A requirements. The proposed car parking pavement and vehicular manoeuvring areas comply with the Category D minimum pavement level of the 2% AEP flood level. The bin store enclosure floor level has been set at or above the 2% AEP flood level plus 300mm in compliance with Category B. Revised architectural and civil plans submitted with this response confirm the updated floor and pavement levels. However, it should be noted that the development is cut off by the overland flow path in a pre- and post-development scenario. No maneuvering of vehicles is to be undertaken during a flood event. Shelter in place is recommended.
</td>
</tr>
<tr>
<td>PO6</td>
<td>AO6.1
Development ensures that:</td>
<td>NA</td>
</tr>
</table>

Development involving essential electrical services or a basement storage area is suitably located and designed to ensure public safety and minimise flood recovery and economic consequences of damage during a flood.	d. all areas containing essential electrical services comply with the flood planning levels in Table 8.2.11.3.D; or e. if a basement contains essential electrical services or a private basement storage area, the basement is a waterproof structure with walls and floors impermeable to the passage of water with all entry points and services located at or above the relevant flood planning level in Table 8.2.11.3.D. Note—A basement storage area does not include a bike storage room, change room, building maintenance storage and non-critical electrical services. **AO6.2** Development involving a basement that relies on a pumping solution to manage floodwater ingress or for dewatering after a flood provides a secondary pump system with a backup power source for the pump.	
PO7 Development does not directly or indirectly create a material adverse impact on flood behaviour or drainage on properties that are upstream, downstream or adjacent to the development.	**AO7.1** Development: c. does not block, or divert floodwaters for any area affected by creek/waterway or overland flow flooding, excluding storm-tide flooding and Brisbane River flooding sources; or d. does not result in a material increase in flood level or hydraulic hazard on upstream, downstream or adjacent properties. Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy. **AO7.2**	The revised TUFLOW hydraulic modelling demonstrates that the proposed development does not block or divert overland floodwaters. The existing overland flow path from the south-east is maintained across the site, and the development does not rely solely on piped infrastructure to manage major flows. The maximum modelled post-development flood impact of 0.015m is within acceptable limits and does not constitute a material adverse impact on adjacent, upstream, or downstream properties. The revised Flood Impact Maps in Appendix G confirm this finding for the 1%, 2%, 5%, and 10% AEP events.

	Development retains existing overland flow paths and does not rely wholly on piped solutions to manage major flows.	
	AO7.3 Development which creates a new overland flow path or significantly modifies an existing overland flow path via earthworks does not materially worsen hydraulic hazard on the site from existing conditions. Note—Compliance with this acceptable solution can be demonstrated by the submission of a flood study by a Registered Professional Engineer of Queensland with expertise in undertaking flood studies demonstrating that the development and engineering design methods conform to the principles within the Flood planning scheme policy and the Infrastructure design planning scheme policy.	
PO8 Development for filling or excavation in an area affected by creek/waterway flooding does not directly, indirectly or cumulatively cause any material increase in flooding or hydraulic hazard or involve significant redistribution of flood storage from high to lower areas in the floodplain. Note—This can be demonstrated by undertaking earthworks in compliance with the Compensatory earthworks planning scheme policy. Note—This part of the code applies to all development other than a dwelling house and any secondary dwelling which involves filling or excavation, whether or not the development application comprises a separate development application for operational work involving filling or excavation.	**AO8** Development ensures that no filling or excavation greater than 100mm is located in the Creek/waterway flood planning area 1, 2 or 3 sub-categories if contained in the 5% AEP flood extent of any Creek/waterway flood planning area sub-category for which no waterway corridor has been mapped in the Waterway corridors overlay.	The site is subject to overland flow flooding only and is not located within the Creek/waterway flood planning area 1, 2, or 3 sub-categories. Accordingly, AO8 does not strictly apply to this development. Notwithstanding, the proposed earthworks have been assessed against the perfomance intent of PO8, and the revised report and filling and excavation plans (included as an appendix to the revised report) confirm that the proposed earthworks do not result in any material increase in flooding or hydraulic hazard on upstream, downstream, or adjacent properties. The earthworks are designed to direct overland flows consistently with existing drainage patterns, and flood storage volumes within the overland flow path are not materially reduced.
PO9 Development ensures that the building and site design:	**AO9.1** Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub-category:	The proposed development incorporates an open undercroft to allow the passage of overland floodwaters beneath the building. In accordance with Table 8.2.11.3.E, the minimum undercroft clearance requirement for the Overland Flow flood planning area is 1.5m above the highest ground elevation in the undercroft area where the

a. maintains the conveyance capacity of existing overland flow paths and creek/waterways; b. ensures floodwaters and flood debris can pass predominantly unimpeded under a structure or building to minimise property or building damage, including for a flood larger than the defined flood event; c. mitigates flood impacts by ensuring that filling, excavation and location of services are designed to allow for the conveyance of floodwater across the site. Note—The Flood planning scheme policy provides guidance on relevant considerations in determining minimum undercroft clearances and treatment of ground level in undercroft areas where floodwater conveyance is required underneath development.	a. complies with the minimum building undercroft clearance requirements in Table 8.2.11.3.E; b. not located directly above any part of a waterway corridor as mapped in the Waterway corridors overlay. **AO9.2** Development involving a building undercroft in the Creek/waterway flood planning area sub-categories or the Overland flow flood planning area sub category: a. has a ground level within the undercroft area that is free draining; b. does not involve excavation below ground level of more than 300mm within the undercroft area.	hydraulic hazard is DV < 0.6 m²/s and depth < 600mm in the 2% AEP event, or 2.5m where DV > 0.6 m²/s or depth > 600mm. The revised report confirms the applicable hydraulic hazard classification at the undercroft and demonstrates that the proposed floor level achieves the required minimum clearance in accordance with Table 8.2.11.3.E. The undercroft area is confirmed as free-draining, with no excavation below ground level exceeding 300mm within the undercroft.
PO10 Development for vulnerable uses, difficult to evacuate uses or assembly uses optimises vehicular access and efficient evacuation from the development to parts of the road network unaffected by flood hazard, in order to: a. protect safety of users and emergency services personnel; b. support efficient emergency services access and site evacuation with consideration to the scale of development. Note—A flood risk assessment may be required to address the performance outcomes or acceptable solutions which deal with evacuation and isolation arrangements, and the ability to take refuge. The Flood planning scheme policy provides information for undertaking flood risk assessments.	**AO10** Development for vulnerable uses, difficult to evacuate uses or assembly uses: a. is not isolated in any event up to the relevant flood planning level specified in Table 8.2.11.3.L and Table 8.2.11.3.D; or b. has direct vehicle access to a critical route or interim critical route in the Critical infrastructure and movement network overlay for evacuation in a flood; or c. can achieve vehicular evacuation to a suitable flood-free location. Note—A suitable flood-free location is of a size and nature sufficient to provide for the size and characteristics of the population likely to need evacuation to that area.	NA
PO11 Development has access which, having regard to hydraulic hazard, provides for safe vehicular and	**AO11.1** Development provides an access or driveway into the site which is: a. trafficable during the defined flood event;	It is acknowledged that the proposed access driveway is inundated during both the 10% AEP and 1% AEP flood event and therefore does not satisfy AO11.1(d). However The driveway is previously inundated prior to the development.

pedestrian movement and emergency services access to adjoining roads.	b. not located in the Creek/waterway flood planning area 1 sub-category; c. not located in the Overland flow flood planning area sub-category if the hydraulic hazard is unsafe in the defined flood event; d. the access or driveway is not inundated by a 10% AEP flood. **AO11.2** Development located in the Creek/waterway flood planning area 1, 2, 3 or 4 sub-categories locates any disabled access in the highest part of the site. Note—explanation of hydraulic hazard provided in the Flood planning scheme policy.	Accordingly, the development is assessed against the Performance Outcome PO11 as follows. The TUFLOW modelling results in Table 6-1 of the revised report confirm the following inundation durations at the site access: **Event** / **Post-Development Inundation Duration** 1% AEP — 55 minutes 10% AEP — 50 minutes The maximum depth of inundation at the access during the 10% AEP event has been confirmed by the hydraulic model. The hydraulic hazard at the access during the 10% AEP event has been assessed against the ARR Book 6 hazard curves (Figures 6-2 and 6-3 of the revised report) and is within acceptable thresholds for people and vehicle stability for the duration of inundation experienced. The inundation is temporary in nature and of short duration relative to the overall storm event. Furthermore, the habitable floor levels of all proposed dwellings are set a minimum of 1.5m above the 1% AEP flood level, allowing occupants to safely remain in place during the flood event. A Flood Emergency Action Plan has been prepared and included within the revised report (Section 6.3.6), detailing the Shelter-in-Place strategy and specifying that evacuation, where required, must be initiated prior to the onset of flooding, before the access becomes inundated. Emergency services access via Old Northern Road is maintained throughout all design events. On this basis, it is considered that the development satisfies the intent of PO11 through performance, with the access arrangement being the minimum practicable given the site's

		constrained frontage, existing stormwater infrastructure, and the nature of the overland flow path crossing the site access.
PO12 Development involving a new road, a bridge or culvert is designed to minimise impacts to flood behaviour, minimise disruption to traffic during a flood and allow for emergency access.	**AO12** Development involving a new road complies with the flood planning levels in Table 8.2.11.3.F.	NA
PO13 Development for pedestrian and cyclist paths: a. provides a suitable level of trafficability; b. manages the impacts of flooding on asset life and ongoing maintenance costs; c. balances route availability with recreational and transport connectivity benefits to the city.	**AO13.1** Development for cyclist and pedestrian facilities other than on public roads, including those traversing through a park and adjacent to a watercourse and overland flow path, are located above the 39% AEP (2 year ARI) flood immunity from all flooding sources. Note—If the site is subject to more than one type of flooding, the requirement that affords the greatest level of protection will apply. **AO13.2** All new on-road cyclist and pedestrian facilities comply with the flood planning levels and trafficability standards for the applicable category of road in Table 8.2.11.3.F or Table 8.2.11.3.K.	NA – Existing path is being rehabilitation to accommodate the new crossover.
PO14 Development which increases the residential population within the Brisbane River flood planning area sub-categories minimises the risk to people in all flood events with consideration to flood hazard, including warning time.	**AO14** Development in the Brisbane River flood planning area sub-categories in areas where the 1% AEP flood level is greater than 12.8m AHD involving: a. an increase in the number of residential dwellings; or b. additional residential lots is not subject to an unsafe hydraulic hazard in the 0.2% AEP flood event. Note—Explanation of a hydraulic hazard is provided in the Flood planning scheme policy.	NA
Additional performance outcomes and acceptable outcomes for essential community infrastructure		

PO15 Development involving essential community infrastructure: a. remains functional to serve community need during and immediately after a flood event, or is part of a network that is able to maintain the function of the essential community infrastructure when parts of the development are unable to function during or after a flood; b. is designed, sited and operated to avoid adverse impacts on the community or the environment due to the impacts of flooding on infrastructure, facilities or access and egress routes; c. is able to remain functional or is part of a network which is able to remain functional even when other infrastructure or services (such as electricity supply) may be compromised in a flood event; d. contains mitigation measures which are not entirely dependent on human activation to respond to a flood event. Note—Protection of function is required up to and including the flood event in Table 8.2.11.3.G.	**AO15** Development involving essential community infrastructure: a. is ancillary to and not relied upon for the provision of the essential service during a flood; or b. is located above the flood planning levels in Table 8.2.11.3.G; c. has access to or provides the necessary back-up emergency electricity and communications supply in times of flood; d. is designed and constructed to resist hydrostatic and hydrodynamic forces as a result of inundation by the flood event listed for the development type in Table 8.2.11.3.G; e. that services a local area: i. is able to be accessed in times of flood to service local community needs up to the event listed for that development type in Table 8.2.11.3.G; or ii. has a service continuity plan that demonstrates the continued provision of service during the relevant flood event.	NA
Additional performance outcomes and acceptable outcomes if development involves the processes in Table 8.2.11.3.H		
PO16 Development involving the storage and handling of hazardous materials avoids or minimises risks to public health and safety and the environment, by: a. protecting underground tanks for hazardous materials against the forces of buoyancy, velocity flow and debris impacts;	**AO16** a. Development does not include the storage or handling of hazardous chemicals that exceed the hazardous chemicals flood hazard threshold quantities in Table 8.2.11.3.M. b. Development involving the processes listed in Table 8.2.11.3.H:	NA

b. securing above-ground tanks for hazardous materials against flotation and lateral movement; c. preventing damage to hazardous materials pipework or entry of floodwater into hazardous materials pipework; d. preventing damage to or off-site release of packages, drums or containers storing hazardous materials. Note—A chemical hazards flood risk report prepared in accordance with the Management of hazardous chemicals in flood affected areas planning scheme policy can assist in demonstrating achievement of this performance outcome. Note—A pump drainage system is not an acceptable measure to meet the performance outcome.	i. where located in the Flood overlay area, occurs only in the Creek/waterway flood planning area 5 sub-category or the Brisbane River flood planning area 5 sub-category; or ii. is consistent with the standards contained in the Management of hazardous chemicals in flood affected areas planning scheme policy and can operate without risk of environmental harm during a flood event. Note—The Management of hazardous chemicals in flood affected areas planning scheme policy sets out further information and processes including risk assessment for the management of hazardous chemicals in flood planning areas.	
Additional performance outcomes and acceptable outcomes for reconfiguring a lot		
PO17 Development locates and designs all lots resulting from reconfiguring a lot to: a. minimise the risk to people from flood hazard; b. minimise damage to property from flood hazard; c. facilitate safe and efficient evacuation. Note— • Consideration of all floods up to the probable maximum flood is relevant to minimising the risk to people. • Flood warning time is not considered sufficient in the Creek/waterway planning area sub-categories or the Overland flow flood planning area sub-category. • Filling above the flood planning level for a flood event greater than the defined flood event cannot be assumed to mitigate the flood hazard.	**AO17.1** Development creating new lots is identified in Table 8.2.11.3.I as suitable within the relevant flood planning area. **AO17.2** Development provides for reconfiguring a lot design that achieves a road and lot layout which: a. provides trafficable vehicular egress for evacuation during a defined flood event; b. optimises hazard-free movement away from sources of flood hazard within the development. Note—Further advice on road and lot layout is contained in the Flood planning scheme policy. **AO17.3** Development which creates a new residential lot in an area subject to Brisbane River flooding, if the 1% AEP flood level is greater than 12.8m AHD is not	NA

	subject to a hydraulic hazard greater than 0.6m^2/s DV or 0.6m deep in a 0.2% AEP flood. Note—Refer to the Flood planning scheme policy for further explanation on the 0.2% AEP flood.	
PO18 Development involving reconfiguring a lot: a. minimises the risk to people from flood hazard; b. creates safe evacuation routes or avoids isolation of the development during a flood greater than the defined flood event; c. minimises damage to property and services; d. provides lots and roads that are not frequently flooded or subject to nuisance ponding or seepage; e. ensures lots created for park or private open space minimise the risk to people from flood hazard and are fit for purpose; f. provides a lot that is not substantially burdened by flood mitigation infrastructure.	**AO18.1** Development involving reconfiguring a lot ensures: a. all lots comply with the flood planning levels in Table 8.2.11.3.J; b. a new road complies with the flood planning levels in Table 8.2.11.3.F. **AO18.2** Development involving reconfiguring a lot creating more than 6 residential lots or a lot for industry ensures the flood planning levels of a dedicated road fronting the development or providing primary access within 200m of the development: a. complies with Table 8.2.11.3.K; or b. has acceptable trafficability in accordance with the requirements in the Flood planning scheme policy and the Queensland Urban Drainage Manual. Note—The Flood planning scheme policy contains supporting information about trafficability on existing roads and serviceability during floods.	NA
	AO18.3 Development protects the conveyance of flood hazard area by providing an easement over the: a. 2% AEP flood extent for overland flow flooding; b. 1% AEP flood extent for creek/waterway flooding.	

Table 8.2.11.3.B—Flood planning levels for a dwelling house (excluding BCA building classification 10a)

Flooding source	Minimum habitable floor level	Minimum non-habitable floor level (i.e. utility areas, garage, laundry, storage room and basement entries)

Brisbane River	1% AEP flood level + 500mm	2% AEP flood level + 300mm

Creek/ waterway	1% AEP flood level + 500mm	1% AEP flood level + 300mm

Overland flow	2% AEP flood level + 500mm	2% AEP level + 300mm
	Note—Where no detailed flood level information is available from the Council such as an overland flow path, a Registered Professional Engineer Queensland with expertise in flood studies is to derive the relevant flood level and certify that the development level for the dwelling house, including any secondary dwelling, meets the required flood immunity standards.	

Note—

- Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these flooding sources.
- Where development involves a building undercroft this may result in a higher floor level than the minimum habitable and non-habitable floor levels in Table 8.2.11.3.B.
- Flood planning levels for a dwelling house from storm-tide inundation are located in the Coastal hazard overlay code.

Table 8.2.11.3.C—Land use compatibility with flood hazard

C — Land use is compatible with the flood hazard subject to meeting all other relevant requirements.

— Flood risk assessment in accordance with requirements of the Flood planning scheme policy is required to demonstrate the use is compatible with the flood hazard.

Accommodation activities	**Brisbane River flood planning area sub-category**						**Creek/waterway flood planning area sub-category**					**Overland flow flood planning area sub-category**
	5	4	3	2B	2A	1	5	4	3	2	1	
Community residence	C	#	#	#	#	#	C	#	#	#	#	#
Dual occupancy	C	C	#	#	#	#	C	#	#	#	#	C
Dwelling unit	C	C	#	#	#	#	C	#	#	#	#	C

Multiple dwelling (1—3 storeys)	C	C	#	#	#	#	C	#	#	#	#	C
Multiple dwelling (4+ storeys)	C	C	C	#	#	#	C	#	#	#	#	C
Nature-based tourism	C	C	C	#	#	#	C	#	#	#	#	C
Relocatable home park	C	#	#	#	#	#	C	#	#	#	#	C
Residential care facility	#	#	#	#	#	#	#	#	#	#	#	#
Resort complex	C	C	C	#	#	#	C	#	#	#	#	C
Retirement facility	C	#	#	#	#	#	#	#	#	#	#	C
Rooming accommodation, short-term accommodation or hotel where including accommodation (1—3 storeys)	C	C	#	#	#	#	C	#	#	#	#	C
Rooming accommodation,	C	C	C	#	#	#	C	#	#	#	#	C

short-term accommodation or hotel where including accommodation (4+ storeys)												
Tourist park	C	C	#	#	#	#	C	C	#	#	#	C

Commercial land uses	**Brisbane River flood planning area sub-category**						**Creek/waterway flood planning area sub-category**					**Overland flow flood planning area sub-category**
	5	4	3	2B	2A	1	5	4	3	2	1	
Agricultural supplies store	C	C	#	#	#	#	C	#	#	#	#	C
Animal husbandry	C	C	#	#	#	#	C	#	#	#	#	C
Animal keeping	C	C	#	#	#	#	C	#	#	#	#	C
Aquaculture	C	C	#	#	#	#	C	#	#	#	#	C
Bulk landscape supplies	C	C	C	C	C	C	C	C	C	#	#	C
Car park ancillary to another use	C	C	C	C	C	#	C	C	#	#	#	C

Car wash	C	C	C	C	C	#	C	C	#	#	#	C
Food and drink outlet	C	C	#	#	#	#	C	C	#	#	#	C
Function facility	C	C	#	#	#	#	C	#	#	#	#	C
Garden centre	C	C	C	#	#	#	C	C	#	#	#	C
Hardware and trade supplies	C	C	#	#	#	#	C	C	#	#	#	C
Home-based business	C	C	#	#	#	#	C	#	#	#	#	C
Hotel (where not including accommodation)	C	C	#	#	#	#	C	#	#	#	#	C
Market	C	C	C	#	#	#	C	C	#	#	#	C
Nightclub entertainment facility	C	C	#	#	#	#	C	#	#	#	#	C
Office	C	C	#	#	#	#	C	#	#	#	#	C
Outdoor sales	C	C	#	#	#	#	C	C	#	#	#	C
Parking station	C	C	C	C	C	#	C	C	#	#	#	C

Roadside stalls	C	C	C	#	#	#	C	C	#	#	#	C
Sales office	C	C	#	#	#	#	C	C	#	#	#	C
Shop, Adult store	C	C	#	#	#	#	C	#	#	#	#	C
Shopping centre	C	#	#	#	#	#	C	#	#	#	#	C
Showroom	C	C	#	#	#	#	C	C	#	#	#	C
Theatre	C	C	#	#	#	#	C	#	#	#	#	C
Tourist attraction	C	C	C	#	#	#	C	C	#	#	#	C
Veterinary service	C	C	#	#	#	#	C	#	#	#	#	C
Wholesale nursery	C	C	C	C	C	C	C	C	C	#	#	C

Community land uses	**Brisbane River flood planning area sub-category**						**Creek/waterway flood planning area sub-category**					**Overland flow flood planning area sub-category**
	5	4	3	2B	2A	1	5	4	3	2	1	
Childcare centre	C	#	#	#	#	#	C	#	#	#	#	#

Club	C	C	#	#	#	#	C	C	#	#	#	C
Community care centre	C	#	#	#	#	#	C	#	#	#	#	C
Community use	C	#	#	#	#	#	C	C	#	#	#	C
Educational establishment (and outdoor education centre)	C	#	#	#	#	#	C	#	#	#	#	C
Environment facility	C	C	C	C	C	C	C	C	C	C	C	C
Health care service	C	#	#	#	#	#	C	#	#	#	#	C
Hospital	#	#	#	#	#	#	#	#	#	#	#	#
Indoor sport and recreation	C	C	#	#	#	#	C	C	#	#	#	C
Major sport, recreation and entertainment facility	C	#	#	#	#	#	C	C	#	#	#	C
Motor sport facility	C	C	C	#	#	#	C	C	C	#	#	C
Outdoor sport and recreation	C	C	C	#	#	#	C	C	#	#	#	C

Park	C	C	C	C	C	C	C	C	C	C	C	C
Place of worship	C	#	#	#	#	#	C	C	#	#	#	C

Special purpose land uses	**Brisbane River flood planning area sub-category**						**Creek/waterway flood planning area sub-category**					**Overland flow flood planning area sub-category**
	5	4	3	2B	2A	1	5	4	3	2	1	
Air service	C	#	#	#	#	#	C	#	#	#	#	C
Cemetery	C	C	C	#	#	#	C	C	#	#	#	C
Crematorium	C	#	#	#	#	#	C	#	#	#	#	C
Detention facility	#	#	#	#	#	#	#	#	#	#	#	C
Emergency services	#	#	#	#	#	#	#	#	#	#	#	#
Funeral parlour	C	#	#	#	#	#	C	#	#	#	#	C
Landing	C	C	C	C	C	C	C	C	C	C	#	C

Major electricity infrastructure	#	#	#	#	#	#	#	#	#	#	#	#
Port service	C	C	C	#	#	#	C	C	C	C	#	C
Substation	C	#	#	#	#	#	C	#	#	#	#	#
Telecommunications facility	C	#	#	#	#	#	C	#	#	#	#	#
Utility installation	C	#	#	#	#	#	#	#	#	#	#	#

Industry land uses	**Brisbane River flood planning area sub-category**						**Creek/waterway flood planning area sub-category**					**Overland flow flood planning area sub-category**
	5	4	3	2B	2A	1	5	4	3	2	1	
Extractive industry	C	C	C	#	#	#	C	C	C	#	#	C
High impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Intensive animal industry	C	C	#	#	#	#	C	#	#	#	#	C
Intensive horticulture	C	C	C	#	#	#	C	C	#	#	#	C

Low impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Marine industry	C	C	C	#	#	#	C	C	#	#	#	C
Medium impact industry	C	C	#	#	#	#	C	C	#	#	#	C
Research and technology industry	C	#	#	#	#	#	C	#	#	#	#	C
Rural industry	C	C	C	C	C	C	C	C	C	#	#	C
Service industry	C	C	#	#	#	#	C	C	#	#	#	C
Service station	C	#	#	#	#	#	C	#	#	#	#	C
Special industries	C	#	#	#	#	#	#	#	#	#	#	C
Transport depot	C	#	#	#	#	#	C	#	#	#	#	C
Warehouse	C	C	#	#	#	#	C	#	#	#	#	C

Note—Caretaker's accommodation and home-based business are considered ancillary to the dominant land use.

Table 8.2.11.3.D—Flood planning categories for development types

BCA building classification(1)	**Development types and design levels, assigned design floor or pavement levels**	**Category — refer to Table 8.2.11.3.L for flood planning levels**
Class 1—4	Habitable room(2)	Category A

	Non-habitable room including patio and courtyard	Category B
	Non-habitable part of a Class 2 or Class 3 building excluding the essential services(2) control room	Category B Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Parking located in the building undercroft of a multiple dwelling	Category C
	Carport(4), unroofed car park; vehicular manoeuvring area	Category D
	Essential electrical services(2) of a Class 2 or Class 3 building only	Category A(6)
	Basement parking entry(3)	Category C + 300mm

Class 5, Class 6, or Class 8	Building floor level	Category C Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Garage or car park located in the building undercroft(3)	Category C
	Carport(4) or unroofed car park	Category D
	Vehicular manoeuvring areas	Category D
	Basement parking entry(3)	Category C
	Essential electrical services(2)	Class 8 — Category C(6) Class 5 & 6 — Category A(6)

Class 7a	Refer to the relevant building class specified in this table

Class 7b	Building floor level	Category C Risk management approach to Brisbane River flooding is permitted (refer to Flood planning scheme policy)
	Vehicular manoeuvring area	Category D

	Essential electrical services[2]	Category C

Class 9	Building floor level	Category A
	Building floor level for habitable rooms in Class 9a or 9c where for a residential care facility	0.2% AEP flood
	Building floor level for habitable rooms in Class 9b where involving children, such as a childcare centre	0.2% AEP flood
	Garage or car park located in the building undercroft[3]	Category C
	Carport[5] or unroofed car park	Category D
	Vehicular manoeuvring areas	Category D
	Essential electrical services[2]	Category A

Class 10a	Car parking facility	Refer to the relevant building class specified in this table
	Shed[5] or the like	Category D

Class 10b	Swimming pool	Category E
	Associated mechanical and electrical pool equipment	Category C
	Other structures	Flood planning levels do not apply

Notes—
[1] Refer to the Building Code of Australia for definitions of building classifications.
[2] Essential electrical services include any area or room used for fire control panel, telephone PABX, sensitive substation equipment including transformers, low voltage switch gear, high voltage switch gear, battery chargers, protection control and communication equipment, low voltage cables, high voltage cables, and lift or pump controls.
[3] Basement car parks must be suitably waterproofed and all air vents, air-conditioning ducts, pedestrian access and entry and exit ramps into the basement must comply with the applicable flood planning levels in this table.
[4] A shelter for a motor vehicle, which has a roof and one or more open sides, and which can be built against the side of a building.
[5] A slight or rough structure built for shelter and storage; or a large strongly built structure, often open at the sides or end.
[6] Where essential electrical services are proposed in a basement below the specified flood planning level, the flood immunity of all air vents, air-conditioning ducts, pedestrian access, lift shafts and entry/exit ramps at the basement entrance and any other openings into that basement must conform with the flood planning levels for Category A for Residential development, and the relevant basement entry level of all other uses. To ensure flood immunity, basements require a waterproof basement design to prevent flood waters entering the basement.

- A flood event with an AEP of 2% is the equivalent of a 50 year ARI flood event.

- A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.
- Where a building has a combination of uses that includes a component of classes 2, 3 or 9, the essential services for that building shall comply with the requirements of the building class with the greatest flood planning level requirement.
- Use classes for residential development also include basement storage.

Table 8.2.11.3.E— Building undercroft clearances

Flooding source	**Minimum clearance requirement(1)(3)**
Overland flow— Hydraulic Hazard (DV <0.6 m^2/s and depth <600mm in 2% AEP flood event)	Lowest floor level is to be 1.5m(2) above the highest ground elevation in undercroft area
Overland flow— Hydraulic Hazard (DV >0.6 m^2/s or depth >600mm in 2% AEP flood event)	Lowest floor level is to be 2.5m(2) above the highest ground elevation in undercroft area
Creek/waterway (Flood planning area 1, 2 or 3 sub-categories)	Lowest floor level is to be 2.5m(2) above the highest ground elevation in undercroft area
Creek/waterway (Flood planning area 4 sub-category)	Lowest flood level is to be 1.5m(2) above the highest ground elevation in undercroft area

Notes—
(1) The minimum undercroft only relates to the minimum clearance requirements from ground level to the finished floor level and not minimum flood planning levels. Where the flood planning level requirement with freeboard results in a higher finished floor level that higher level needs to be adopted.
(2) Refer to the Flood planning scheme policy for explanatory material regarding clearances and considerations.
(3) The minimum undercroft clearance only applies to the area of undercroft above the relevant flood extent or flood planning area sub-category.

Table 8.2.11.3.F—Flood planning levels for a new road

Flooding source(1)	**Minimum design levels at the crown of the road (m AHD)(2)**	
	Residential development	**Industrial or commercial development**
Brisbane River(3)	Defined flood level	5% AEP flood level
Creek/waterway	1% AEP flood level	2% AEP flood level

Overland flow	2% AEP flood level	2% AEP flood level

Notes—
(1) Where the road is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.
(2) Where flood levels are not available from Council's FloodWise Property Report, such as for overland flow flooding, a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level.
(3) A risk management approach determining flood planning levels of roads for Brisbane River flooding can be applied as an alternative to Table 8.2.11.3.F. Typically such roads would have a flood immunity no worse than the surrounding roads that support a similar land use, otherwise a Flood Risk Assessment which complies with the relevant requirements of the Flood planning scheme policy is provided.

Table 8.2.11.3.G—Flood planning levels for essential community infrastructure

Type of essential community infrastructure	**Minimum design levels**
Emergency services	0.2% AEP flood
Emergency services, where for an emergency shelter	0.5% AEP flood
Emergency services, where for police facilities	0.5% AEP flood
Hospital and health care service where associated with a hospital	0.2% AEP flood
Community facility where involving storage of valuable records or items of historic or cultural significance (e.g. galleries and libraries)	0.5% AEP flood
State-controlled roads Major or minor electricity infrastructure not otherwise listed in this table Utility installation where for rail transport services Air service Telecommunications facility	No specific recommended level but development proponents should ensure that the infrastructure is optimally located and designed to achieve suitable levels of service, having regard to the processes and policies of the administering government agency.
Power stations (as defined in the *Electricity Act 1994*) or renewable energy facility.	0.2% AEP flood

Major electricity infrastructure where a major switch yard	0.2% AEP flood
Substations	0.5% AEP flood
Utility installation where for a sewage treatment plant	Defined flood event
Utility installation where for a water treatment plant	0.5% AEP flood

Note—A flood event with an AEP of 0.2% is the equivalent of a 500 year ARI flood event.
Note—A flood event with an AEP of 0.5% is the equivalent of a 200 year ARI flood event.

Table 8.2.11.3.H—Table of processes requiring additional assessment in a flood planning area

Process
(1) Oil refining or processing
(2) Producing, refining or processing gas or fuel gas
(3) Power station, including the activity of generating electricity by using fuel
(4) Producing, quenching, cutting, crushing or grading coke
(5) Waste incinerator, including thermal treatment of waste
(6) Pulp or paper manufacturing
(7) Tannery or works for curing animal skins, hides or finishing leather
(8) Textile manufacturing, including carpet manufacturing, wool scouring or carbonising, cotton milling, or textile bleaching, dyeing or finishing

(9) Rendering plant, including meat processing
(10) Manufacturing chemicals, poisons and explosives
(11) Manufacturing fertilisers involving ammonia
(12) Manufacturing polyvinyl chloride plastic
(13) Major hazard facilities for the storage and handling of dangerous goods
(14) Storage of hazardous chemicals in quantities that would exceed the hazardous chemicals flood hazard threshold set out in Table 8.2.11.3.M
(15) Manufacturing medium-density fibreboard, chipboard, particle board, plywood, laminated board or wood veneer products
(16) Manufacturing or processing plaster
(17) Enamelling workshop
(18) Galvanising works
(19) Anodising or electroplating workshop
(20) Powder coating workshop
(21) Treating timber for preservation using chemicals including copper, chromium, arsenic, borax and creosote
(22) Manufacturing soil conditioners by receiving, blending, storing, processing, drying or composting organic material or organic waste, including animal manures, sewage, septic sludges and domestic waste

(23) Manufacturing tyres, asbestos products, asphalt, cement, glass or glass fibre, mineral wool or ceramic fibre
(24) Abattoir, including meat processing
(25) Recycling chemicals, oils or solvents
(26) Waste disposal activity (other than waste incinerator), including waste transfer station operation
(27) Recycling, storing or reprocessing regulated waste, including regulated waste treatment
(28) Manufacturing batteries and battery recycling
(29) Drum and container reconditioning
(30) Water treatment
(31) Sewage treatment

Table 8.2.11.3.l—Suitability of reconfiguring a lot within a flood planning area
C — Reconfiguring a lot is suitable within a flood planning area

— Flood risk assessment in accordance with the requirements of the Flood planning scheme policy is required to demonstrate the mitigation of risk from flood hazard

Flood planning area	**Creek/waterway flood planning area sub-categories**			**Brisbane River flood planning area sub-categories**		
	Residential	**Industrial**	**Other**	**Residential**	**Industrial**	**Other**
1	#	#	#	#	#	#

2/2a;2b	#	#	#	#	C	#
3	#	#	#	#	C	C
4	C	C	C	C	C	C
5	C	C	C	C	C	C

Notes—

- A flood risk assessment is required for residential reconfiguring a lot development where creating more than two new lots in the overland flow flood planning area sub-category.
- Additional requirements apply for the Brisbane River flood planning area sub-category if the 1% AEP flood level is greater than 12.8m AHD.
- Minimum site levels, requirements for no adverse off site impacts and other provisions in the planning scheme still apply.

Table 8.2.11.3.J—Flood planning levels for reconfiguring a lot

Flooding source(1)	**Minimum lot levels (m AHD)(2)**		
	Residential (creating 6 or less lots with no new road)	**Residential (creating more than 6 lots), or a new road**	**Other than residential**
Brisbane River	2% AEP flood level + 300mm	1% AEP flood level + 0.3m	1% AEP flood level
Creek/waterway	Minimum 300m^2 area at the 1% AEP flood level + 300mm(3)	1% AEP flood level + 300mm	2% AEP flood level
Overland flow	Minimum 300m^2 area at the 2% AEP flood level + 300mm(3)	2% AEP flood level + 300mm	2% AEP flood level

Notes—

(1) Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.

(2) Where flood levels are not available from Council's FloodWise Property Report such as for overland flow flooding, a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level.

(3) The 300m^2 area is considered suitable for siting a dwelling house with open space area at or above the nominated flood planning level.

Table 8.2.11.3.K—Flood planning levels for existing road providing access to or fronting a development

Flooding source(1)	**Minimum design levels at the crown of the road (m AHD)(2)(3)**

	Local road	Neighbourhood road	District road, suburban road, arterial road
Brisbane River	5% AEP flood level	2% AEP flood level	2% AEP flood level
Creek/waterway	5% AEP flood level	2% AEP flood level	2% AEP flood level
Overland flow	5% AEP flood level	5% AEP flood level	5% AEP flood level

Notes—
(1) Where the site is subject to more than one flooding source, the minimum flood planning level is the highest level determined from these sources.
(2) Where flood levels are not available from Council's FloodWise Property Report such as overland flow flooding a suitably qualified Registered Professional Engineer in Queensland with expertise in undertaking flood studies is required to estimate the relevant flood level. The Flood planning scheme policy sets out the requirements for a flood risk assessment process.
(3) The design standard for industry access is the 5% AEP flood level for all flooding sources.

Table 8.2.11.3.L—Categories of flood planning levels

Flooding source(1)	Minimum design floor or pavement levels (m AHD)(2) (refer to Table 8.2.11.3.D for assignment of these categories)				
	Category A	Category B	Category C	Category D	Category E
Brisbane River	1% AEP flood level + 500mm	1% AEP flood level + 300mm	DFL	5% AEP flood level	5% AEP flood level
Creek/ waterway	1% AEP flood level + 500mm	1% AEP flood level + 300mm	1% AEP flood level	1% AEP flood level	5% AEP flood level
Overland flow	2% AEP flood level + 500mm	2% AEP flood level + 300mm	2% AEP flood level	2% AEP flood level	5% AEP flood level

Notes—
(1) Where the site is subject to more than one type of flooding that is overland flow flooding, creek or waterway flooding or river flooding, the minimum flood immunity level is the highest level determined from these sources.
(2) Where flood levels are not available from Council's FloodWise Property Report such as overland flow flooding, the applicant will need to engage a suitably qualified Registered Professional Engineer Queensland with expertise in undertaking flood studies required to estimate the relevant flood level. The Flood planning scheme policy sets out the requirements for a flood risk assessment process.

Table 8.2.11.3.M—Hazardous chemicals flood hazard threshold

Hazardous chemicals flood hazard threshold means any of the following:
A hazardous chemical listed in schedule 11 of the Work Health and Safety Regulation 2011 in a quantity that exceeds a threshold quantity stated in column 5 of schedule 11
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code in the Acute I or Chronic I category that exceeds 2500 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code in the Chronic II category that exceeds 10,000 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Australian Dangerous Goods Code and assigned to Packing Group III that exceeds 10,000 litres or kilograms
A chemical classified as hazardous to the aquatic environment under the Globally Harmonised System of Classification and Labelling of Chemicals that exceeds 10,000 litres or kilograms