AUS-SPEC

Infrastructure Specifications

0061 Bridges and related structures

0061 BRIDGES AND RELATED STRUCTURES

IMPORTANT: This document has been adapted from the NATSPEC suite of specification templates for use in the Cessnock City Council area by both Council and industry. NATSPEC regularly updates the base templates (currently in April and October each year), and Council may incorporate changes into its version of AUS-SPEC from time to time. To assist in highlighting any changes made by Council to the NATSPEC templates, the following conventions are used.ANNEXURE M – CESSNOCK CITY COUNCIL SPECIFIC CLAUSESSee ANNEXURE M at the end of this document which contains (where practical) Cessnock City Council customisations (also known as 'office master' text). References to the Annexure are to also be inserted at relevant clauses in the main body of the document.

- Where content is added to the main body of the document, it is to be shown in brown text like this.
- Where content is deleted or excluded from the main body of the document, it is to be shown ~~struck through like this~~. Such clauses are to have no effect.

Where there is a conflict between main body text and Cessnock City Council specific clauses, Council's specific clauses shall prevail.

1 GENERAL

1.1 INTRODUCTION

Worksection application

Description: This worksection is applicable to design and documentation requirements for the following structures:

- Road traffic bridges.
- Pedestrian bridges including bicycle and wheelchair access.
- Structures other than bridges associated with bridge construction e.g. culverts, retaining structures, major sign supporting structures and noise barriers.
- Structures providing public safety, e.g. safety barriers, safety rails, protection screens and street lighting poles.
- Temporary works.

1.2 RESPONSIBILITIES

General

Requirement: Provide design and documentation for the bridges and related structures covered by this worksection.

Scope of design services: Includes structural, hydrological, hydraulic, electrical, civil, geotechnical, mechanical and other elements as required by any DA consent conditions.

Designer's qualifications: In the case of major projects such as the design of a bridge structure and its components, nominate a professional engineer who must have relevant experience in bridge design as defined in AS 5100.1 clause 4.6. Submit proof to Council as part of the design report. In the case of minor projects including minor culverts and temporary works, nominate a qualified and experienced civil or structural engineer.

Note: a professional engineer is a person that meets the definition given in AUS-SPEC 0010 Clause 1.4.

Evidence of designer's qualifications and experience: Submit to Council ~~Authorities.~~ along with the design.

Performance

Authority requirements: As per any DA consent conditions.

State planning legislation: As per any DA consent conditions, and the following Acts:

- Environmental Planning and Assessment Act (NSW)

- Protection of the Environment Operations Act (NSW)
- Roads Act (NSW)
- Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)

1.3 CROSS REFERENCES

General

Requirement: This is not a self-contained design document, conform to the following worksection(s):

- *0010 Quality requirements for design.*
- *0022 Control of erosion and sedimentation (Design).*
- *0041 Geometric sealed road design.*
- *0074 Stormwater drainage (Design).*
- *1101 Traffic management.*

1.4 STANDARDS

General

Bridge design: To the AS 5100 series and Austroads AGBT series.

Note: For more information, refer to ARRB Best Practice Guide 4 (2020) on bridge management and IPWEA NSW Bridge design guide (2020) for the design, construction and maintenance of bridges in council areas.

2 PRE-DESIGN PLANNING

2.1 PLANNING

Data collection

Requirement: Collect the following information (if available) of the existing bridge structure and/or surrounding area for the proposed bridge, to establish design criteria:

- Existing alignment.
- Existing bridge inventory records, such as span lengths, structure and foundation type.
- Historical information such as high flood levels, details of any modifications to the existing bridge and any previous bridges at the site.
- Previous waterway studies on file for the bridge site and for the wider catchment area.
- Other catchment and rainfall information.
- Traffic information, including the average number of vehicles that cross the bridge, what percentage are heavy vehicles, typical traffic speed and likely future increases.
- Council Local Environment Plans (LEPs).
- Information from any previous geotechnical investigations.
- Assessment of utilities.
- Survey information including adjacent property boundaries.

Design procurement model

Requirement: As per the DA consent conditions. If not specified, the developer is to propose their preferred procurement model for Council's approval and shall provide any supporting information which Council may require prior to such approval.

References: The procurement model is usually determined by the principals' in-house capabilities, policies and objectives. Austroads AGPD02 (2022) and Austroads AGBT04 (2018) give guidance on project procurement and discuss the advantages and disadvantages of different models. There are three main procurement models associated with road structures design:

- Separate design followed by construction. (Design and construction are separately procured).
- Integrated design and construct. (Also known as Design and Construct. Detailed design and construction are procured under one contract).
- Alliance arrangements. (This type of procurement method is not covered by the contracts worksections of AUS-SPEC).

Design delivery stages

Requirement: As per any DA consent conditions. At a minimum, provide a concept design as part of DA documentation, and as part of any Subdivision Works Certificate provide detailed design drawings, investigation reports, design reports and construction manuals.

Checking and review concepts

General: Reference: Austroads AP-T28 outlines the responsibilities of the Designer and Owner/Council authority for delivering a quality design.

Land tenure: Confirm which entities have ownership or care and control of waterfront land or stream crossings that form part of the site. Obtain each party's written consent to the works at the concept design (DA) stage. If the land is not dedicated public land, it is to be dedicated as public land as part of any Subdivision Certificate. Verify whether the land is subject to any claims under the Native Title Act.

Independent review: Not required for local or Regional classified roads unless requested by Transport for NSW.

Concept design

Design investigations: Inspect the site and carry out necessary design investigations.

Checklists: Complete the following before commencement of detailed design:

- Action checklist for preparation of bridge design concept: To Austroads AGBT04 (2018), Appendix B.
- Matters for resolution before design commences: To AS 5100.1 (2017) clause 6.

Geotechnical investigation and survey

Strength reduction factors: To AS 5100.3 (2017) Section 2.

Responsibilities: Obtain a preliminary geotechnical investigation prior to DA lodgement, to ensure that the initial siting and concept design is well informed regarding site constraints and soil conditions. As part of any detailed design (e.g. Subdivision Works Certificate) preparation, the proponent shall procure a full geotechnical investigation in consultation with the geotechnical and structural engineersthat will certify the design. The investigation is to include boring, sampling and testing of insitu soils as required to design the structural foundations to meet the required design life and serviceability of the structure.

Land survey

General: Document features of the site and surrounds including cadastral boundaries, trees, services and so on.

Heritage considerations

General: As required by the DA consent conditions, with reference to the State Heritage Register, Aboriginal Heritage Information Management System (AHIMS), and Council's Local Environmental Plan for potential impacts on heritage items. Waterways

Requirement: Provide a plan for management of heritage assets.

Protection of existing infrastructure

Existing plans: Obtain drawings of existing structures adjoining the site.

Dilapidation reports: Carry out inspections of all existing structures adjoining the site. Prepare a report on the existing structural condition including a photographic record of any defects.

Groundwater control: Identify potential effects of dewatering during construction.

2.2 SUBSIDISED SCHEMES

Funding

Government grant funds: If the works form part of a contract attracting Government grant funds, identify items which do not meet the project objectives and the requirements of the various authorities for the least Net Present Value (NPV) but may become the preferred option for construction.

If the works form part of a contract attracting Government grant funds, include the requirements here.

2.3 CONSULTATION

Council and other authorities

Requirements: Consult with the Council and other relevant authorities during the preparation of design. In addition to the requirements of this worksection, identify the specific design requirements of these authorities:

Authorities: Transport for NSW (formerly Roads and Maritime) in regard to classified roads, Water NSW for Controlled Activity Approvals, Department of Primary Industry (Fisheries) for design of stream crossings. Consult with the Consent Authority (e.g. Council) to ensure that any environmental requirements of the relevant Acts will be managed.

Public consultation

Requirements: Undertake public consultation on design in conformance with Council policy.

Utilities services plans

Existing services: Obtain service plans from all relevant utilities and other organisations whose services exist within the area of the proposed structure. Plot these services on the relevant drawings including the plan and cross-sectional views.

Note: BEFORE YOU DIG AUSTRALIA is a free service, from anywhere in Australia, for identifying underground pipe and cables. See www.byda.com.au. It only provides information on utility services (power, water, gas and telecommunications) and not all utility service operators are part of the scheme. The plans provide information about the presence of a service, not the exact location.

3 DESIGN

3.1 DESIGN CRITERIA

Design life

Requirement: As required by the DA consent conditions. Structures generally are to have a minimum design life of 100 years, as specified by AS 5100.1 clause 8.2. The design life may be increased to suit local projected climate conditions, exposure classification, importance of the structure and its purpose.

Ancillary components: A shorter design life may be specified in accordance with relevant codes and standards for easily replaceable ancillary components including steel barriers, light poles or signage gantries. For example, AS 5100.1 Clause 23.2 nominates a 50 year design life for signs and lighting structures, and AS 5100.2 Clause 25.2 nominates a 50 year design life for noise barriers.

References: Austroads AP-T28 provides useful information about the economies of long life structures.

Resolution of design issues

Design checklist: To Austroads AGBT04 (2018), Appendix A.

Engineering properties used for design

Concrete: To AS 5100.5 (2017).

Steel: To AS/NZS 5100.6 (2017).

Timber: To AS 5100.9 (2017).

Waterways and flood design

Design: To AS 5100.1 (2017) Section 11 and Austroads AGBT08 (2019).

Additional requirements: Generally, stream crossings are to be designed to meet the objectives of Council's Development Control Plan (DCP) and flood policy. At a minimum (without negating the requirements of any other Council policy), structures are to be structurally adequate for, and are not to impede, flood flows up to at least the 1% Annual Exceedance Probability (AEP) plus adequate freeboard in accordance with Clause 3.2 below. Generally, design the road carriageway on such structures to remain flood free for all storm events up to this AEP.

Small bridges: Unless otherwise indicated on the development consent, where inundation of small bridges is permitted by Council, the bridge shall be designed to remain flood free up to at least the 5% AEP storm event, with certification by a professional engineer stating that the bridge is capable of withstanding the inundation loadings for up to the 1% AEP storm event.

Safety in design

General: Document the risks associated with choices made in design and construction of the bridge and how design can be modified to eliminate or minimise their effects.

Requirement: Provide a design that allows for safe construction, operation and maintenance, and demolition in conformance with statutory requirements.

Documentation requirements: To AS 5100.1 (2017) Section 9.

~~**Durability of structural components**~~

~~Foundation and soil supporting structures: To AS 5100.3 (2017) Section 4.~~

~~Concrete: To AS 5100.5 (2017) Section 4.~~

~~Steel: To AS/NZS 5100.6 (2017) Section 3.~~

~~Timber: To AS 5100.9 (2017) Section 4.~~

Traffic conditions

Traffic requirements: Conform to *1101 Traffic management.*

Additional requirements: As per DA consent conditions, or as per this clause if no requirements are specified. Design for traffic flows that are forecast for 25 years post-completion of the development, at a minimum.

Geometry

Design: To AS 5100.1 (2017) Section 13.

Road layout: Conform to *0041 Geometric road design*.

Aesthetics

Design guidance: Austroads AGBT04 (2018) Appendix C provides references to assist designers. The impact of the bridge aesthetic on communities and the minimal additional cost for achieving good aesthetics is illustrated in RMS Bridge aesthetics (2019)..

Maintenance considerations

Rehabilitation and strengthening of existing bridges: To AS 5100.8 (2017).

Marine and saline or hostile soil environments: consider appropriate durability of materials.

Requirement: Provide an Operation and Maintenance Manual (in editable electronic format) to accompany the detailed design, including maintenance schedule, operational restrictions, quality of materials, fitments, finishes, joints and bearings, access for inspections and maintenance, debris load and scour protection.

Timber structures: further information is available in IPWEA (NSW) Timber bridge management report, a study based on 142 validated local government surveys which provides information on maintenance of timber bridges on regional and local roads in NSW.

Construction considerations

Requirement: Detail items to be considered during construction, including standardised components requirements, access restrictions, temporary traffic restrictions, WHS issues during construction, noise restrictions, vibration limits caused by excavation machinery and temporary works restrictions.

~~Formwork for concrete: To Austroads ATS 5305 (2023).~~

~~Placement of concrete: To Austroads ATS 5320 (2023).~~

~~Precast concrete members: To Austroads ATS 5325 (2023).~~

~~Structural steelwork: To Austroads ATS 5410 (2022).~~

Provisions for traffic: Conform to *1101 Traffic management*.

Design loads

General: To AS 5100.2 (2017).

~~Dead loads: To AS 5100.2 (2017) Section 8.~~

Additional requirements: As per DA consent conditions. At minimum for Regional classified roads, Industrial roads or equivalent, design to SM1600 unless otherwise approved by Council (for example, if a lesser design vehicle is supported and the structure is remote from any current or likely future B-double routes). Consider superimposed dead loads, live loads, wind, earthquake, thermal, foundation settlement, terrorism, collision, water flows, construction and any other loads with likelihood of occurrence during the design life.

Serviceability

General: To AS 5100.2 (2017).

Environmental constraints

Requirement: As per any DA consent conditions, which may include noise, air or waterway protection or mitigation measures. Generally, specify materials and coatings which are non-toxic to marine and terrestrial life, and design so as not to impede the passage of marine life, in consultation with NSW DPI Fisheries.

Erosion and sedimentation control: To *0022 Control of erosion and sedimentation (Design)*.

3.2 ROAD TRAFFIC AND PEDESTRIAN BRIDGES

General

Design guidance: To the AS 5100 series and AS 1742.

Standard designs: Council may require any proprietary components or designs to be replaced with generic or standard designs (vendor-agnostic) at its discretion, for ease of future maintenance.

Reference: AS 5100.4 and Austroads AP-R405 for more information about bridge bearings and expansion joints.

Design life maintenance

Requirement: Design for low maintenance.

Procedures for planned maintenance: To the AS 5100 series generally, AS 5100.1 Clause 19, and AGBT07..

Additional procedures for planned maintenance:

- To Austroads AGBT07 (2018) on the maintenance and management of existing bridges
- To ARRB Best Practice Guide 4 (2020) on bridge management for further guidance**.**

Design life maintenance:

- Timber: To AS 5100.9 (2017).
- Steel: To AS/NZS 5100.6 (2017).
- Concrete: To AS 5100.5 (2017).

Materials

General: Document low maintenance materials for construction, finishes and fitments. Consider exposure conditions and appropriate durability requirements.

Material types:

- Timber: To AS 5100.9 (2017) Section 2.
- Steel: To AS/NZS 5100.6 (2017) Section 2 and Austroads ATS 5410 (2022).
- Concrete: To AS 5100.5 (2017) Section.3 and for prefabricated elements to AS 3850.3 (2021).

Protection of materials: Document protection methods for materials to satisfy durability requirements.

Drainage

General: Conform to *0074 Stormwater drainage (Design)*.

Freeboard

Design: Provide freeboard as required by DA consent conditions, or **AUS-SPEC (CCC) 0074 Stormwater drainage (Design)** worksection Clause 3.6, to suit local conditions and expected amount and size of debris.

Public utilities

General: If public utilities are required, conceal from public view, where possible. Consider maintenance requirements and install where they may easily be craned or slung into or out of position from above.

Attachments: Specify durable materials for utilities and fixings to structures.

3.3 PROVISIONS FOR PEDESTRIANS AND CYCLISTS ON ROAD BRIDGES

Walkways and cycleways

Standard: To AS 5100.1 (2017) clause 13 and Austroads AGRD06A (2017).

Separate footpaths: For all local streets and above, design separate carriageways for vehicular and pedestrian traffic in accordance with **AUS-SPEC (CCC) 0041 Geometric sealed road design** and **0044 Pathways and cycleways (Design)** worksections. Cyclists may be catered for by on- or off-road (shared) facilities as per worksection 0044. Protect pedestrians where a pathway is within 1.5m of the edge of traffic lane by providing a suitable traffic barrier system for the traffic design speed (usually a rigid barrier e.g. a concrete F-type or New Jersey kerb system).

Traffic management: To AS 1742.9 (2018).

Disabled access

Standard: To the NCC cited AS 1428.1 (2009) and AS/NZS 1428.4.1 (2009).

3.4 OTHER STRUCTURES

Buried corrugated metal structures

Standard: To AS/NZS 2041.1 (2011) and Austroads AP-T196 (2011).

Soil-supporting structures

Standard: To AS 5100.3 (2017).

Note: The philosophy used for the design of earth-retaining structures in AS 5100.3 (2017) differs from that contained in AS 4678 (2002). It is considered that for bridges and road-related structures, where soil/structure interaction occurs and the loads are predominantly soil-imposed, the design method of AS 5100.3 (2017) is more realistic. However, AS 4678 (2002) contains useful information that can be used to supplement the design of structures covered by AS 5100.3 (2017).

Culverts

Standard: To AS 5100.2 (2017) Section 11 and AS 5100.3 (2017) clause 9 AS 1597.1 and AS1597.2 for precast box culverts..

Noise barriers

Standard: To AS 5100.1 (2017) Section 17 and AS 5100.2 (2017) clause 25.

3.5 STRUCTURES USED FOR PUBLIC SAFETY

Barriers and rails

Design of safety barriers: To Austroads AGRD06 (2022).

Standard: To AS/NZS 3845.1 (2015), AS 5100.1 (2017) Appendix A and AS 5100.2 (2017) Sections 12, 25 and Appendix A.

Approved barriers: Generally preference TfNSW-approved barrier products, or otherwise provide justification, to the satisfaction of Council, for selection of non-approved barriers. Refer to https://www.rms.nsw.gov.au/business-industry/partners-suppliers/approved-products-materials/safety-barriers/index.html

Pedestrian and cyclist path barriers: To AS 5100.1 (2017) clause 16.

Omitting safety barriers: Conform to AS 5100.1 (2017), clause 10.5.2. Specify flood depth indicators and signposting.

Lighting and lighting support structures

Standard: To the AS/NZS 1158 series, AS 1798 (2014) and AS 5100.2 (2017).

Design: Provide for street lighting on bridge approaches and crossings.

Protection screens

Requirement: As required by DA consent conditions, or at minimum to protect traffic from thrown or falling objects on high traffic, intermediate and high speed roads.

Standard: To AS 5100.1 (2017).

4 DOCUMENTATION

4.1 GENERAL

Approvals

Requirements: Document the approval conditions advised by the appropriate authority which contribute to the basis for the design of the bridge(s) and related structures.

Design reports

Concept design: Provide a design report including the following:

- Design criteria.
- Design options.
- Recommended solution.
- Recommended construction procedures.
- Recommended maintenance procedures.

Detailed design: Provide a design report including the following:

- Design criteria.
- Detailed design calculations.
- Structural design models.

- Reference documents supporting the design, such as hydrological, geotechnical, vibration study and fatigue study reports.
- Safety in design report.
- Construction sequence.
- Maintenance schedule.

Design certification

Requirement: Provide a signed and dated design certificate in accordance with **0010 Quality requirements for design** worksection..

Final certification of completed works

Requirement: Refer to AUS-SPEC (CCC) 0161 Quality Management Construction

4.2 DRAWINGS

General

Requirement: Provide drawings and/or computer output defining the works and assumed operating and maintenance procedures.

Structural drafting

Standards: To AS/NZS 1100.501 (2002) and Austroads AGBT05 (2018).

Drawing content

Requirement: Provide drawings to include the following for all structure features as required by DA consent conditions.:

Concept drawings: Include the following:

- Locality plan.
- Site plan.
- General arrangement plans, sections and elevations.

Construction drawings: Include the following:

- Cover sheet.
- Drawing sheet index.
- General notes.
- Drawing specific notes.
- Design loads/design life information.
- Locality plan.
- Site plan.
- General arrangement plans, sections and elevations.
- Geometric data.
- Vertical alignment diagrams.
- Horizontal alignment diagrams.
- Skew diagrams.
- Foundation plans and geotechnical information.
- Foundation details and pile set out.
- Underpinning details/protection measures to existing structures.
- Reinforced concrete details.
- Post-tensioned concrete details.
- Structural steel details.
- Bearings: General, installation and replacement details.
- Beams: Fabrication and installation.
- Expansion joint details.
- Deck drainage details.
- Safety barriers/rails: Key plans, sections, general details and support details.
- Sign/lighting/noise barriers/protection screens: Key plans, sections, general details and support details.
- Street lighting: Locations and details.

- Approach slabs and abutments: Plans, sections and details.
- Retaining structures.
- Earthworks and services.
- Construction sequence.
- Temporary works.
- Maintenance schedule.
- Details of access structures for future maintenance.
- Locations of existing utility services.
- Attachment details for new utility services.
- Traffic management plans.
- Erosion and sediment control plan
- Revegetation plan.

Work-as-executed drawings

Requirement: Provide an additional set of final construction drawings for the purpose of recording the work-as-executed by the Contractor. Mark up variations from the approved design using red pen.

Work-as-executed drawing format: in open digital (not requiring specific software) CAD format (DXF), as well as DWG and PDF copies.

Data format: To Austroads AP-R673 (2022).

4.3 SPECIFICATIONS

Construction documentation

Requirement: Prepare technical specifications using the AUS-SPEC Construction worksection *Templates* from the National Classification System including workgroups 02, 03, 11 and 13.

5 ANNEXURE A

5.1 ANNEXURE - REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS 1100		Technical drawing
AS 1100.101	1992	Technical drawing general principles
AS 1100.401	1984	Technical drawing - Engineering survey and engineering survey design drawing
AS 1100.501	2002	Technical drawing - Structural engineering drawing (Reconfirmed 2014)
AS/NZS 1158		Lighting for roads and public spaces
AS 1428		Design for access and mobility
AS 1428.1	2009	General requirements for access - New building work
AS/NZS 1428.4.1	2009	Means to assist the orientation of people with vision impairment - Tactile ground surface indicators
AS 1597.1	2010	Precast reinforced concrete box culverts - Small culverts (not exceeding 1200 mm span and 1200 mm height)
AS 1597.2	2013	Precast reinforced concrete box culverts Large culverts (exceeding 1200 mm span or 1200 mm height and up to and including 4200 mm span and 4200 mm height)
AS 1742		Manual of uniform traffic control devices
AS 1742.9	2018	Bicycle facilities
AS 1798	2014	Lighting poles and bracket arms - Recommended dimensions
AS/NZS 2041		Buried corrugated metal structures
AS/NZS 2041.1	2011	Design methods
AS/NZS 3845		Road safety barrier systems and devices
AS/NZS 3845.1	2015	Road safety barrier systems
AS 3850		Prefabricated concrete elements
AS 3850.3	2021	Civil construction
AS 4678	2002	Earth-retaining structures
AS 5100		Bridge design
AS 5100.1	2017	Scope and general principles

AS 5100.2	2017	Design loads
AS 5100.3	2017	Foundation and soil-supporting structures
AS 5100.4	2017	Bearings and deck joints
AS 5100.5	2017	Concrete
AS 5100.6	2017	Steel and composite construction
AS 5100.7	2017	Bridge design – Bridge assessment
AS 5100.8	2017	Rehabilitation and strengthening of existing bridges
AS 5100.9	2017	Timber
ARRB BPG4	2020	Bridge management
Austroads AGBT		Guide to bridge technology
Austroads AGBT04	2018	Design procurement and concept design
Austroads AGBT05	2018	Structural drafting
Austroads AGBT07	2018	Maintenance and Management of Existing Bridges
Austroads AGBT08	2019	Hydraulic design of waterway structures
Austroads AGPD		Guide to project delivery
Austroads AGPD02	2014	Planning and control
Austroads AGRD		Guide to road design
Austroads AGRD06	2020	Roadside design, safety and barriers
Austroads AGRD06A	2017	Paths for walking and cycling
Austroads AP-R405	2012	Design rules for bridge bearings and expansion joints.
Austroads AP-R673	2022	Austroads road asset data Standard
		Austroads Research Report
Austroads AP-T28	2003	Guidelines for ensuring specified quality performance in bridge construction
Austroads AP-T196	2011	Guidelines for design, construction, monitoring and rehabilitation of buried corrugated metal structures
Austroads AP-R597	2019	Data Standard for Road Management and Investment in
Austroads ATS		Austroads technical specifications
Austroads ATS 5305	2023	Formwork for concrete
Austroads ATS 5320	2023	Placement of concrete
Austroads ATS 5325	2023	Precast concrete members
Austroads ATS 5410	2022	Structural steelwork – Fabrication and erection
Native Title Act	1993	Australia and New Zealand Version 3.0 Native Title Act 1993
IPWEA (NSW)	2020	Timber bridge management report
RMS, NSW	2019	Bridge aesthetics: Design guideline to improve the appearance of bridges in NSW
Cessnock City Council		Development Engineering Handbook

6 ANNEXURE M – CESSNOCK CITY COUNCIL SPECIFIC CLAUSES

M1.	Variations to or non-conformances with Council's AUS-SPEC are to be evaluated with reference to the procedure in Council's *Development Engineering Handbook*. Acceptance is to be obtained in writing from: a) an authorised representative of Council's Director of Infrastructure and Engineering Services.	**Variation procedure**
M2.	This specification applies in addition to any development consent (DA) conditions. If there is any inconsistency, the conditions of consent shall prevail.	**DA Conditions**
M3.	Refer to the Cessnock City Council Development Engineering Handbook for final inspection, works-as-executed and handover requirements.	**Completion**

7 AMENDMENT HISTORY

0	15/01/2024	First Published