

## TOMLINS AND DODSONS ROADS UPGRADE 2025/2026

### DEFINITIONS

<u>'Agreement'</u>	means the Letter of Acceptance together with this Design Brief (including annexures), forming part of the Contract under AS4902–2000
<u>'Contractor'</u>	means the engineering company responsible for carrying out the design and construction of the Works under AS4902–2000
<u>'Principal'</u>	means Banana Shire Council.
<u>'Principal's Project Requirement (PPR)'</u>	Means this Design Brief and all associated documents, drawings, schedules, and appendices issued by the Principal that describe the scope, design intent, performance criteria, standards, and other requirements for the Works, as contemplated under Clause 2 of AS4902–2000
<u>'Council'</u>	means Banana Shire Council.

*This Design Brief (Rev 01, 9-Jan-2026) forms part of the Principal's Project Requirements under AS4902–2000 for the Tomlins and Dodsons Roads Upgrade Project. It sets out the design scope, standards, and deliverables to be undertaken by the Contractor.*

### **1 PROJECT DESCRIPTION**

As part of Banana Shire Council's 2025/26 Roads Upgrade Program, a project will be undertaken to widen and upgrade Tomlins Road and Dodsons Road in the Goovigen area. The project involves approximately 12 kilometres of road widening and associated works, aimed at improving safety, accessibility, and overall transport efficiency within the local road network.

The project will be delivered as a collaborative initiative between Banana Shire Council and Edify Energy under a Private Works Agreement, with the objective of upgrading the existing roads to meet the standards of **Rural Minor Collector roads**. The upgrade works encompass widening to Rural Minor Collector standard, associated drainage improvements, and the construction of a BAR treatment at the Tomlins–Dodsons Road intersection to safely accommodate heavy vehicle movements including Class 9 design vehicles during the development of the proposed solar farm.

Council has prepared a Concept Design, included as Appendix A, which outlines Council's expectations, design intent, and indicative scope of works to be developed and refined by the

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Contractor. The Concept Design serves as a basis for the Contractor's detailed design and construction delivery.

Council's priorities for the project include establishing a safe, efficient, and reliable transport corridor, while maximising value for money, design efficiency, and quality outcomes. The works will be procured through a Design & Construct Lump Sum Contract in accordance with AS4902–2000 and undertaken by a suitably qualified civil engineering and construction contractor.

The project scope includes, but is not limited to, pavement rehabilitation, bitumen sealing, and the installation of new culverts to improve drainage.

## **2 PROJECT OBJECTIVES**

The objectives to be accomplished through the proposed Tomlins and Dodsons roads upgrade project are as follows:

- Design the upgrade of Tomlins Road and Dodsons Road to the standards of Rural Minor Collector roads, providing a safe, efficient, and reliable transport corridor that meets current and future community needs.
- Undertake road widening and associated works to improve road geometry, formation, drainage, and pavement performance.
- Undertake an intersection upgrade at the Tomlins Road and Dodsons Road intersection, incorporating a Basic Rural Right Turn Treatment (BAR) in accordance with the relevant road design guidelines to improve traffic safety and functionality.
- Support the development of the Smoky Creek Solar Farm by providing a safe and compliant site access in accordance with relevant standards and statutory requirements.
- Achieve value for money, efficiency, and quality outcomes through effective planning, risk management, and adherence to applicable design and construction standards.

## **3 PROCESS OF DELIVERY**

The Contractor is responsible for managing and completing all design activities necessary to deliver the Works in accordance with this Design Brief, AS4902–2000 and all referenced standards.

The Principal may review design submissions for the sole purpose of confirming conformity with the Design Brief. Any review, comment or lack of comment by the Principal does not constitute approval, does not relieve the Contractor of any obligation, and does not in any way transfer responsibility for the design.

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## 3.1 DESIGN STAGES

- Stage 1: Preliminary Design (85% design stage review)
- Stage 2: Detailed Design (100% design stage review)
- Stage 3: Final Submission
- Stage 4: Post Design Support

Each stage must include the completed documentation relevant to that stage to allow the Principal to undertake a conformity review.

The Contractor must not proceed to construction using any design that has not been submitted as Issued for Construction (IFC).

## 3.2 DESIGN SUBMISSIONS AND REVIEWS

Design submissions must provide sufficient detail for the Principal to confirm that the design conforms to this Design Brief.

- The Contractor must submit each design package complete and checked.
- The Principal may undertake a conformity review within the period allowed under the Contract.
- The Contractor remains fully responsible for the adequacy, accuracy and completeness of the design, regardless of any review, comment, or lack of comment by the Principal.

The Contractor must address any non-conformances identified by the Principal and resubmit the affected documentation.

## 3.3 PROGRESS MEETINGS

The Contractor must attend progress meetings as reasonably required by the Superintendent to discuss coordination, design progress, safety, risks, interfaces, and program matters. Meetings are not design approval forums. The Contractor remains responsible for all design decisions.

## 3.4 PRELIMINARY DESIGN SUBMISSION

The Preliminary Design submission must demonstrate:

- compliance with this Design Brief,
- compliance with referenced standards,
- resolution of key design constraints,
- identification of required departures or non-conformances (if any),
- design development to a level suitable to progress toward detailed design.

The Principal's review is limited to determining conformity with this Design Brief. The Contractor retains full responsibility for selecting the design solutions that satisfy the Design Brief and performance requirements.

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## 3.5 DETAILED AND FINAL DESIGN SUBMISSION

The Detailed Design submission (100%) must present a complete design suitable for construction. The Final Submission (IFC package) must include all drawings, documents, models, reports and digital data required to construct the Works.

All IFC documents must incorporate all required revisions following the Principal's conformity review. The Contractor must ensure that no IFC documentation contains unresolved ambiguities, inconsistencies, or omissions.

## 3.6 POST DESIGN SUPPORT

The Contractor must provide post-design support necessary to ensure the Works can be constructed in accordance with the IFC design. This includes:

- revisions required to maintain conformity with the Design Brief,
- responding to information requests,
- providing updated digital design data as needed for construction,
- preparing amended IFC drawings where required.

Corrections arising from the Contractor's design errors, omissions or non-conformances are at the Contractor's cost.

## 4 DELIVERABLES

The Contractor must provide all deliverables necessary to complete the design and support construction of the Works in accordance with this Design Brief, AS4902-2000 and all referenced standards.

All deliverables must be complete, accurate, coordinated and suitable for use in construction.

The Principal may review deliverables for the sole purpose of confirming conformity with this Design Brief; such review does not constitute approval and does not relieve the Contractor of any design responsibility.

### 4.1 GENERAL DELIVERABLES

The Contractor must provide the following:

- Conduct site inspection.
- Dial Before You Dig (BYDA) search.
  - If underground or existing infrastructure is identified, further investigations (e.g., potholing or service locating) must be undertaken by the Contractor as required.

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- Colour digital site photographs in accordance with Section 6.
- Topographical survey and associated digital terrain/model files.
- Potholing of identified underground services, where required for design confirmation.
- Geotechnical investigations and a factual report suitable for engineering design.
- Submissions to the Department of Agriculture, Fisheries and Forestry (DAFF), where required by legislation or standards.
- Pavement design, including supporting calculations and documentation.
- All documentation necessary to demonstrate conformity with the standards referenced in Section 5.

All deliverables must be provided in an electronic format.

## 4.2 DESIGN DOCUMENTATION

The Contractor must prepare and submit design documentation at each design stage (Preliminary 85%, Detailed 100%, and Issued for Construction). Documentation must include all material necessary for the Principal to undertake a conformity review.

### **Drawings**

Design drawings must be prepared to professional engineering drafting standards and include, where applicable:

- Cover Sheet, Locality Plan and Index Sheet
- General Layout Plan
- Longitudinal Sections and Cross Sections
- Drainage Plan(s)
- Culvert Schedule and Culvert Details (if applicable)
- Safety Barrier Layout (if applicable)
- Pavement Marking and Signage Plan
- Erosion and Sediment Control Plan
- Any other drawings required to fully describe the design

Drawings must:

- Be provided in CAD (.dwg) and PDF formats;
- Use the Principal's standard title block (to be supplied);
- Use standard engineering scales appropriate to the content;
- Be complete, coordinated and suitable for use in construction.

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## **Design Calculations and Supporting Documentation**

The Contractor must submit all design calculations, data sets, modelling files and supporting documentation required to verify conformity with:

- This Design Brief;
- Referenced standards and guidelines;
- Manufacturer requirements (where relevant).

Documentation must include but is not limited to:

- Pavement design calculations;
- Drainage and hydraulic calculations;
- Geotechnical design inputs;
- Horizontal and vertical geometry design outputs;
- Road safety barrier assessments (if applicable);
- Design vehicle turning path analysis.

### **4.3 FINAL SUBMISSION (ISSUED FOR CONSTRUCTION)**

The Issued for Construction (IFC) submission must include:

- IFC drawings in CAD and PDF formats;
- A completed Safety-In-Design Report;
- All digital survey files and updated design models;
- The final Geotechnical Factual Report;
- The BYDA report;
- A Bill of Quantities relevant to construction planning and administration;
- Machine guidance files (e.g., Trimble format), where available;
- Any other digital data required to construct the Works.

The IFC documents must incorporate all revisions arising from the Principal's conformity review and must be fully coordinated.

### **4.4 POST-DESIGN SUPPORT**

The Contractor must provide post-design support to ensure the Works can be constructed in accordance with the IFC documentation. Post-design support includes:

- Responding to requests for technical clarification;
- Preparing revised design documentation where necessary to maintain conformity with this Design Brief;
- Providing updated design files, models or drawings where field conditions require refinements;

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- Producing additional setting-out data, if required.

## 4.5 FORMAT AND SUBMISSION REQUIREMENTS

The Contractor must ensure all deliverables:

- Are provided electronically in the formats specified in Section 9;
- Are complete, checked and coordinated prior to submission;
- Clearly reference drawing or document numbers, revision status and dates;
- Remain consistent across all design stages;
- Are suitable for use by the Principal, Superintendent and construction teams.

## **5 DESIGN REQUIREMENTS**

- The Contractor must identify all existing infrastructure and services, including undertaking potholing as required.
- The Contractor must provide copies of all site investigation, geotechnical and survey reports in conjunction with the design documents.
- The Horizontal and Vertical Alignment, Pavement Crossfall, Earthwork Batters, Sight distance design shall comply with CMDG D1 – Geometric Road Design, specifically Annexure D01A.
- The overall design shall be in accordance with Austroads' Guide to Road Design, and where this is not possible meet the outcomes of the Lower Order Road Design Guidelines.
- The alignment is to be determined such that the design standards defined in this section are attained while minimizing costs and impacts, and meeting Council's priorities for safety, cost-effectiveness, and design performance. If need be, Alignments outside the existing road reserve can be considered and the Contractor shall submit preliminary drawings for conformity review prior to commencing final design.
- The Contractor shall identify roadside hazards, assess the need for safety barriers, identify locations and type of barrier required, and produce a report. Safety barrier locations, length of need, barrier type and terminal type shall be clearly shown on the relevant plan/profile drawings and intersection drawings.
- Existing driveways shall be reinstated in their current location unless they are considered unsafe, or a more suitable location is available. Connections to all existing property accesses shall also be provided in the design. The Principal will manage landowner engagement regarding driveway relocations.
- The Contractor is to ensure that the design does not unnecessarily conflict with existing infrastructure such as drainage, lighting, underground sewer, water lines.

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- The Contractor is also to ensure that new or relocated infrastructure can be installed as proposed in the design.
- Where the road design is required to connect into existing alignments, such tie-ins shall be designed with minimum disturbance to existing facility. The design shall provide for the continuity of geometry and form at the tie-ins.
- Chainages to be adopted for road design shall be as per the information provided in the Concept Design.
- The Contractor shall submit preliminary drawings inclusive of design vehicle turning paths for conformity review prior to commencing final design.
- All open drains and floodways shall be designed in accordance with Austroads' Guide to Road Design Part 5B or Queensland Urban Drainage Manual (QUDM).
- All culverts and associated works shall be in accordance with DTMR Standard Drawings.
- Repair or replacement floodways is to comply with the Department of Agriculture, Fisheries and Forestry (DAFF) requirements.
- Where required by legislation, the Contractor is responsible for preparing and lodging submissions to DAFF. Compliance with DAFF requirements forms part of the Contractor's design obligations.
- The Contractor is responsible for the hydraulic assessment and design of all culverts, floodways and drainage structures affected by the Works. Hydraulic assessment must be sufficient to demonstrate compliance with the performance, safety and statutory requirements of the Contract, including the Accepted Development Requirements for Waterway Barrier Works.
- Hydraulic assessment is to be targeted and proportionate to the scale, function and risk of each structure.
- The Contractor is not required to undertake full catchment-wide or floodplain modelling unless such modelling is necessary to demonstrate compliance with statutory or safety requirements for a particular structure.
- Where existing culverts and floodways are replaced on a like-for-like basis, no detailed hydraulic assessment is required, provided the replacement replicates the existing size, type, invert levels and alignment, and the Contractor is satisfied that the replacement does not materially alter hydraulic performance or introduce adverse upstream or downstream impacts.
- Where the Contractor proposes, or determines it is necessary, to upgrade a culvert or floodway to a larger capacity, the Contractor must undertake an appropriate hydraulic assessment to demonstrate compliance with the performance, safety and statutory



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requirements of the Contract, including the Accepted Development Requirements for Waterway Barrier Works.

- The locations of all drainage structures shall be specified by coordinates in the design drawings.
- The Contractor shall determine where subsoil drainage will be required to ensure adequate drainage of pavement subgrades and to prevent "wetting up" and shall design the system accordingly including any remedial measures which may be necessary to alleviate the problem. Subsoil drainage shall be designed in accordance with Austroads' Guide to Road Design Part 5A.
- The design must provide Erosion and Sediment control plans.
- Layout drawings for appropriate pavement marking, guideposts and traffic signage shall be prepared in accordance with AS1742 parts 1 to 15.
- The design must provide adequate maintenance access to allow for ease of maintenance.
- Copies of standard Drawings shall be obtained on-line on the CMDG website.

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## **6 PHOTOGRAPHY**

The Contractor is to provide colour digital photographs of the existing road reserve, including but not limited to road pavement, road shoulders, stormwater features, and verges. Label or number photographs and provide an index that includes the location of the feature by chainage, and the position and view direction from which the photograph was taken.

## **7 SAFE WORK PRACTICES**

Further to the Conditions of Tendering and Contract, the Contractor shall ensure that his employees, agents or sub-consultants/contractor or their employees, agents or sub-contractors comply with the requirements of the Queensland Work Health and Safety Act in so far as they are applicable to the execution of work under this contract. The Contractor must ensure they are aware of all potential hazards and of all safety requirements relating to the Works. A risk assessment and signed SWMS must be submitted to Council prior to commencing any field work.

## **8 PROGRAM AND COMPLETION**

The Contractor shall prepare and submit a Design Program outlining key milestones, deliverables, and review timeframes for the design phase within 10 business days of Contract award.

The Design Program shall identify the stages for Preliminary (85%), Detailed (100%), and Final Design submissions, including Superintendent review periods and target completion dates. The program shall form part of the Contractor's overall Contract Program required under AS4902–2000 and shall be maintained and updated as the project progresses.

The Principal will review the Design Program for information and coordination purposes; however, such review shall not relieve the Contractor of its responsibility to achieve completion in accordance with the Contract.

## **9 CONCEPT DESIGN – STATUS AND RELIANCE**

The Concept Design attached in Appendix A forms part of the Principal's Project Requirements and is provided for information and tendering purposes only. The Contractor must not rely on the Concept Design as a complete or fully coordinated design.

The Contractor must verify all information, levels, geometry, dimensions, underground services and constraints and must develop its own design to satisfy the performance, safety and statutory requirements of this Contract.

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The Contractor is solely responsible for developing its own design solutions and must not treat the Concept Design as prescriptive, exhaustive, or fit for construction.

## **10 DESIGN DELIVERABLES AND SUBMISSION REQUIREMENTS (AS4902-2000 ITEM 17)**

Document	No. of copies	Submission Timing
Design Program	1 electronic	Within 10 Business Days of Date of Acceptance
Preliminary Design (85%)	1 electronic	Within 20 Business Days of Date of Acceptance
Final design (100%)	1 electronic	Within 10 Business Days of the Principal's conformity review
Issued for Construction Drawings	1 electronic	Prior to commencement of corresponding Works

Unless stated otherwise, the Principal's conformity review period for each design stage is 10 Business Days.

## **11 OBLIGATIONS OF THE CONTRACTOR**

- The Contractor must perform the design in a diligent manner, and to the standard of skill and due care expected of the Contractor experienced in the provision of design obligations required in accordance with this brief.
- The Contractor must use all reasonable efforts to be informed of the Principal's requirements during the performance of the design obligations.
- The Contractor must ensure that all personnel engaged to undertake the design obligations are appropriately qualified, competent, and experienced in the provision of the design obligations required by the Principal. The Principal will not enter into any agreement with a Contractor who utilizes personnel who are not appropriately qualified to perform the design obligations.
- The Contractor shall perform the design obligations expeditiously and in accordance with this Design Brief.
- As soon as practicable, the Contractor, after becoming aware of any matter which is likely to change or has changed the timing or cost of the design obligations, must give notice to the Principal detailing the circumstances and extent, or likely extent of the change or delay.
- The Contractor warrants that no conflict of interest exists at the date of Contract commencement and must immediately notify the Principal of any actual, potential, or perceived conflict of interest.

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## **12 COPYRIGHT**

Intellectual property rights in the design documentation and other materials created by the Contractor remain vested in the Contractor, subject to the provisions of Clause 10 of AS4902–2000. The Principal is granted a perpetual, royalty-free, irrevocable licence to use, reproduce, and adapt such materials for the purposes of constructing, operating, maintaining, and extending the works. All design documentation and related data shall be provided to the Principal in editable electronic format upon completion.

## **13 INDEMNITY**

The Contractor indemnifies the Principal and Council against any loss or damage to property and against any claim or action which may be brought or made by any person against the Principal or Council in respect of personal injury or death of any person or loss of or damage to property caused by a negligent or willful act or omission of the Contractor, its employees, agents, and subcontractors.

## **14 INSURANCES**

The Contractor shall maintain and provide evidence of insurance in accordance with Clause 16 of AS4902–2000, including but not limited to:

- Insurance of Employees

Against any death of or injury to persons employed by the Contractor pursuant to the requirements of the Workers Compensation and Rehabilitation Act 2003 (QLD).

- Public Liability Insurance

Against any death or injury to any third party or parties or loss of or damage to any property whatsoever caused during the performance of the Works under a public liability policy. Such policy shall have a limit of indemnity of not less than \$20,000,000 and shall contain a cross liability clause and a Principal's indemnity noting Banana Shire Council as Principal.

- Professional Indemnity Insurance

For all claims arising out of any negligent act, error or omission whether committed or alleged to have been committed by the Contractor for a limit of not less than \$10,000,000 any one claim.

- Motor Vehicle Insurance

- A motor vehicle policy covering accidental damage, fire and theft. Such a policy shall be for a sum not less than the full market value of the vehicle.

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- Against any injury to any third party or parties under the compulsory Third Party Insurance Act as required by the Motor Accidents Insurance Act 1994 (QLD).

Should any of the above insurance policies include an excess or deductible amount then the Contractor shall be liable for such amount(s) in the event of any claim(s).

Certificates of Currency shall be submitted to the Superintendent prior to commencement of any work.

These insurances shall remain valid and in effect until all contractual obligations, including design warranties, are satisfied. The Principal shall be noted as an interested party on all applicable policies.

The levels and types of insurance required by this Design Brief are to be read consistently with, and do not limit, the requirements of Clause 16 of AS 4902–2000 and Annexure Part A (Items 23–25). If there is any inconsistency, the higher level or more stringent requirement applies.

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## APPENDIX A CONCEPT DESIGN

DISCLAIMER: This concept design for information and tendering purposes only.