



Design Policy and Procedure

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1. APPLICATION

This policy applies to all paid, contracted, and volunteering staff of the Sucon Consultancy Ltd (from here on referred to as 'Sucon'. This policy also applies to all Sucon associates, subcontractors, and freelancers. This policy also extends to all business extensions of Sucon.

2 EFFECTIVE DATE: 06/05/2021

This applies to all Sucon-relevant operations from the effective date stipulated above. From the date stipulated above all previous policies and practices are repealed.

3 POLICY IMPLEMENTATION, APPROVAL, MONITOR AND REVIEW

The Central Administration and the responsible officer(s) of Sucon via the authority of the President, Vice Presidents, and Operations Manager are liable for the management and implementation of this policy and ensuring that its provisions and records management are applied and adhered to. This includes the establishment of relevant record-keeping systems.

APPROVAL AND REVIEW	DETAILS
Policy Author	Arnel Sinconiegue, Vice President - Technical Services
Council Approval	 _____ Lefaotogi Paletasala Faolotoi President
Next Review Date	<ul style="list-style-type: none">• Last Reviewed May 2024• Next Review May 2027

4 PURPOSE AND DEFINITION

The Design Policy and Procedure provides a systemic guideline and protocol for the development, production and implementation of various designs produced in-house or outsourced via Sucon. This policy ensures that all designs, calculations, concepts, drawings and related annex design documents such as surveys and reports produced within or through Sucon are quality assured in meeting international standards.

4.1 TYPES OF DESIGNS

The definition of designs covers but is not limited to the following:

- Architectural Designs (Buildings, Landscaping, Interior, etc.)
- Civil Engineering Designs
- Electrical Engineering Designs
- Mechanical Engineering Designs (Including Plumbing, Fire, Hydraulic etc.)
- Specialised Engineering Designs (Marine, Aviation, BIM, Mining etc.)
- Structural Engineering Designs

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4.2 ANNEX DESIGN DOCUMENTS

This policy also covers annex design documents and contributive materials such as reports, surveys, studies, samples, research and other forms of publications. This includes but is not limited to the following:

- a) Archaeological Surveys and Reports
- b) Concept Notes
- c) Design Calculation Reports
- d) Design Reports
- e) Environmental Impacts Assessment Reports (including PEARS, marine surveys)
- f) Feasibility Studies
- g) Geotechnical Surveys and Reports
- h) LiDAR Surveys and Reports
- i) Specialized Surveys and Reports (Depth-sounding survey, bathymetric, tunnel examination, mining, etc.)
- j) Topography Surveys and Reports

5 SUCON DESIGN GUIDING PRINCIPLES

Sucon recognises that this Policy serves both the public good, in line with the Council's commitment to social responsibility, and Sucon interests in maximising the positive impacts of our services. Sucon adheres to a set of principles aimed at ensuring safety, efficiency, sustainability, and compliance with national and international regulations pertaining to respective countries we operate and deliver our services within. Our guiding principles are divided into the following three (3):

5.1 Engineering Design Principles:

- i. **Safety:** Ensuring designs prioritise the safety of users, workers, and the general public. This includes adherence to safety codes and standards relevant to the project's location and type.
- ii. **Efficiency:** Designing systems and processes that are efficient in terms of energy use, materials, and cost. This often involves optimisation and the use of advanced engineering techniques subject to the approval of the Presidents Council.
- iii. **Sustainability:** Incorporating principles of sustainability to minimize environmental impact, such as using renewable materials, energy-efficient technologies, and sustainable design practices.
- iv. **Durability and Reliability:** Designing for longevity and reliability, considering factors like maintenance requirements and lifecycle costs. This also includes designing based on the available materials and expertise in country.
- v. **Code Compliance:** Ensuring designs comply with building codes, zoning regulations, environmental regulations, and other legal requirements applicable to the projects location.
- vi. **Inclusive and Gender-Responsive:** All Sucon designs and documents must be inclusive

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and take into account the needs of people with disabilities, children, women and other vulnerable groups.

- vii. **Innovation:** Sucon encourages innovative solutions that push the boundaries of engineering while maintaining practicality and feasibility. Acceptance of untested or unconventional innovation will be subject to the President Council's approval and scrutiny.
- viii. **Interdisciplinary Collaboration:** Sucon promotes collaboration between engineering disciplines (e.g., civil, mechanical, electrical) to ensure integrated design solutions.
- ix. **Risk Management:** All designs must identify and mitigate potential risks associated with the design, construction, and operation phases of projects. This is inclusive of social and environmental risks.

5.2 Architectural Design Principles:

- i. **Aesthetic Integrity:** Creating designs that harmonize with their surroundings and meet the aesthetic preferences of clients and end-users.
- ii. **Functionality:** Designing spaces that are functional and meet the operational needs of occupants or users.
- iii. **Spatial Efficiency:** Maximizing the use of space while ensuring comfort and usability.
- iv. **Accessibility:** Designing buildings and spaces that are accessible to people with disabilities, following accessibility guidelines and standards. This includes the principles of gender responsive infrastructure.
- v. **Cultural Sensitivity:** Incorporating local culture and context into architectural designs where relevant, respecting historical significance and community preferences.
- vi. **Environmental Responsibility:** Using sustainable building materials, energy-efficient systems, and green design principles to minimize environmental impact.
- vii. **Building Performance:** Optimising building performance in terms of energy efficiency, indoor air quality, and occupant comfort.
- viii. **Technological Integration:** Integrating technology into architectural designs where appropriate, such as smart building systems and IoT (Internet of Things) solutions.

5.3 Annex Design Documentation:

- i. **Design Documentation:** Maintaining detailed records design documentation, including drawings, specifications, calculations, and reports, to ensure clarity and facilitate construction.
- ii. **Quality Assurance:** Implementing internal and external (where applicable) quality assurance processes to verify that designs meet requirements and standards before implementation.
- iii. **Continuing Education:** Encouraging ongoing professional development and staying

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updated on industry trends, new technologies, and best practices.

By adhering to these principles and standards, Sucon maintains delivering high-quality engineering and architectural designs that meet client expectations, regulatory requirements, and contribute positively to the built environment.

6 DESIGN ADHERENCE AND COMPETENCY STANDARDS – THE POLICY

All Sucon produced or influenced designs and annex design documents must adhere to the following:

6.1 Official Building Codes of Sucon

In meeting our strategy in maintaining international standards, Sucon designs are catered to the building codes of **Australia**, **New Zealand** and the **United States of America** (USA). Our official building codes do not discredit the building standards of the Pacific Islands where our projects are based but are solely for the purpose of internal uniformity in our designs. This ensures that our designs are consistent internally. The building code of the projects setting precedes on the regulatory basis.

6.2 Institute of Professional Engineers Samoa (IPES)

As per **Qualifications Quality Assurance Policy**, all Sucon full-time staff are subject to the standards of IPES in Samoa, and are required to register in alignment is the **IPES Registration Regulation 2017**.

Thus, it is a minimum requirement that all Sucon designs and annex design documents are subject to the standards upheld by IPES.

6.3 Design Sign Off and Certification

All design sign-off and certification must be conducted by the following verified in-house professionals subjective to the standards and regulations of the respective country and context of the project in alignment with the Presidents Councils approval:

i. Chartered Professional Engineer (CPEng/CEng) – European Standards

For countries subject to European standards pertaining to the Washington, Dublin and Sydney Accords, the in-house engineers must be chartered by the relevant institution and authority of the respective country of where the project is located. This includes but is not limited to the following institutions:

- ASEAN Federation of Engineering Organizations (AFEO)
- Engineering New Zealand
- Engineering UK
- Engineers Australia
- Fiji Institute of Engineers (FIE)
- Institute of Engineering Papua New Guinea (IEPNG)
- IPES (Samoa)

ii. Professional Engineer (PE) – USA Standards

For countries or territories subject to standards of the United States of America (USA), the certifying engineer in-house has to have successfully completed the PE certification and examination relevant to the discipline and regulations of the respective context of

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the project.

Aside from the sign off and certification, authority over the direction of the design, the calculations and annex documentation remains with the President in alignment with 7.3.1.

6.4 Membership of Other Professional Organisations without Charter or PE Issuance

In the absence of meeting requirements for 6.1 or 6.2, project and technical staff involved in the design process or project management, must at least be a member and be registered to other associations pertaining to engineering, architectural, design, environmental, project management and any other relevant disciplines. This includes but is not limited to the following:

- American Society of Refrigeration, and Air Conditioning Engineers (ASHRAE)
- Civil Contractors New Zealand
- Project Management Professionals New Zealand
- Fiji Association of Architects (FAA)
- Philippine Society of Mechanical Engineers (PSME)
- Samoa Conservation Society (SCS)
- Samoa GIS User Group
- Samoa Recycling and Waste Management Association (SRWMA)
- South Pacific Professional Engineering Excellence (SPPEEx)
- Illuminating Engineering Society of Australia, and New Zealand (MIES)

7 DESIGN DEVELOPMENT AND APPROVAL PROCEDURE

Design works and annex design documents as defined in section 4, are subject to the following extensive internal scrutiny and approval procedures. The scrutiny and approval procedures provides a platform for peer review, quality assurance, feedback, idea and skill sharing among the design and project coordination teams of Sucon. We believe that having multiple lens and a multidisciplinary approach to our designs and annex design documents ensures that the highest standards are upheld.

The design and annex design document scrutiny and procedures are divided into two (2) processes. Option one (1) for Standard Review, and Option two (2), for Extensive Review:

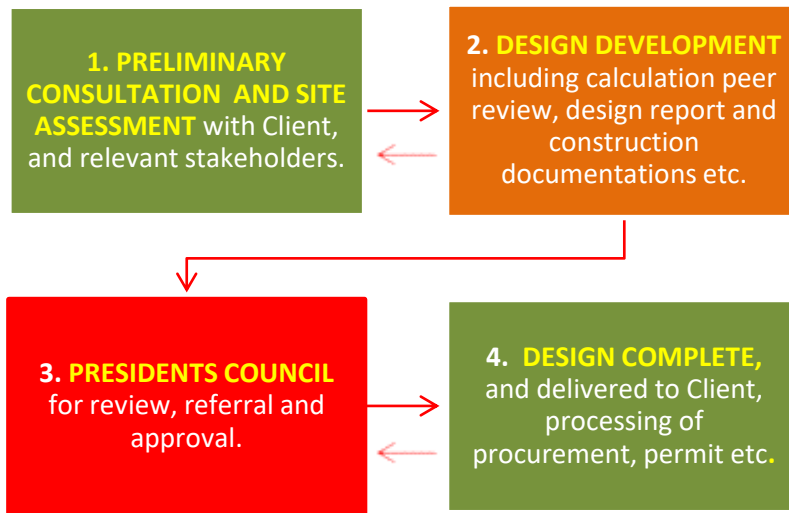
7.1 Standard Review Procedure

The standard review procedure is designed to process, scrutinize and review small and medium size projects that **do not** have complicated features, setting or environmental conditions. This includes but is not limited to the following:

- a) Value of below USD 500, 000.00
- b) Size below 500 square metres
- c) Floors and storeys of two and below
- d) Not situated on the cliff or terrain above 2 meters in height
- e) Not situated on the ocean or coastal zone of less than 1.5 meters above sea level
- f) Does not require specialised engineering or expertise not found in-house or in country

Our standard review procedure is as follows:

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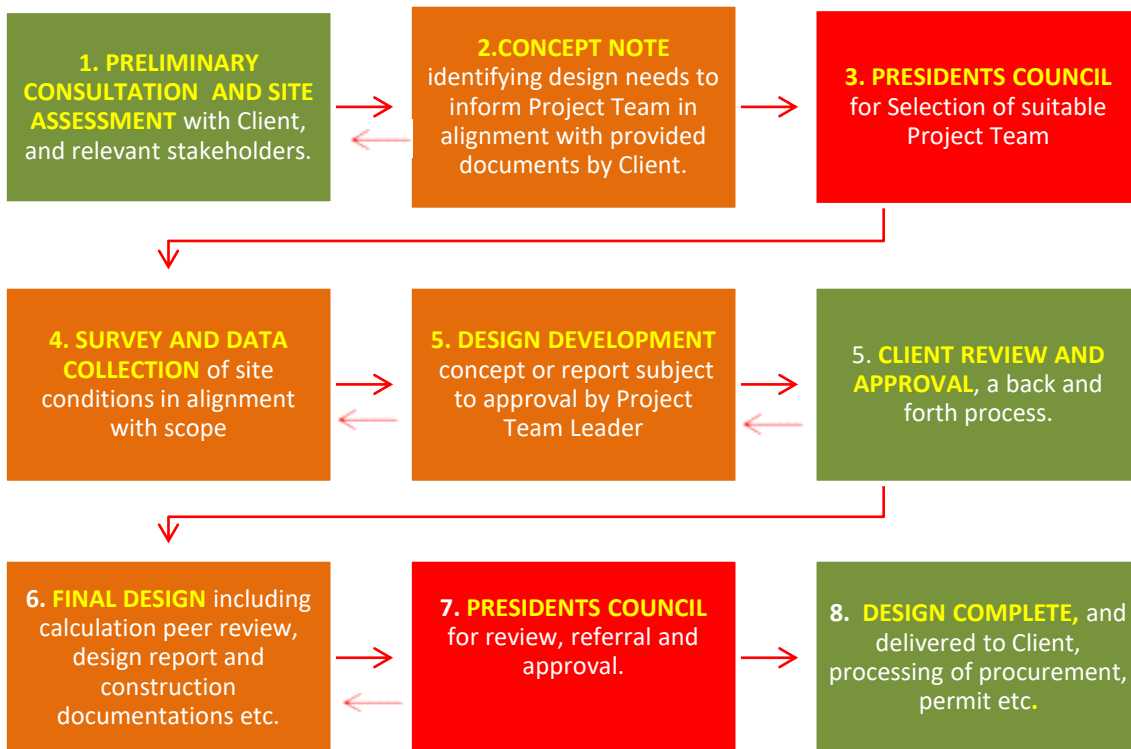


7.2 Extensive Review Procedure

The extensive review procedure is designed to process, scrutinize and review large and sophisticated projects that have complicated features, setting and alarming environmental conditions. This includes but is not limited to the following:

- a) Value of above USD 500, 000.00
- b) Size greater than 500 square metres
- c) Floors and storeys of three and above
- d) Situated on the cliff or terrain above 2 meters in height
- e) Situated on the ocean or coastal zone of less than 1.5 meters above sea level
- f) Requires specialised engineering or expertise not found in-house or in country

Our extensive review procedure is as follows:



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7.3 Presidents Council

The Presidents Councils role is to 'council', the decisions of the President. The Council is made up of the six below members:

- a) President (Chair)
- b) Vice President, Project Coordination
- c) Vice President, Technical Services
- d) Operations Manager (Secretary)
- e) Manager Construction Services
- f) Manager International Services

Aside from managing the operations of Sucon, the Presidents Council also oversees the review and approval of all design and annex design documents produced by Sucon.

7.3.1 Delegation of Authority of Designs and Annex Design Documentation

The direction of design, the annex design documents, the calculations, proposed materials and methodology remains with the President. The President holds at his discretion the authority to delegate to who he feels. The delegation of authority must be done so within the Presidents Council.

The author, review, quality assurance and approval must be reflected in all Sucon documents. The author, quality assurance and reviewer cannot be the same person. The quality assurance and reviewer must be different people. The author and approver can be the same person, so as the reviewer and approver.

7.3.2 Issuance of Specialist Review, Sub-committee or External Peer Review

For complicated extensive design review, during Step 7, highlighted in 7.2, if the Council feels that specialist or additional review is needed, the Council can appoint a sub-committee or proceed with external peer review dependent on the project resources and scope.

8 USE OF AI IN DESIGN DEVELOPMENT AND REVIEW

The use of AI for developing design is prohibited as the sole developer for designs. AI tools and design software's must be Sucon approved and issued. AI can only be used as a quality assurance and review tool, only after the design has been developed by the staff member. This ensures that the work credit remains with the staff member. It is mandatory when supervisors cross check employee submissions and work, company approved and procured AI detection tool must be used. The use of AI cannot exceed 50% of the generated work by employees. AI detection of more than 50% will be returned to be reproduced by the employee.

Please refer to the Sucon **AI Use, Detection and Prohibition Policy** for more information.

9 REPORTING PROCESS AND PROCEDURES

Employees must report any suspected violations of this policy, or any incidents related to the violation of the Design Policy and Procedure to the Presidents Council. All reports of suspected violations or incidents will be investigated promptly and thoroughly and as confidentially as possible. Employees must cooperate fully with any investigations related to suspected violations or incidents where the quality or integrity of the design or annex documents have been compromised. Sucon prohibits retaliation against any employee who reports or participates in an investigation of a possible violation of our code of conduct, our policies including this policy, or the law. If you believe you are being retaliated against, please contact the Operations Manager

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or Vice President. Sucon reserves the right to review any communications to investigate suspected violations or incidents. This includes but is not limited to emails, messages, prompts, attachments, and files.

9.1 Non-Compliance

Failure to comply with this Policy may result in severe consequences, which could include internal disciplinary action or termination of employment or consulting arrangements without notice in alignment with the Misconduct Process and Procedures' in the Human Resources Policy. Violation of this Policy may also constitute a criminal offence under Samoan, American Samoa, Solomon Island, and New Zealand laws depending on where the project is stationed. If it appears in the opinion of the President's Council that any director, officer, employee, consultant or contractor of Sucon may have violated such laws, then Sucon may refer the matter to the appropriate regulatory authorities, which could lead to civil or criminal penalties for Sucon and/or the responsible person.

9.2 Appeal Process

Verdicts that are believed to be unfair by the Administration can be challenged via writing to the Council. Verdicts believed to be unfair by the Council must be challenged in writing to the Legal Counsellor as stipulated in the 'Misconduct Process and Procedures'

9.3 Whistle Blower Protection and Retaliation Prevention

It is the responsibility of all Sucon staff, Council, and affiliating members to protect the identity, security, and employment of the whistle-blower to prevent confrontation and retaliation from the alleged suspect and violator. Sucon staff, Council and affiliating members found to have leaked the identity of the whistle-blower are subject to suspension or termination by the Council or Administration depending on the level and severity of the case. Sucon staff, Council and affiliating members found to have participated directly or indirectly in retaliation are subject to suspension or termination by the Council or Administration depending on the level and severity of the case.

Whistle-blowers who are found to have falsified claims in an attempt for defamation are also subject to suspension or termination by the Council or Administration depending on the level and the severity of the case.

10. POLICY FEEDBACK

All Sucon employees and associates may provide feedback about this document by emailing info@sucon.ws

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