Preliminary Environmental Assessment Report (PEAR)

PRELIMINARY ENVIRONMENTAL ASSESSMENT REPORT (PEAR)

Development Consent Application

FIA Boundary Fence Replacement Project

Replacement of Existing Airport Perimeter Security Fence with a Fibre Reinforced Polymer (FRP) Mesh Security Fence System - Faleolo International Airport (FIA)

Prepared for:

Samoa Airport Authority (SAA)

Samoa Aviation and Roads Investment Project (SARIP)

Project Implementation Unit (PIU)

Submitted to:

Ministry of Works, Transport and Infrastructure - Planning and Urban Management Agency (PUMA)

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Samoa Airport Authority (SAA)

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Version	Date	Description of Revision	Prepared By	Reviewed By
Draft 1/Rev. 0	June 2026	Initial PEAR prepared and submitted for project review and Development Consent assessment.	Mr Patea Setefano, ESS Consultant	Ms Ruseta Taaloga, Project Manager, SARIP PIU/SAA
Draft 2/Rev. 1	July 2026	Revised following MWTI–PUMA review comments and additional project assessment.	Mr Patea Setefano, ESS Consultant	MWTI–PUMA review process
Revised Draft/Rev. 2	July 2026	Incorporates supplementary field inspection and RTK GNSS engineering survey undertaken on 4 July 2026, together with strengthened assessment of the fence corridor, drainage, stormwater pathways, coastal and ground conditions, ecological conditions, infrastructure interfaces, mitigation and monitoring measures.	Mr Patea Setefano, ESS Consultant	SARIP PIU/SAA coordination and response to MWTI–PUMA comments
Revised Draft/ Rev 3	August 2026	Revised following World Bank and SAA/SARIP PIU review comments. Updates include adjacent land uses and sensitive receptors; labour and working conditions; Contractor compound and laydown requirements; waste and fence	Mr Patea Setefano, ESS Consultant	1. Ms Ruseta Taaloga, Project Manager, SARIP PIU/SAA

		removal; drainage, erosion and water-quality controls; coastal protection; spill and hazardous-material management; airport operations and security; OHS; community health and safety; and proportionate CESMP requirements.		

LIST OF ACRONYMS

ABBREVIATION	DESCRIPTION
CAD	Civil Aviation Division
CESMP	Contractor's Environmental and Social Management Plan
COEP	Code of Environmental Practice
DCA	Development Consent Application
DSIR	Department of Scientific and Industrial Research
EIA	Environmental Impact Assessment
ESCP	Environmental and Social Commitment Plan
ESF	Environmental and Social Framework
ESHS	Environmental, Social, Health and Safety
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
ESS	Environmental and Social Specialist
ESSS	Environmental and Social Standards
FIA	Faleolo International Airport
FRP	Fibre Reinforced Polymer
GIIP	Good International Industry Practice
GNSS	Global Navigation Satellite System
ICAO	International Civil Aviation Organization
MNRE	Ministry of Natural Resources and Environment
MWTI	Ministry of Works, Transport and Infrastructure
OHS	Occupational Health and Safety
PEAR	Preliminary Environmental Assessment Report
PIU	Project Implementation Unit
PUMA	Planning and Urban Management Agency
RTK	Real-Time Kinematic
SAA	Samoa Airport Authority
SARIP	Samoa Aviation and Roads Investment Project
SE	Supervising Engineer
SWMS	Safe Work Method Statement

Contents

Supporting Document:

Project Specific Environmental and Social Management Plan (ESMP)

Executive Summary

This Preliminary Environmental Assessment Report (PEAR) supports the Development Consent Application for the proposed Faleolo International Airport (FIA) Boundary Fence Replacement Project, to be implemented by the Samoa Airport Authority (SAA) under the Samoa Aviation and Roads Investment Project (SARIP).

The project comprises approximately 2,985m of Fibre Reinforced Polymer (FRP) Mesh Security Fence, reinforced concrete footings, continuous concrete mowing strips, four pedestrian gates, three vehicle gates and associated works. The proposed fence generally follows the established airport perimeter corridor within the identified FIA project area. Existing fencing comprises deteriorated timber post-and-rail sections with plastic mesh and localised steel components, together with chain-link wire mesh supported by steel pipe posts. Replacement is required to improve perimeter security, operational reliability and durability under coastal exposure conditions.

Assessment Approach and Field Verification:
The PEAR was prepared with reference to the Planning and Urban Management Act 2004, Environmental Impact Assessment Regulations 2007, relevant Codes of Environmental Practice (COEPs), applicable SARIP safeguards instruments and the World Bank Environmental and Social Framework (ESF). The assessment included review of engineering drawings and technical information, field inspections, RTK GNSS and engineering survey, assessment of drainage, coastal, ground and ecological conditions, alternatives assessment, stakeholder coordination, impact evaluation and preparation of mitigation and monitoring measures.

Following MWTI–PUMA review comments, supplementary field inspection and RTK GNSS engineering survey were undertaken on 4 July 2026 to strengthen spatial assessment of the fence corridor, drainage systems, stormwater pathways, ground elevations and nearby airport infrastructure. The survey continued from the termination of the previously surveyed 2,341.14m existing fence section, extending eastward and then southward along an additional approximately 568.696m existing alignment, predominantly comprising chain-link wire mesh supported by steel pipe posts.

The survey also recorded accessible drainage channels, pits, inlets, reinforced concrete culverts, coastal outfalls, visible indicators of underground drainage and cable infrastructure, roads, airfield pavement interfaces and other relevant assets. Ground-surface elevations assisted interpretation of local relief, low points and apparent stormwater flow pathways. The 2,985m project length remains the proposed engineering design length. Final construction set out shall follow the approved engineering drawings and assessed project corridor.

Existing Environment and Key Interfaces:
The project corridor lies within a highly modified operational airport environment characterised by maintained grassed areas, disturbed ground, perimeter and service roads, security infrastructure, drainage systems and airfield assets.

Accessible sections of the northern perimeter adjoin a predominantly rock- and boulder-supported shoreline with localised coral gravel, coarse sand and loose granular deposits. Ground conditions vary along the corridor and include sandy-granular material, coral fragments and gravel, coarse deposits, rock and boulders, and localised disturbed or filled ground. These conditions are relevant to excavation, footing support, drainage protection and reinstatement.

Drainage infrastructure includes open channels, pits, inlets, reinforced concrete culverts and coastal outfalls. Surveyed ground elevations and visible drainage features indicate stormwater movement through open systems and apparent underground connections towards coastal discharge points. The proposed works shall maintain existing drainage pathways and protect drainage assets from blockage, sediment, concrete residue and construction waste.

The inspected ecological environment is predominantly modified and maintained, comprising mown grass, low vegetation, coastal groundcover and localised shrubs. Invasive and disturbance-associated species occur at selected locations, particularly within parts of the eastern and southern corridor. No mangroves, wetlands, native coastal forest, active bird nesting colonies or concentrated fauna-use areas were identified within accessible sections at the times of inspection. These rapid, non-seasonal observations do not constitute a comprehensive biodiversity survey.

Environmental and Social Assessment:
The principal potential impacts are construction-related and include:

- temporary dust and noise;
- waste from removal of existing fence systems;
- sediment, concrete residue or pollutants entering drainage systems or coastal waters;
- obstruction or redirection of stormwater flow;
- accidental damage to drainage, utilities or airport infrastructure;
- localised unsuitable ground or loss of footing support;
- unnecessary disturbance of shoreline material;
- vegetation disturbance and spread of invasive species;
- spills and hazardous-material incidents; and
- occupational health, airport operational and security risks.

The project primarily replaces existing infrastructure within an established airport perimeter corridor. Under the current design, no reclamation or direct marine works are proposed. With effective implementation of the specified controls, identified impacts are expected to be predominantly localised, temporary and low after mitigation.

Environmental and Social Management:
The attached Environmental and Social Management Plan (ESMP) establishes mitigation, monitoring, responsibilities, performance requirements and corrective-action procedures for project implementation. Key controls address drainage and water quality, erosion and sediment, concrete works, waste, spills, ground and coastal conditions, ecology and invasive species, infrastructure protection, OHS, airport access and security. The Contractor shall implement a project-specific Contractor's Environmental and Social Management Plan (CESMP) consistent with applicable contract and SARIP safeguards requirements. The Contractor is responsible for day-to-day compliance, with verification and safeguards oversight undertaken by the Supervising Engineer, ESS Consultant, SAA and SARIP PIU within their respective roles.

Stakeholder and Regulatory Coordination:
PEAR preparation included stakeholder engagement and technical coordination with SAA, SARIP PIU, the Project Manager, engineering representatives and SAA Airport Security on project scope, field access, operational constraints, security and safeguards requirements. MWTI–PUMA review comments informed the supplementary 4 July 2026 field verification and subsequent revision of the PEAR and attached ESMP. Further coordination with relevant authorities shall occur where required through applicable project and regulatory processes.

Conclusion and Recommendation:

Based on the engineering design, field investigations, RTK GNSS spatial verification and environmental and social assessment presented in this PEAR, the proposed FIA Boundary Fence Replacement Project is considered environmentally and socially acceptable.

The identified potential impacts are predominantly localised, temporary and manageable, with residual impacts expected to remain low through implementation of the mitigation and monitoring measures set out in this PEAR and attached ESMP.

Accordingly, the project is recommended for Development Consent. Determination of the application and any conditions of consent remain with MWTI–PUMA under the applicable planning and environmental framework.

1. Background

FIA is Samoa's principal international gateway and a critical national transport asset supporting international travel, tourism, trade, freight movement and emergency response. Maintaining a secure and reliable airport perimeter is essential for protecting aviation operations, airport infrastructure and public safety.

A recent Fence Condition Assessment commissioned by the SAA identified that the existing northern and eastern perimeter fence has reached the end of its service life. The assessment found widespread deterioration of fence panels, timber rails, support posts and associated structural components resulting from prolonged exposure to the coastal environment, including salt spray, high humidity and extreme weather events. These conditions have reduced the effectiveness of the airport's perimeter security and increased maintenance requirements.

To address these deficiencies, the SAA, through the SARIP, proposes to replace the existing fence with approximately 2,985 metres of FRP Mesh Security Fencing, reinforced concrete footings, concrete mowing strips, four pedestrian gates and three vehicle access gates. The proposed works are confined to the existing airport operational corridor on Government-owned land and do not require land acquisition or expansion of the airport footprint.

This PEAR has been prepared to assess the environmental and social implications of the proposed development and support a Development Consent Application (DCA) under the PUM Act 2004 and EIA Regulations 2007.

2. Purpose of the PEAR

The purpose of this PEAR is to provide PUMA with an evidence-based assessment of the proposed FIA Boundary Fence Replacement Project to support consideration of the DCA. Specifically, the PEAR:

- Describes the proposed development, site conditions and surrounding environment.
- Identifies and evaluates potential environmental, social, health and safety impacts during construction and operation.
- Assesses feasible project alternatives and confirms the preferred development option.
- Recommends practical mitigation, monitoring and management measures through the ESMP.
- Demonstrates compliance with the PUM Act 2004, EIA Regulations 2007, applicable COESP, and relevant national and international aviation and environmental standards.

3. Objectives of the Assessment

The objectives of this assessment are to:

- Characterise the existing physical, environmental and social conditions within the project area.
- Assess the potential environmental, social, occupational health and safety, and operational impacts of the proposed works.
- Evaluate engineering, drainage, coastal and climate resilience considerations relevant to the project.
- Assess the suitability of the proposed FRP Mesh Security Fence System against alternative options.

- Identify mitigation and monitoring measures to avoid, minimise or manage potential impacts.
- Establish the environmental and social management framework for project implementation through the ESMP.
- Provide a sound technical basis for PUMA's assessment of the DCA.

4. Assessment Methodology

This PEAR was prepared using a systematic, evidence-based approach consistent with the PUM Act 2004, EIA Regulations 2007, applicable COESP, and recognised environmental assessment and engineering practice. The assessment comprised the following activities:

- Review of applicable legislation, policies, engineering drawings, technical specifications and relevant project documentation.
- Site inspections and field verification to assess existing conditions, verify the proposed works and identify environmental and engineering constraints.
- RTK GNSS survey of the existing airport boundary fence to verify the existing alignment, infrastructure interfaces and site characteristics.
- Assessment of the physical environment, including topography, drainage, coastal processes, shoreline conditions and geomorphology.
- Rapid ecological assessment of vegetation, habitat conditions and environmentally sensitive features within the project area.
- Review of the proposed engineering design, construction methodology and operational requirements.
- Environmental and social screening to identify potential impacts during the construction and operational phases.
- Evaluation of project alternatives and development of appropriate mitigation, monitoring and management measures.

The findings of these investigations provide the basis for the environmental and social assessment presented in this PEAR and the preparation of the project-specific ESMP.

5. Legislative, Policy and Standards Framework

The proposed FIA Boundary Fence Replacement Project has been assessed against the national legislation, regulations, policies and international standards applicable to airport infrastructure, environmental management, occupational health and safety, and aviation security.

5.1. National Legislative and Policy Framework.

Legislation/Policy	Responsible Agency	Relevance to the Project
Planning and Urban Management Act 2004	MWTI	Statutory framework for Development Consent and land use planning.
Environmental Impact	MWTI	Requires preparation of a PEAR and

Assessment Regulations 2007		environmental assessment.
Civil Aviation Act 1998	MWTI	Regulates aviation safety and airport operations.
Samoa Airport Authority Act 2012	SAA	Provides statutory authority for airport management and infrastructure development.
Lands, Surveys and Environment Act 1989	MNRE/MLS	Provides for the management of Government land and environmental resources.
National Building Code of Samoa 2017	MWTI	Establishes structural and construction standards.
Occupational Safety and Health Act 2002 and Regulations 2017	MCIL	Establishes workplace health and safety requirements.
Waste Management Act 2010	MNRE	Regulates construction and demolition waste management.
Water Resources Management Act 2008	MNRE	Protects drainage systems and water resources.
Disaster and Emergency Management Act 2007	MNRE	Supports disaster risk reduction and resilient infrastructure.
Samoa Codes of Environmental and Social Practice (COESP)	MWTI	Provides environmental and social management requirements for infrastructure projects.
Pathway for the Development of Samoa (PDS) 2026–2031	MOF	Supports resilient and sustainable national infrastructure investment.

7. International Standards and Good Practice.

Standard/Framework	Organisation	Relevance
World Bank Environmental and Social Framework (ESF) (ESS1, ESS2, ESS3 and ESS10)	World Bank	Environmental and social risk management, labour, pollution prevention and stakeholder engagement.
ICAO Annex 14 – Aerodromes	ICAO	Airport infrastructure, operational safety and perimeter protection.
ICAO Annex 17 – Aviation Security	ICAO	Airport security and restricted area protection.
ICAO Annex 19 – Safety Management	ICAO	Safety management and operational risk management.
ICAO Airport Services Manual – Airport Security and Perimeter Protection	ICAO	Guidance on perimeter fencing and access control.

Good International Industry Practice (GIIP)	International Best Practice	Engineering, environmental management, occupational health and safety, and sustainable construction.

The project has been planned and assessed in accordance with the legislative and policy framework outlined above. Applicable statutory requirements have been incorporated into the engineering design, environmental assessment and project-specific ESMP. Contractor obligations, including preparation and implementation of a CESMP, will be included in the construction contract to ensure compliance throughout project implementation.

8. Consistency with Strategic Planning Documents

The proposed FIA Boundary Fence Replacement Project is consistent with the strategic planning framework applicable to FIA, including the A'ana Alofi III Community Integrated Management (CIM) Plan and the Faleolo Airport Flood Resilience Strategy and Stormwater Drainage Master Plan. The project supports these planning objectives by:

- replacing deteriorated perimeter infrastructure within the existing airport boundary;
- maintaining existing drainage networks and coastal processes;
- incorporating durable, corrosion-resistant materials suitable for the coastal environment; and
- supporting the long-term resilience of nationally significant airport infrastructure.

The proposed works are compatible with future drainage improvements and coastal protection initiatives identified for the airport and do not conflict with the objectives of either planning document.

9. Project Description

9.1 Project Location

The proposed FIA Boundary Fence Replacement Project is located at FIA, Upolu, within Government-owned land managed by the SAA. The works are confined to the established airport operational corridor and follow the existing northern and eastern perimeter boundary.

9.2. Existing Fence

The existing perimeter fence is 2,341.14 metres long and comprises plastic mesh fence panels supported by treated timber posts, timber rails and galvanised steel fittings founded on reinforced concrete footings. Site inspections confirmed that prolonged exposure to salt spray, coastal weathering and age has resulted in deterioration of fence panels, timber members, steel components and sections of the foundations, reducing the fence's structural integrity and security performance.

Figure 1: Proposed Works

9.3. Proposed Works

The project will replace the existing fence with approximately 2,985 metres of FRP Mesh Security Fencing, including reinforced concrete footings, continuous concrete mowing strips, four (4) pedestrian gates and three (3) vehicle access gates. The new fence will generally follow the existing alignment and extend along the eastern airport boundary to improve perimeter security and operational coverage. All works will be undertaken within the existing airport boundary and operational corridor, without requiring land acquisition, reclamation or changes to surrounding land use.

10. Engineering Design and Technical Assessment

10.1. Engineering Design.

The proposed development involves the replacement of the existing FIA perimeter security fence with approximately 2,985 metres of FRP Mesh Security Fencing within the established airport operational corridor. The works include reinforced concrete footings, continuous concrete mowing strips, four (4) pedestrian access gates, three (3) vehicle access gates, and associated site reinstatement works.

An RTK GNSS survey confirmed an existing fence length of 2,341.14 metres, providing the survey control for the engineering design. The increased fence length reflects the approved design, which extends the fence along the eastern airport boundary to strengthen perimeter security while remaining entirely within Government-owned airport land. The project does not require land acquisition, reclamation or changes to the existing airport footprint.

10.2. Engineering Drawings[1].

The engineering design is supported by drawings and technical specifications prepared by APME Engineering, which formed the basis of this assessment.

[1] Refer to the List of Figures attached in this PEAR for engineering design drawings and details for information.

Drawing Series	Description
Figures 1–5	General notes, design criteria, standard fence details and gate details
Figures 6–8	Fence alignment plans, chainages, longitudinal profiles and gate locations
Figures 9–12	Structural details, survey control, topographic information and construction details

The drawings define the proposed fence alignment, foundation details, gate locations, drainage crossings and interfaces with existing airport infrastructure. These drawings have been reviewed as part of this PEAR to assess potential environmental and engineering implications.

10.3. Materials and Construction.

The proposed security fence comprises:

- FRP mesh fence panels and posts;
- reinforced concrete footings;
- continuous reinforced concrete mowing strips;
- four (4) pedestrian security gates;
- three (3) vehicle access gates; and
- associated bracing, fittings and foundation works.

FRP has been selected because it is well suited to the coastal environment at FIA, providing:

- high resistance to marine corrosion and salt spray;
- high strength-to-weight ratio;
- radio transparency compatible with aviation navigation and communications;
- frangible characteristics suitable for airport operations;
- resistance to ultraviolet exposure and tropical weathering; and
- low maintenance with an extended service life.

10.4. Design Criteria.

The engineering design has been developed to satisfy the operational and environmental requirements of an international airport.

Design Parameter	Specification
Design Life	25 years
Importance Level	IL2
Ultimate Limit State Wind Speed	70 m/s
Corrosion Classification	C5 Marine
Fence System	FRP Mesh Security Fence
Foundations	Reinforced Concrete
Design Standard	ICAO airport security requirements

Concrete Specification

Structural Element	Minimum Strength
Reinforced Footings	25 MPa
Structural Concrete	25 MPa
Concrete Mowing Strip	20 MPa

10.5. Technical Assessment.

The engineering assessment confirms that the proposed works comprise the replacement and extension of existing airport perimeter infrastructure within the established airport boundary. The design follows the existing operational corridor, minimises earthworks, maintains existing drainage and coastal processes, and avoids impacts on adjoining land. The proposed FRP fence system provides a durable, corrosion-resistant and low-maintenance solution appropriate for FIA's coastal environment. Temporary construction impacts will be managed through the project-specific ESMP and the Contractor's CESMP.

10.6. Planning Compliance.

The proposed development is consistent with the intent of the PUMA Fencing Guideline (2021/2022**)**. The assessment confirms that the project:

- is located entirely within Government-owned airport land;
- follows the existing airport operational corridor;
- maintains existing drainage and overland flow paths;
- integrates with existing airport infrastructure and security systems; and
- uses durable materials suitable for long-term operation in a coastal environment.

As the project involves specialised airport security infrastructure, residential fencing provisions relating to property boundaries, road setbacks and sight-distance requirements are not applicable.

11. Estimated Project Cost

11.1 Construction Methodology and Programs.

The works have been allocated a budget of USD 2.0 million, roughly equivalent to $5.4 million tala. The budget accounts for all applicable taxes.

The project cost reflects the specialised design requirements for airport perimeter security infrastructure operating in a coastal environment. The selected security fence system has been designed to meet SAA operational requirements and relevant ICAO standards, providing improved durability, corrosion resistance and reduced maintenance compared with the existing fence.

Although the initial capital cost is higher than conventional fencing systems, the FRP design provides lower whole-of-life maintenance costs, an extended service life and improved resilience to salt spray, high winds and tropical weather conditions. The proposed investment is therefore considered technically appropriate and economically justified for the long-term protection of FIA.

12. Construction Methodology

12.1. Site Inspection and Survey Verification.

The proposed works will be undertaken over an estimated 11-month period, comprising approximately 7 months for procurement, manufacturing, shipping and mobilisation, followed by 4 months of on-site construction, testing and commissioning. Construction will be staged to maintain airport security, aircraft operations and access throughout the works.

12.1. Proposed Implementation Programme.

Phase	Duration	Principal Activities
Procurement and Mobilisation	Months 1–7	Procurement, manufacturing, shipping, approvals and mobilisation
Site Establishment	Month 8	Survey set-out, temporary facilities, environmental controls and security induction
Fence Removal	Month 8	Removal and disposal of the existing fence
Civil Works	Months 8–10	Excavation, reinforced concrete footings, mowing strips and localised ground stabilisation
Fence Installation	Months 10–11	Installation of FRP fencing and security gates
Testing and Handover	Month 11	Inspection, commissioning, defect rectification and handover
Demobilisation	Month 11	Site reinstatement and removal of temporary facilities

12.2. Construction Activities.
Peak construction is expected to involve approximately 15–30 personnel. Typical equipment includes:

- excavators;
- compactors;
- concrete mixers;
- utility vehicles;
- survey equipment;
- hand and power tools; and
- water carts for dust suppression.

Construction will normally occur between 8:00 am and 4:00 pm, Monday to Friday, unless otherwise approved by SAA for operational reasons.

12.3 Site Establishment, Laydown and Contractor Compound

The final location of the Contractor's compound, laydown areas and material storage areas has not yet been determined and will depend on the successful Contractor's construction methodology and mobilisation arrangements.

Given the volume of imported FRP fencing materials, construction equipment and temporary site facilities required, inappropriate site establishment could affect drainage, coastal areas, airport operations or public access.

Prior to mobilisation, the Contractor shall prepare a Site Establishment Plan for review and approval by the SAA, SARIP PIU, SE and ESS. The plan shall identify:

- Contractor compound and office location;
- FRP and construction material storage areas;
- waste segregation and temporary storage areas;
- fuel and hazardous-material storage;
- concrete washout area;
- worker sanitation and welfare facilities;
- construction access and haul routes;
- drainage and stormwater controls;
- separation from public-access areas; and
- reinstatement requirements at demobilisation.

Laydown and compound areas shall be located, as far as practicable, away from:

- drainage channels and culverts;
- stormwater outfalls;
- the coastal foreshore;
- public access routes; and
- operationally sensitive airport areas.

The Contractor shall not establish the compound or laydown areas until the Site Establishment Plan has been approved.

13. Physical Environment

The proposed works are located within the FIA perimeter and project corridor, a highly modified coastal and operational environment comprising generally flat to gently undulating terrain, maintained grassed areas, disturbed ground, airport roads, drainage infrastructure, security facilities and operational airfield assets.

The northern perimeter adjoining the existing fence corridor is predominantly characterised by a rock- and boulder-supported shoreline, with localised coral gravel, coarse sand and loose granular deposits. Coastal conditions vary eastward, where inspected sections comprise a mixture of sandy ground, rock, coral-derived material and localised loose unconsolidated deposits. Inland sections are generally modified by airport operations, access routes, drainage systems, vegetation maintenance and existing infrastructure.

Based on the current engineering design and field conditions observed on 18 June 2026 and 4 July 2026, no reclamation, direct marine works, excavation below the applicable high-water mark or construction seaward of the existing shoreline is proposed. Any material design change requiring such works shall be subject to further environmental assessment and applicable regulatory approval before implementation.

14. Existing Site Conditions and Proposed Fence Corridor

The proposed FRP Mesh Security Fence System has an overall engineering design length of approximately 2,985m, based on the current project drawings. Field inspections and RTK GNSS surveys undertaken on 18 June and 4 July 2026 verified accessible sections of the existing

perimeter fence, existing site conditions and key infrastructure interfaces along the proposed project corridor.

The 18 June 2026 RTK GNSS survey recorded 2,341.140m of existing perimeter fence, predominantly comprising timber posts and rails with plastic mesh and localised steel components.

Following the MWTI–PUMA review comments, a supplementary RTK GNSS survey was undertaken on 4 July 2026. The survey continued from the termination of the previously surveyed section, extending eastward and subsequently southward along the existing perimeter. This survey recorded a further 568.696 m of existing fence, predominantly comprising chain-link wire mesh supported by steel pipe posts.

The two field surveys therefore recorded a combined existing fence alignment of 2,341.140m + 568.696m = 2,909.836m.

This RTK-surveyed existing fence length of 2,909.836m shall be distinguished from the approximately 2,985m proposed engineering design length. The resulting difference of 75.164m reflects the difference between the surveyed existing fence alignment and the current proposed design alignment and shall not be interpreted as an existing unfenced gap or additional project scope.

The final fence alignment and construction quantities shall be confirmed through reconciliation of the RTK GNSS survey data with the approved engineering drawings and verified during construction set out before fence installation.

Ground conditions vary along the surveyed corridor. The eastern and southern section's include localised sand, rock, coral-derived and loose granular materials, maintained and previously disturbed grassed areas, shrubs and invasive vegetation. Infrastructure interfaces identified during the surveys include drainage channels, pits and inlets, culverts, stormwater outfalls, access and service roads, security points, operational airfield areas, and airfield lighting and electrical infrastructure. The RTK surveys did not constitute a comprehensive investigation of underground services; therefore, relevant services shall be identified and verified before excavation where potential conflicts may occur.

The proposed works comprise removal of the existing fence systems, localised excavation, construction of reinforced concrete footings and mowing strips, installation of approximately 2,985m of FRP mesh security fencing and associated gates, and reinstatement of disturbed areas. The approved engineering design and verified construction set out shall govern the final alignment and quantities.

Based on the project information available to the assessment, the proposed works are within the identified FIA project area under Government of Samoa control. The RTK GNSS surveys undertaken for the PEAR were for project and environmental spatial verification and do not constitute cadastral boundary redefinition or determination of legal title. Where confirmation of land tenure or cadastral boundaries is required, authoritative Government land records and approved project documentation shall prevail.

15. Supplementary RTK GNSS Engineering Survey and Spatial Assessment

In response to MWTI–PUMA review comments on the draft PEAR, a supplementary field inspection and RTK GNSS engineering survey was undertaken on 4 July 2026, from approximately 10:30 am to 5:00 pm, to strengthen assessment of drainage systems, stormwater pathways, ground-surface variation, the fence corridor and nearby airport infrastructure.

15.1. Survey Control and Methodology

The survey adopted Geodetic Mark No. 102, located within FIA in front of the SAA Engineering Carport, with the following coordinates:

Survey Control	Adopted Value
Northing (N)	8470604.923
Easting (E)	391976.820
Ellipsoidal Height	47.600 m

Field observations were collected using a CHCNAV i93 RTK GNSS base-and-rover system, with fixed RTK solutions used where available. Survey data were processed into engineering survey drawings by XPMS & Associates Ltd. Accessible surveyed or recorded features included:

- existing fence alignments and the additional eastern and southern fence section;
- ground-surface elevation changes and local low points;
- swale drains, open channels, drainage pits, inlets and reinforced concrete culverts;
- coastal stormwater outfalls;
- visible surface evidence and access points associated with underground drainage connections;
- concrete service pits and visible indicators of underground airfield cable infrastructure;
- the corridor between the runway and northern perimeter access road;
- the eastern corridor between the unused runway and airport road;
- perimeter and service roads; and
- relevant airport assets, including the concrete diesel tank structure, taxiway, apron and aircraft parking areas.

15.2. Survey Drawings and Spatial Interpretation.

The survey outputs comprise Drawing Pages 1–10. Pages 1–9 present contour information derived from surveyed ground-surface observations. Page 10 is an alignment drawing showing the additional surveyed fence section.

Drawing Page	Approximate Contour Range / Content
Page 1	44.3 m to 41.0 m
Page 2	42.0 m to 41.0 m
Page 3	42.0 m to 41.4 m
Page 4	42.0 m to 41.2 m

Page 5	42.9 m to 41.2 m
Page 6	44.6 m to 41.4 m
Page 7	45.3 m to 42.0 m
Page 8	46.4 m to 40.4 m
Page 9	43.6 m to 42.1 m
Page 10	Additional surveyed existing fence section of approximately 568.69 m, extending eastward and then southward

The drawings shall be read collectively to interpret relative ground variation and spatial relationships between the fence corridor, drainage infrastructure, roads, operational pavements and other identified airport assets.

The 568.69 m surveyed section records the additional existing fence alignment observed on 4 July 2026. It is not presented as a mathematical balance of the proposed 2,985 m engineering design length. The proposed project length remains governed by the engineering design and approved construction set-out.
Supporting Google Earth screenshots are provided for general spatial orientation and visual context only. They do not replace the RTK GNSS data or engineering drawings, and imagery dates may differ from the field survey date.

15.3. PEAR Relevance and Stormwater Interpretation.

The survey directly strengthened the PEAR assessment of drainage, outfalls and infrastructure interfaces identified through PUMA's review. Surveyed ground-surface elevations and visible drainage features support interpretation of:

- relative higher and lower ground;
- local low points and apparent runoff directions;
- relationships between ground gradients and swales, channels, pits, culverts and outfalls;
- potential interfaces between fence foundations, mowing strips and drainage pathways; and
- airport infrastructure requiring protection during construction.

At accessible locations, observed ground gradients and drainage features were consistent with stormwater movement towards established swales, channels, culverts and downstream outfalls through surface drainage and apparent underground connections. Inspected drainage features were generally maintained and free of significant visible blockage at the time of survey. The survey provides a spatial basis for stormwater interpretation but does not constitute hydraulic modelling or a drainage capacity assessment and does not confirm system performance under extreme rainfall, cyclone, storm-surge or tidal conditions.

15.4. Survey Basis and Limitations.

The survey provides engineering, topographic and spatial verification of accessible surface features relevant to the PEAR. It does not constitute cadastral boundary redefinition, hydrographic or bathymetric survey, subsurface utility detection, internal drainage inspection, hydraulic modelling or coastal-process assessment.

Underground drainage and cable infrastructure is identified only where supported by visible surface evidence, identifiable access points or available project information and is therefore treated as observed at surface, inferred or indicative, as applicable.
Drawing elevations are based on the adopted survey control, including the stated ellipsoidal height of 47.600 m at Geodetic Mark No. 102. They shall not be represented as orthometric Reduced Levels or elevations above mean sea level unless a verified vertical datum transformation has been applied and documented.
The RTK GNSS engineering survey drawings and supporting Google Earth screenshots are provided in the Appendices to this PEAR.

16. Coastal Environment and Shoreline Conditions

The northern FIA perimeter adjoins a variable coastal environment comprising predominantly rock and boulders, with localised coral gravel, coarse sand and loose granular deposits. The corridor also interfaces with maintained airport land, perimeter roads, drainage infrastructure, stormwater outfalls and existing security fencing. Field inspections identified:

- a predominantly rock- and boulder-supported shoreline at accessible locations, with observed material ranging from small fragments to boulders approximately 1,500 mm in maximum dimension at selected locations;
- localised coral gravel, coarse sand and loose deposits between and landward of larger rocks;
- variable sandy-granular surfaces;
- localised exposure or reduced ground support around some existing fence footings, including sections opposite the International Terminal Building; and
- no widespread displacement of larger shoreline rocks or boulders under the conditions observed at the times of inspection.

Limited RTK GNSS measurements at selected accessible locations assisted assessment of the spatial relationship between the existing fence, exposed footings and adjacent shoreline. These measurements were localised and do not constitute a continuous topographic, hydrographic, bathymetric or coastal-process survey.

The observed rock-and-boulder framework appears to provide local resistance to routine wave action and movement of finer material. This qualitative observation does not confirm long-term stability under cyclone, storm surge, extreme waves, erosion, scour or future sea-level conditions and does not classify the shoreline as an engineered coastal protection structure.

Under the current engineering design, works comprise removal and replacement of existing fencing, localised excavation for foundations and mowing strips, installation of the proposed FRP Mesh Security Fence System and associated gates, and reinstatement within the identified project corridor. No reclamation, direct marine works or construction below the applicable high-water mark is proposed. Construction shall:

- retain stable shoreline rocks and boulders where practicable;
- avoid unnecessary removal, displacement or destabilisation of shoreline material;
- protect drainage pathways, culverts and coastal outfalls from obstruction, sediment and construction waste;
- prevent uncontrolled runoff, concrete wash water and pollutants from entering coastal waters; and
- address localised inadequate footing support in accordance with the approved

engineering design and actual conditions encountered during excavation.
Relevant mitigation and monitoring requirements are provided in the attached ESMP.

17. Published Soil Mapping and Classification

Published soil mapping for the FIA area was reviewed using the 1962 Soil Map of Upolu and the 1989 Soil Map – Upolu. Within or relevant to the wider airport and coastal setting, the maps identify:

- Unit 15 – Man-made soils;
- Unit 3 – Fusi sands;
- Unit 6 – Namoa clay loam;
- Unit 2a – Sataua loams and clay loams, including stony and bouldery phases; and
- Unit 31a – shallow phases of recent soils developed from calcareous sand.

The two mapping systems differ in scale, methodology and classification and are not directly equivalent. Collectively, they indicate a variable coastal and modified soil environment comprising sandy, calcareous, loamy, stony and locally disturbed ground conditions. The 1989 mapping further places the Fusi soil series within a carbonatic, isohyperthermic soil-family grouping.

These maps provide regional baseline context only. They do not confirm the precise distribution, thickness, engineering properties or foundation suitability of soils along the project corridor; site conditions are therefore addressed separately through field observations and construction-stage verification.

18. Geological, Ground and Geotechnical Considerations

Published geological and soil mapping provides regional context only. Field observations identified variable surface and exposed near-surface materials, including sand and sandy-granular deposits, coral fragments and gravel, coarse granular material, rock and boulders, and localised disturbed or filled ground.

Accessible northern coastal sections are predominantly rock- and boulder-supported, with localised loose deposits and reduced support around some existing fence footings. Conditions vary along the corridor and may affect excavation, founding support, drainage and reinstatement.

No intrusive geotechnical investigation, subsurface testing or bearing-capacity assessment was undertaken for this PEAR. Accordingly, field observations do not confirm subsurface profiles or foundation suitability. Actual founding conditions shall be inspected during excavation, and construction shall comply with the approved engineering drawings and specifications. Key requirements are to:

- retain stable rocks and boulders where practicable;
- appropriately treat unsuitable, unstable or materially disturbed founding material before foundation construction;
- protect excavations from runoff, ponding and loss of support;
- maintain drainage structures and established flow paths; and
- use only suitable, clean fill placed and compacted to approved engineering requirements.

Where inadequate support or unexpected conditions are encountered, including unstable material, voids, unexpected fill, seepage or groundwater, buried waste, contamination, unidentified services or significant scour, the affected area shall be made safe and referred to the Supervising Engineer (SE) before concrete placement or continuation of affected foundation works.

Particular care shall be applied near the shoreline, drainage structures and outfalls to avoid undermining, obstruction of stormwater flow or unnecessary disturbance of shoreline material.

19. Drainage Infrastructure and Stormwater Flow

The 4 July 2026 supplementary RTK GNSS survey, undertaken in response to MWTI–PUMA review comments, mapped accessible drainage features and their relationship to the proposed fence corridor and nearby airport infrastructure.

Recorded features included open channels, drainage pits and inlets, reinforced concrete culverts, coastal outfalls and visible surface indicators of underground drainage connections. Separate concrete service pits associated with airfield lighting and electrical infrastructure were also identified.
Within surveyed operational areas, including land adjoining the taxiway, apron and aircraft parking areas, ground elevations and visible drainage features indicate stormwater movement through a combination of open channels and inferred underground connections towards coastal discharge points. Drainage assets were also recorded within a corridor of approximately 50m at selected locations between the drainage system and adjacent paved operational areas.

At accessible locations, drainage channels, pits and outlets were generally maintained and free of significant visible blockage or accumulated debris. Vegetation was predominantly low and did not materially obstruct observed flow paths, although localised ornamental togo planting occurred near some drainage areas. Apparent tidal influence was observed at selected coastal outfalls.

The proposed fence footings, mowing strips, excavation, spoil storage and temporary works shall not obstruct drainage structures, redirect established runoff or reduce access for inspection and maintenance. Channels, pits, culverts and outfalls shall be protected from sediment, concrete wash water, waste and construction debris, with any accidental blockage or damage rectified promptly.
Concrete service pits associated with airfield lighting and electrical cabling are not stormwater structures and shall be clearly distinguished and protected during construction.

The assessment is based on accessible surface features, RTK GNSS observations and surveyed ground elevations. It does not verify subsurface drainage connectivity, pipe condition, hydraulic capacity or performance under extreme rainfall or tidal conditions.

20. Ecological Conditions

Rapid ecological observations were undertaken along accessible sections of the proposed 2,985 m FIA fence corridor. The inspected corridor is predominantly a highly modified and routinely maintained airport environment characterised by mown grass, low vegetation, coastal

groundcover and localised shrubs. Comparatively denser vegetation occurs at selected eastern and southern sections inspected on 4 July 2026.

Birds observed included feral pigeon/lupe palagi (*Columba livia domestica*) and common myna bird/maina (*Acridotheres tristis*). No mangroves, wetlands, native coastal forest, active bird nesting colonies or concentrated fauna-use areas were identified within the accessible sections inspected at the times of survey.

Vegetation clearance shall be confined to the approved construction footprint. If active nests, protected species or other sensitive ecological features are encountered, disturbance at the affected location shall cease pending appropriate assessment and direction. These observations were rapid, non-seasonal and limited to accessible areas; they do not constitute a comprehensive flora or fauna survey.

21. Invasive and Disturbance-Associated Species

Invasive and disturbance-associated species were observed within and adjacent to accessible sections of the fence corridor, with greater abundance at selected eastern and southern locations inspected on 4 July 2026. Recorded species included:

- yellow crazy ant/loi (*Anoplolepis gracilipes*);
- elephant grass/vao povi (*Cenchrus purpureus*, syn. *Pennisetum purpureum*);
- Moluccan albizia/tamaligi paeape (*Falcataria moluccana*);
- Merremia vine/fue lautele (*Decalobanthus peltatus*, syn. *Merremia peltata*); and
- fau (*Hibiscus tiliaceus*), recorded as a disturbance-associated species and not treated as invasive in this assessment.

Construction may spread invasive plants, seeds, ants and contaminated soil through vegetation clearance, excavation and movement of machinery or materials. Disturbance shall therefore be minimised; cleared invasive material shall be contained and appropriately managed; soil movement between work areas shall be limited; and machinery shall be cleaned of significant soil, seeds and plant material before transfer between affected and unaffected areas.

Where yellow crazy ants or other invasive species are encountered in concentrated numbers, affected material shall not be transferred to unaffected parts of the corridor without appropriate control measures. Herbicide use, if required, shall be authorised and managed to prevent contamination of drainage systems and coastal waters. The observations provide a project-level baseline for the PEAR and do not constitute a comprehensive invasive-species survey.

22. Environmental Impact Assessment

The assessment considers the current engineering design, field observations and RTK GNSS verification of accessible project features. Principal risks relate to drainage and water quality, coastal and ground conditions, ecology and invasive species, existing airport infrastructure, waste, and construction within an operational airport.

22.1. Existing Infrastructure and Sensitive Interfaces

Infrastructure/Interface	Project Relevance
Existing perimeter fence systems	Progressive removal and replacement while maintaining continuous perimeter security.
Perimeter and service roads	Construction access shall not materially disrupt airport operations or maintenance access.
Open drains, pits, inlets, culverts and visible flow paths	Protect from blockage, sediment, spoil, concrete residue and altered runoff.
Stormwater and coastal outfalls	Maintain discharge pathways and prevent construction-related contamination.
Runway, taxiway, apron and aircraft parking areas	Coordinate works with SAA operational, safety and access controls.
Airfield lighting, electrical pits and other services	Identify and protect before excavation where potential conflicts exist.
Security gates and controlled access points	Maintain authorised access and secure temporary fence openings.
Coastal and variable ground interfaces	Avoid unnecessary shoreline disturbance and verify founding conditions during excavation.

Underground services were not comprehensively investigated. Potential conflicts shall be verified before excavation using available records, visible surface evidence and appropriate service-location procedures.

Table 22.2 identifies the principal construction-phase impacts and the minimum mitigations, monitoring and performance requirements. Detailed implementation measures are provided in the project ESMP and shall be incorporated into the Contractor's CESMP.

Aspect	**Potential Impact**	**Mitigation, Monitoring and Performance Requirement**	**Residual Impact**
Dust and Noise	Temporary dust and noise from fence removal, excavation, concrete works, vehicles and equipment, with potential disturbance to airport users and operations.	• Suppress dust on exposed surfaces where required. • Cover loose materials, stockpiles and transported loads. • Enforce low vehicle speeds within work areas. • Maintain plant and equipment in good operating condition. • Restrict works to approved construction hours. • Coordinate high-noise activities with SAA Operations and, where practicable, avoid peak passenger movements near public areas. • Investigate and address justified complaints promptly.	Low

		Performance: No persistent visible dust beyond the work area or material construction-related interference with airport operations.	
Waste and Fence Removal	Plastic mesh, wire, timber, steel, concrete spoil, FRP offcuts and general construction waste causing injury, visual impacts, obstruction or contamination of land, drainage or coastal areas.	• Progressively remove and segregate dismantled fence materials and construction waste. • Store plastic mesh, wire, timber, steel, concrete spoil and FRP offcuts in secure, contained areas pending reuse, recycling or disposal. • Remove accumulated waste at agreed intervals to approved facilities. • Prohibit burning, burial or uncontrolled disposal of waste. • Require appropriate PPE, including suitable gloves and safety footwear, when handling sharp wire, metal and other hazardous waste. • Maintain waste disposal records. Performance: No uncontrolled accumulation, dispersal or disposal of construction waste; disposal records maintained.	Low
Drainage, Erosion and Water Quality	Sediment, spoil, concrete slurry, wash water or waste obstructing drainage, altering runoff or contaminating coastal waters.	• Maintain existing drainage channels, culverts, pits, outfalls and overland flow paths. • Prohibit stockpiling within drainage flow paths, beside drainage structures or near the coastal boundary. • Install erosion and sediment controls where required. • Establish a designated, contained concrete washout area. • Prohibit concrete or equipment washout directly onto the ground or into drains, culverts, outfalls or coastal waters. • Stabilise disturbed ground promptly. • Inspect drainage and active work areas regularly and after significant rainfall. Performance: No construction-related drainage blockage, uncontrolled sediment discharge or concrete contamination.	Low
Infrastructure and Utilities	Damage to roads, drainage assets, underground services,	• Identify and verify relevant infrastructure and service interfaces before excavation.	Low

	airfield lighting, electrical infrastructure or other operational airport assets.	• Protect drainage structures, service pits, cabling and airport assets within or adjacent to work areas. • Use controlled excavation where underground services may be present. • Immediately report unidentified services or accidental damage to SAA and the SE. • Reinstate damaged services or infrastructure in accordance with SAA requirements. Performance: No unresolved damage or unplanned interruption to airport services.	
Ground and Coastal Conditions	Unsuitable founding material, localised erosion or scour, loss of footing support, or disturbance of shoreline materials.	• Inspect founding conditions during excavation and refer unsuitable or materially different ground conditions to the SE before concrete placement. • Confine works to the approved fence footprint. • Do not remove, relocate or disturb existing rock armour, coral rubble, boulders or other shoreline material unless specifically approved. • Maintain no-go buffers from shoreline-sensitive areas where practicable. • No reclamation, unapproved seaward works or construction below the high-water mark. • Control runoff and stabilise localised disturbed areas where required. Performance: No unauthorised shoreline disturbance or construction-related destabilisation of the coastal margin.	Low
Ecology and Invasive Species	Localised vegetation disturbance or spread of invasive plants, ants, seeds or soil-borne material during vegetation clearance and movement of equipment.	• Confine disturbance to the approved construction footprint. • Minimise unnecessary vegetation clearance and soil transfer. • Contain and appropriately dispose of cleared invasive vegetation. • Inspect and clean machinery where necessary before movement between affected and unaffected areas. • Avoid active nests or other sensitive ecological features if encountered and seek ESS advice before disturbance. Performance: Disturbance remains	Low

		within the approved footprint with no material construction-related spread of invasive species.	
Spills and Hazardous Materials	Fuel, oil or chemicals contaminating soil, drainage infrastructure or coastal waters.	• Store fuel, oil and hazardous materials in bunded areas on an impermeable surface. • Undertake refuelling only in designated areas away from drainage structures and the coastal edge. • Use drip trays during refuelling and beneath stationary plant where leakage is reasonably foreseeable. • Maintain appropriately stocked spill kits at relevant work areas. • Brief workers on spill prevention and response procedures. • Immediately contain and clean spills. • Immediately notify SAA/SE of significant spills or any spill reaching drainage or coastal waters; report other reportable incidents within 24 hours. Performance: No uncontrolled release to soil, drainage or coastal waters; spills recorded, remediated and closed out.	Low
Airport Operations, Security and OHS	Worker injury, excavation hazards, unauthorised restricted-area access, perimeter security breach or disruption to airport operations.	• Implement approved OHS, SWMS and airside security procedures. • Conduct site induction and daily toolbox talks relevant to planned activities and risks. • Require appropriate PPE for all workers. • Provide safe excavation controls, including barricading, access control and protection of open excavations. • Implement heat-stress controls, including drinking water, rest breaks and shade/shelter. • Coordinate fence removal and installation sequencing with SAA Operations and Airport Security. • Install secure temporary fencing or barriers before removing any existing fence section where removal would create a perimeter gap. • Maintain perimeter integrity and emergency access throughout construction. • Immediately report and rectify security breaches and OHS incidents.	Low

		Performance: No uncontrolled high-risk activity, unauthorised airside access or unresolved perimeter security breach.	
Community Health, Safety and Airport Access	Temporary disruption or safety risks to airport users accessing the terminal, car parks, drop-off areas or other public facilities.	• Maintain safe public access to the International Terminal Building, car parks and drop-off areas throughout construction. • Separate construction activities from public access routes using barriers and signage. • Provide clearly marked temporary or alternative routes where required. • Provide advance notification of material temporary access changes or closures. • Coordinate public-access arrangements with SAA Terminal Management and Airport Operations. • Schedule disruptive works near public areas outside peak passenger movements where practicable. Performance: Safe access to airport public facilities maintained; temporary changes clearly communicated and managed.	Low
Laydown and Contractor Compound	Poorly located material storage or site facilities causing drainage obstruction, coastal disturbance, public-access conflict, pollution or airport operational interference.	• Require the Contractor to submit a Site Establishment Plan to SAA for approval before mobilisation. • Identify the proposed compound, FRP/material storage, waste storage, worker facilities, access and relevant environmental controls. • Locate laydown and compound areas away from drainage flow paths, coastal-sensitive areas and public access zones. • Secure stored materials and maintain orderly site conditions. • Reinstate temporary compound and laydown areas following completion. Performance: Site Establishment Plan approved before mobilisation; no drainage, coastal, public-access or airport operational interference from site establishment.	Low
Labour and Working Conditions	Poor employment practices, excessive working hours, underpayment,	• Engage workers under documented employment arrangements consistent with applicable Samoa labour requirements.	Low

	inadequate worker welfare or unresolved worker grievances, particularly where local or casual labour is engaged.	• Clearly communicate wages, working hours, duties and applicable employment conditions. • Maintain worker attendance and employment records. • Provide appropriate rest periods, sanitation, drinking water and worker welfare facilities. • Maintain an accessible worker grievance mechanism. • Prohibit child labour and forced labour. • Require compliance with the project Worker Code of Conduct. Performance: Documented employment arrangements and worker records maintained; grievances recorded and addressed.	
Unexpected Conditions and Chance Finds	Unidentified services, unstable ground, voids, buried waste, contamination, seepage, archaeological/cultural material or unexpected drainage, ecological or coastal conditions.	• Stop or make safe affected works immediately. • Secure the affected area where necessary. • Notify the SE, ESS and relevant SAA representative. • Apply the chance-find procedure where potential cultural or historical material is encountered. • Obtain appropriate engineering, environmental or regulatory direction before resuming affected works. Performance: Unexpected conditions assessed and appropriately managed before work recommences.	Low

22.2. Labour and Working Conditions

Construction is expected to involve a relatively small workforce comprising skilled tradespersons, machine operators, supervisors and local labour engaged by the successful contractor and subcontractors. Foreseeable labour risks include:

- informal or poorly documented employment arrangements;
- uncertainty regarding wages, working hours and entitlements;
- inadequate induction or worker welfare;
- excessive working hours or insufficient rest periods;
- occupational health and safety risks;
- worker misconduct; and
- unresolved worker grievances.

To manage these risks, the Contractor shall:

- engage workers under documented employment arrangements consistent with applicable Samoa labour requirements;
- clearly communicate duties, wages, working hours and applicable employment conditions;

- maintain worker attendance and employment records;
- comply with applicable working-hour, rest-break and wage requirements;
- provide appropriate OHS induction, PPE, sanitation, drinking water and welfare facilities;
    - operate an accessible worker grievance mechanism;
    - prohibit child labour and forced labour; and
    - require all workers to comply with the project Worker Code of Conduct.
      Detailed labour-management requirements are provided in the ESMP and Contractor's CESMP.

22.3. Community Health and Safety

Construction activities will occur within an operational airport environment and may temporarily affect passengers, visitors, airport staff and other users of the terminal, car parks, drop-off areas and access routes.

Potential community health and safety risks include temporary obstruction of access, interaction with construction vehicles and plant, exposure to work areas, and disruption near public-use areas. The following controls shall apply:

- maintain safe public access to the International Terminal Building, car parks and drop-off areas;
- separate construction activities from public areas using barriers and clear signage;
- provide temporary or alternative access routes where required;
- provide advance notice of temporary access changes or closures;
- coordinate works near public areas with SAA Terminal Management and Airport Operations;
- avoid peak passenger movement periods where practicable; and
- record and respond promptly to public complaints through the project GRM.

With these measures in place, community health and safety impacts are expected to be temporary, localised and low.

22.4. Airport Operations and Security

The project will be implemented within an active international airport and requires strict coordination with SAA Operations and Airport Security to maintain operational continuity and perimeter integrity throughout construction.

Key risks include unauthorised airside access, temporary perimeter gaps during fence removal, interference with airport operations, vehicle or plant movements within restricted areas, and disruption to security infrastructure. The following requirements shall apply:

- coordinate construction staging with SAA Operations and Airport Security;
- always maintain airport perimeter security;
- install secure temporary fencing or barriers before removing any section of the existing fence where a security gap would result;
- restrict access to authorised personnel holding the required SAA security clearances and airside permits;

- control construction vehicles and plant within approved routes and work areas;
- maintain emergency and operational access throughout the works;
- immediately report and rectify any perimeter breach or security incident; and
- suspend affected works where airport safety or security may be compromised.

Subject to these controls, the project is not expected to materially disrupt airport operations or compromise aviation security. Detailed operational and security requirements are provided in the ESMP and Contractor's CESMP.

22.5. Operational Phase Assessment

Aspect	Assessment
Airport Security	Improved perimeter integrity and controlled access, subject to routine inspection and maintenance.
Fence Performance	FRP materials are expected to provide improved corrosion resistance and durability, subject to approved design, installation and maintenance requirements.
Drainage	Footings, mowing strips and maintenance activities shall not obstruct drainage assets, established flow paths or maintenance access.
Coastal and Ground Conditions	Low operational impact is expected where the fence remains within the approved corridor and avoids seaward filling or substantial shoreline disturbance.
Ecology and Invasive Species	Effects are expected to remain limited where maintenance avoids unnecessary vegetation disturbance and transfer of invasive material.
Overall Residual Effect	Operational impacts are expected to be low with effective inspection, maintenance and drainage protection.

23. Environmental and Social Safeguards.

The FIA Boundary Fence Replacement Project shall be implemented in accordance with the SARIP Environmental and Social Management Framework (ESMF), Environmental and Social Commitment Plan (ESCP), applicable World Bank Environmental and Social Standards (ESSs), this PEAR, the project ESMP, Development Consent conditions and construction contract requirements.

Before mobilisation, the Contractor shall prepare a proportionate, project-specific Contractor's Environmental and Social Management Plan (CESMP) using the template/TOC and implementation tools provided in the bidding documents. The CESMP shall consolidate the environmental, social, labour, occupational health and safety (OHS), airport security and construction controls applicable to the works.

Separate standalone sub-plans are not required unless specifically warranted by the

Contractor's methodology, site conditions, contract requirements or directions of the SAA/SARIP PIU. As a minimum, the CESMP shall address:

- OHS, labour conditions, worker conduct and worker grievances;
- airside access, traffic, perimeter security and emergency response;
- waste management, erosion and sediment control, drainage protection and concrete washout;
- pollution prevention, hazardous materials and spill response;
- ecological protection and invasive-species management;
- stakeholder engagement, community grievances and SEA/SH-sensitive referral procedures;
- chance finds and unexpected environmental or social conditions; and
- monitoring, incident notification, reporting, corrective action and close-out.

The CESMP shall be reviewed and accepted in accordance with the contract before mobilisation and shall remain consistent with the approved PEAR and project ESMP throughout construction.

24. Applicable World Bank Environmental and Social Standards.

Based on the assessed works and current project information, the following ESSs are directly relevant:

Standard	Project Relevance
ESS1	Assessment and management of environmental and social risks and impacts.
ESS2	Labour conditions, worker health and safety, worker grievances and construction risks.
ESS3	Resource efficiency, pollution prevention, waste, stormwater and spill management.
ESS10	Stakeholder engagement, information disclosure and grievance management.

Potential relevance of other ESSs shall be determined through the approved SARIP safeguards instruments, project screening and final design. Current information indicates no proposed land acquisition or physical displacement and no known cultural heritage site or significant natural habitat within the assessed footprint. Any material design change or unexpected land, ecological or cultural heritage issue shall be assessed before affected works proceed.

25. Institutional Responsibilities.

Entity	Primary Responsibility
SAA/SARIP PIU	Project management, safeguards oversight, stakeholder coordination, grievance oversight and contract administration.
ESS Consultant	Environmental and social monitoring, compliance review and safeguards reporting within the consultancy scope.
Supervising Engineer	Construction supervision, technical compliance and verification of corrective actions.
Contractor	CESMP implementation, worker safety, environmental controls, incident reporting and corrective action.
MWTI–PUMA	Development Consent assessment and regulatory oversight under applicable planning requirements.

World Bank	Oversight of environmental and social compliance under SARIP financing arrangements.

26. Stakeholder Consultation and Grievance Management.

Stakeholder consultation and project coordination undertaken during preparation of this PEAR informed the environmental and social assessment and the mitigation, monitoring and corrective-action measures contained in the attached ESMP.

An inception meeting was held on 15 June 2026 with SAA, the SARIP PIU and project representatives to confirm the project scope, implementation arrangements, engineering requirements, airport operational and security constraints, safeguards obligations, institutional responsibilities and PEAR/ESMP requirements.

On 18 June 2026, field coordination with the Project Manager and SAA Airport Security established controlled access, escort, communication and safety arrangements for field investigations near restricted and operational airport areas. Subsequent fieldwork was undertaken in accordance with SAA access and security requirements.

Following MWTI–PUMA review comments, a supplementary field inspection and RTK GNSS engineering survey was undertaken on 4 July 2026 to address identified information gaps. The additional work strengthened assessment of the fence corridor, drainage infrastructure, stormwater pathways, ground elevations, coastal and ecological conditions, and interfaces with nearby airport assets. Relevant findings have been incorporated into the revised PEAR and attached ESMP.

No adjacent landowners are expected to be affected during the works. There is an ongoing land acquisition issue between the Government of Samoa (GoS) and the owners of the land adjacent to the eastern end of the new boundary fence. GoS is currently in the process of compensating the owners for relocation costs. This matter is separate from the scope of work, and is not expected to affect the works, as the works itself will be contained within the airport boundary, and access to the works will be through the airport land.

E-Energy Pacific Ltd currently leases land on the southern side of the fence and will be consulted to inform them of the upcoming works.

Stakeholder/Entity	**Engagement Purpose**	**Status**
SAA/SARIP PIU	Project implementation, safeguards oversight and operational coordination	Ongoing
Project Manager/ Engineering Team	Design, survey and construction coordination	Ongoing
SAA Airport Security	Controlled access, airside safety and perimeter security	Ongoing as required
MWTI–PUMA	Development Consent review and environmental planning requirements	Ongoing

MWTI–Civil Aviation Division	Aviation regulatory coordination where required	As required
MNRE	Technical or environmental coordination where required by the consent process or project impacts	As required
Office of the Attorney General (OAG)	Progress update of the Fusive'a land acquisition case	Ongoing
E-Energy Solar (Adjacent lease owner)	Awareness of upcoming fence works	To be conducted before contract award

The attached ESMP translates relevant consultation and assessment findings into implementation controls for drainage and stormwater protection, erosion and sediment management, waste and pollution prevention, coastal and ground conditions, ecological and invasive-species risks, airport access and security, OHS, incident reporting and corrective action. The Contractor shall address applicable requirements through the CESMP and construction procedures before and during works.

During implementation, SAA SARIP PIU shall maintain proportionate engagement with affected and responsible parties on construction timing, access restrictions, operational interfaces and material environmental or social issues. Grievances shall be managed through the applicable SARIP grievance mechanism, including recording, acknowledgement, assessment, referral, response and closure. Worker grievances shall be managed separately through applicable labour procedures, with confidential handling of sensitive matters.

Consultation and coordination records, including relevant agendas, attendance records, minutes, correspondence, PUMA comments and field-access documentation, shall be retained as part of the project safeguards record. Any material issue arising from regulatory review, stakeholder engagement or design change shall be assessed and incorporated, as applicable, into the PEAR, ESMP, CESMP and construction requirements before affected works proceed.

27. Alternatives Assessment.

Alternatives were assessed against the PUMA Act 2004, EIA Regulations 2007, relevant COEPs, applicable SARIP safeguards instruments and World Bank ESS1. Criteria included airport security, engineering suitability, environmental disturbance, coastal exposure, drainage and infrastructure interfaces, constructability, maintenance and whole-of-life performance.

27.1. Assessment of Alternatives

Option	Assessment	Outcome
Do Nothing	Avoids immediate construction impacts but retains deteriorating fencing, increasing security and maintenance risks.	Not Preferred
Repair Existing	Reduces short-term disturbance and cost but retains	Not

Fence	ageing, mixed fence systems and recurring maintenance requirements.	Preferred
Alternative Alignment	Could increase new ground disturbance, drainage and utility conflicts, operational constraints and approval requirements compared with use of the established perimeter corridor.	Not Preferred
Chain-Link Fence	Proven and already present along parts of the perimeter but generally requires greater corrosion protection and maintenance under coastal exposure.	Less Preferred
FRP Mesh Security Fence within Existing Corridor	Reduces new land disturbance while providing a corrosion-resistant, low-maintenance security system suited to the airport's coastal environment, subject to approved design and specifications.	Preferred

27.2. Preferred Option.
The FRP Mesh Security Fence System within the established perimeter corridor is preferred because it provides the strongest overall balance of airport security, engineering suitability, coastal durability, environmental impact avoidance and maintenance requirements.

Use of the existing corridor limits additional land disturbance and reduces potential conflicts with drainage, coastal areas, airport infrastructure and operational access. Construction impacts remain temporary and localised and shall be managed through the attached ESMP, approved CESMP and applicable consent conditions.

Final fence performance and service life remain subject to the approved engineering design, material specifications, installation quality, site conditions and maintenance.

28. Monitoring Requirements.

Aspect	Performance Requirement	Responsibility	Frequency
OHS, Airport Safety and Security	• Maintain approved work controls and access permits. • Secure temporary fence openings and restricted areas. • Implement inductions, SWMS and incident procedures.	Contractor/SAA	Daily
Dust and Noise	• Suppress dust where required. • Maintain equipment and control unnecessary noise. • Record and address complaints promptly.	Contractor	Daily/as required
Waste, Fuels and Chemicals	• Segregate and secure waste. • Use approved disposal pathways.	Contractor	Ongoing/weekly inspection

	• Store fuels and chemicals safely. Prevent, contain and report spills.		
Drainage, Erosion and Water Quality	• Maintain existing flow paths. • Protect drains, pits, culverts and outfalls. • Prevent sediment, waste and pollutants entering drainage or coastal waters. Inspect after significant rainfall.	Contractor/SE	Weekly, during relevant works and after significant rainfall
Concrete Works	• Contain concrete slurry and wash water. • Use designated washout areas. • Prevent discharge to soil, drains and coastal waters.	Contractor/SE	During concrete works
Infrastructure and Utilities	• Verify relevant interfaces before excavation. • Protect roads, drainage assets, airfield services and identified utilities. Report and rectify damage promptly.	Contractor/SE	Daily in active work areas
Ground and Coastal Conditions	• Inspect founding conditions during excavation. • Identify instability, scour or loss of support. • Avoid unnecessary shoreline disturbance. • Refer material issues for engineering review before affected works proceed.	Contractor/SE	During excavation and foundation works
Ecology and Invasive Species	• Limit vegetation disturbance to the approved footprint. • Contain invasive vegetation and affected material. • Prevent transfer of invasive plants, ants, seeds and soil between work areas. • Avoid disturbance to active nests or sensitive	Contractor/ESS	During clearance and earthworks

	ecological features.		
Stakeholder and Grievance Issues	• Record and acknowledge project-related grievances. • Refer issues to the responsible party. • Track actions and responses to closure.	SAA/PIU	Ongoing
Reinstatement and Close-Out	• Stabilise disturbed ground progressively. • Remove residual waste and temporary works. • Restore affected areas. • Verify satisfactory close-out before completion.	Contractor/SE/ESS	Progressive and before completion
Overall Safeguards Compliance	• Verify compliance with the PEAR, ESMP, CESMP, consent and contract requirements. • Record inspection findings and non-compliance. • Assign and track corrective actions to closure. • Include findings in safeguards reporting.	ESS/PIU/SE	Weekly inspection and monthly reporting

29. Recommendation.

- Based on the engineering design, field investigations, RTK GNSS spatial verification and environmental and social assessment presented in this PEAR, the proposed FIA Boundary Fence Replacement Project is considered environmentally and socially acceptable.

- The identified potential impacts are predominantly localised, temporary and manageable, with residual impacts expected to remain low through implementation of the mitigation and monitoring measures set out in this PEAR and the attached Environmental and Social Management Plan (ESMP).

- Accordingly, the project is recommended for Development Consent. The determination of the application and any conditions of consent remain with MWTI–PUMA under the applicable planning and environmental framework.

19. References

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2. Government of Samoa. (2004). *Planning and Urban Management Act 2004*. Apia, Samoa.
3. Government of Samoa. (2007). *Planning and Urban Management (Environmental Impact Assessment) Regulations 2007*. Apia, Samoa.
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11. Samoa Aviation and Roads Investment Project (SARIP). *Environmental and Social Management Framework (ESMF)*.
12. Samoa Aviation and Roads Investment Project (SARIP). *Environmental and Social Commitment Plan (ESCP)*.
13. Samoa Aviation and Roads Investment Project (SARIP). *Applicable Stakeholder Engagement and Environmental and Social Safeguards Instruments*.
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15. World Bank. *Environmental and Social Standard 1 (ESS1): Assessment and Management of Environmental and Social Risks and Impacts*.
16. World Bank. *Environmental and Social Standard 2 (ESS2): Labor and Working Conditions*.
17. World Bank. *Environmental and Social Standard 3 (ESS3): Resource Efficiency and Pollution Prevention and Management*.
18. World Bank. *Environmental and Social Standard 10 (ESS10): Stakeholder Engagement and Information Disclosure*.
19. XPMS C Associates Ltd. (2026). *Field Inspection and RTK GNSS Survey Records for the FIA Boundary Fence Replacement Project*, 18 June 2026 and 4 July 2026. Samoa.
20. MWTI–Planning and Urban Management Agency (PUMA). (2026). *Review Comments on the Preliminary Environmental Assessment Report for the FIA Boundary Fence Replacement Project*. Samoa.
21. Samoa Airport Authority / SARIP PIU. (2026). *Project Coordination, Site Access, Security Briefing and Stakeholder Engagement Records for the FIA Boundary Fence Replacement Project*. Samoa.
22. XPMS C Associates ltd. (2026) Site photographs taken on the 18 June C 4 July at Faleolo International Airport.

APPENDIX 1: XPMS _260707_SAA SURVEY TOPOGRAPHIC

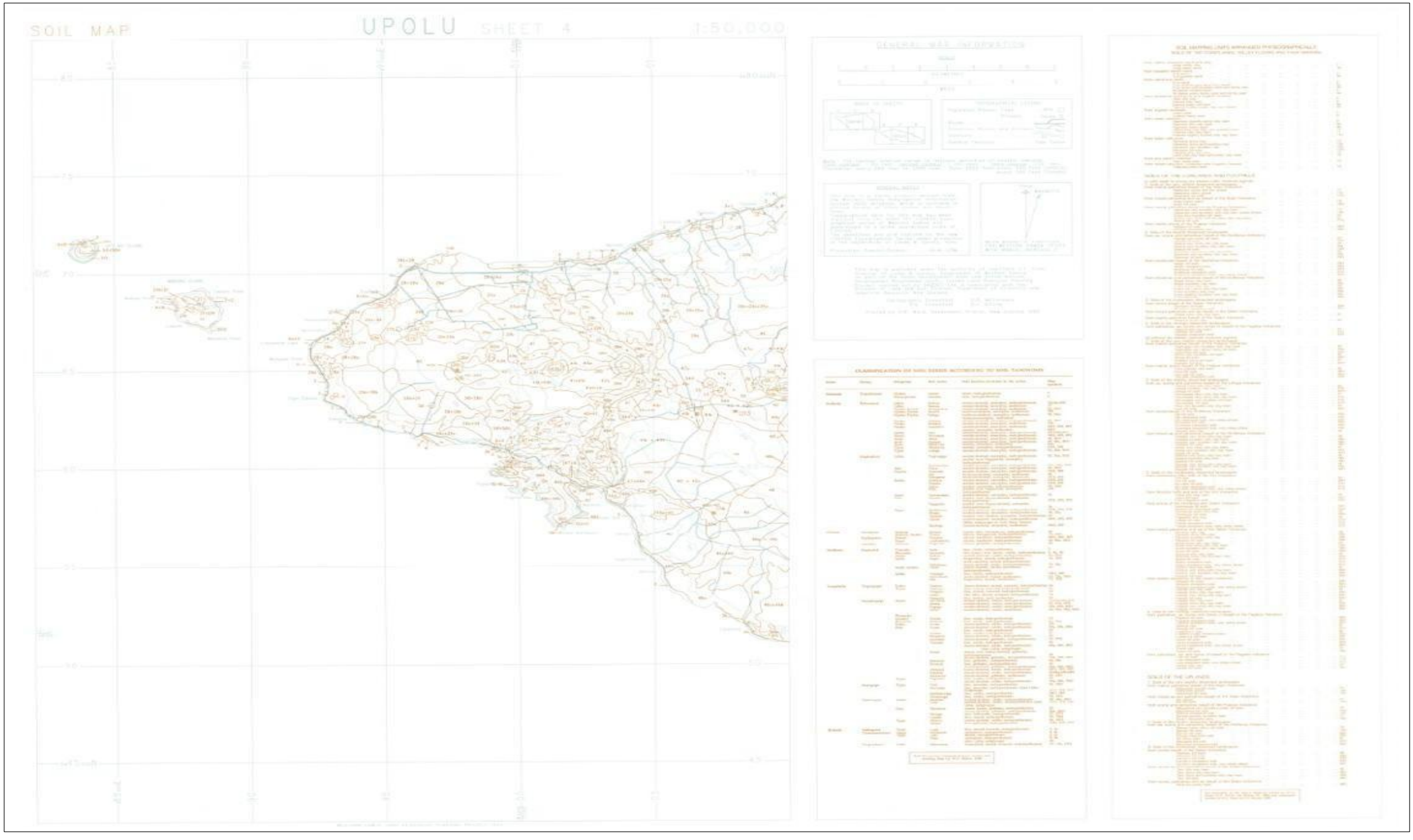
XPMS _260707_SAA SURVEY TOPOGRAPHIC

XPMS _260707_SAA SURVEY TOPOGRAPHIC

XPMS _260707_SAA SURVEY TOPOGRAPHIC

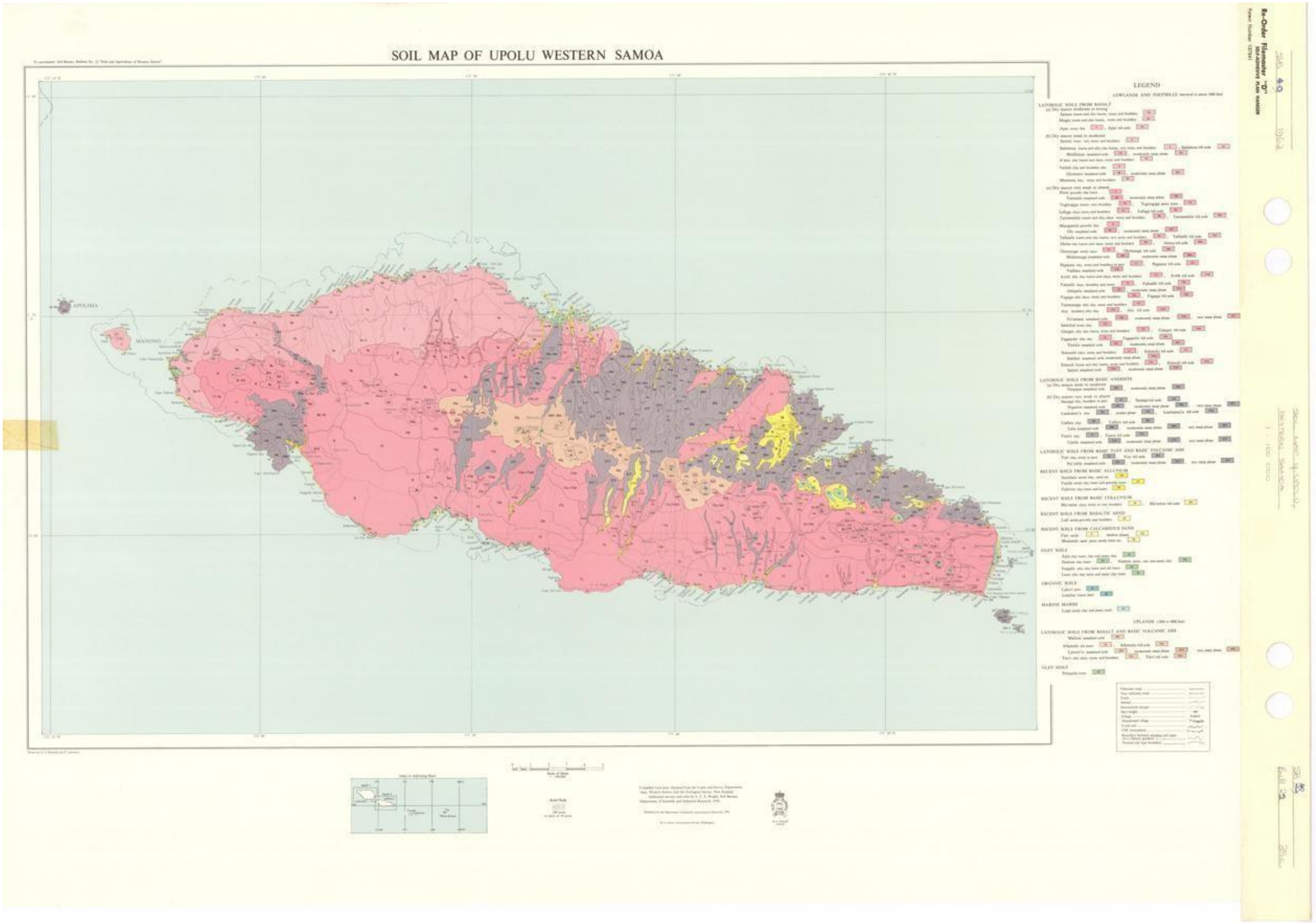
APPENDIX 2: SOIL MAP- UPOLU.

SOURCE: Ministry of Public Works s Transport. (1G86). *Soil Map – Upolu, Sheet 4* (Scale 1:50,000). Government of Samoa.



SOIL MAP OF UPOLU, SAMOA.

SOURCE: Land Use Planning Department, Ministry of Agriculture, Forests and Fisheries, Government of Samoa.



APPENDIX 3: Images/Photos taken on 18 June and 4 July 2026 by XPMS & Associates Ltd

Source: XPMS & Associates Ltd (Location: Faleolo International Airport)

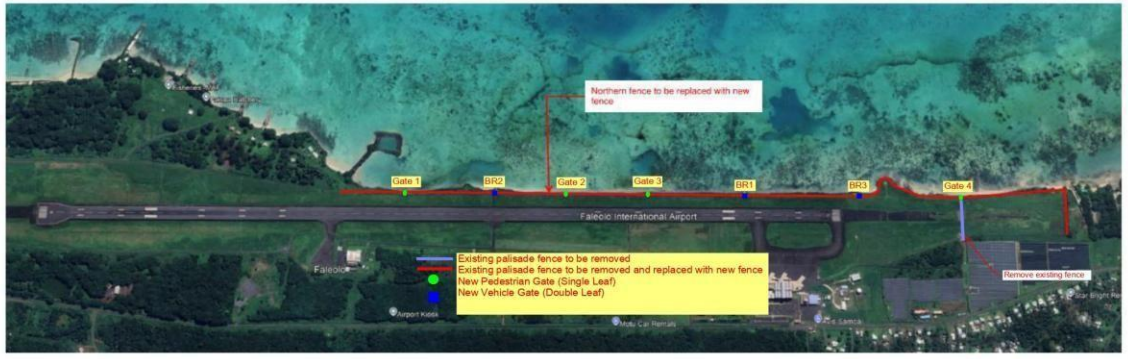
APPENDIX 4: Overall Layout of the Proposed Faleolo International Airport Boundary Fence Replacement Project2

SAMOA AIRPORT AUTHORITY
SAMOA AVIATION AND ROADS INVESTMENT PROJECT
FALEOLO INTERNATIONAL AIRPORT BOUNDARY FENCE

DRAWINGS
APME

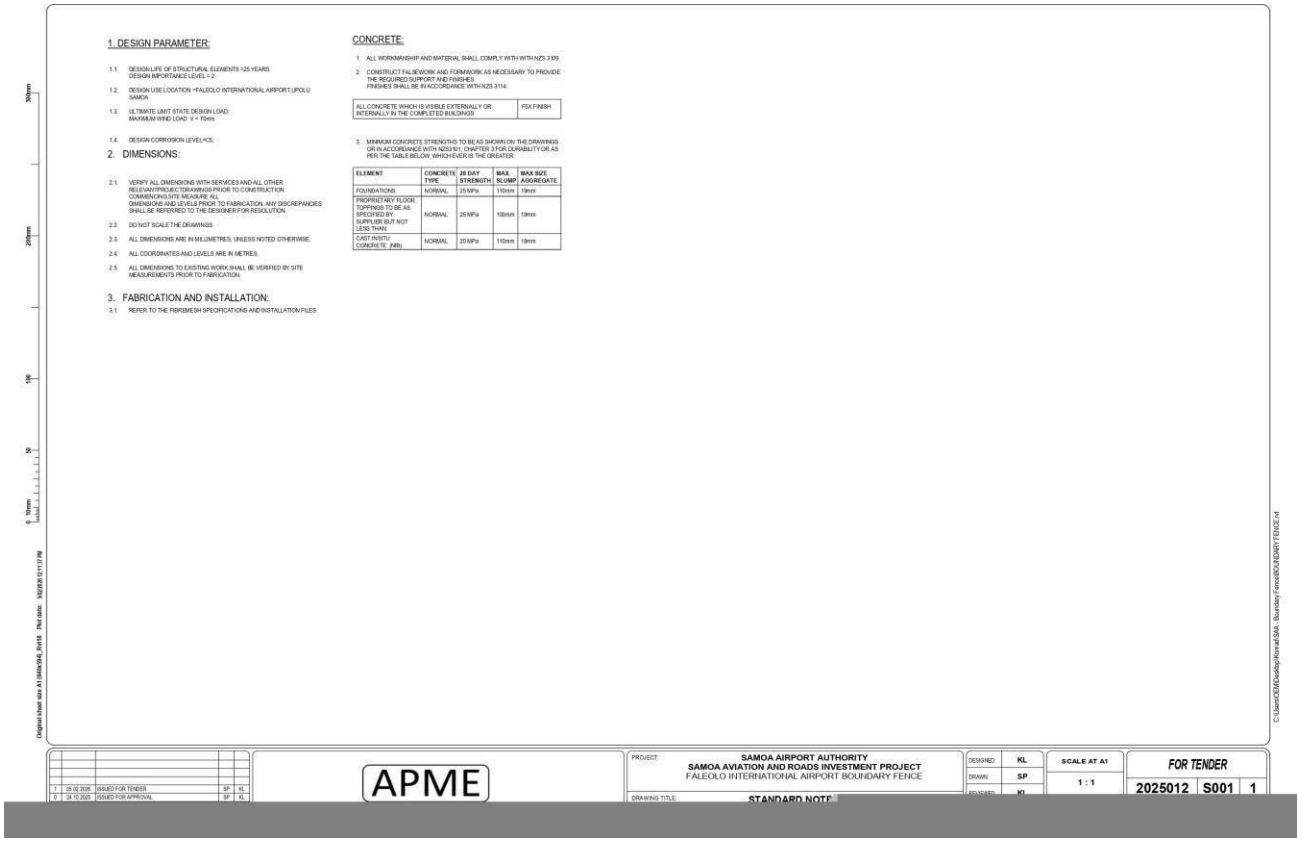
SHEET INDEX		
SHEET NO.	DRAWING TITLE	CURRENT REV.
S001	STANDARD NOTES - SHEET 1	1
S101	OVERALL PLAN AND SECTION	1
S102	NEW FENCE PLAN VIEW SHEET 1	1
S103	NEW FENCE PLAN VIEW SHEET 2	1
S201	NEW FENCE ELEVATION SHEET 1	1

SHEET INDEX		
SHEET NO.	DRAWING TITLE	CURRENT REV.
S300	TYPICAL FENCE ELEVATION	1
S301	STANDARD FENCE DETAIL	1
S302	STANDARD PEDESTRIAN GATE DETAIL	1
S303	STANDARD VEHICLE DOUBLE LEAF GATE DETAIL	1



[2] Source: Adapted from APME Engineering Drawings prepared for the SAA under the SARIP, Drawing Sheets S001–S303 (February 2025). The figure illustrates the proposed replacement of approximately 2,985 linear metres of the existing northern airport boundary fence, including the locations of four (4) pedestrian gates and three (3) double-leaf vehicle gates. The layout is indicative and should be read in conjunction with the certified engineering drawings and technical specifications.

Figure 2. Standard Design Notes and Engineering Specifications[3]



1. DESIGN PARAMETER:

1.1. DESIGN LIFE OF STRUCTURAL ELEMENTS =25 YEARS.
DESIGN IMPORTANCE LEVEL = 2

1.2. DESIGN USE LOCATION =FALEOLO INTERNATIONAL AIRPORT, UPOLU SAMOA

1.3. ULTIMATE LIMIT STATE DESIGN LOAD:
MAXIMUM WIND LOAD V = 70m/s

1.4. DESIGN CORROSION LEVEL =CL

2. DIMENSIONS:

2.1. VERIFY ALL DIMENSIONS WITH SERVICES AND ALL OTHER RELEVANT PROJECT DRAWINGS PRIOR TO CONSTRUCTION COMMENCING SITE MEASURE ALL DIMENSIONS AND LEVELS PRIOR TO FABRICATION. ANY DISCREPANCIES SHALL BE REFERRED TO THE DESIGNER FOR RESOLUTION.

2.2. DO NOT SCALE THE DRAWINGS.

2.3. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS NOTED OTHERWISE.

2.4. ALL COORDINATES AND LEVELS ARE IN METRES.

2.5. ALL DIMENSIONS TO EXISTING WORK SHALL BE VERIFIED BY SITE MEASUREMENTS PRIOR TO FABRICATION.

3. FABRICATION AND INSTALLATION:

3.1. REFER TO THE FIBREMESH SPECIFICATIONS AND INSTALLATION FILES.

CONCRETE:

1. ALL WORKMANSHIP AND MATERIAL SHALL COMPLY WITH WITH NZS 3109.
2. CONSTRUCT FALSEWORK AND FORMWORK AS NECESSARY TO PROVIDE THE REQUIRED SUPPORT AND FINISHES.
FINISHES SHALL BE IN ACCORDANCE WITH NZS 3114.

ALL CONCRETE WHICH IS VISIBLE EXTERNALLY OR INTERNALLY IN THE COMPLETED BUILDINGS	F5X FINISH

3. MINIMUM CONCRETE STRENGTHS TO BE AS SHOWN ON THE DRAWINGS OR IN ACCORDANCE WITH NZS3101, CHAPTER 3 FOR DURABILITY OR AS PER THE TABLE BELOW, WHICH EVER IS THE GREATER.

ELEMENT	CONCRETE TYPE	28 DAY STRENGTH	MAX. SLUMP	MAX SIZE AGGREGATE
FOUNDATIONS	NORMAL	25 MPa	110mm	19mm
PROPRIETARY FLOOR TOPPINGS TO BE AS SPECIFIED BY SUPPLIER BUT NOT LESS THAN	NORMAL	25 MPa	100mm	19mm
CAST IN SITU CONCRETE (MIN)	NORMAL	20 MPa	110mm	19mm

APME

PROJECT: SAMOA AIRPORT AUTHORITY
SAMOA AVIATION AND ROADS INVESTMENT PROJECT
FALEOLO INTERNATIONAL AIRPORT BOUNDARY FENCE

DRAWING TITLE: STANDARD NOTE

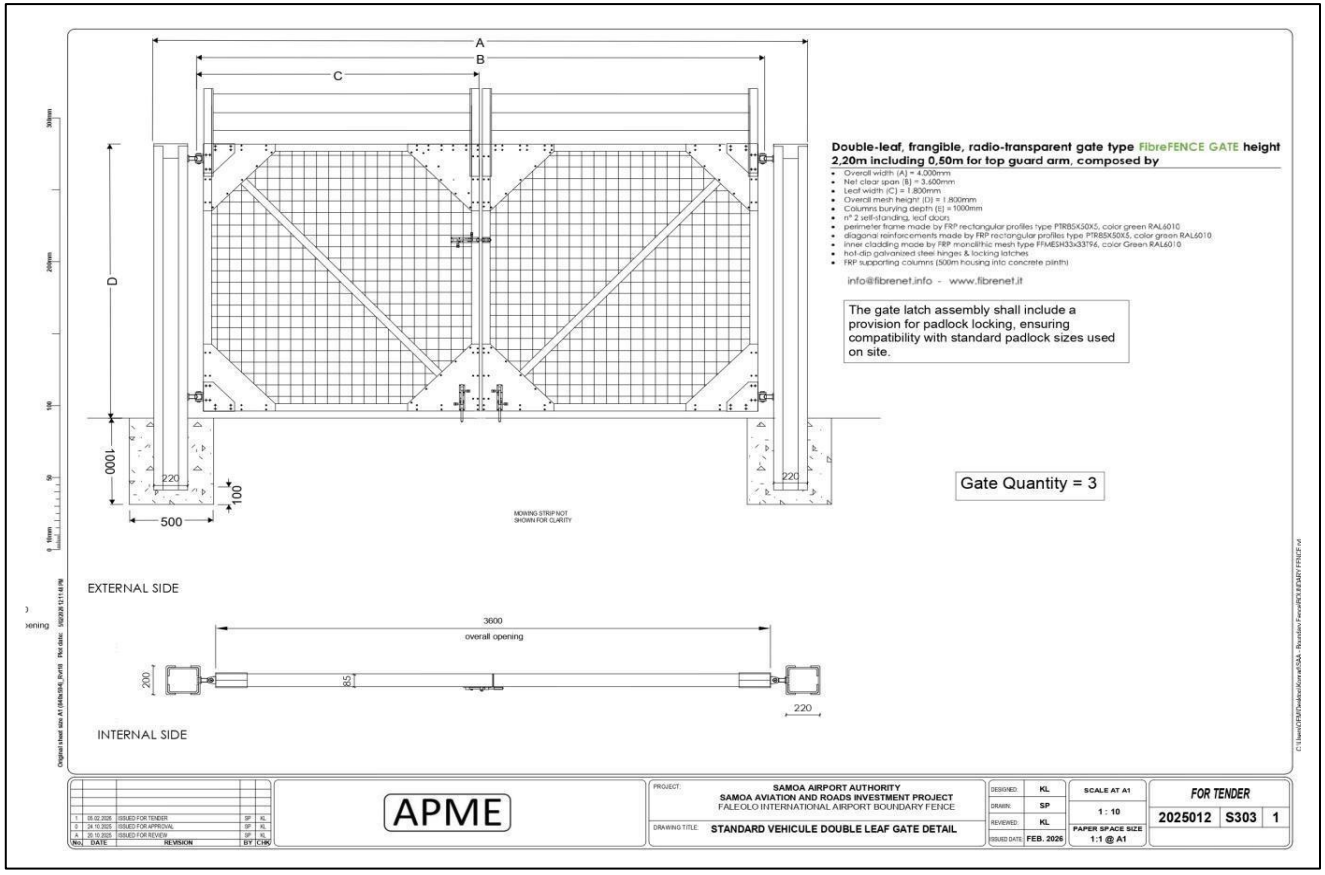
DESIGNED: KL
DRAWN: SP

SCALE AT A1: 1 : 1

FOR TENDER
2025012 | S001 | 1

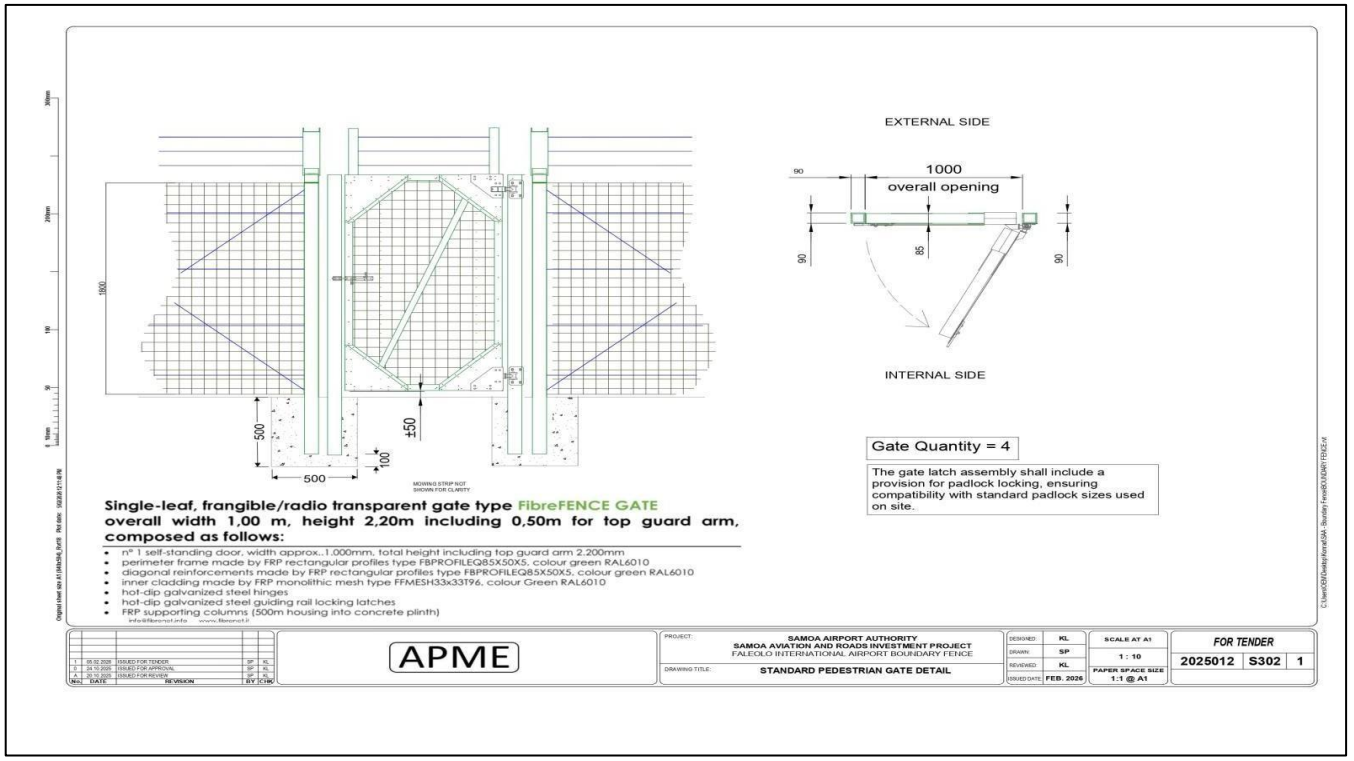
1 | 05.02.2026 | ISSUED FOR TENDER | SP | KL
0 | 24.10.2025 | ISSUED FOR APPROVAL | SP | KL

Figure 3. Standard FRP Double-Leaf Vehicle Security Gate (APME Drawing S303) showing the proposed gate configuration, FRP mesh panels, structural framing, reinforced concrete footings, locking arrangement and vehicle access opening. Three (3) gates are proposed as part of the FIA Boundary Fence Replacement Project4.



[4] Figure 3 illustrates the proposed Fibre Reinforced Polymer (FRP) Double-Leaf Vehicle Security Gate to be installed as part of the FIA Boundary Fence Replacement Project. The gate is specifically designed for airport security applications and comprises FRP structural framing, FRP mesh infill panels, reinforced concrete footings, hot-dip galvanised or stainless-steel hardware, and a secure lockable latch assembly compatible with standard airport security padlocks. The gate has an overall height of approximately 2.20 metres, including a 0.50-metre top guard arm, and provides an overall vehicle access opening of approximately 3.60 metres. The design incorporates radio-transparent and frangible FRP materials, making it suitable for use within an operational airport environment where compatibility with aviation communication and navigation systems is required. A total of three (3) double-leaf vehicle security gates are proposed and will provide controlled

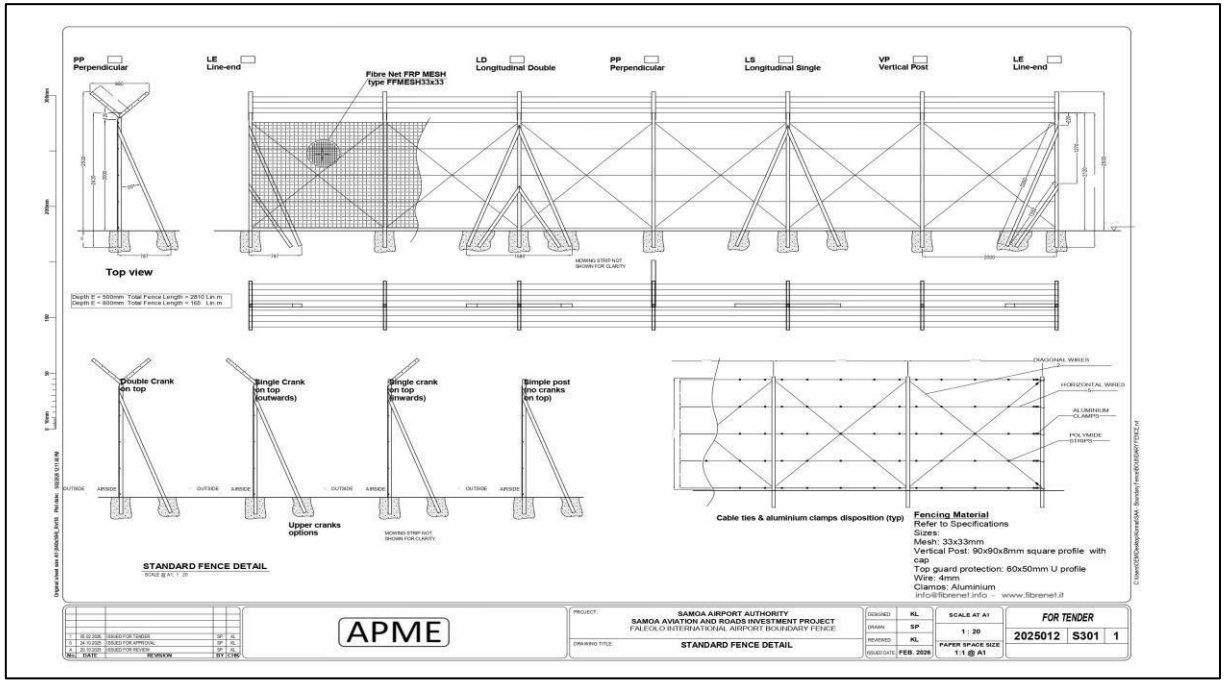
Figure 4. Standard FRP Single-Leaf Pedestrian Security Gate[5]



access for authorised airport operational vehicles, emergency response vehicles and maintenance personnel. The gates will be integrated into the proposed FRP perimeter security fence system and installed on reinforced concrete foundations designed to withstand coastal exposure, high winds and operational loading conditions.

[5] Figure 4 illustrates the proposed FRP Single-Leaf Pedestrian Security Gate to be installed as part of the FIA Boundary Fence Replacement Project. The gate is specifically designed for airport security applications and comprises an FRP structural frame, FRP mesh infill panel, reinforced concrete footings, corrosion-resistant hinges and a lockable latch assembly compatible with standard airport security padlocks. The gate has an overall height of approximately 2.20 metres,

Figure 5. Standard FRP Fence Detail.[6]



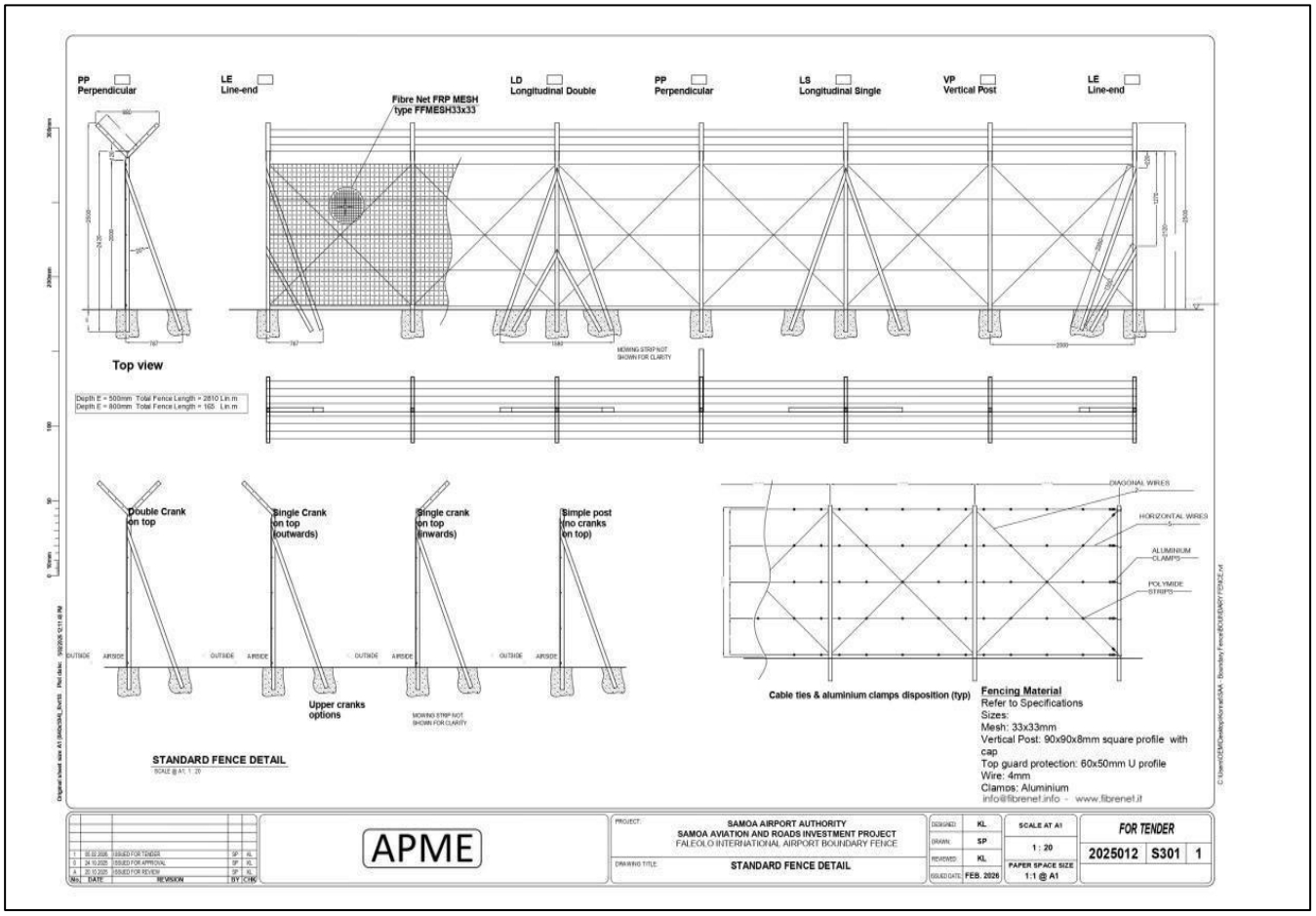
including a 0.50-metre top guard arm and provides a clear pedestrian access opening of approximately 1.00 metre. The design incorporates radio-transparent and frangible FRP materials that are suitable for operational airport environments and compatible with aviation communication and navigation systems. A total of four

(4) single-leaf pedestrian security gates is proposed and will provide controlled access for authorised airport personnel, maintenance staff and emergency responders. The gates will be integrated into the proposed FRP perimeter security fence system and installed on reinforced concrete foundations designed to withstand coastal exposure, marine corrosion and extreme weather conditions.

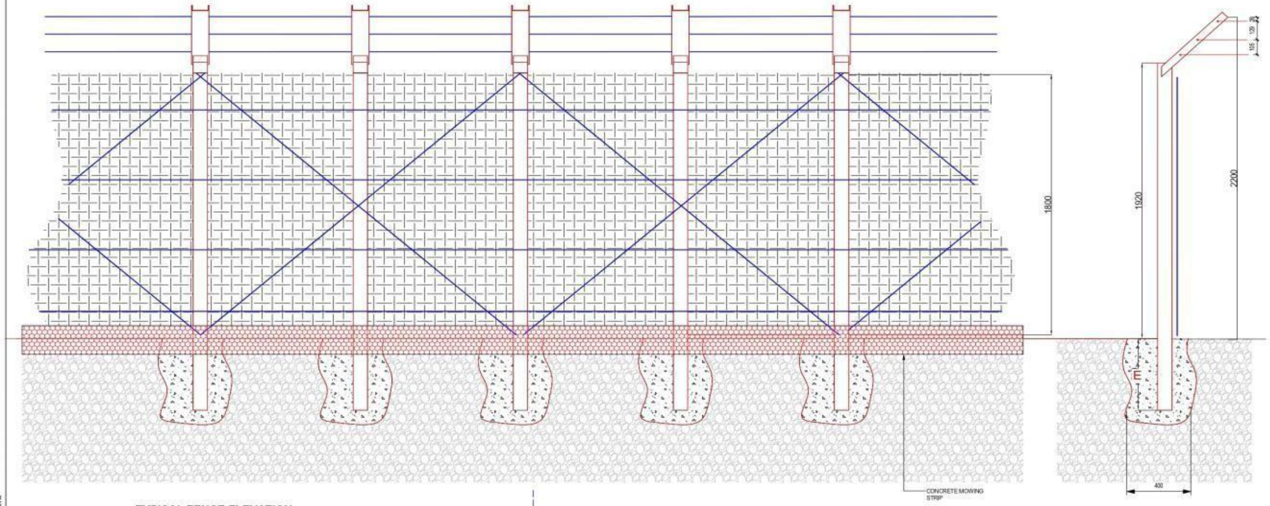
The proposed pedestrian gate design provides a secure, durable and low-maintenance access solution that is appropriate for the operational requirements of FIA. The use of FRP materials enhances resistance to corrosion, salt spray and tropical weathering while supporting long-term operational reliability and airport security.

[6] Standard FRP Mesh Security Fence Detail (APME Drawing S301) showing the typical fence elevation, FRP mesh configuration, vertical posts, bracing system, top guard arm, reinforced concrete footings, mowing strip and structural components proposed for the FIA Boundary Fence Replacement Project. The detail forms the basis for the installation of approximately 2,985 metres of new airport perimeter security fencing.

Figure 6. Typical FRP Fence Elevation and Foundation Detail.[7]



[7]Typical FRP Mesh Security Fence Elevation (APME Drawing S300) showing the proposed fence profile, FRP mesh panels, vertical posts, diagonal bracing, top guard arm, reinforced concrete footings and continuous concrete mowing strip. The detail represents the standard construction arrangement for the proposed 2,985-metre airport perimeter security fence at FIA.

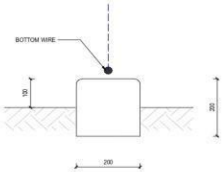


TYPICAL FENCE ELEVATION

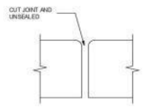
SCALE @ A1; 1 : 10

NOTES:

1. FENCE POST ARE SPACED AT 1m MAX.
2. REFER TO STANDARD FENCE DETAILS FOR BRACING DETAILS.
3. FENCE INSTALLATION DETAILS AS PER MANUFACTURERS SPECIFICATIONS.
4. 25MPa FOR ALL CONCRETE.



Concrete Mowing Strip



Expansion joint 30M

Depth E = 500mm Total Fence Length = 2810 Lin.m
Depth E = 800mm Total Fence Length = 165 Lin.m

Fencing Material
Refer to Specifications
Sizes:
Mesh: 33x33mm
Vertical Post: 90x90x8mm square profile with cap
Top guard protection: 60x50mm U profile
Wire: 4mm
Clamps: Aluminium

info@fibrenet.info - www.fibrenet.it

No.	DATE	REVISION	BY	CHK
1	05.02.2026	ISSUED FOR TENDER	SP	KL
0	24.10.2025	ISSUED FOR APPROVAL	SP	KL
A	20.10.2025	ISSUED FOR REVIEW	SP	KL

APME

PROJECT: SAMOA AIRPORT AUTHORITY
SAMOA AVIATION AND ROADS INVESTMENT PROJECT
FALEOLO INTERNATIONAL AIRPORT BOUNDARY FENCE

DRAWING TITLE: TYPICAL FENCE ELEVATION

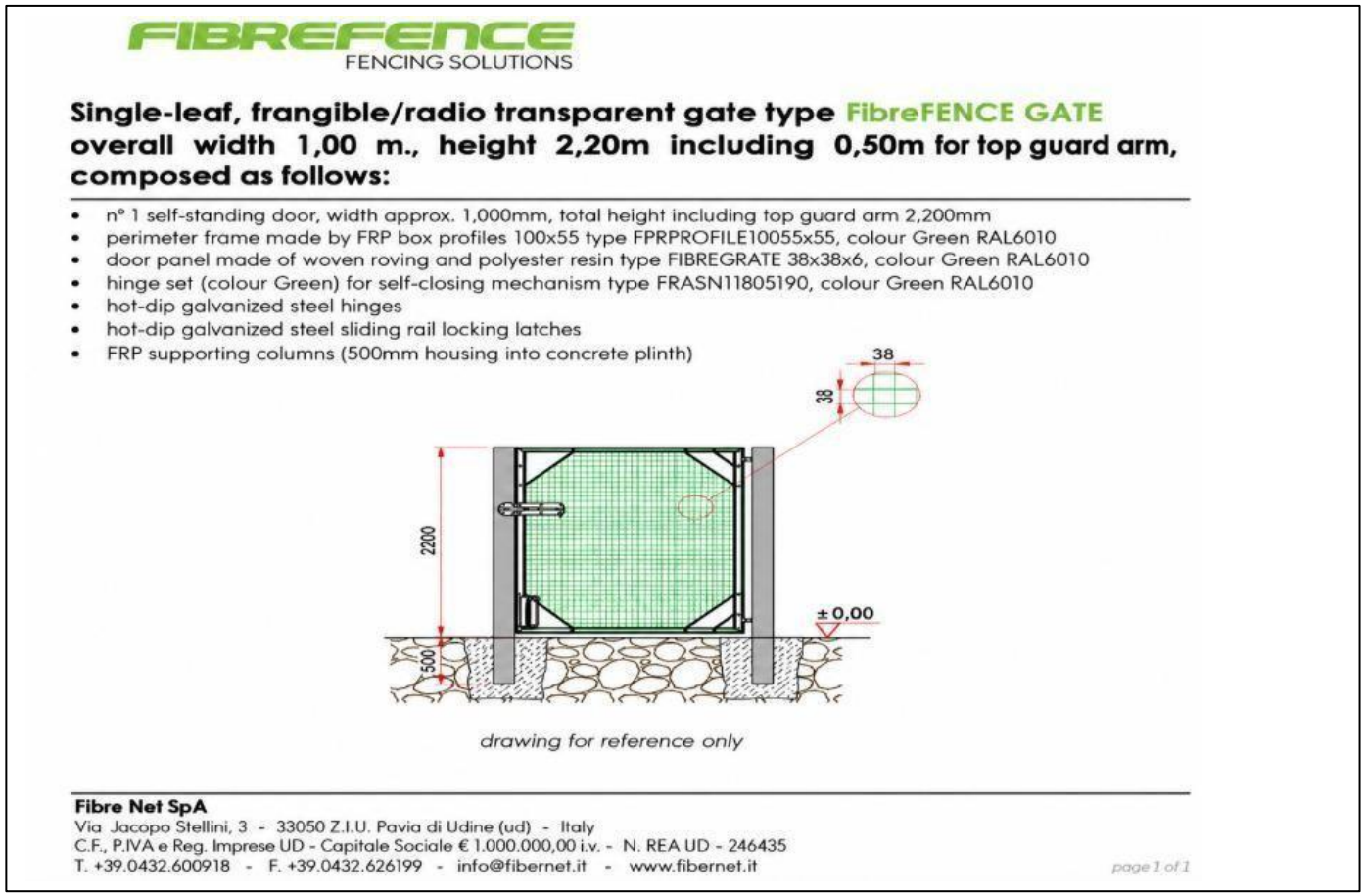
DESIGNED:	KL
DRAWN:	SP
REVIEWED:	KL
ISSUED DATE:	FEB. 2026

SCALE AT A1: As indicated
PAPER SPACE SIZE: 1:1 @ A1

FOR TENDER

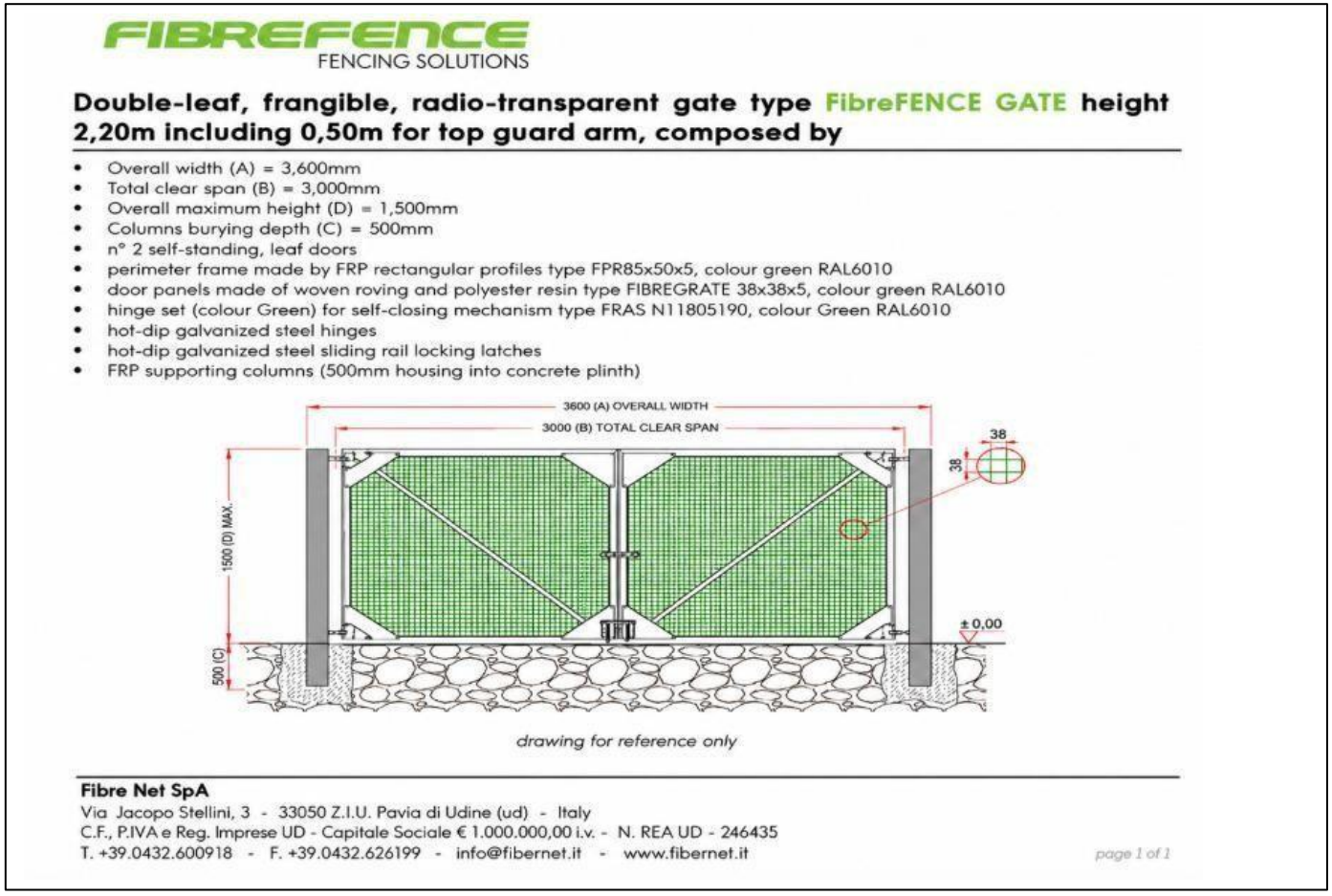
2025012	S300	1

Figure 7. Standard FRP Single-Leaf Pedestrian Security Gate[8]



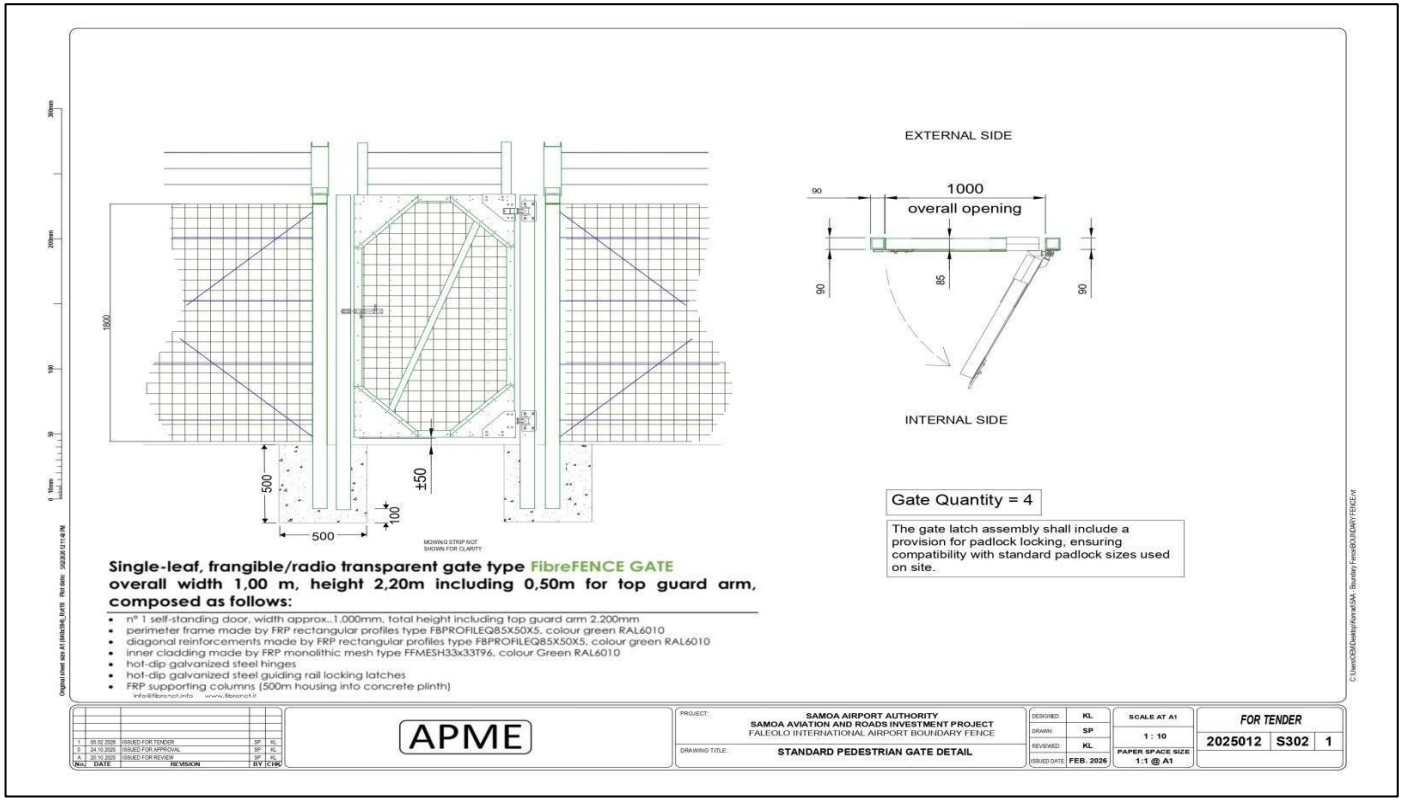
[8] Standard FRP Single-Leaf Pedestrian Security Gate showing the proposed gate configuration, FRP mesh infill panel, support columns, locking mechanism and reinforced concrete footings. The gate is approximately 1.0 metre wide and 2.20 metres high, including a 0.50-metre top guard arm, and forms part of the proposed FIA perimeter security fence upgrade. Four (4) pedestrian gates are proposed under the project.

Figure 8. Standard FRP Double-Leaf Vehicle Security Gate[9]



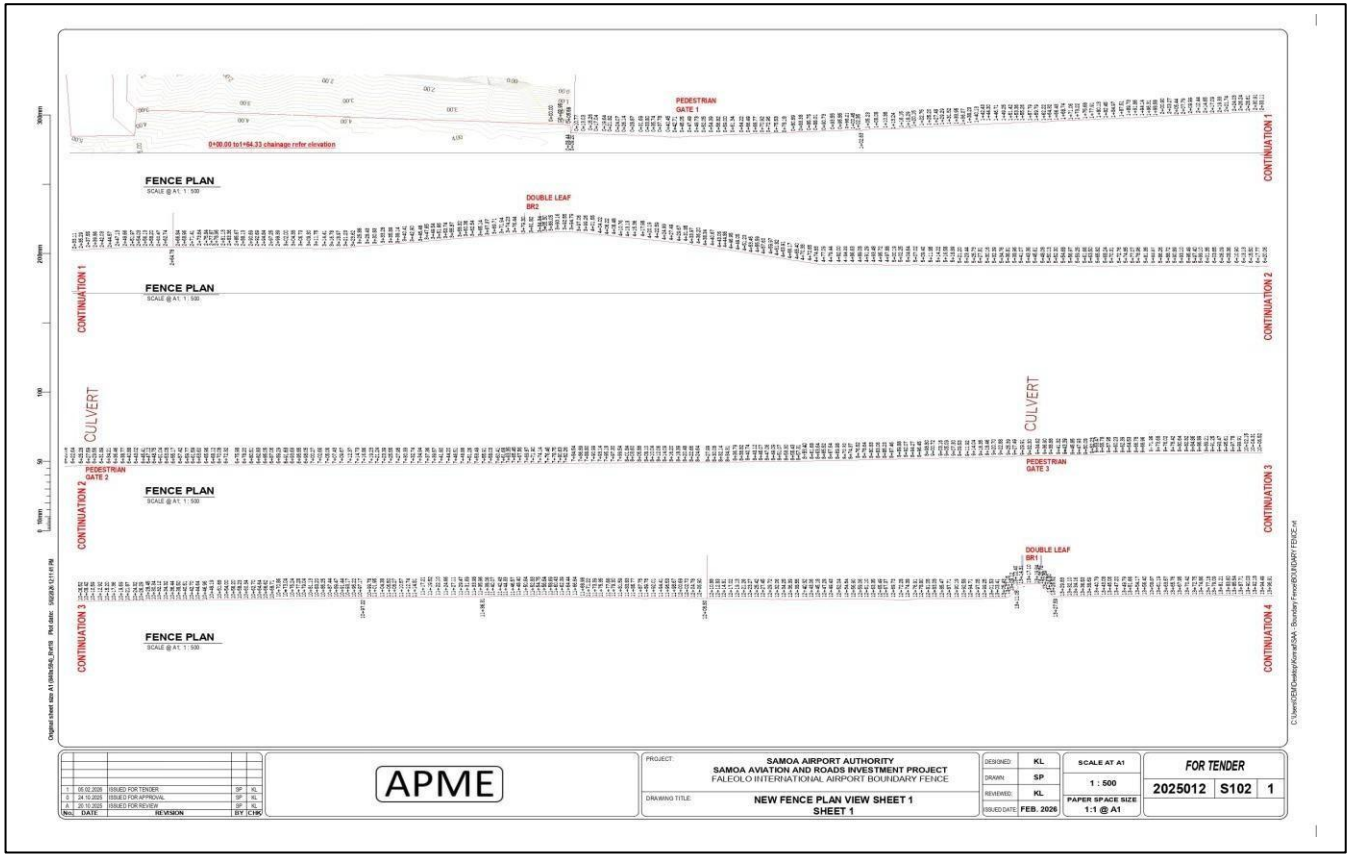
[9]Standard FRP Double-Leaf Vehicle Security Gate showing the proposed gate configuration, FRP mesh infill panels, support columns, locking system and reinforced concrete footings. The gate provides an approximate 3.60-metre clear vehicle opening and 2.20-metre overall height, including a 0.50-metre top guard arm. Three (3) vehicle access gates are proposed as part of the FIA Boundary Fence Replacement Project.

Figure 9. Standard Pedestrian Gate Detail[10]



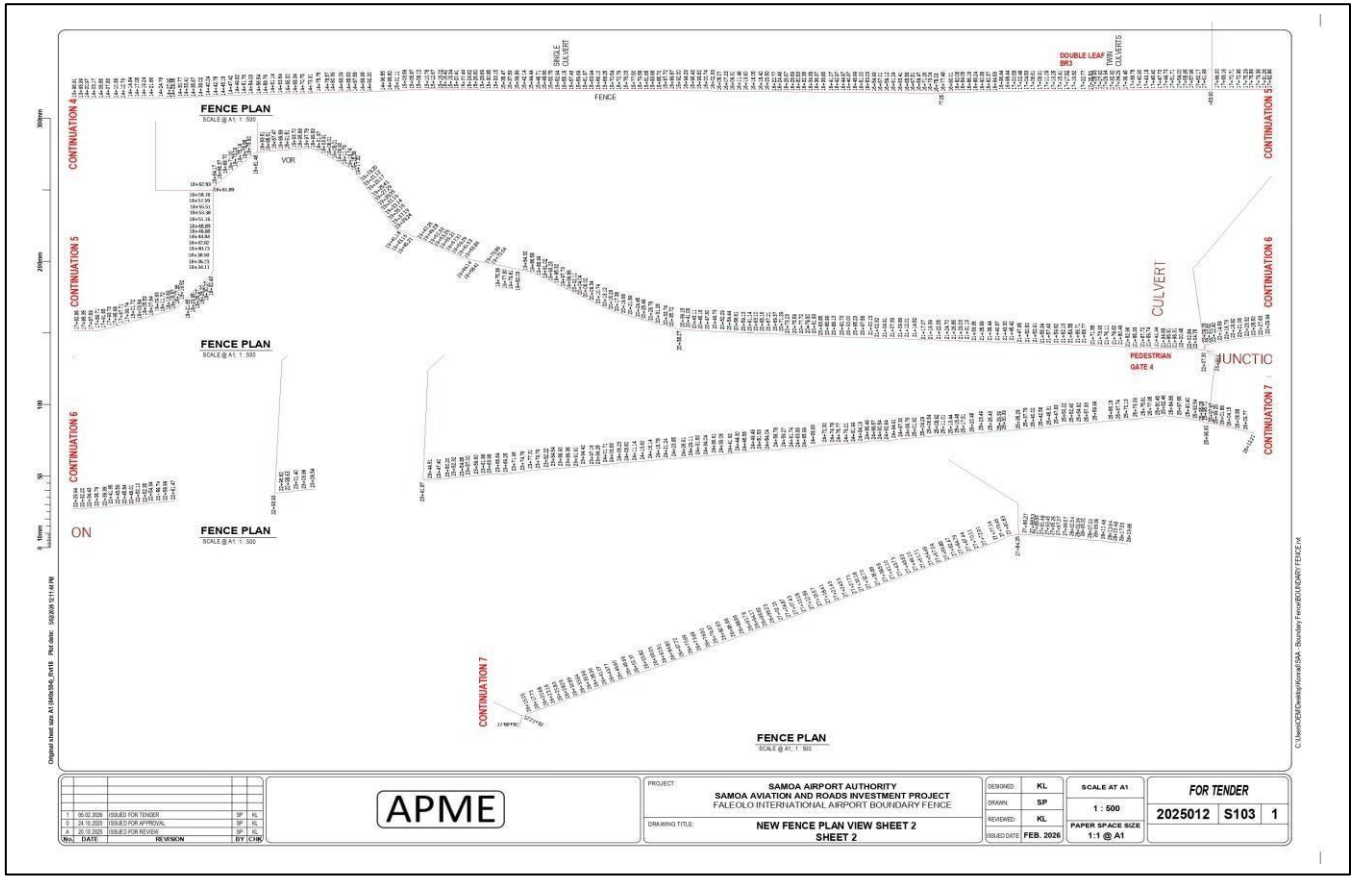
[10] Standard Pedestrian Gate Detail (APME Drawing S302) showing the proposed FRP single-leaf pedestrian security gate, including gate dimensions, support posts, reinforced concrete footings, opening configuration and locking mechanism. Four (4) pedestrian gates are proposed as part of the FIA Boundary Fence Replacement Project.

Figure 10. New Fence Plan View – Sheet 1[11]



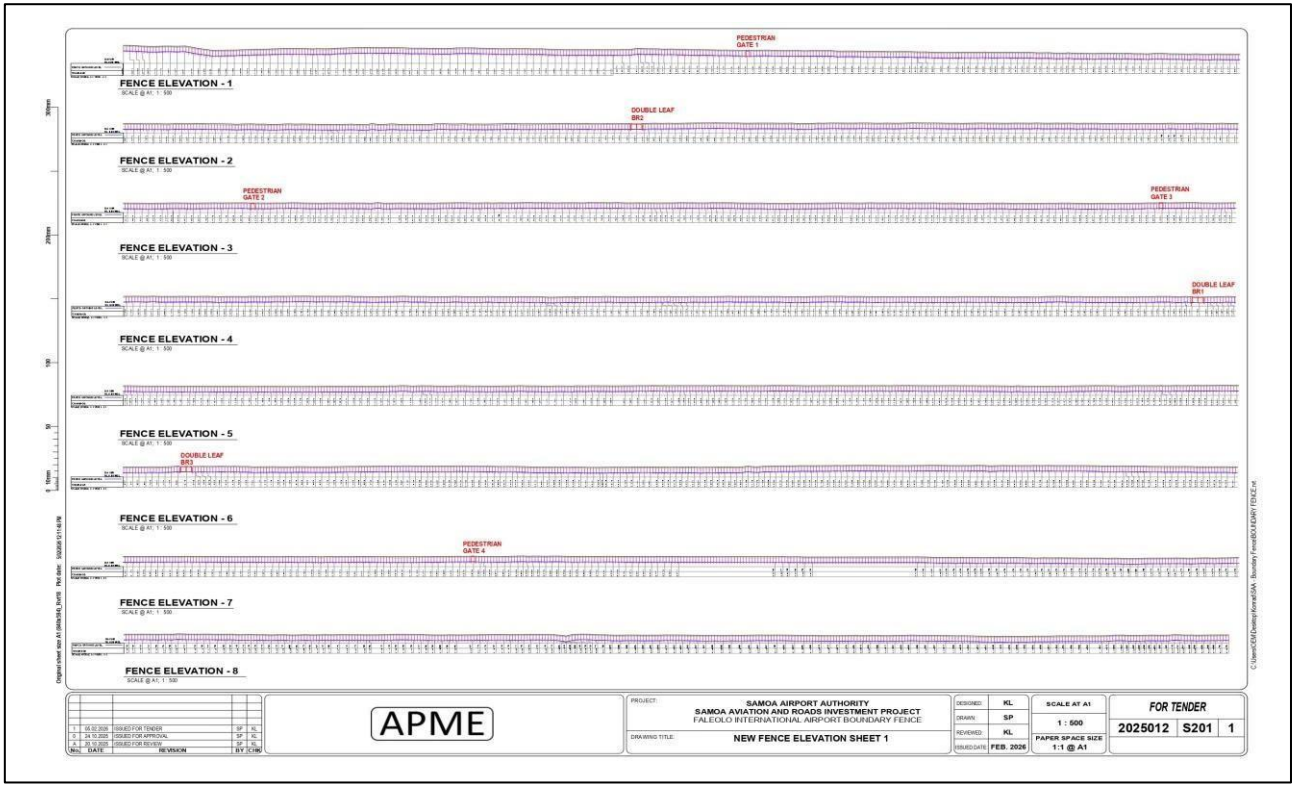
[11] New Fence Plan View – Sheet 1 (APME Drawing S102) showing the proposed FIA perimeter fence alignment, chainage references, pedestrian and vehicle gate locations, culvert crossings, drainage interfaces and associated airport infrastructure. The drawing forms part of the engineering design package for the proposed 2,985-metre FRP Mesh Security Fence System.

Figure 11. New Fence Elevation – Sheet 2[12]



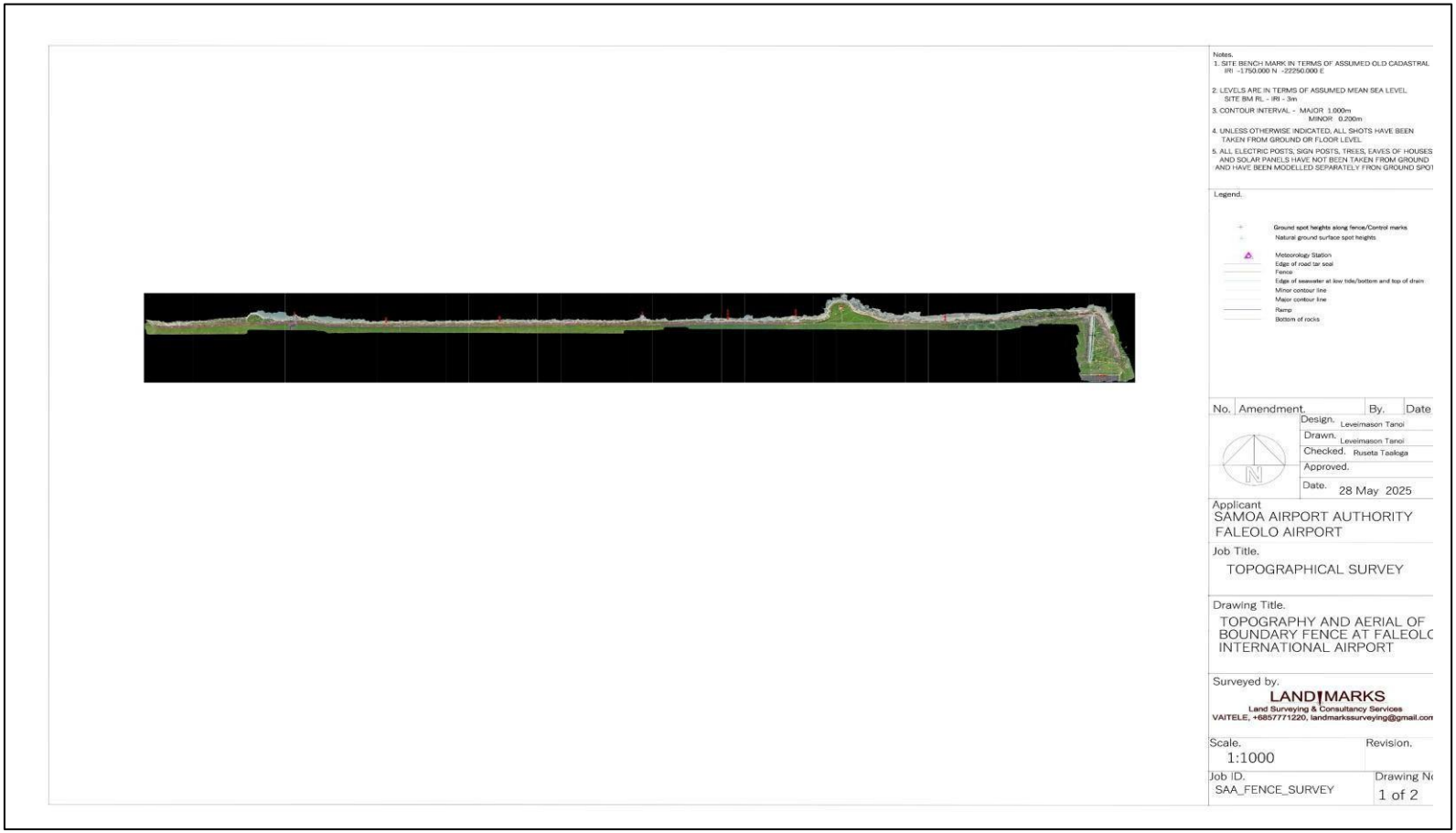
[12] New Fence Plan View – Sheet 2 (APME Drawing S103) showing the continuation of the proposed FIA perimeter fence alignment, VOR facility interface, pedestrian and vehicle gate locations, culvert crossings, drainage infrastructure and operational boundary connections. The drawing forms part of the detailed engineering design package for the proposed 2,985-metre FRP Mesh Security Fence System.

Figure 12. New Fence Elevation – Longitudinal Profile and Gate Locations[13]



[13] New Fence Elevation – Sheet 1 (APME Drawing S201) showing the longitudinal profile of the proposed FIA perimeter fence, existing and proposed ground levels, pedestrian gate locations, vehicle gate locations and fence elevation arrangements along the 2,985-metre alignment. The drawing provides the primary vertical design reference for construction, quality control and future maintenance of the airport perimeter security system.

Figure 13. Topographical Survey, Aerial Imagery and Existing Boundary Fence Corridor – Faleolo International Airport[14]



[14] Topographical survey and aerial orthomosaic of the FIA northern boundary corridor prepared by LandMarks Land Surveying C Consultancy Services (28 May 2025) at a scale of 1:1000. The survey provides verified topographic, spatial and engineering baseline information, including the existing boundary fence alignment, coastal interface, drainage features, access roads and surrounding landforms. Survey control was referenced to an assumed benchmark (N 1,750.000 m; E 22,250.000 m; RL 3.00 m), with contour intervals of 1.00 m (major) and 0.20 m (minor). The survey forms a key engineering and environmental reference for the design, assessment and implementation of the proposed FIA Boundary Fence Replacement Project

----------END OF REPORT----------