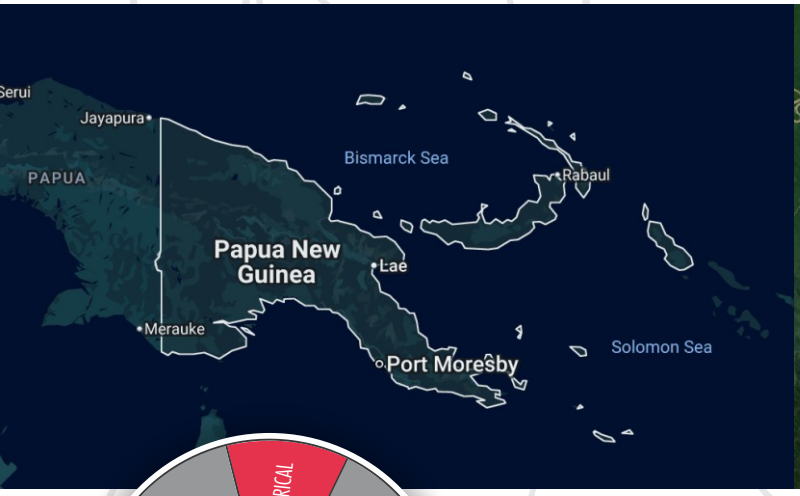
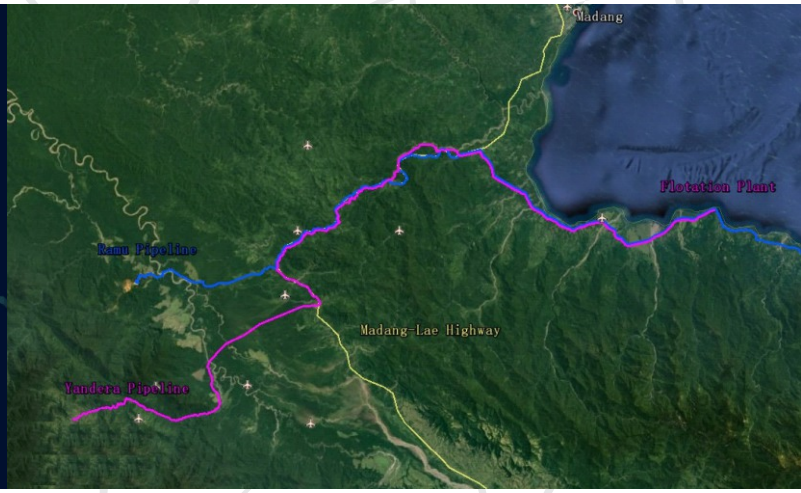
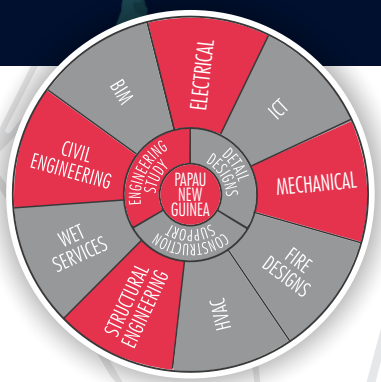
NURIZON
CONSULTING ENGINEERS

CASE STUDY 2025

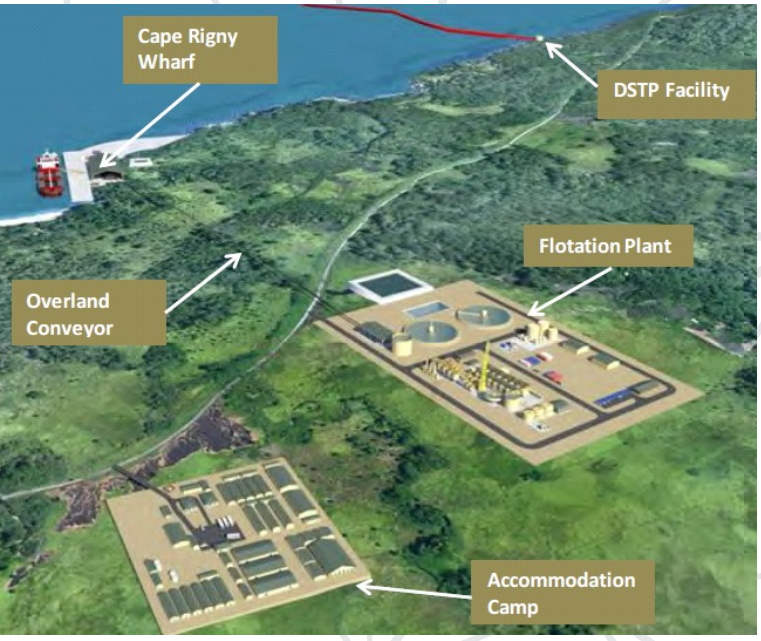
Practara - Yandera Project







WHAT IS IT?	New Mining Site
LOCATION	Madang Province, Papua New Guinea
DESIGN DURATION	3 Months
CONSTRUCTION	30 - 36 Months



Technical details

Nurizon Consulting was engaged to deliver a Phase 2 Concept Study following the completion of a high-level optimisation study for the Yandera Copper Project. The focus of this work was to evaluate the economic potential of mining high-grade copper ore at a significantly reduced throughput of 15 Mtpa, down from the previously modelled 33 Mtpa.

Key components of the scope included:

- Open pit optimisation using a revised copper cut-off grade
- Life-of-mine (LoM) scheduling
- Capital and infrastructure re-evaluation for downscaled operations
- Pre-sorting and blending strategies for low-grade materials

ENGINEERING DISCIPLINES WE COVERED	Mining Engineering	Geological Modelling	Process and Infrastructure Engineering

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Problem

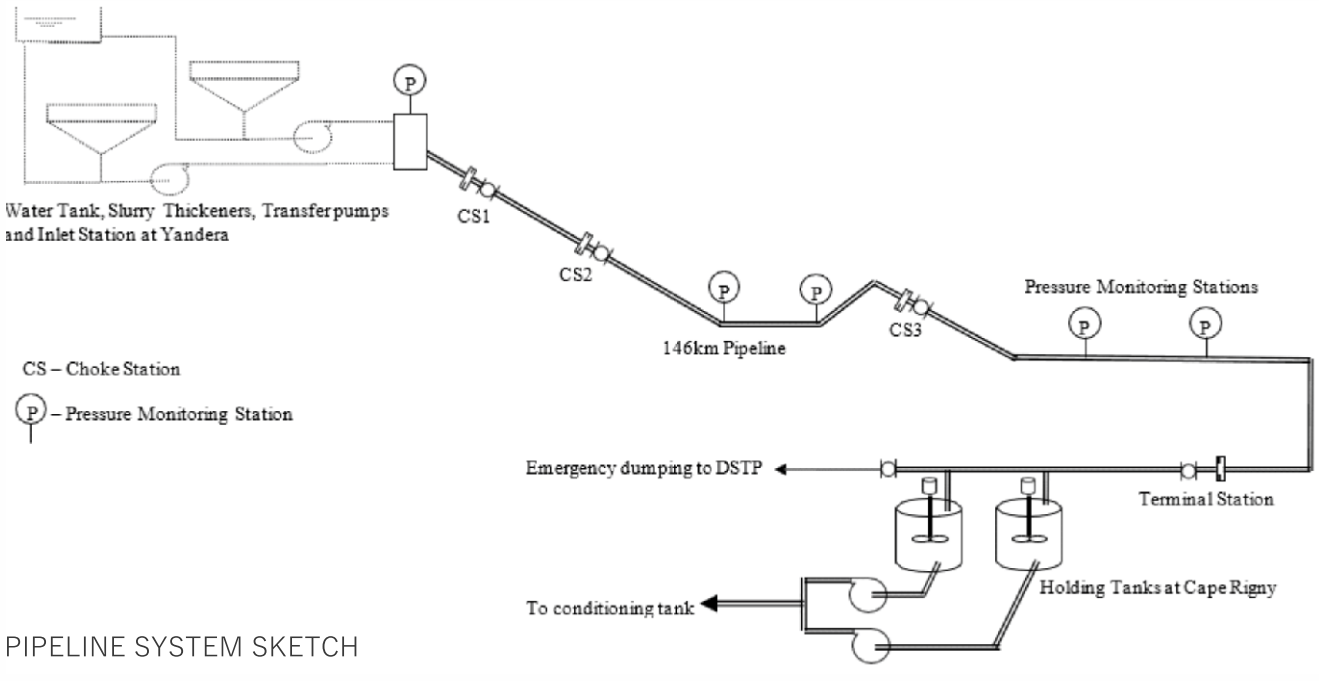
Any design challenge?

The Yandera Copper Project, situated in the mountainous Madang Province, faced multiple technical and logistical challenges, including:

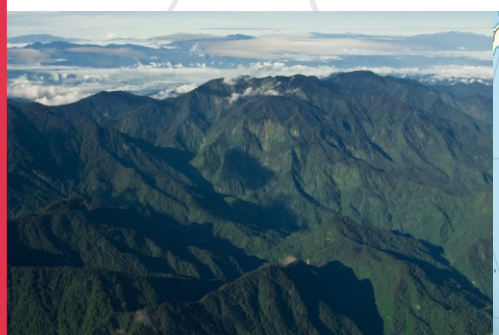
- The need to optimise pit design around a revised economic shell to focus on higher-grade ore.
- Balancing infrastructure design to suit a downsized processing throughput while maintaining long-term operational viability.
- Evaluating blending strategies to include pre-sorted low-grade materials.
- Working within the geotechnical and environmental constraints typical of remote, mountainous terrain in Papua New Guinea.

Any unique circumstances on the project?

- The site is located in a remote and topographically complex region of Papua New Guinea, posing significant logistical, environmental, and infrastructural challenges.
- A unique aspect of this study was the integration of low-grade ore pre-sorting into the production schedule—allowing potentially uneconomic material to become viable supplemental feedstock.
- The study aligned with the client's need for a flexible investment scenario, allowing for scalability and staged development based on capital availability and market conditions.



PIPELINE SYSTEM SKETCH



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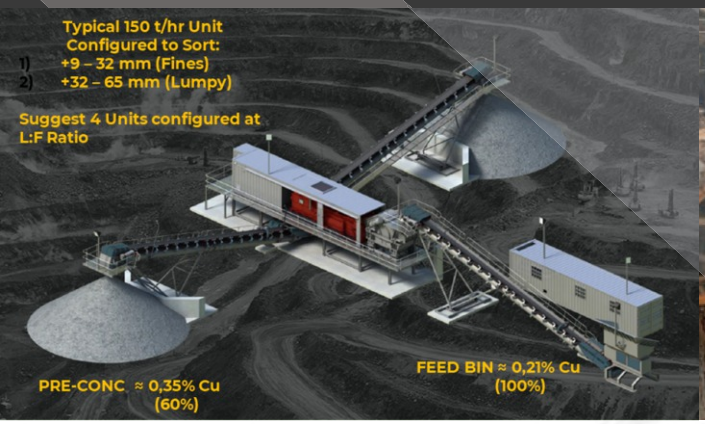

Cost-effective engineering decisions, supporting future feasibility-level studies and investor engagement.

Solution

What we achieved

The Yandera Copper Project, situated in the mountainous Madang Province, faced multiple technical and logistical challenges, including:

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- Balancing infrastructure design to suit a downsized processing throughput while maintaining long-term operational viability.
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Highlight all unique solutions

Generated an optimised pit shell containing:

- 138Mt of ore @ 0.42% Cu
- 32Mt of low-grade ore @ 0.21% Cu
- 117Mt of waste
- Delivered an 11-year life-of-mine (LoM) schedule based on the new pit configuration and processing throughput.
- Developed an effective pre-sorting and blending plan to enhance ROM feed quality using low-grade material.
- Reassessed the 2017 PFS infrastructure and processing designs, enabling a significant reduction in capital expenditure and project complexity.
- Produced robust outputs to inform cost-effective engineering decisions, supporting future feasibility-level studies and investor engagement.

Engineering **Solutions**
Inspired by **Vision**

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