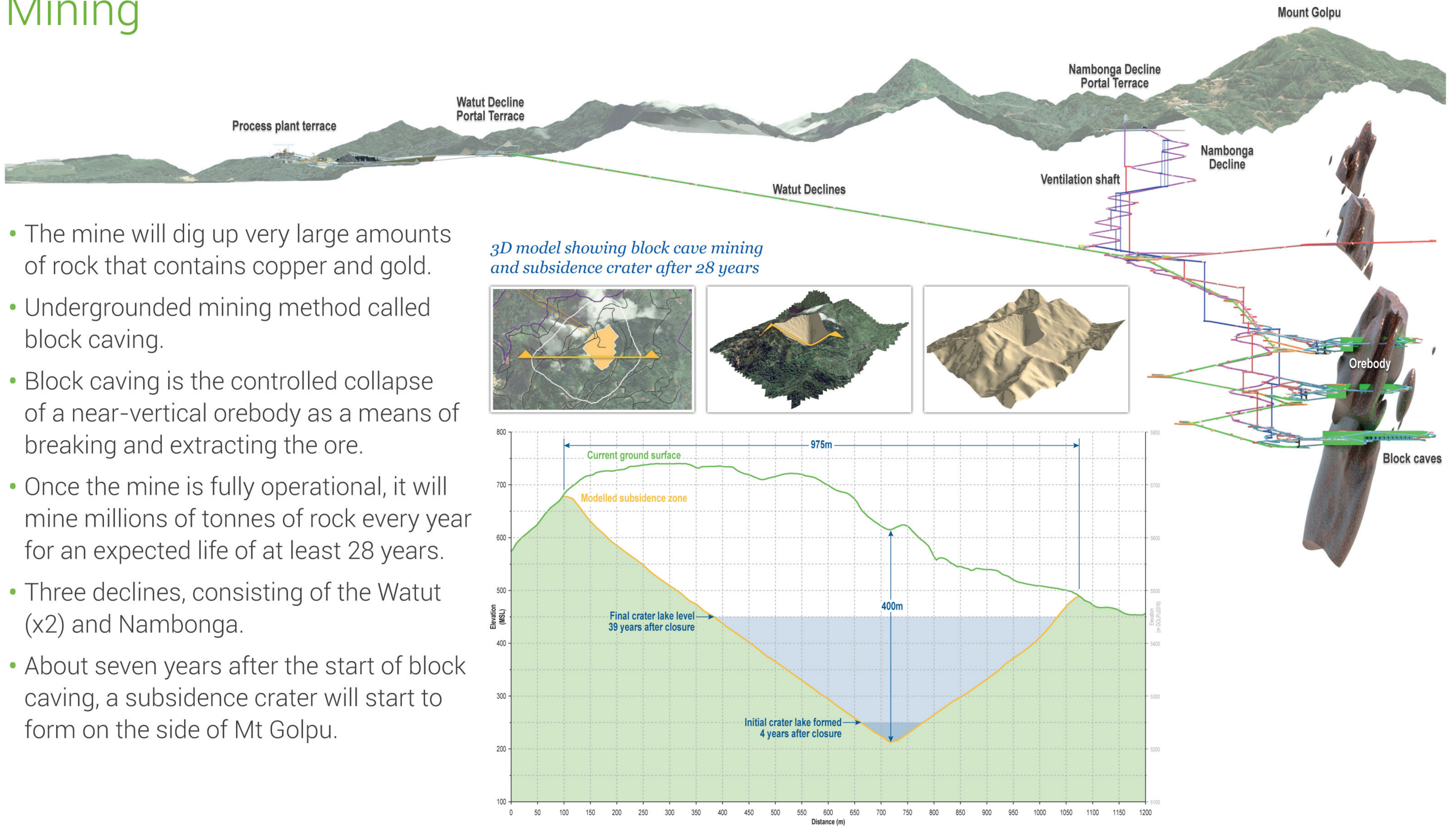


# Mining

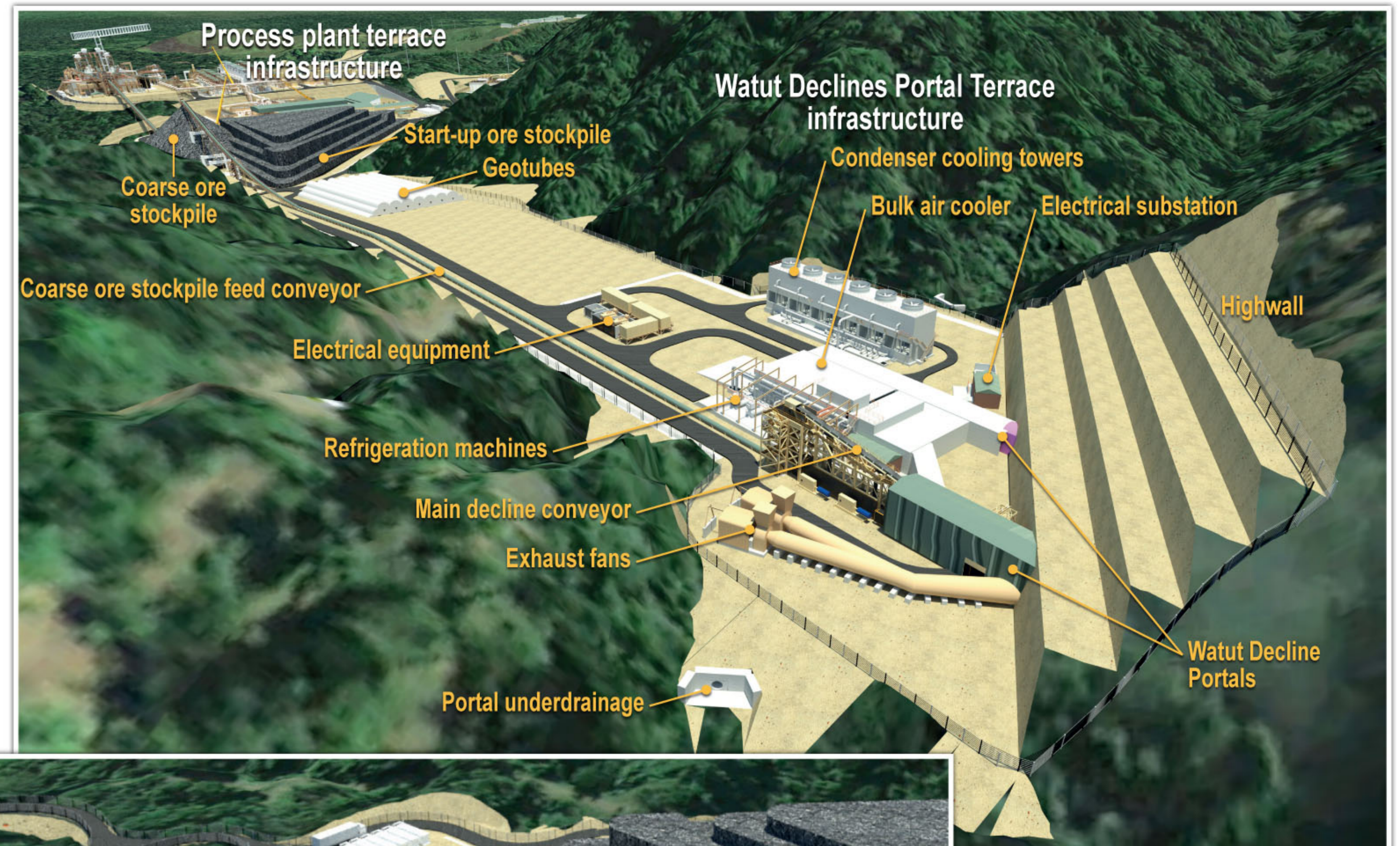
- The mine will dig up very large amounts of rock that contains copper and gold.
- Underground mining method called block caving.
- Block caving is the controlled collapse of a near-vertical orebody as a means of breaking and extracting the ore.
- Once the mine is fully operational, it will mine millions of tonnes of rock every year for an expected life of at least 28 years.
- Three declines, consisting of the Watut (x2) and Nambonga.
- About seven years after the start of block caving, a subsidence crater will start to form on the side of Mt Golpu.



## Ore processing

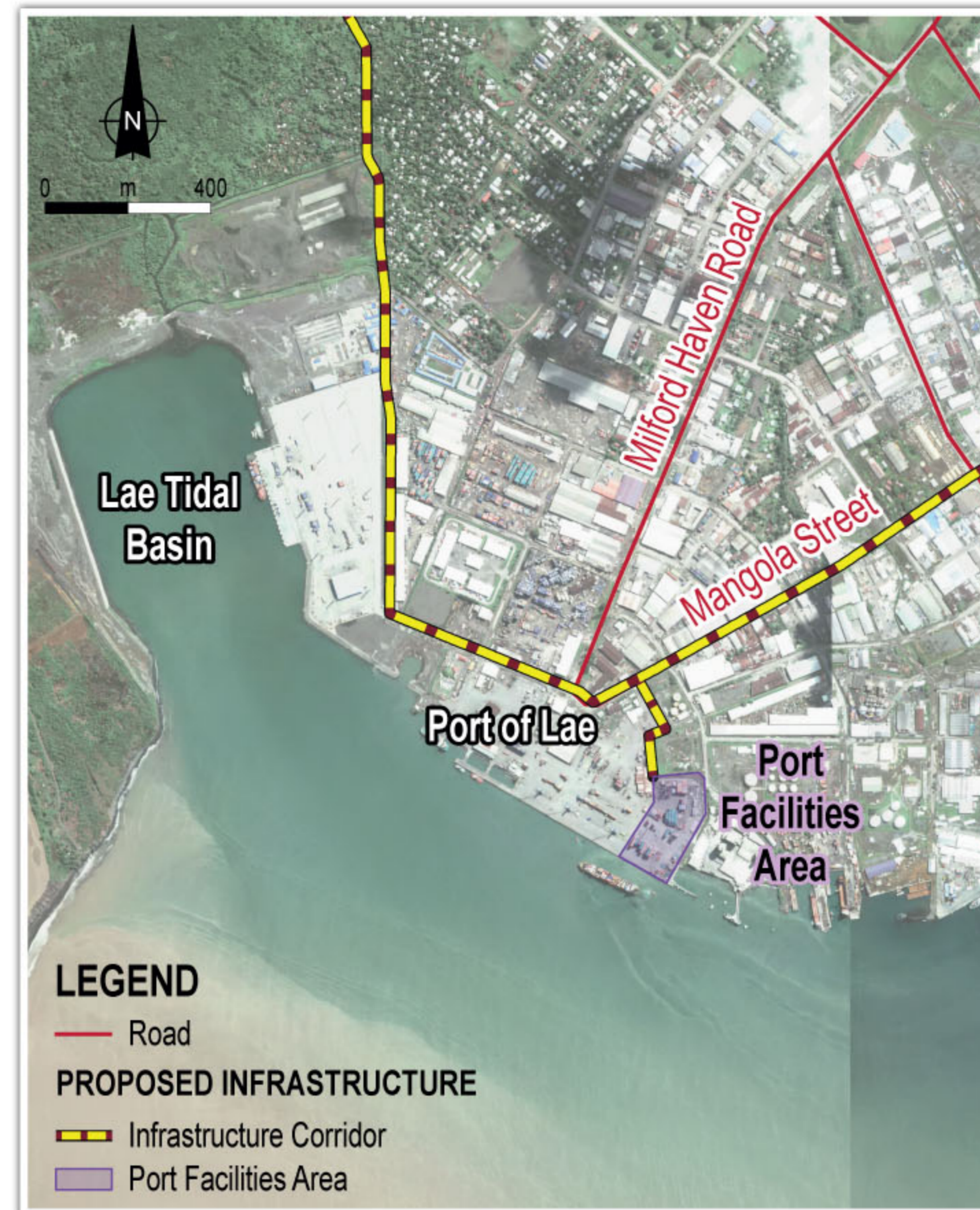
- The rock is first crushed underground and brought to the surface on a conveyor belt
- The crushed rock from the mine is ground into a fine sand and put through a 'process plant' that separates out the copper and gold.
- The process plant separates the copper and gold by means of froth flotation.
- This process uses chemicals to alter the surface properties of mineral particles (like detergent) so they adhere selectively to air bubbles.
- The copper and gold are removed as 'concentrate' while the non-valuable minerals that remain are known as 'tailings'.

*3D model showing process plant terrace and Watut portal terrace infrastructure (above) and flotation circuit (below)*

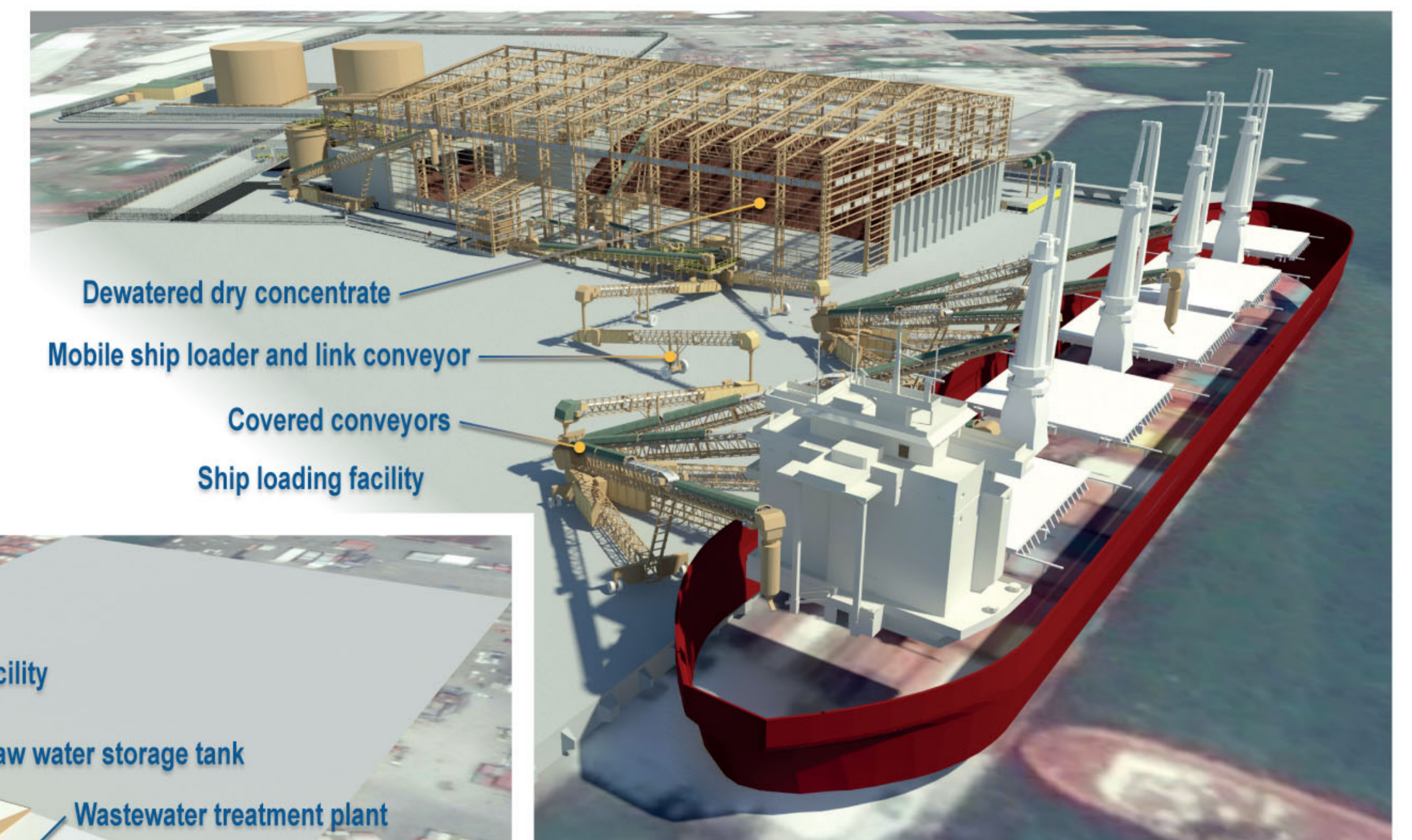


# Concentrate export from Port of Lae

- The concentrate is mixed with water and pumped in a buried pipeline from the mine to a building in the Port of Lae where it is dried out and stored in a shed. Every couple of weeks a ship will be loaded with the dried concentrate and sent to customers overseas for further processing.
- Port Facilities will include:
  - Concentrate storage shed
  - Electrical sub-station
  - Wastewater treatment plant
  - Discharge of treated filtrate water into marine environment

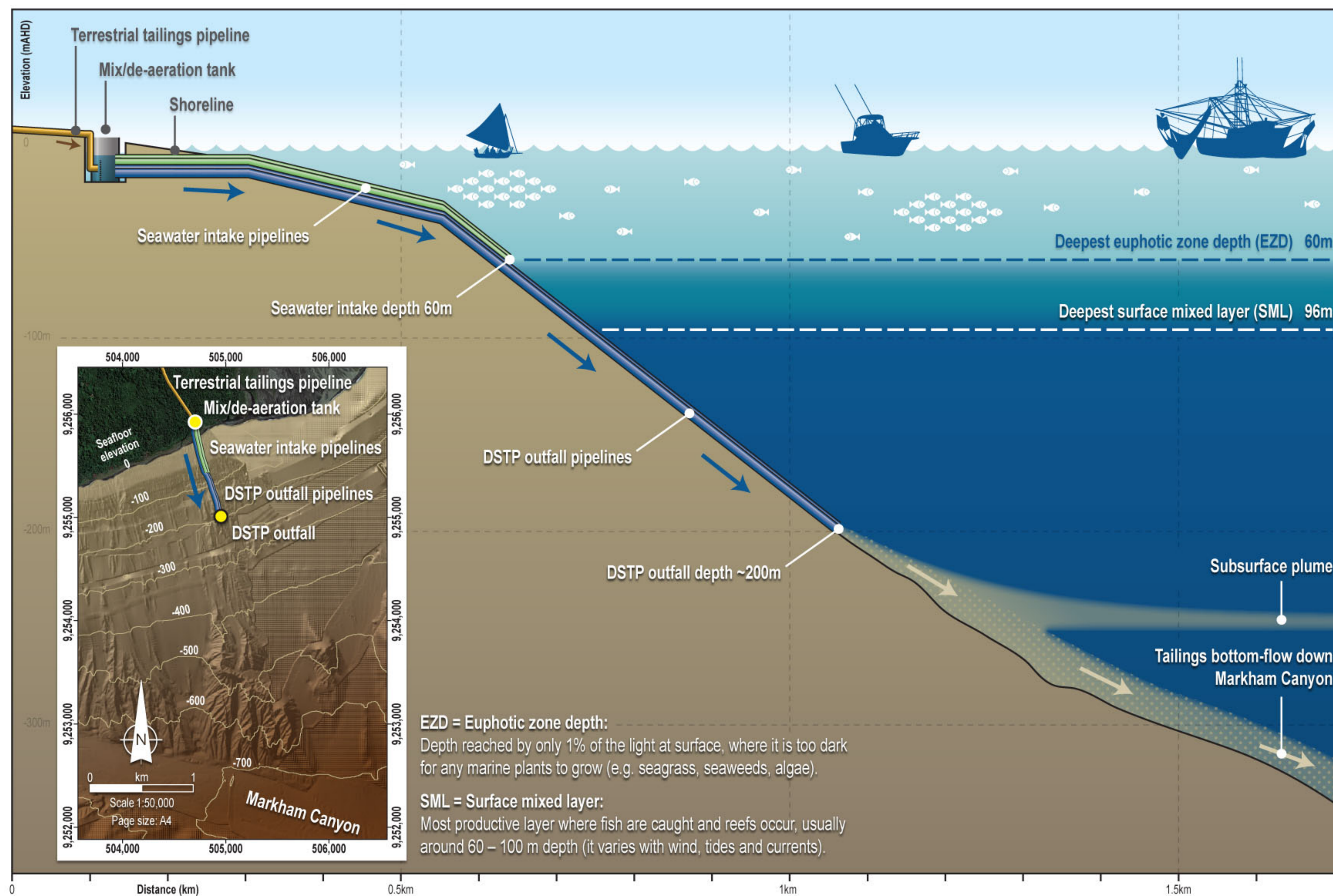


Infrastructure proposed for Port of Lae

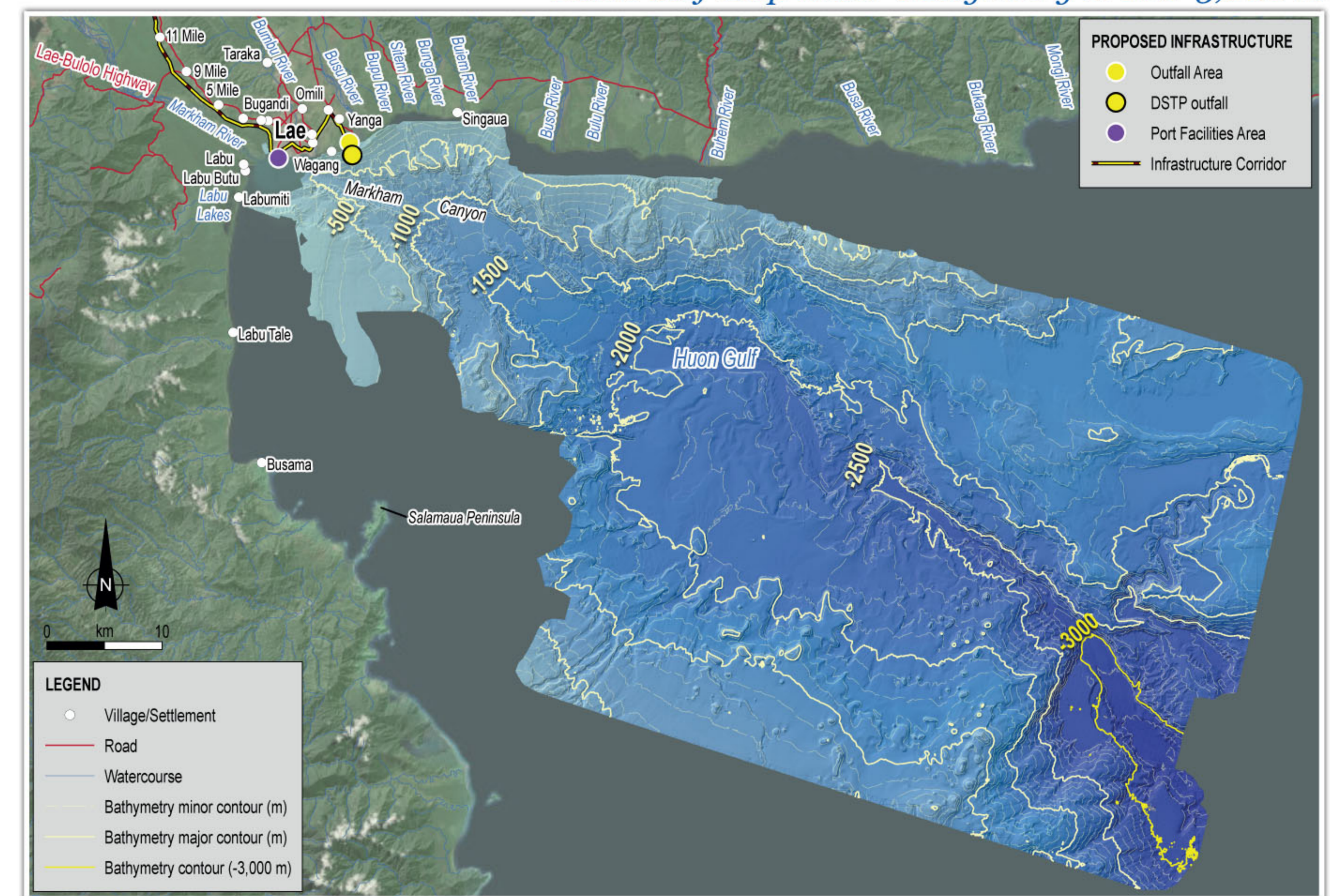


# Deep sea tailings placement (DSTP)

- Three options have been investigated – a land-based Tailings Storage Facility (TSF), land-based dry stacking, and a Deep Sea Tailings Placement (DSTP) system.
- The Project assessed 45 potential sites for a TSF. To store all of the tailings, a very large TSF area would be required.
- Also a TSF and dry-stacking would have challenges like high rainfall and seismicity.
- DSTP studies indicate the Western Huon Gulf is highly suitable for DSTP. Rivers already deposit large amounts of sediment into the Gulf and there is a deep canyon leading to a deep ocean basin.
- After assessing all of these factors DSTP is the preferred tailings management solution for the Wafi-Golpu Project.



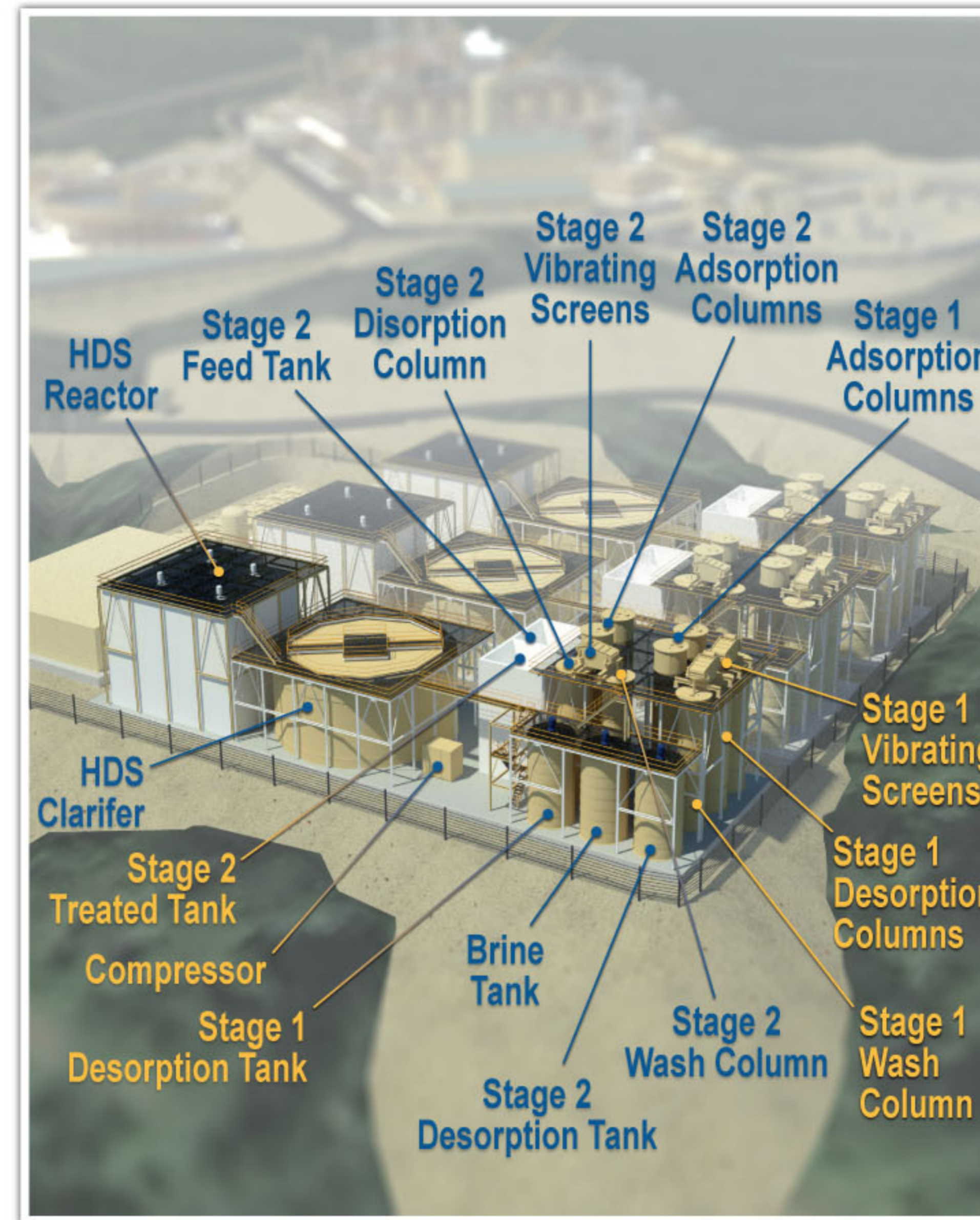
*Huon Gulf deep water bathymetry to over 3,000 m*



*Figure showing how DSTP works*

# Ancillary infrastructure

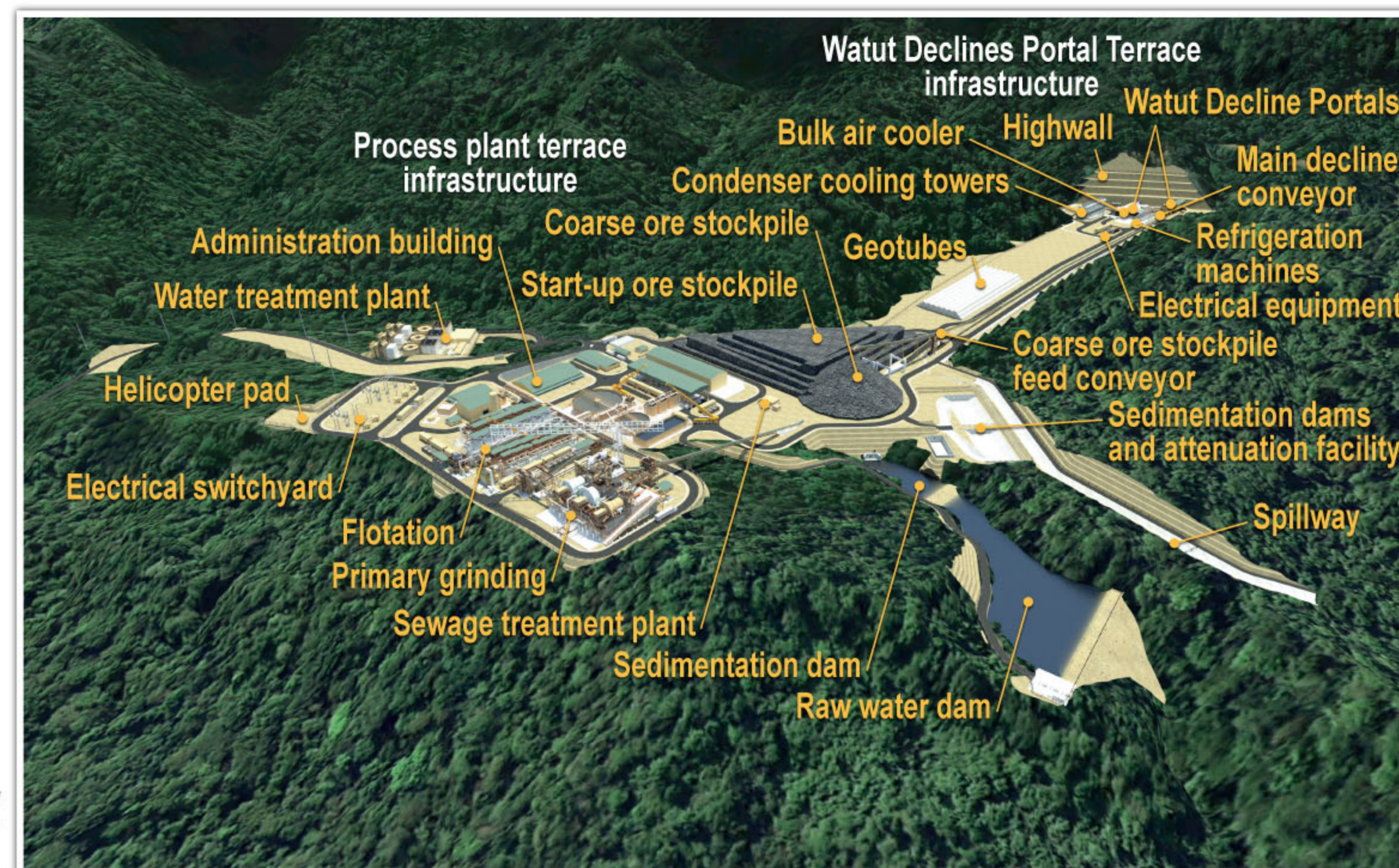
- Additional infrastructure at the mine site:
  - Power plant
  - Workshops
  - Offices
  - Accommodation
  - Explosives storage (magazine)
  - Water treatment plant
  - Waste water and water supply pipelines to the Lower Watut River
  - Waste rock dump
  - Sedimentation dams
- Borrow pits will also required to provide rock



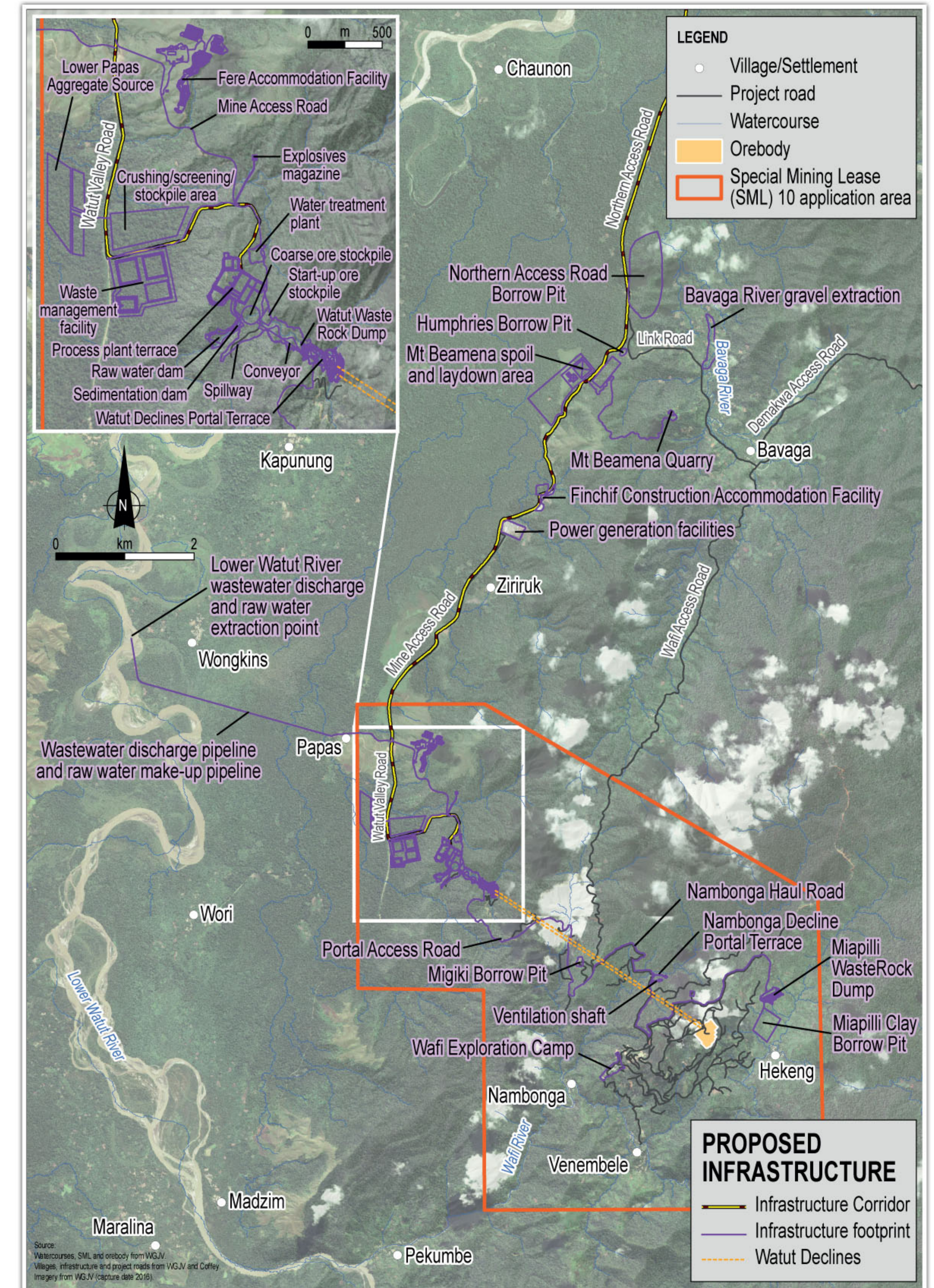
Water treatment plant



Waste rock dump

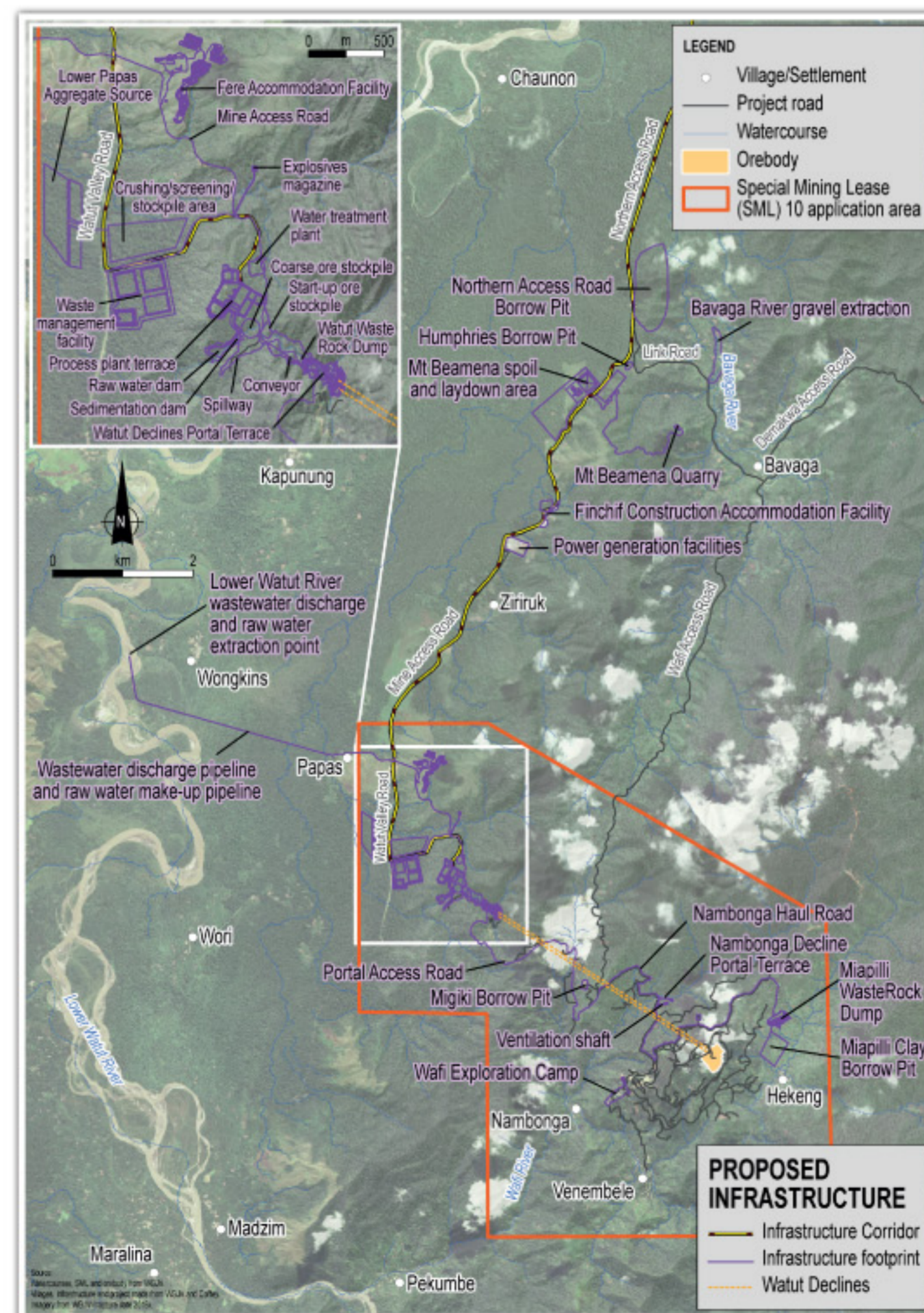


3D model showing proposed infrastructure at mine area

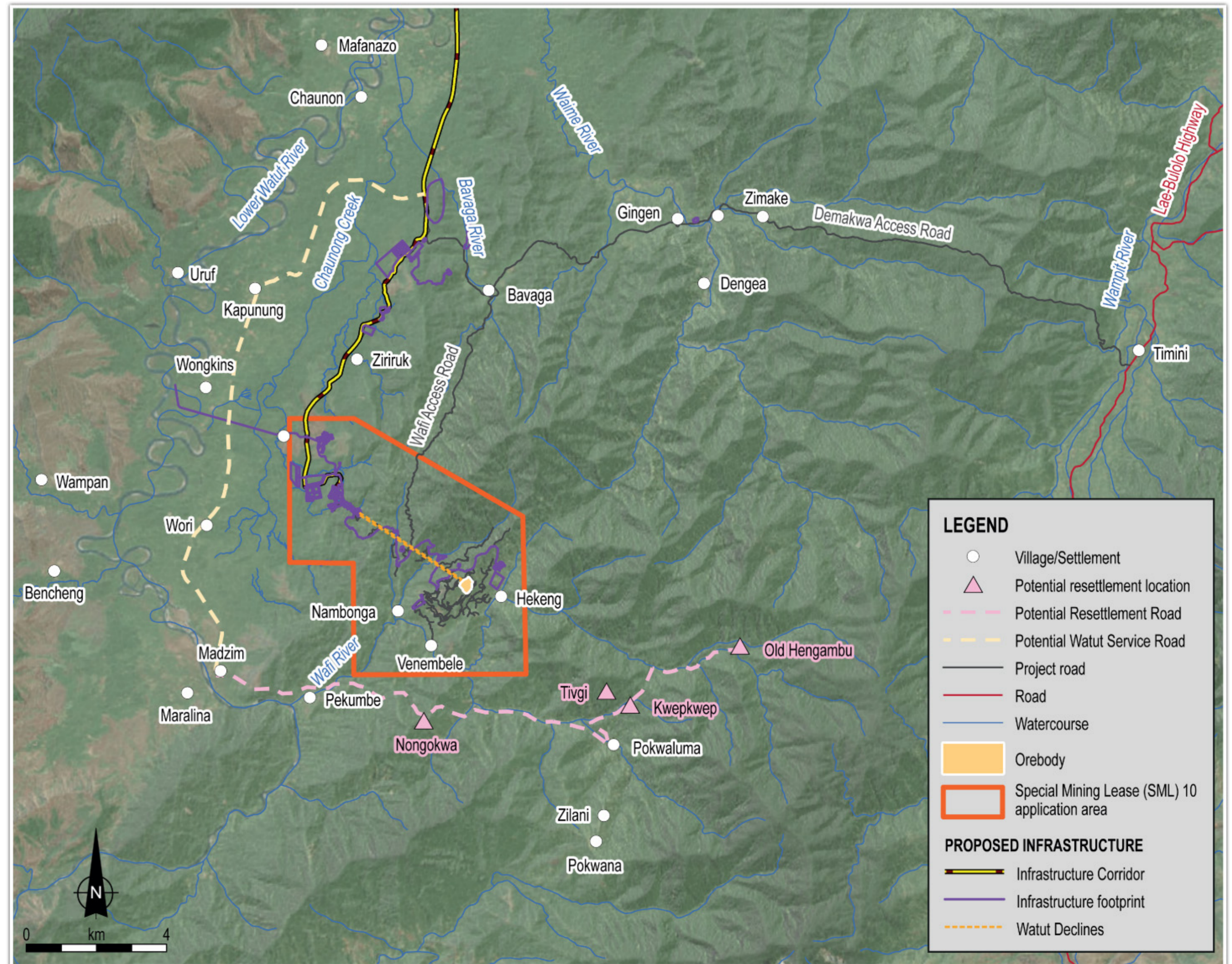


# Access roads

- A new Northern Access Road is proposed from the Highlands Highway to near Bavaga.
- A new Watut Access Road west of the Watut River is proposed.
- Two new community access roads are proposed.



Northern Access Road route

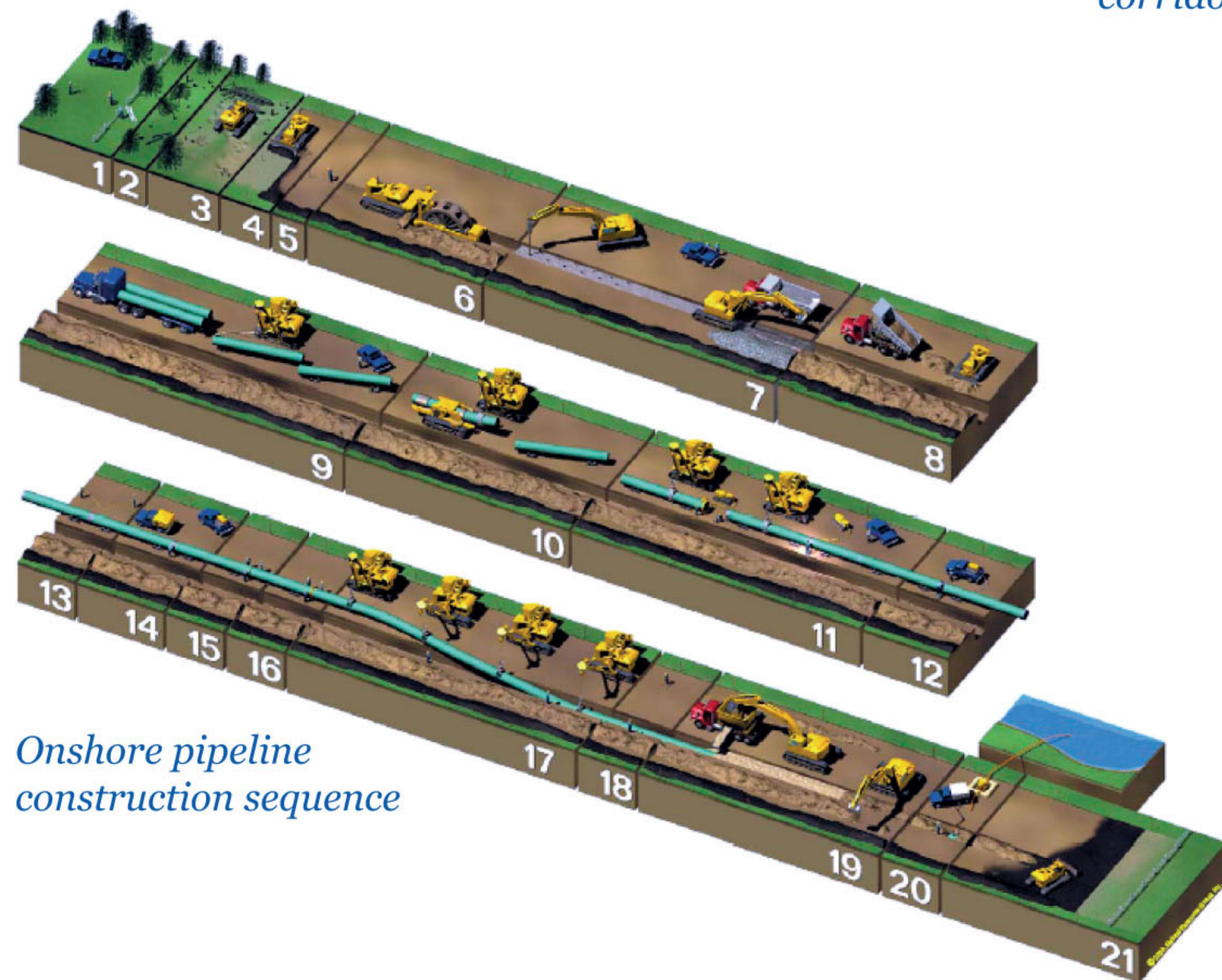
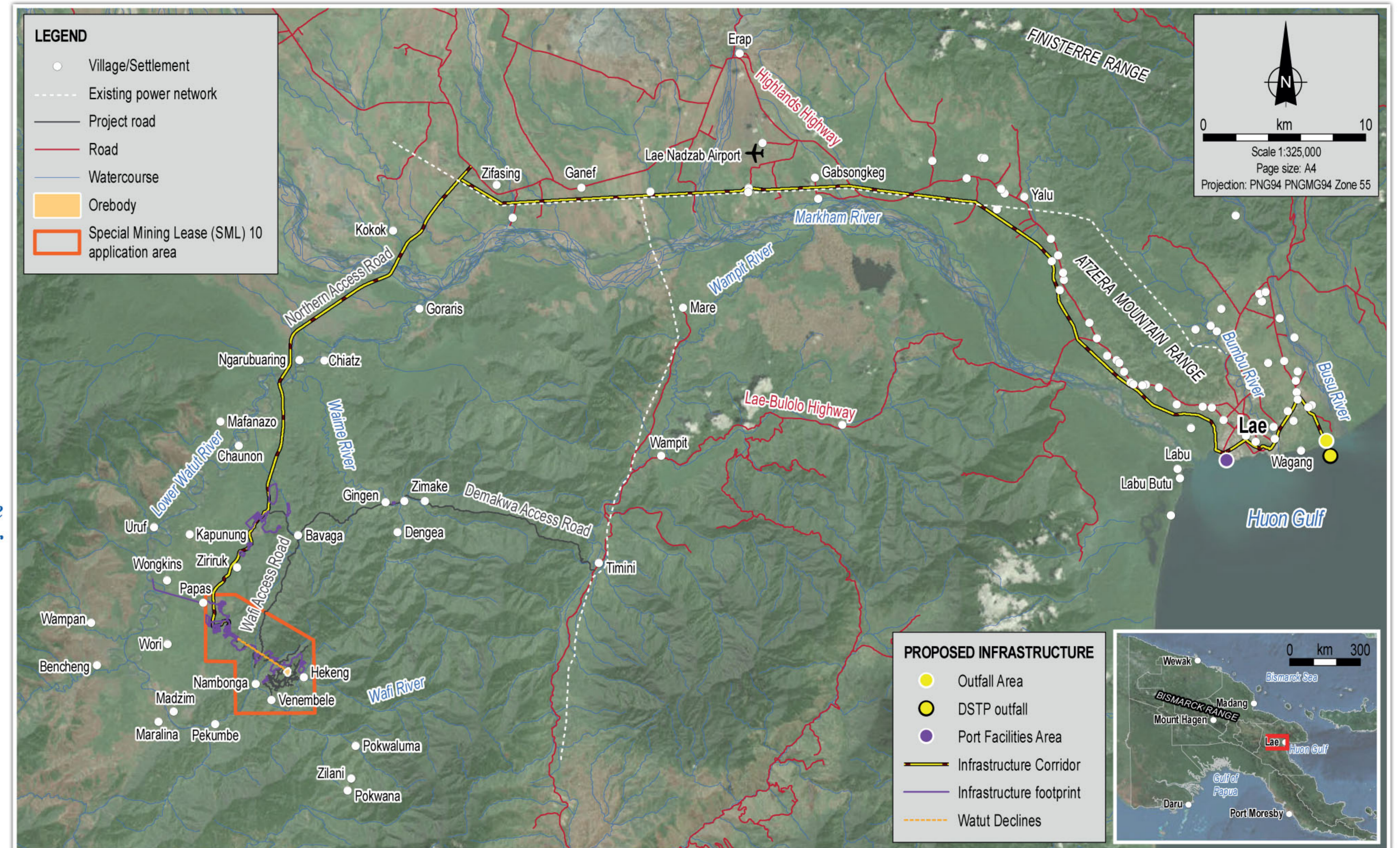


Other access roads including preliminary community access road options

# Infrastructure corridor

- Corridor includes:
  - Road from Mt Golpu to Zifasing with bridges over the Bavaga, Watut and Markham rivers.
  - Buried concentrate, tailings and fuel pipelines. Pipeline to be strung from the new bridges over Watut and Markham rivers.
  - The road will be built first and construction of the pipelines will follow.

*Infrastructure corridor*



1. Survey and pegging
2. Clearing
3. Grading
4. Soil stripping
5. Pegging centreline of trench
6. Trenching (wheel ditcher)
7. Trenching (rock)
8. Padding trench bottom
9. Transport and stringing pipe
10. Bending pipe
11. Line-up initial weld
12. Final weld
13. As-built footage
14. X-ray inspection weld repair
15. Pipeline coating
16. Pipeline inspection
17. Lowering pipe into trench
18. As-built survey
19. Padding, backfill, grading
20. Hydrostatic testing
21. Rehabilitation and clean-up

*Example of pipeline construction*



# EIS process and update

- An environmental impact statement is being prepared by WGJV to inform government decisions on whether the project can go ahead.
- WJGV plans to submit the EIS to CEPA at the end of June.
- CEPA will present findings of EIS and gather input from community.
- EIS specialist studies include:
  - Noise and vibration
  - Air quality and greenhouse gas
  - Terrestrial ecology
  - Mine geochemistry
  - Groundwater
  - Surface water
  - Freshwater ecology
  - DSTP (ecotoxicology and modelling)
  - Deepsea and nearshore marine ecology
  - Fisheries and marine resource use
  - Socioeconomic
  - Cultural heritage
  - Health risk assessment

