A FERTILE FUTURE FOR CONTAMINATED LAND

The tailings deposition areas contained between the levees regulating the Otomona and Ajkwa Rivers have been an integral part of the operation of PT Freeport Indonesia’s (PTFI) Grasberg mine concession for over 30 years. However, in preparation for mine closure in 2041 and to fulfill commitments to its new environmental management plan, PTFI has now ceased tailings deposition in the Ajkwa River so that the area can be used as a test bed for the future reclamation of all of the lowland concession areas.

BuroHappold Engineering was appointed to develop an integrated reclamation framework for the this 20 km river corridor that would allow it to simultaneously function as a mining operations area, a flood defence, a key infrastructure backbone, a site for research of regional and global importance, a restored forest ecosystem for local communities and a test bed for new high value sustainable agriculture and aquaculture approaches which can support the post mining transition of the regional economy.

The framework was based on a thorough assessment of existing site conditions and data as well as a full review of ongoing research programmes. All key project data was brought together in 3D GIS and numerical model of the Double Levee region that allowed us to integrate our findings and test our reclamation strategies, as well as various proposals designed to encourage subsequent socioeconomic development.

This model proved of vital importance, exemplifying not only the means by which the sensitive rainforest environment could be restored, but also how new businesses could be developed on the land that would support Timika’s transition to a non-mining based economy. From this, we were able to develop a coherent, evidence-based 10-year masterplan for the reclamation of this land, which could be applied to the surrounding region moving forward.

DOUBLE LEVEE AREA MASTERPLAN FRAMEWORK
TIMIKA, PAPUA, INDONESIA

CLIENT
PT Freeport Indonesia

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