

**Analysis of Waste Generation in Worker Residential Area,
Project Cost Calculation and Waste to Value in PT Bisma Dharma
Kencana Palm Oil Plantation: An Individual Project**



THESIS

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**Analysis Of Waste Generation in Worker Residential Area, Project Cost
Calculation and Waste to Value in PT Bisma Dharma Kencana Palm Oil
Plantation: An Individual Project**

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**A THESIS
Submitted in a partial fulfilment of the requirements for the degree of Master
of Business Administration**

CERTIFICATE OF APPROVAL

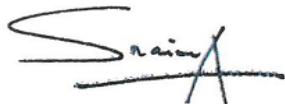
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PT. Bisma Dharma Kencana Palm Oil Plantation: An
Individual Project

We hereby declare that this Thesis is from student's own work, has been read and presented to Institute IPMI Board of Examiners, and has been accepted as part of the requirements needed to obtain a Master of Business Administration Degree and has been found to be satisfactory.

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NON-PLAGIARISM DECLARATION FORM

This Individual Project Thesis is a presentation of our original research work. Wherever contribution of others are involved, every effort is made to indicate this clearly, with due reference to the literature, and acknowledgement of collaborative research and discussions.

Also, this work is being submitted in partial fulfilment of the requirements for the Master of Business Administration degree and has not previously been accepted in substance for any degree and is not being concurrently submitted in candidature for any degree.

Jakarta, 3 September 2026



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ABSTRACT

Household waste management in palm oil plantation worker residential areas remains unresolved in Indonesia. The absence of a formal waste management system at PT Bisma Dharma Kencana (PT BDK), a palm oil company in Central Kalimantan, caused non-compliance under the 2025 Program Penilaian Peringkat Kinerja Perusahaan (PROPER), which introduced mandatory household waste management criteria for company-operated residential areas. This study addresses three objectives: calculating waste generation and infrastructure requirements using SNI 3242:2008 at 2.5 liters per person per day; estimating total project cost through the Bill of Quantities (BOQ) method; and developing a waste-to-value framework grounded in the 3R principle. A pilot project was implemented at two of PT BDK's thirteen worker residential emplacements (Emplacement 4 and Emplacement 12). Results show that 337 residents generate 842.5 liters of waste daily, requiring 63 bin sets and two TPS units. Effective planning requires integrating census population for waste volume calculation with unit counts for bin sizing. The total budget is IDR 263 million, including 12% contingency, with TPS construction comprising 69.8% of direct costs, establishing a scalable budgeting formula for rollout to remaining emplacements. Waste-to-value analysis positions organic and inorganic streams as community empowerment resources: compost is returned to residents for household and communal gardens, while recyclables are sold through Waste Bank under a DLH Katingan agreement, with proceeds returned to employee households that sorted the waste. PT BDK's return is strategic like PROPER compliance, ISPO certification, and ESG credibility. The methodology, cost benchmarks, and infrastructure specifications are fully replicable across PT BDK's remaining eleven emplacements.

Keywords: *waste pilot project, waste generation, SNI 3242:2008, PROPER, waste to value*