KAMATIVI MINING COMPANY

环境与社会影响评估（ESIA）公示摘要

Kamativi Lithium-Based Minerals Exploration, Mining & Processing Project

项目名称	Kamativi 锂基矿产勘探、采矿及加工项目
项目业主	Kamativi Mining Company (Pvt) Ltd
项目编号	8751
项目地点	津巴布韦 Matabeleland North Province， Hwange District，Ward 11，Kamativi Mine
披露用途	供利益相关方和受影响社区了解项目内容、潜在影响、缓解措施及反馈渠道

说明：本摘要依据 Kamativi Mining Company 于 2025 年 11 月形成的《Environmental and Social Impact Assessment Addendum Report》整理，供公开披露和社区沟通使用。

一、项目概况 Project Overview

Kamativi Mining Company （KMC）拟在津巴布韦 Matabeleland North 省 Hwange 区 Ward 11 的 Kamativi Mine 开展锂基矿产项目，项目内容涵盖勘探、露天采矿、矿石加工以及与之配套的供水、尾矿、危化品储存、道路、维修车间等附属设施。本次 ESIA 文件属于补充评估（addendum）性质，主要原因是项目范围和环境足迹较既有许可阶段已发生实质性变化，因此需要对新增或扩大的环境、社会、文化和遗产责任进行系统更新，并作为项目后续环境与社会管理的工作依据。项目注册编号为 8751。根据 ESIA 披露信息，项目第一阶段计划原矿开采能力约为每年 30 万吨，预计锂精矿产量约 5 万吨；第二阶段计划扩大至总共每年 230 万吨原矿处理量，预计生产锂精矿总计约 35 万吨。项目区位于 Cross Dete 镇以东约 29 公里处，周边 Kamativi 镇及其外围人口约 7,000 人，历史上该区域曾长期从事锡矿生产，1994 年停产后公共基础设施和居民生计受到较大影响，因此本项目的恢复开发同时伴随明显的环境治理与社区恢复需求。

Kamativi Mining Company (KMC) proposes to develop a lithium-based mineral project at the Kamativi Mine, located in Ward 11, Hwange District, Matabeleland North Province, Zimbabwe. The project scope encompasses exploration, open-pit mining, ore processing, and supporting facilities such as water supply, tailings management, hazardous chemical storage, roads, and maintenance workshops. This ESIA document is an addendum, necessitated by substantial changes in the project scope and environmental footprint compared to the previously permitted stage. It serves to systematically update environmental, social, cultural, and heritage responsibilities and acts as the basis for subsequent environmental and social management. The project registration number is 8751. According to the ESIA disclosure, Phase 1 plans an ore mining capacity of approximately 300,000 tonnes per annum (tpa) with an estimated lithium concentrate output of 50,000 tpa; Phase 2 plans to expand to a total ore processing capacity of 2.3 million tpa, with a total estimated lithium concentrate production of 350,000 tpa. The project site is located approximately 29 km east of Cross Dete. The

surrounding Kamativi town and its outskirts have a population of about 7,000. Historically, this area was engaged in long-term tin production. After production ceased in 1994, public infrastructure and local livelihoods were significantly affected; therefore, the redevelopment of this project is accompanied by clear needs for environmental remediation and community restoration.

二、ESIA 评估范围与方法 ESIA Scope and Methodology

本次 ESIA 补充评估覆盖项目勘探、采矿、选矿、尾矿处置、供水、危险物质储存、交通、社区关系、文化遗产、尾矿库、闭矿与复垦、新增磷锂铝石和锡铌钽重选等内容，文件同时纳入环境基线调查、利益相关方咨询、影响识别与分析、环境管理计划、复垦闭矿计划以及企业社会责任计划。评估方法包括案头资料审查、现场踏勘、观察记录、利益相关方访谈与会议、问卷调查以及文献研究。现场调查重点关注勘探沟槽和钻孔、未修复旧坑、矿石加工区、尾矿设施、水体、水文地貌、植被、社会经济活动及文化遗产分布等因素，目的在于建立一个能够支撑后续监测、缓解和管理的环境与社会基线。

This ESIA addendum covers exploration, mining, processing, tailings disposal, water supply, hazardous substance storage, transportation, community relations, cultural heritage, tailings facilities, mine closure and reclamation, and the addition of petalite and tin-niobium-tantalum gravity separation. The document also incorporates environmental baseline surveys, stakeholder consultations, impact identification and analysis, environmental management plans, reclamation and closure plans, and corporate social responsibility (CSR) plans. Evaluation methodologies include desktop reviews, site inspections, observational records, stakeholder interviews and meetings, questionnaire surveys, and literature research. Site investigations focused on exploration trenches and boreholes, unreclaimed historical pits, ore processing areas, tailings facilities, water bodies, hydrogeomorphology, vegetation, socio-economic activities, and the distribution of cultural heritage, aiming to establish an environmental and social baseline capable of supporting subsequent monitoring, mitigation, and management.

三、项目区环境与社会基线 Environmental and Social Baseline

项目所在区域属于 Gwayi 流域，Kamativi Dam 是最主要的水文特征，也是矿山生产和周边活动的重要供水来源。ESIA 同时指出，既有研究曾在 Kamativi 不同水源中检出砷浓度超过津巴布韦及世界卫生组织饮用水健康基准的情况，部分水源还出现铝、锰超标以及粪便污染迹象，因此当地水环境本身已具有一定敏感性，矿山复产后必须强化水处理和持续监测。地形方面，Kamativi 地区整体起伏较大、山地特征明显，生态上具有较高多样性；植被表现为 miombo 与 mopane 林地过渡带。社会基础设施方面，矿区及周边仍存在旧锡冶炼厂、办公楼、三所学校、警营、交通管理设施和医院等历史遗留基础设施。

The project is located within the Gwayi Catchment, where the Kamativi Dam is the most prominent hydrological feature and a vital water source for mine production and surrounding activities. The ESIA points out that previous studies detected arsenic concentrations exceeding Zimbabwean and WHO drinking water health standards in various water sources in Kamativi. Some sources also showed signs of aluminum and manganese exceedances, as well as fecal contamination. Consequently, the local water environment is inherently sensitive, and the mine must strengthen water treatment and continuous monitoring upon resumption of production. In terms of topography, the Kamativi area is characterized by significant relief and mountainous features; ecologically, it possesses high diversity, represented by a transition zone between Miombo and Mopane woodlands. Regarding social infrastructure, historical legacy facilities such as old tin smelters, office buildings, three schools, police camps, traffic management facilities, and a hospital still exist within and around the mining area.

四、项目工艺与主要设施 Project Process and Key Facilities

项目拟利用 Kamativi Dam 作为加工供水主要来源，并建设补充蓄水设施以弥补加工系统额外需水。ESIA 披露，项目原设计生产用水总量约为每年 200 万立方米，加工水回用率约为 65%，同时另新设补充蓄水设施以满足额外约 100 万立方米的短缺需求。尾

矿管理方面，项目原设湿排尾矿系统，同时引入干堆尾矿设施以降低环境影响。现有尾矿设施已采用 HDPE 衬层，企业亦安装 GNSS 软件监测尾矿坝稳定性，并对坝体位移、水位、降雨及关键排洪节点进行监测。干堆尾矿方案被认为有助于降低失稳风险、减少用水、缩小占地并降低水污染风险。除矿山和选厂外，项目还包括行政办公区、维修车间、危化品与柴油储存设施等附属工程。

The project intends to utilize the Kamativi Dam as the primary source of processing water and construct supplementary water storage facilities to meet the additional water demand of the processing system. The ESIA discloses that the original design for total production water use was approximately 2 million cubic meters per year, with a processing water recycling rate of about 65%. Meanwhile, new supplementary storage facilities will be established to meet an additional shortfall of approximately 1 million cubic meters. Regarding tailings management, the project originally featured a wet discharge tailings system but has introduced dry stack tailings facilities to reduce environmental impact. Existing tailings facilities utilize HDPE liners, and the company has installed GNSS software to monitor the stability of the tailings dam, tracking dam displacement, water levels, rainfall, and key discharge points. The dry stack tailings scheme is considered conducive to reducing instability risks, decreasing water consumption, minimizing land occupation, and lowering water pollution risks. In addition to the mine and processing plant, the project includes auxiliary works such as administrative offices, maintenance workshops, and hazardous chemical and diesel storage facilities.

五、主要正面影响 Main Positive Impacts

ESIA 显示，项目的主要正面影响包括就业机会增加、地方经济活跃度提升、矿产产值和政府财政收入增长、交通和社区基础设施改善，以及 CSR 项目带来的公共服务补充。文件显示，KMC 已在社区供水、学校供水、道路维护、应急支持及医疗点支持等方面开展实际投入，例如已向社区提供 2 口太阳能机井和 5,000 升水罐，并持续改善 St Theresa primary school、Kamativi Primary School 和 United Primary School 供水条件、修

建校舍和提供奖学金；同时，公司还向社区和警察局应急服务提供柴油支持，并为当地诊所提供太阳能电池、口罩和消毒用品。对一个长期因矿山关闭而衰退的城镇而言，项目带来的就业、市场活动和基础设施恢复具有较强的社会意义。

The ESIA indicates that the primary positive impacts of the project include increased employment opportunities, enhanced local economic activity, growth in mineral output value and government fiscal revenue, improvements in transportation and community infrastructure, and the supplementation of public services through CSR projects. Documentation shows that KMC has already made actual investments in community water supply, school water supply, road maintenance, emergency support, and medical point assistance. For example, it has provided the community with two solar-powered boreholes and 5,000-liter water tanks, continuously improved water conditions at St. Theresa Primary School, Kamativi Primary School, and United Primary School, built school buildings, and provided scholarships. Additionally, the company provides diesel support for community and police emergency services and provides solar batteries, masks, and disinfectants for local clinics. For a town that has long declined due to mine closures, the employment, market activity, and infrastructure recovery brought by the project hold significant social importance.

六、主要不利影响及缓解措施 Main Adverse Impacts and Mitigation Measures

ESIA 识别出的重点不利影响集中在水环境、尾矿与废物管理、粉尘和空气质量、噪声与振动、地表扰动和植被损失、历史遗留坑体安全、社区健康与社会秩序以及文化遗产保护等方面。水环境方面，项目新增勘探和采矿活动可能导致酸性矿山排水、砷负荷增加、尾矿渗滤液进入地下水或地表水，因此文件要求持续抽排坑内积水并回用于抑尘或选矿、收集和处理剥离物径流、对尾矿和泥浆设施实施衬层防渗、设置监测井并按季度开展 Kamativi Dam 和地下水水质监测。粉尘和空气影响方面，项目承诺加强道路洒水、根据天气调整抑尘频率、在必要区域建设防风措施，并开展季度排放调查。噪声和职业健康方面，文件提出通过设备维护、更新老旧设备、岗位轮换以及提供耳塞耳罩等

PPE 来降低风险。地表与生态影响方面，项目要求避免无序清表、控制非必要越野行驶、及时回填沟槽和钻孔、开展植被恢复和水土保持。维修车间和化学品管理方面，ESIA 要求对废油实施围控和回收，安装油水分离设施，做好现场整洁与消防准备。

The key adverse impacts identified by the ESIA are concentrated in the water environment, tailings and waste management, dust and air quality, noise and vibration, surface disturbance and vegetation loss, safety of historical legacy pits, community health and social order, and cultural heritage protection. Regarding the water environment, new exploration and mining activities may lead to acid mine drainage, increased arsenic loads, and tailings leachate entering groundwater or surface water. Therefore, the document requires continuous pumping of pit water for reuse in dust suppression or processing, collection and treatment of runoff from overburden, implementation of lining for tailings and slurry facilities, installation of monitoring wells, and quarterly water quality monitoring of the Kamativi Dam and groundwater. For dust and air impacts, the project commits to enhancing road watering, adjusting dust suppression frequency based on weather, constructing windproof measures in necessary areas, and conducting quarterly emission surveys. Regarding noise and occupational health, the document proposes reducing risks through equipment maintenance, updating old equipment, job rotation, and providing PPE such as earplugs and earmuffs. For surface and ecological impacts, the project requires avoiding disorderly clearing, controlling unnecessary off-road driving, timely backfilling of trenches and boreholes, and conducting vegetation restoration and soil conservation. For maintenance workshops and chemical management, the ESIA requires containment and recycling of waste oil, installation of oil-water separation facilities, and ensuring site cleanliness and fire readiness.

七、社区、传统文化与利益相关方意见 Community, Traditional Culture, and Stakeholder Views

项目咨询工作覆盖了传统首领、村头人、地方政府、卫生部门、学校、农业推广部门、警方、妇女事务机构及其他受影响群体。根据 ESIA 披露，咨询通知于 2025 年 8 月 21 日至 22 日发出，2025 年 9 月 4 日在 KMC 场址召开了与当地社区和传统领袖代表的集中沟通会议，并辅以访谈、问卷、观察和文献研究。利益相关方普遍关注的议题包括：就业是否优先本地居民、供水是否改善、粉尘与噪声是否得到控制、旧坑是否修复和围挡、毒品与卖淫等社会问题是否上升、文化传统与神圣场所是否得到尊重、墓地和祖先祭祀地是否受到影响等。针对这些问题，KMC 在 ESIA 中承诺持续与传统领袖和社区沟通，对文化遗产、墓地和仪式场所开展记录、避让、缓冲保护或在充分协商基础上的迁葬和重埋；对距离矿区较远的 Chingehari 等重要文化地点，文件认为在当前目标区范围内不会直接扰动，但仍要求持续告知社区任何可能改变影响范围的项目调整。ESIA 咨询结果显示，当前采矿目标区周边不存在原住民群体，同时矿山距离居民住宅较远，不涉及社区搬迁。

The project consultation work covered traditional chiefs, headmen, local government, health departments, schools, agricultural extension departments, the police, women's affairs agencies, and other affected groups. According to ESIA disclosures, consultation notices were issued from August 21 to 22, 2025, and a centralized communication meeting with local community and traditional leader representatives was held at the KMC site on September 4, 2025, supplemented by interviews, questionnaires, observations, and literature research. Issues of general concern to stakeholders include: whether employment prioritizes local residents, whether water supply will be improved, whether dust and noise will be controlled, whether old pits will be repaired and fenced, whether social problems such as drugs and prostitution will increase, whether cultural traditions and sacred sites will be respected, and whether cemeteries and ancestral sacrificial sites will be affected. In response to these issues, KMC committed in

the ESIA to continuous communication with traditional leaders and the community, to record, avoid, and provide buffer protection for cultural heritage, cemeteries, and ceremonial sites, or to conduct relocation and reburial based on full consultation. For important cultural sites like Chingehari, which are far from the mining area, the document concludes there will be no direct disturbance within the current target area, but still requires continuous notification to the community of any project adjustments that might change the scope of impact. ESIA consultation results show that there are no indigenous groups around the current mining target area, and the mine is far from residential houses, involving no community relocation.

八、环境与社会管理、监测及闭矿安排 Environmental and Social Management, Monitoring, and Closure Arrangements

ESIA 提出，环境与社会管理不能停留在一次性评价，而应贯穿项目全生命周期实施。文件设定了水资源、生态资源、废物、职业健康、公共基础设施和附属工程等多项环境管理矩阵，明确实施主体、监管部门、时间安排与季度监测频次。闭矿与复垦方面，项目提出对勘探沟槽和不再使用钻孔及时回填封闭，对采扰区覆土、整形和植被恢复，对旧坑设置围栏和警示标识，对尾矿设施在停止排放后启动再植被、侵蚀控制和雨洪管理。ESIA 建议尾矿设施在闭矿后至少持续监测 5 年，并持续监测地表水和地下水质量。社会层面，闭矿阶段还需提前告知员工、开展技能评估和转岗安排，并继续就闭矿计划与利益相关方保持沟通。

The ESIA proposes that environmental and social management should not remain a one-time evaluation but should be implemented throughout the project life cycle. The document sets multiple environmental management matrices for water resources, ecological resources, waste, occupational health, public infrastructure, and auxiliary works, specifying the implementing entities, regulatory departments, schedules, and quarterly monitoring frequencies. Regarding closure and reclamation, the project proposes timely backfilling and sealing of exploration trenches and disused boreholes, soiling, shaping, and vegetation restoration for mining-

disturbed areas, and setting up fences and warning signs for old pits. The ESIA recommends that tailings facilities be monitored for at least five years after discharge stops, with continuous monitoring of surface and groundwater quality. On the social level, the closure phase also requires early notification to employees, skill assessments, and redeployment arrangements, along with continued communication with stakeholders regarding the closure plan.

九、信息公开与公众反馈 Information Disclosure and Public Feedback

根据 IRMA Chapter 2.1 关于 ESIA 应按照公开且成文程序实施的要求，本摘要作为 Kamativi 项目对外披露材料之一，旨在帮助利益相关方以清晰、非技术性的方式理解项目内容、潜在影响、管理措施及参与渠道。公众如需查阅 ESIA 补充报告全文、咨询项目环境与社会管理安排、反馈意见或提出关切，可联系 Kamativi Mining Company（Pvt）Ltd，

办公室地址：Unit 4A, 2 Iona Close, Borrowdale Road, Harare；

项目地点：Kamativi Mine, Ward 11, Hwange；

公开联系电话：+263 775 827 384。

In accordance with IRMA Chapter 2.1 requirements regarding the implementation of ESIAs according to open and written procedures, this summary serves as one of the disclosure materials for the Kamativi project. It aims to help stakeholders understand the project content, potential impacts, management measures, and participation channels in a clear, non-technical manner. Members of the public who wish to review the full ESIA addendum report, inquire about the project's environmental and social management arrangements, provide feedback, or raise concerns may contact Kamativi Mining Company (Pvt) Ltd.

Office Address: Unit 4A, 2 Iona Close, Borrowdale Road, Harare；

Project Location: Kamativi Mine, Ward 11, Hwange;

Public Contact Number: +263 775 827 384

KMC 表示将结合既有利益相关方沟通机制，持续向社区更新项目进展、环境监测、文化遗产保护及闭矿安排等事项，并在项目实施过程中继续吸收和回应公众意见。

KMC states that it will utilize existing stakeholder communication mechanisms to continuously update the community on project progress, environmental monitoring, cultural heritage protection, and closure arrangements, and will continue to absorb and respond to public opinions during project implementation.

注：如项目方案、产能规模、尾矿设施、用水方案或影响范围发生重大调整，KMC 应同步更新 ESIA 补充资料及本公示摘要。

Note: If there are major adjustments to the project plan, production capacity, tailings facilities, water use plan, or scope of impact, KMC should simultaneously update the ESIA addendum materials and this public notice summary.