Development Bank of Namibia

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DBN ENVIRONMENTAL AND SOCIAL MANAGEMENT GUIDANCE FOR THE BUILDING MATERIALS WAREHOUSE/STORES INDUSTRY

Contents

a) Version Control

The table below serves to track the key revisions made to this document for change control purposes.

Date	Version	Change Description	Author/Editor
07/09/2016	0.01	Initial Draft for first review	Manager: Environment & Social Development
28/02/2018	0.02	DBN Logo and update as per 07 April 2017 Kreditanstalt für Wiederaufbau (KfW) Development Bank Gap Assessment of the Development Bank of Namibia's (DBN) Environmental & Social Management System (ESMS)	Officer: Environment & Social Development

1. DEFINITIONS, TERMS & ABBREVIATIONS

DBN	Development Bank of Namibia
EOHS&S risks	Environmental, Occupational Health and Safety and Social
ESIA	Environmental and Social Impact Assessment
HSE	Health, Safety and Environment
SEP	Stakeholder Engagement Plan
MDF	Medium Density Fibreboard
PCB's	Polychlorinated Biphenyls (PCBs)
PPE	Personal Protective Equipment
VOC's	Volatile organic compounds

2. INTRODUCTION

This guideline is designed to be used by the Development Bank of Namibia (DBN) clients to understand the nature of environmental, occupational health and safety and social (EOHS&S) risks associated with existing operations in this sector and suggested actions for businesses to manage these EOHS&S risks.

It also provides guidance for clients on potential due diligence questions to discuss with management to understand how their business is managing these EOHS&S risks. This guideline focuses on material EOHS&S risks; it is not an exhaustive list of EOHS&S risks. In managing EOHS&S risks, all businesses should be compliant with relevant EOHS&S laws and regulations and best practices.

This guideline focuses on building materials warehouses/stores with reference to the International Finance Corporation's Environmental, Health and Safety (EHS) General Guidelines. The EHS Guidelines are technical reference documents with general and industry-specific examples of Good International Industry Practice (GIIP).

3. SCOPE

This guidance is applicable to all the Development Bank of Namibia's (DBN) clients/customers who intends to or have set up operations in this sector category and, extends to their assets, facilities, operations, projects and activities, including activities undertaken by any contractor on behalf of the Company, business units and managed operations including corporate/administration offices and other facilities located off site.

4. INTENT

The intent of this guidance note is to assist prospective clients to develop a thorough Environmental and Social Management Plan (ESMP) for their activities and merely act as a guidance and is not comprehensive nor exhaustive.

5. BACKGROUND TO THE SECTOR

Building materials warehouses/stores range in size and type from independent hardware stores and builders merchants to large warehouse style operations situated isolated or on retail parks. The warehouse style of a building/hardware store is characterised by high-level racking and narrow gangways designed to allow access by forklift trucks and side loaders with little room to spare in addition to yards where bricks, crushed stone, sand, fencing, fertiliser, lumber and poles are stored.

Building/hardware stores sell a wide range of materials and equipment for home construction, improvement, decoration, gardening and garden furniture etc. Some of the larger supermarkets may also sell a significant quantity of building/hardware products.

6. KEY EOHSS RISKS

Below are the material EOHSS risks associated with this sector and key measures to manage them. Where gaps are found in the management of key EOHSS risks, the DBN E&S risk management measures may form part of a corrective E&S action plan agreed with clients.

6.1. Consumer Environmental Impact

The products sold at Building materials warehouses/stores have the potential to damage the environment from the manufacturing stages, in use and at disposal.

Building materials warehouses/stores can reduce the impact of the product after sale by providing:

- Alternative, less environmentally damaging products;
- Materials and equipment for energy and water conservation;
- Materials and equipment for renewable energy generation;
- Information on energy and water conservation;
- Reduced packaging;
- Information on correct cleaning and disposal of products after use

6.1.1. Mitigation measures

- Monitor source of timber and timber based products, ensure that these are sourced from certified sustainable forestry resources.
- Provide information to consumers on the environmental impacts and health effects of products to enable them to make informed choices and to ensure correct use and disposal;
- Provide information to customers via product labelling on any necessary PPE required for product use.

6.2. Dust

Movement of dry goods can result in the creation of dust which can be a nuisance to neighbours.

Dust can also arise from cutting operations, spillage from packaged products and poor storage and movement of loose product, e.g. sand, gravel and crushed stone.

- Workers may inhale or ingest the dust and aerosols exposing them to biological and microbial agents presenting a risk of occupational lung disease or asthma. When combined with high levels of humidity they may give rise to skin irritation or allergic reactions such as conjunctivitis and rhinitis;
- Uncontrolled exposure to wood dust and formaldehyde (present in some medium density fibre board (MDF) products) may cause skin and eye irritation, respiratory disease and cancer,
- Cement dust is mildly corrosive. Short-term exposure will cause skin and eye irritation. Long-term exposure can cause inflammation of the cornea, skin dryness and dermatitis. If inhaled cement and stone dust can result in respiratory disease and asthma.
- Mineral wool dust arising from insulation products may cause temporary skin irritation and can exacerbate existing respiratory conditions.
- As well as potential explosions there is also the potential for fire if the commodities stored are flammable and/or there is poor housekeeping on site.

6.2.1. Mitigation measures

- Dust emissions can be controlled by enclosing processing and transport equipment, which also reduces product losses and the installation of extraction equipment.

6.3. Energy/ Electricity

Energy is used within building materials warehouses/stores primarily for heating, lighting, air-conditioning and to power equipment.

Energy usage has a direct correlation to the operating costs of the company and energy generation and consumption may be regulated or taxes/levies applied to reduce energy use and associated emissions of gases such as carbon dioxide.

6.3.1. Mitigation measures

- Install motion sensor lights to bath rooms, store rooms and areas that are not used continually to ensure electricity will not be wasted as these auto lights allow for light to be automatically turned off when the area or room is not in use.
- Change current lighting system to LED's. LED lights reduce power usage by as much as 80%. LED lights also last for up to 10 years so this means less replacement costs, reduced labour for changing lighting bulbs.
- Install High Volume, Low Speed (HVLC) fans designed to move massive columns of air at low speeds. HVLS fans can help regulate a facility's temperature year-round from floor to ceiling.
- Regular maintenance of heating, ventilation, cooling, and refrigeration systems including changing filters regularly.

- Use battery electric forklifts. Battery electric forklifts have lower ongoing running costs; they also have significantly lower emissions because main power plant emits less carbon/fuel than LPG or Diesel forklifts.

6.4. Flood and water ingress

Goods will be spoiled if water enters into a warehouse. Therefore, it is essential that any warehouse is secured against water ingress and flooding.

6.4.1. *Mitigation Measures*

- Apply a waterproof coating or membrane to exterior walls;
- Seal all wall penetrations including where utilities enter the warehouse;
- Install waterproof shields over all openings, including windows and doors;
- Anchor the building to resist floatation.

6.5. Financial Impact

Faulty or inaccurately labelled products may be a safety risk and potentially form an environmental hazard. Such an incident could have significant financial implications on a viable business. Financial impacts may arise from compensation claims, loss of reputation and loss of contracts;

- Where large quantities of energy are used then this can result in high operating costs to the business;
- Injuries may lead to increased payroll costs to replace workers;
- Fines, penalties and third party claims may be incurred for non-compliance with health, safety and environmental regulations.

6.5.1. Mitigation measures

- Operational procedures to manage environmental, health and safety risks;
- Monitoring programmes for HSE;
- Improvement objectives, targets and project plans;
- Training for personnel;
- Regular inspections, checks and audits with records to demonstrate achievement of the required level of performance against legal requirements and improvement action;
- Emergency plans for environment, health and safety accidents;
- Management review/demonstrated involvement in environment, health and safety management.
- Look for signs of poor housekeeping, such as spillages and piles of empty packaging or spoiled goods;
- Check for evidence of leaks into the building or from bulk storage tanks;
- Check security levels;
- Check whether people are wearing personal protective equipment;
- Check the signage around the site, does it convey what health and safety risks might exist in areas?

6.6. Fire

Fire at warehouses could result in loss of storage and goods and commodities as well as increased insurance costs and injuries may lead to increased payroll costs to replaced skilled workers;

6.6.1. Mitigation measures

- Install filter equipment to reduce the likelihood of explosion associated with dust build up;
- Ensure fire alarms are fitted to protect buildings and fit sprinklers to buildings;
- Establish a fire safety plan;
- Train Staff in carrying out the fire safety plan;
- Don't allow trash and other flammable to accumulate on site;
- Provide designated smoking areas.

6.7. Hazardous Substances

Building materials warehouses/stores may stock significant quantities of highly flammable, explosive or toxic materials, such as oils, gas cylinders, timber, paints, solvents and pesticides. Large stores may be subject to the Environmental Management Act No 7 of 2007 and its Regulations of 2012 and the Hazardous Substances Ordinance 14 of 1974 which aims to control the quantities of dangerous substances that can be stored onsite in order to prevent a major accident.

Some stocks and some cleaning chemicals may be harmful and exposure through normal usage or spillages may cause respiratory problems, dermatitis or chemical burns.

6.7.1. Mitigation measures

- Work with suppliers to substitute chemical ingredients where there are recognised environmental or health and safety issues, with lower risk alternatives;
- Offer customers alternative products where the issues surrounding a chemical ingredient are significant and controversial, but unresolved;
- Discontinue products, where research indicates that they pose significant risks to customers, staff and the environment;
- Gas cylinders (if any) should be securely stored on a flat dry surface in an adequately ventilated storage area. Gas cylinders should also be stored away from sources of ignition and other flammable materials due to the potential for explosion.

6.8. Transport

At a warehouse goods are received and stored until they are required and then prepared for transportation. Activities include, receiving and unloading goods from suppliers, transferring goods onto pallets for storage, storing goods in appropriate conditions, responding to customer orders by picking products from warehouse shelves and preparing them for transportation e.g. placing them on pallets or wrapping them, and loading orders onto vehicles for transport to the customer.

Delivery vehicles and customer cars may cause traffic congestion or excessive noise particularly at holiday periods which are peak times for consumers to undertake construction and renovation projects.

6.8.1. Mitigation measures

- Plan, schedule delivery times so as to avoid peak periods and night time deliveries;
- Ensure that the vehicles being used are safe and have been adequately maintained;
- Ensure that the drivers are safe and has appropriate training;
- Minimise the need for reversing on premises;
- Avoid sharp bends and blind corners;
- Prioritise maintenance by not allowing potholes and uneven surfaces to develop;
- Establish rights of way, site speed limits, operating rules and procedures and control of traffic patterns and directions.
- Restricting circulation of delivery and private vehicles to defined routes and areas, giving preference to 'one way' circulation if possible.

6.9. Fork Lift Trucks

Fork lift trucks are widely used in warehouses as they can eliminate some or all of the manual handling involved in the job. However fork lift trucks are dangerous vehicles and can cause serious injuries and fatalities. Consequently, actions should be taken to ensure the safety use of Fork Lift Trucks in warehouses.

6.9.1. *Mitigation Measures*

- Ensure all Forklift drivers have received adequate training on fork lift truck operations;
- Inspect and maintain to ensure the fork lift trucks are in safe condition;
- Safe operating procedures, including arrangements to prevent overloading and prohibiting riding on the forks;
- Keys to the Fork Lift Trucks to always be removed by the operator at the end of his/her shift and kept in a safe and secure place to prevent unauthorised use of Fork Lift Truck.

6.10. Solid Waste

Typically, the majority of building materials warehouses/stores waste is from:

- Products damaged in transit or in store;
- Packaging waste from deliveries;
- Returned products.

If not managed appropriately this waste may be a fire hazard; if it is not removed, it may contaminate product.

Methods to reduce the amount of waste, such as reuse and recycling should be considered. For example, good quality redundant but serviceable equipment can be reduced for sale to customers and staff.

6.10.1. Mitigation measures

Train workers to correctly segregate and dispose of waste;

- Implement procedures to ensure solid and liquid waste is removed from surface areas before rinsing and washing, e.g. using scrapers, brooms and vacuum cleaners;
- Good housekeeping should be maintained at all times;
- Regular inspection should be carried out for all bulk containment facilities on site;
- Implement waste management systems which are safe, hygienic, secure from scavenging and minimise manual handling;

6.11. Stacking, Racking and Storage

Goods stacked incorrectly may fall onto staff and customers and overloaded shelving may collapse. People may also be tempted to climb on racking to reach goods and may fall and injure themselves.

Storage facilities may include silos, bulk storage tanks and drums, sacks and bags;

6.10.1. Mitigation measures

- Mark equipment and racking with safe loading limits.
- Stack goods with heaviest at the bottom where possible.
- Safety ladders or mobile elevated platforms should be provided to enable staff to have safe access to goods on higher shelves.
- Training should be provided in their safe use to reach higher shelves;
- Install mechanical lifting aids where possible and rotate work tasks to reduce repetitive activities;

6.12. Machinery and Equipment

Sharp tools and moving blades such as circular saws, planning and band sawing machines may be used to cut products to size. Persons using this equipment are at risk of serious injury (e.g. cuts and amputations) from coming into contact with moving blades and of receiving facial and eye injuries from stray pieces of wood etc.

The use of mechanical handling equipment such as fork lift trucks and cranes can lead to crushing and amputation injuries.

6.11.1. Mitigation measures

- All equipment should have safety guarding and workers should be issued with appropriate personal protective equipment (PPE) to protect against unavoidable sharp items and edges.
- Members of the public should be excluded from areas where such operations are conducted.

6.13. Manual Handling and Repetitive Injury

Lifting and moving heavy, awkward or bulky items such as bags of cement and kitchen marble tops can cause back injuries and muscle strain in both employees and customers. Employees should be trained in manual handling techniques and the weight of heavy items should be clearly indicated on the packaging and customer assistance provided if necessary.

A selection of different types of trolleys should be provided for customer use to enable them to select the most appropriate for their needs

6.12.1. Mitigation measures

- Provision of personal protective equipment (PPE) that is fit for the task to prevent injury and maintain hygiene standards.
- Staff should be trained in the correct selection, use and maintenance of PPE; the training should include the reasons for its use and the dangers of not using it. PPE should be inspected regularly and maintained or replaced as necessary;
- Redesign of manual processes to avoid heavy lifting/repetitive activities. Install mechanical lifting aids where possible;
- Train staff in proper lifting techniques and safe use of machinery;
- Devise a safe system of movement for arrival, reception, unloading, loading and movement within the site (e.g. one-way systems, designated parking and pedestrian areas, restricted access to dangerous areas). Provide clear information and signage on these procedures to drivers and public;
- Separate delivery areas from those areas accessible to the general public;
- Train staff in correct loading and use of vehicles, e.g. forklifts;

6.14. Noise

Fork lifts, trucks and other machinery may give rise to hazardous noise levels causing hearing loss.

6.13.1. Mitigation measures

- Limit time spent by employees in noisy environments by task rotation;
- Assess the risks to employees from noise at work;
- Take action to reduce the noise exposure that produces noise at work;
- Provide your employees with hearing protection;
- Make sure the legal limits on noise exposure are not exceeded.

6.15. Packaging

Packaging is used to preserve and protect the retail products from damage during transport but also to market the product. Much of this packaging can be recycled. Building materials warehouses/stores should work with their suppliers to reduce the amount of packaging wherever possible, e.g. using reusable plastic crates rather than cardboard for deliveries and reducing over packaging of products to enable easy recycling of any remaining packaging.

6.14.1. Mitigation measures

Work with the supply chain to reduce packaging waste, e.g.

- Use of reusable containers for deliveries;
- Removal of unnecessary packaging layers;
- Use of thinner packaging;
- Use of recyclable or biodegradable packaging;
- Minimise stocking of hazardous substances by use of just-in-time inventory monitoring and control;
- Explore alternatives for reuse and recycling of unsold/unsaleable goods, e.g. staff discount;

6.16. Pests and vermin

Storage of goods can attract pests and vermin and measures need to be in place to ensure that warehouses are secure against pests to reduce the likelihood of goods being spoiled.

6.15.1. Mitigation measures

- Seal buildings to determine pests and vermin and to prevent water ingress.

6.17. Polychlorinated Biphenyls (PCBs) and Asbestos

PCB's are a group of substances which are good electrical insulators. Typically, PCB's may be present as constituents of hydraulic oils or dielectric fluids in electrical switchgear, transformers and fluorescent light starters;

Asbestos has been used on a large scale for many years as a fire proofing and insulation material and may be encountered in a wide range of forms including asbestos cement boards, as fire retardant gaskets in pipework and as fire retardant insulation around boilers and furnaces.

6.17.1. Mitigation Measures

- Develop and Implement and maintain Polychlorinated Biphenyls (PCBs) and Asbestos management Plan.
- Assess all premises for the potential presence Polychlorinated Biphenyls and Asbestos containing materials.
- Develop and maintain a register of the identified or suspected Polychlorinated Biphenyls and Asbestos containing materials, including its location, accessibility, condition, risk assessments and control measures.
- Ensure Risk assessments are conducted when working around/with areas containing Asbestos and Polychlorinated Biphenyls.
- Ensure that all required notices and labels are in place for Polychlorinated Biphenyls and Asbestos containing materials are on site.
- Ensure that personnel including contractors, suppliers, visitors and the public are informed or made aware of Polychlorinated Biphenyls and Asbestos specific site.

6.18. Slips and Trips

There is a high risk of slips, trips and falls where poor housekeeping exists. Uneven, slippery or obstructed floor surfaces and trailing cables may lead to accident or injury. Passageways, delivery areas and stairs should be kept clear, spills cleaned up immediately and warning of wet surfaces clearly displayed.

6.18.1. Mitigation measures

- Minimise access to areas being cleaned or where spillages have occurred and provide warning signs to customers.
- Spills should be cleaned up immediately and the floor should be dried as much as possible;
- Provide supplementary matting in entrance areas during wet weather;
- Maintain walking areas to ensure they are clean and dry and prevent slips and trips;

6.19. Supply Chain

Building materials warehouses/stores are in a strong position to control the impact of their products on the environment through their supply chain,

6.19.1. Mitigation measures

- Specify which chemicals cannot be used in your products, by requiring all wood and wood products to be sourced from sustainable forestry, and reducing fertilizer used in gardening products.

6.20. Wastewater

Wastewater will arise from:

- Cleaning windows, internal floors, display surfaces, equipment etc.;
- External cleaning of yard and parking areas;
- Watering plants and seedlings;
- Discharges from plant rooms, air conditioning and heating systems.

Discharges should pass to the foul sewer. A permit with specific discharge parameters from the regulatory authorities will normally be required as per the Water Act No 54 of 1956 and its requirements in terms of water supplies for drinking water and for waste water treatment and discharge into the environment.

Rainwater run-off from large car parks and other hard surfaced areas may give rise to pollution due to oil drips from cars, and the accumulation of dust and litter. This may require treatment prior to discharge, e.g. oil separators.

6.20.1. Mitigation measures

- Spillages of liquid product, in particular paints and solvents, should be mopped up using spill kits and not permitted to enter the drainage system.
- Install secondary containment of tanks (bunds, for example) to prevent spills reaching the wider environment or the goods;
- The used materials may be classed as hazardous waste and therefore will be subject to national regulations on their safe disposal.
- Provide hard standing for vehicles, should be designed to prevent or contain oil or fuel leaks;

6.21. Working at Height

Storage warehouses will entail working at height which is a hazard.

6.21.1. Mitigation measures

- Restrict access to working at height or around the top of shelving. Ensure correct fall arrest systems are in place, such as, (guarding and harnesses);

6.22. Vehicle movements

In a warehouse environment with moving vehicles and people combined it can be common to have injuries where people are struck by moving or falling objects, such as, crates, boxes, equipment, and fork lift trucks, all of which can lead to injury.

The movement of goods into, out of and around building materials warehouses/stores involves the use of forklifts, trucks, trailers, delivery vehicles and customer cars, and accounts for a large proportion of accidents at these premises.

During loading and unloading, accidents can occur if the driver's view is obstructed, the load shifts or falls from the vehicle or if the vehicle is unsuitable for the load.

6.22.1. Mitigation measures

- Separation of people from moving equipment;
- Ensure that the warehouse layout reduces opportunities for process activities to cross paths;
- Install

7. REVIEW

The principles contained in this guidance will be reviewed on an annual basis to facilitate improvement.

8. GENERAL REFERENCES FOR STANDARD METHODS

- European Bank for Reconstruction and Development (EBRD). Environmental and Social Policy May 2008. Performance Requirement 2: Labour and Working Conditions. http://www.ebrd.com/enviro/tools/index.htm
- EBRD Sub sector Environmental Guidelines. http://www.ebrd.com/about/policies/enviro/sectoral/index.htm
- International Organisation for Standardisation (ISO) www.iso.org ISO14001:2004: Environmental Management Systems – Requirements with Guidance for use. Geneva: ISO