



Setting up a safe site

EBRD briefing note

BN05

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Introduction

Construction sites vary in scale and nature, greatly influenced by the work that needs to be done. Sites can be fixed – in a static location for the duration of the work – or temporary or transient. If a site is fixed for a long period, setting it up is fairly straightforward. However, most construction sites are temporary and of short duration, and are moved and modified as work progresses. Temporary or transient construction sites pose the biggest safety challenges, so prior to setting up any site, companies should carry out a risk assessment.

Risk assessment

A risk assessment will help to identify any potential hazards, such as who is at risk, how they are at risk and the control measures necessary to protect the health and safety of workers and local communities. When setting up a construction site, it is important to consider the following elements:

- ▶ **Local environment:** What community services are close to the planned site, including schools, emergency services and hospitals? What is the likely impact of planned works on these services?
- ▶ **Site survey:** Are there any chemical, biological and/or physical hazards and, if so, what measures will be needed to limit the exposure of workers and local communities?
- ▶ **Security:** What level of security will be needed to control pedestrian and vehicle access and who will be permitted to enter the site?
- ▶ **Traffic management:** Can separate vehicle and pedestrian routes be maintained on site to prevent interaction or accidents? Can site operators manage on-site vehicle and plant movements, as well as the movement of vehicles in and out of the site onto public highways? What arrangements are in place to manage worker parking, material unloading and storage areas?
- ▶ **Welfare:** What rest areas, food preparation and eating areas and toilet facilities are provided for workers? Larger sites may also need to establish a dedicated first-aid room.

Local environment

Those in charge of construction sites should assess the local area to identify anything that may be affected by the planned construction work, such as:

Schools and children: At the start and end of the school day, schoolchildren may approach and pass by the construction site, so work and deliveries should be stopped or reduced at these times. Become familiar with the location of local schools and key times. If necessary, consider visiting schools to speak with teachers and make them aware of the work that will be undertaken, so that they can share the dangers of construction sites with the children. Although it is important to secure the construction site at all times, even greater attention is required at the end of the working day, to ensure that children do not enter and play there.

Emergency services: Emergency services access must be maintained at all times. Temporary entrances or routes may be required, or alternative arrangements made (for example, on-site emergency arrangements).

High pedestrian traffic: Service locations such as train stations and bus stations may see large numbers of pedestrian traffic, which may interact with construction-site access points. Clear signage should be used to ensure access routes to these services are kept clear and that pedestrians stay away from work areas. In some cases, the construction site may need to consider working during less busy periods (for example, at night) or carrying out some activities at non-peak times.

Site survey

Site surveys should be undertaken in the design and planning stage. Depending on the location, geology and history of the site, different surveys may have been carried out to identify the presence of underground hazards on site, such as pipes, cables, ground conditions, contaminated soils, the presence of aquifers, underground structures and cavities. This information is key to safe site set-up and helps to identify any measures required to control exposure to potential hazards.

Overhead services: High- and low-voltage electrical cables and communication cables may present difficulties when excavating, due to the clearance needed for large vehicles moving below. Temporary isolation or re-routing of cables may be required.

Underground services: The presence of chambers or manhole covers (or lids), in addition to visible structures, such as streetlights, may provide an indication of the presence of underground services.

Most hazards associated with the local environment can be raised and dealt with through meaningful stakeholder engagement with affected property owners, service providers and project-affected communities. Such engagement can help to confirm and foster understanding of the needs of these groups while construction continues. Stakeholder engagement can involve a formal meeting, however, for emergency works, it may take the form of prewritten letters with contact details issued to every affected property, service provider or business.

Security

The construction site should have security that is appropriate to the type, duration and location of the construction work. For short-duration activities, simple, securely connected boundary fencing should suffice to prevent casual access. To prevent theft, children playing on the site or people using the site as a short cut, fencing should be fixed and robust, so it cannot be easily removed. In some circumstances, solid boundary fencing or “site hoarding” may be effective. In some places, overhead protection may be required to shield the public and road users from any dust and debris falling from above. If lifting operations or other overhead work results in any objects extending beyond the site boundary, appropriate pedestrian and traffic management outside the site boundary will be required. This may require consultation with appropriate road and local authorities.

Advance warning signs, informing pedestrians and road users of construction work ahead, will raise awareness and enable the public to take alternative routes if necessary. Advance stakeholder engagement with local residents and businesses will also help.

Signage should be fixed and positioned on site fencing to inform the public of the construction work being carried out and how they can make contact with site management to provide feedback or raise grievances. The contact is usually an appointed individual and details, such as a relevant telephone number, address and email, should be made available. This will prevent local communities attempting to access the site to raise concerns directly with workers in a potentially hazardous area.

Traffic management

Sites should have a clear traffic management plan that takes into account all potential project traffic. A nominated person should be made responsible for the plan and it should be reviewed periodically to ensure its effectiveness and suitability for site needs. A copy of the plan should be available at the site entrance and used in driver inductions on site rules, routes and directions. In some cases, this may require a person or vehicle to accompany or escort the driver.

Traffic management and directional signs may be required to guide delivery drivers to where they need to go. In some cases, this may be simple, but a more complex system may be required depending on the number of work areas and site entrances. Ideally, sites should have a one-way system to prevent interaction with oncoming vehicles. Reversing should also be discouraged, as it is the single biggest cause of vehicle collisions on site.

Traffic and pedestrian routes should be kept separate and ideally be fenced off to prevent pedestrian access. Doors to welfare units and site offices should face away from these routes, so they do not open directly into moving traffic. When planning site layout, bear in mind that offices, worker canteens and toilets will be well-used pedestrian areas, so traffic movements in these areas should be avoided where possible.

Consider trying to avoid having workers cross a traffic route to reach the canteen or office from the work site. Where crossing points cannot be avoided, they should be done in a way that protects the workforce. For example, they should be well-lit, with plenty of advance warning signage, priority given to pedestrians and positioned to allow an unhindered, clear line of sight for drivers (for example, it should not be placed immediately after a bend or obstructed by structures or other objects).

A dedicated area must be established for parking site vehicles, to prevent obstruction of public highways or pedestrian walkways. A parking or staging area should also be established for deliveries, so that when they arrive on site, they can be directed to where they need to go. More complex work sites may need to specify delivery times and allocate time slots for deliveries. Extra space may also be necessary as construction work progresses.

Worker accommodation and welfare

High standards of worker accommodation and welfare are important on construction sites. Physical and mental ill health can affect large numbers of workers. Disease can spread among the workforce and offsite, affecting local communities. Most illnesses are caused by a lack of basic personal hygiene and handwashing before preparing and eating food or smoking.

Establishing worker accommodation and welfare facilities on larger fixed construction sites of longer duration is relatively straightforward. For transient or temporary construction sites, it is far more difficult, due to continual changes in workforce, location and work being carried out. In such cases, portable or mobile welfare units should be used. All worker accommodation and welfare facilities should include the following:

- ▶ handwashing facilities with soap and hot and cold (or warm) water
- ▶ toilets with associated handwashing facilities
- ▶ food preparation facilities that are easy to clean and will not contaminate food stored in the area
- ▶ a suitable area for workers to take breaks and eat meals, with appropriate heating and cooling to maintain a comfortable temperature
- ▶ access to clean, potable drinking water
- ▶ areas for storing and disposing of dirty or contaminated personal protective equipment (PPE)

- ▶ fire-prevention and fire-extinguishing equipment, marked fire exits and evacuation plans
- ▶ welfare arrangements that take into account the requirements of both men and women.

Sleeping accommodation

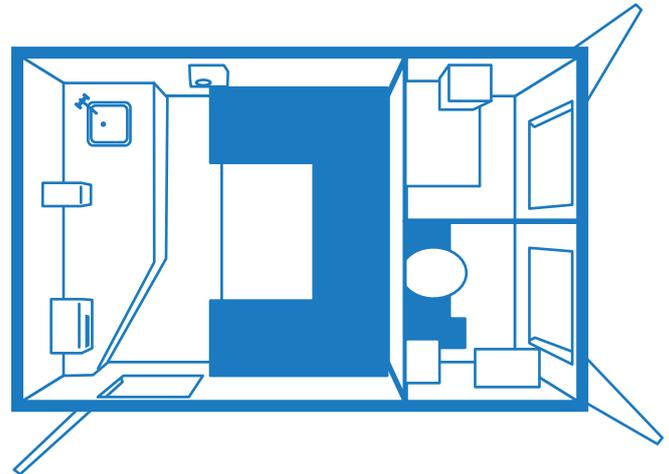
Where sleeping accommodation is provided, it should meet the EBRD and International Finance Corporation's (IFC) guidance on "Workers' accommodation: processes and standards" (EBRD and IFC, 2009). Along with a variety of requirements for the accommodation itself, the guidance includes the following health and safety standards:

1. Health and safety management plans, including electrical, mechanical, structural and food safety, must be carefully designed and implemented.
2. The person in charge of managing the accommodation has a specific duty to report to the health authorities any outbreak of contagious disease, food poisoning or other major illness/injury.
3. An adequate number of staff/workers should be trained to provide first aid.
4. A specific fire-safety plan must be prepared, including the training of fire wardens, periodic testing and monitoring of fire safety equipment, and periodic drills.
5. Guidance on the detrimental effects of the abuse of alcohol and drugs and other potentially harmful substances should be made available to workers, along with risks and concerns relating to HIV/AIDS and other health risk-related activities. It is best practice to develop a clear policy on this issue.
6. Workers should have access to adequate preventive measures, such as contraception (condoms, in particular) and mosquito nets.
7. Workers should have easy access to medical facilities and staff. Where possible, female doctors and nurses should be available for female workers.
8. Emergency plans on health and fire safety should be prepared. Depending on the local context, additional emergency plans should be prepared as needed to handle specific occurrences (earthquakes, floods and tornadoes, for instance).

Where establishing site accommodation and welfare facilities is difficult, alternative solutions should be made available, such as a central hub or depot with fixed welfare facilities to which workers can return to during the day. This may not be possible in some cases, especially where work areas are a significant distance away from any depots. Where possible, an agreement should be made with affected premises owners to allow workers to use their toilets and handwashing facilities. This agreement should be made in advance and it should be made clear to all that these facilities will only be used by transient construction workers and in small numbers (those working on their own or in pairs).

Some organisations have access to site accommodation and mobile welfare vehicles that can provide all of the requirements in a specific vehicle or unit. Handwashing sinks are fitted with access to hot water or sanitiser and chemical toilets are fitted. Drinking water is supplied separately in containers or bottles. It is important that workers are given sufficient time to keep their welfare vehicles in a clean state.

Figure 1. A towable or lorry-mounted welfare unit for six workers, with toilet, handwashing facilities, heating and food preparation area



Summary

- ▶ Before setting up site, consider the location and nearby services, businesses and residents. How will they be affected?
- ▶ Are there any factors that will affect the site, such as contaminated ground or overhead services?
- ▶ Will there be high numbers of vulnerable people, such as schoolchildren, in the area?
- ▶ Will stakeholder engagement be needed?
- ▶ What signage and information will be needed to inform the public of hazards, risks and ways to report grievances?
- ▶ Is there sufficient space to establish proper traffic management?
- ▶ Where will site vehicles park?
- ▶ How and when will deliveries be made?
- ▶ What site accommodation and welfare facilities are needed?
- ▶ Will the workforce have access to site accommodation and welfare facilities?

See also

- [BN01](#): Underground and overhead services
- [BN04](#): Safe working with mobile plant

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