

Annex IV. Developing temporary disposal sites

Information gathered during preliminary damage assessments should give a good indication of the types and amounts of debris handled. From this information local authorities may be able to determine whether existing recycling facilities and dumpsites/landfills are sufficient for the expected volumes of debris.

If sufficient capacity is not available, local authorities must make other plans including:

- expanding existing recycling, processing and disposal facilities to handle the increased demands;
- hauling waste to intermediate sites and reducing the amounts of debris through recycling;
- identifying a temporary storage area at a landfill or vacant lot for recycling operations; and
- establishing recycling, processing mechanisms / facilities.

General considerations

- Temporary storage sites should be a last resort. Time and money can be saved by taking materials directly to recyclers /processors and paying for transportation and labour only once.
- Nevertheless, sometimes temporary storage sites are still required and can be located in or near the affected area. The best way to select a temporary storage site that incorporates environment, public health and other issues is to conduct a full Rapid Environmental Impact Assessment (REA).
- Consider setting up sites for specific materials that do not threaten public health and safety, e.g. concrete, bricks, metal, asphalt etc.
- Start a public information programme immediately to notify the public and contractors of the site, the materials accepted, and the hours of operation.
- Ensure the site can hold rubble, natural debris like trees, branches and palm leaves as well as conventional waste.

Sites should:

- be sufficient in size with appropriate topography and soil type (if possible, work with national and local environmental agencies to determine this);

- be located away from potable water wells and rivers, lakes, streams and drainage channels. If possible work with national and local environmental agencies to determine appropriate setback distances;
- not be located in a floodplain or wetland or on agricultural land;
- have controls to mitigate storm water runoff, erosion, fires and dust if possible;
- be free from obstructions such as power lines and pipelines;
- have limited access with only certain areas open to the public;
- be located close to the affected area, but far enough away from residences, infrastructure, and businesses that could be affected by site operations during the recovery period;
- be on public lands because approval for this use is generally easier to obtain. However private land may be more convenient and logistically necessary; and
- be appropriate relative to the scale of debris. Large equipment requires large areas for storage. When planning for small scale equipment, more but smaller sites are needed. Conveniently located sites will reduce travel time when transferring debris to processing or management facilities and result in expedited debris clean-up. Communities can also use these sites to distribute reusable or recycled products. As a rule of thumb, 400 000 square metres of land are needed to process one million cubic metre of debris.

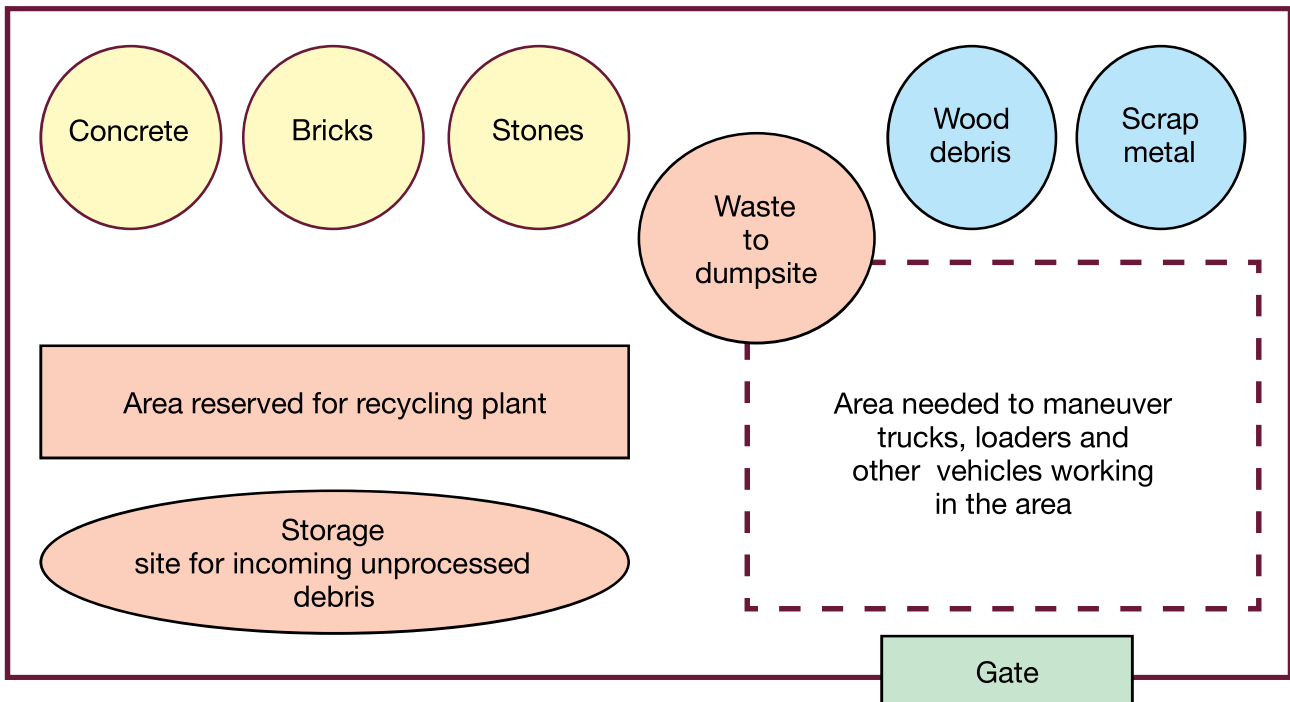
Operational considerations

The condition of the temporary disposal sites should be documented in print and photos prior to use. Depending on the debris to be staged there, it is advisable to assess the soil, groundwater and/or surface water at a proposed staging area prior to receiving debris and to re-establish pre-existing conditions.

The government agencies involved may be responsible for returning these sites to their original condition. Therefore, guidelines could be developed and established for the return of property to the owners.

A typical depot site will include areas for: unloading and storing hauled debris, a mobile or stationary processing

Suggested layout for a temporary disposal site.



plant and storage for recycled material and waste to be transferred to permanent sites.

Incoming loads should be inspected to ensure materials are handled properly and directed properly. Estimate quantities of incoming materials based on type of haul vehicle and capacity.

All recoverable materials should be separated into major categories such as concrete, bricks, stones, metals, green waste, wood debris, white goods etc. Keep materials as free from contamination as possible to increase reuse and recycling potential.

General environmental, safety, and logistical considerations

- Areas to be used to process vegetation debris do not typically require groundwater monitoring, but should be monitored for fires. Areas for mixed rubble, or hazardous wastes may need more extensive monitoring. Consult with the national authorities for recommendations.
- Removal of debris from the site in a timely manner. Biodegradable, mixed, harmful, and hazardous waste should not be stored for extended periods.
- Limit access to ensure that the site is secure. Some types of waste that present higher levels of concern should have additional storage controls and security measures.
- Evaluate traffic logistics on and around the storage site.
- Restrict noise disruptions to acceptable hours.

Security

Consider the following safeguards for hazardous waste bulking sites:

- Cover areas with two layers of plastic sheeting, tarps, or a concrete pad.
- Fence off area with T-posts and orange barricade fencing.
- If possible, surround fenced off-area with absorbent booms and/or sandbags to absorb potential leaks and prevent spills from seeping into the ground.
- Use wooden pallets to raise collection bins off the ground, which helps to determine if there are leaks.
- Provide adequate space for walking/carrying items between pallets.
- Segregate containerized gases, liquids, or solids by material type (e.g. corrosive waste, reactive waste), place each material type in a separate bin or barrel, and label the bin or barrel appropriately.
- Cover collection bins or barrels with plastic liners/lids or cover the entire hazardous waste collection site with a tent to prevent water collecting in bins.
- Place cylinders containing compressed gas upright with cap on and secured in place.
- Provide sufficient fire extinguishers for the site in case fire breaks out. Four fire extinguishers per 1000 square metres are recommended, placed at the corners or in easily accessible locations.