

## Melissa Environmental Working Note - Construction

### Purpose

This Working Note summarizes several key environment-related issues which should be considered in post-Melissa construction work. The Note may be updated as additional issues are identified. The Note supplements any specific building or health regulations-related regulations in Jamaica.

Readers should feel free to raise issues or request information through an email to [environmentoperations@sheltercluster.org](mailto:environmentoperations@sheltercluster.org).

### General Information

These two documents provide useful general information on post disaster construction in Jamaica.

- [Build Back Safer House Repair](#)
- [How to Rebuild and Reinforce a Wooden House](#)

### Assessing Environmental Impacts Construction

- [NEAT+](#) should be used at project design or implementation phases to identify critical site or shelter related issue which could affect construction decisions or activities. NEAT+, which uses drop-down menu questions, can take less than an hour to complete, and generates specific follow-up actions to consider.
- [SMAC](#) should be used to assess the carbon footprint of an initial building design or building-related intervention (e.g., reroofing, repairs, upgrading) and consider alternatives in materials or design which can reduce the overall carbon footprint. SMAC is based on a detailed Bill of Quantity and requires an hour to complete (if instructions are followed).

### Disaster Risk Reduction (DRR)

DRR should be a specific element of all construction work, in line with the [Build Back Safer](#)<sup>1</sup> and Do No Harm policies. For hurricane-related reconstruction this includes:

- Use of capped twisted nails or screws for attaching metal roofing to stringers.
- Use of screw (twisted) nails for trusses, rafters, stringers and purlins.
- Use of hurricane straps or other similar attachments for trusses, rafters, stringers, purlins and to attach trusses or rafters to walls.
- When working with concrete-block buildings, increasing seismic resistance, by adding a ring beam or other wall strengthening option. (Note that Jamaica has a relatively high risk from strong earthquakes.)
- Clearing trees or tree branches from close to buildings.
- Clearing and repairing gutters.
- Installing gutters and water collection tanks, to reduce the impact of rainwater run-off and improve household water supplies.

For more information on building to reduce the risk of damage, see [Construction Handbook - How to rebuild and reinforce your wooden house?](#)

### Reuse and Repurposing

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<sup>1</sup> While the term Build Back Better is often used, evidence suggests that an understanding of what is “better” may differ between aid organizations and those receiving assistance. See <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1468-5973.2008.00529.x>.

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Where possible, debris from the hurricane should be used in repairs or rebuilding. This reduces the need to import wood and other construction materials into Jamaica, reducing costs and carbon footprint.

Consideration should be given to ancillary, case-by-case, use of debris. This can include, for instance,

- Using damaged roof members to reinforce the frame of wooden buildings.
- Repairing or upgrading walls, doors and windows to a level which improves personal security and makes them more efficient during severe weather.
- Construction of outbuildings such as an animal shed.

These actions can include participation of a house owner and family and facilitate recovery at very low costs.

### **Debris and Recycling**

Where possible, hurricane debris should be collected and recycled. Collection and recycling support is available through humanitarian organizations, environment-focused organizations in Jamaica, and via regional solid waste management authorities.

Where large scale debris collection is not underway, property owners should be encouraged to collect and segregate the debris on their property. This will help identify items which can be reused, repurposed or recycled, and can help reduce the risk of the spread of disease (see box).

Formal and informal recycling systems exist in Jamaica. Most informal systems operate at landfill sites. Recyclers purchase materials from pickers who work at landfills. In the case of Recycle Plastics Jamaica (RPJ), individuals also collect bottles where they can be found and then sell to RPJ.

Plastics recyclers include:

- Recycle Plastics Jamaica. They have depots which can receive and process plastic bottles and other containers (#1 PET and #2 HDPE) in Montego Bay and Negril. RPJ can provide bags for the collection of bottles and also can arrange transport to their processing locations. See their [web site](#) for more details. (Note that they pay for plastic collected and collection can be promoted as a livelihoods support effort.)

Metal recyclers include:

- Fearon and Davis Trucking and Recycling. Contact: Lester Fearon. 24, 5 Slipse Rd, Kingston, Phone: (876) 615-3147
- CM Recycling Metal. Contact: Hilroy McFarlane, 383 Spanish Town Road, Kingston, (876)758-3781.

Electronics recyclers include:

### **Debris, Clean-up and Disease**

Jamaica is experiencing an outbreak of [Leptospirosis](#), with mosquito-transmitted [Dengue](#) also a health threat.

Clearing debris and other waste items from areas around housing helps reduce vector breeding sites and the risk of disaster transmission.

Where possible, these clean-up efforts should be linked to the Ministry of Health and Wellness vector control efforts. Specific information on these efforts can be provided by Parish Health and Wellness offices. Public information flyers are also available at this [link](#).

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- Regional Solid Waste Management depots. For more details, see <https://www.nswma.gov.jm/wp-content/uploads/2024/12/E-WasteBrochure.pdf>.
- INET Jamaica, Contact: Kirk Hall. 30 Westminster Ave, Kingston (office), 225 ½ Marcus Garvey Drive, Kingston (depot). 976-371-2583, 876-297-3808, [klylehall@gmail.com](mailto:klylehall@gmail.com).

Additional information on debris management and information on potential recyclers can be found at <https://www.sheltercluster.org/jamaica/documents/working-notes-melissa-debris-and-recycling-rev-2>.

### **Treated Timber**

Treated timber has been pressure treated with chemicals as protection against insects and mold. Treated timber should have a tag attached to each piece of timber indicating the nature of the treatment.

Workers handling treated timber should use appropriate gloves. Direct contact with the timber during handling and construction should be minimized. Appropriate clothes and shoes should be worn during work.

As a general matter of safety, chemically treated timber should not be used where it can come in direct contact with humans. Uses such as roof structures are not likely to lead to human contact. Where treated timber is used for framing walls, it is recommended that an interior facing (wall board, plywood, etc.) be installed to reduce the risk of human contact.

*Pieces of treated timber which have been left over or cut off during construction should not be burned or buried.* They should be collected, placed in a plastic or woven garbage bag and taken to one of the authorized land fill sites for disposal (Retirement, Montego Bay, for the western Parishes and Meyersville for St. Elizabeth).

### **Site-Level Considerations**

Housing and other building construction and repair work should include an assessment of the building site to identify any hazards which could affect the building, as a result of the construction work or from pre-existing conditions. Specific concerns include whether a building could be affected by flooding, landslides, sea surge or subsidence. In these cases, consideration should be given to moving the building to a safer location or, where risk can be reduced to an acceptable level, installing protective measures.

Particularly where work is done on roofs (re-roofing or expanding roofing), attention should be given to ensuring that run-off water flows away from the building and does not pose a problem for the structure or for normal access or create pond (creating a breeding site for mosquitoes). The installation of gutters and water tanks can serve a double purpose of reducing roof run-off directly to the ground and improving water access for the building users.

Consideration should also be given to planting indigenous tree species near buildings to provide shade. Plantings should be placed so as to not pose a threat to a building from falling branches or eventual overtopping. The use of indigenous tree species will improve the chances of these trees surviving future hurricanes and drought conditions as they are naturally adapted to the climate of Jamaica.

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