

## **CHAPTER 6**

### **ENVIRONMENTAL CONTINGENCY PLAN**

#### **6.1 EMERGENCY RESPONSE PLAN**

The main objective of the emergency response plan (ERP) is to minimize the impact of emergency events to effected parties, the public and the environment through effective planning, preparedness and quick response. This ERP covers activities, services and products that may create potential accidents and emergency situations during construction phase such as landslides, fire, flood, spillage, structure collapse and general accidents. The ERP is prepared to present the framework for response actions and communications in the event of an emergency.

The developer shall establish site Emergency Response Team (ERT). The ERT will prepare the appropriate ERP for each situation. All staff is responsible to understand ERP and response procedures and evacuation routes and to follow the instruction of the designed Estate Manager. The emergency plan shall be the responsibility of the Estate Manager who shall also oversee environmental, health and safety matters.

The ERP should be displayed at related area such as site office, workshop, guard station, canteen and workers quarters. The ERT should conduct periodical training for the ERP and ensure emergency response equipment are tested were applicable at least once a year. The ERT also should review and revise the ERP at least once a year particularly after the occurrence of accidents or emergency situation.

## 6.2 EMERGENCY RESPONSE TEAM

An Emergency Response Team (ERT) shall respond to any emergency situations that occurred within the project site. The ERT normally comprises between eight (8) to ten (10) members, each of whom can provide knowledge and experience to the emergency situation at the site. The team needs to be small enough to be efficient and allow each member to make a contribution. The team leader shall coordinate all actions and shall submit relevant reports to the authority this will avoid confusion and duplication of efforts.

For this project, the Estate Manager shall lead the ERT and the members will include representatives from contractors/sub-contractors. Emergency response will be coordinated from the Estate Office. The key members of the ERT and their responsibilities are outlined as in **Table 6.1**.

**Table 6.1:** Key Members of the ERT and Their Responsibilities

No.	Key ERT Members	Responsibilities
1.	Estate Manager	<ul style="list-style-type: none"> <li>• Act as Emergency Coordinator</li> <li>• Ensure awareness about ERP among employees and contractors.</li> <li>• Ensure ERP available for reference.</li> <li>• Coordinate and implement emergency response actions during emergency.</li> <li>• Liaise with relevant authorities/consultants.</li> <li>• Monitor effectiveness of remedial response measures.</li> <li>• Prepare report for managing Director/Coordinator</li> <li>• Ensure Awareness about ERP among employees.</li> </ul>
2.	Assistant Estate Manager	<ul style="list-style-type: none"> <li>• Ensure environmental, health and safety measures are observed at the site at all times.</li> <li>• Inform the Estate Manager immediately upon discovery of an emergency or a potential emergency.</li> <li>• Monitor effectiveness of relevant remedial response measures.</li> </ul>

### 6.3 EMERGENCY RESPONSE PROCEDURE

The Emergency Response Procedure (ERP) shall be closely observed in the event of an emergency. The normal steps in responding to an emergency are as follows:

- Discovery & Identification
- Notification
- Assessment
- Containment
- Treatment/mitigation
- Clean up & Disposal of Residues
- Reporting

➤ ***Discovery & Identification***

In the event of an emergency the most likely personnel to be the first on the scene would be the workers. Upon discovery of an emergency, the staff shall:

- Note clearly the emergency i.e. whether spill or fuel or chemicals, fire and explosion or structural collapse;
- Control situation, if appropriate;
- If unable to control, summon help;
- Warn other staff nearby;
- Initiate notification process;

➤ ***Notification***

Notification of emergency can occur through the telephone or verbally. **The Estate Manager will be the focal point of emergency communication.** He shall be the first to be notified of an emergency; and will in turn contact internal and external personnel as required.

➤ ***Internal Communication***

Notification of emergency incidents involves both internal and external communication. Internal Communication alerts on-site personnel of possible dangers and provides for an orderly stop of operations in the affected area, if necessary. It also signals the emergency response team to respond to the emergency.

**Table 6.2:** Internal Emergency Phone List

No	Name	Location	Contact Number
1.	Liput Raya Sdn Bhd (Project Proponent) Attention: Dato Wei Chuan Beng  Samasuka Sdn Bhd (Project Developer) Attention: Mr Thomas Cheah	Suite 30, 3A Floor, IOI Business Park, 47100 Puchong, Selangor Darul Ehsan	016-503 3152

Upon being notified of an emergency, the Emergency Coordinator shall:

- Assess the situation by gathering as much information as possible;
- Initiate response measures;
- Communication with relevant authorities and EMT Coordinator (head office)

➤ ***Assessment, Containment & Mitigation***

Upon notification, the Emergency Coordinator will proceed to the location of emergency to assess the situation

Based on this assessment, the Emergency Coordinator will decide on the following:

- Can the ERT handle the emergency without external assistance?
- If no, which are the external agencies to be contacted?
- Is partial or complete site evacuation necessary?
- What are the control and mitigation measures to be instituted?

Normally, the following measures may be undertaken:

- Containment of Oil Spillage, Chemicals or Scheduled Waste
- Erection of Barricades
- Utility Shut Down

➤ **Reporting**

Forms of reporting will depend on the seriousness of the emergency. Minor emergencies that are rectified immediately without requiring external assistance usually do not require external reporting. An internal incident report should be prepared and filed for future reference. A more serious event that requires evacuation and external assistance, or affects local communities requires external reporting. The reports, to be prepared by the Emergency Coordinator may cover the following:

- Date, time and location of event/incident
- Nature of incident
- Response measures taken
- Staff involved
- Follow Up required, if any
- Effectiveness of measures

#### 6.4 ORGANISATIONS INVOLVED

The list of outside organizations that should be on the external Emergency Phone List is presented in **Table 6.3**.

**Table 6.3:** External Emergency Phone List

NO	AGENCY	LOCATION	CONTACT NUMBER
EXTERNAL (GOVERNMENT AGENCIES)			
1	Department of Environment (DOE)	Tingkat 4 & 7, Bangunan Seri 30000, Jalan Sultan Idris Shah, 30000 Ipoh, Negeri Perak	05-253 4749
2	Fire & Rescue Services Department (BOMBA)	Jalan Sungkai, 35800 Slim River, Perak	05-452 8444
3	Muallim District Police HQ	Kampung Kurnia, 35800 Slim River, Perak	05-452 8222
4	Slim River Hospital	35800 Slim River, Perak	05-450 8000
5	Department of Occupational, Safety & Health (DOSH)	Tingkat 3, Bangunan Sri Kinta, Jalan Sultan Idris Shah, Perak, 30000 Ipoh	05-242 1925
6	Department of Wildlife and National Parks (DWNP)	Kompleks Pejabat PERHILITAN, Batu 3, Jalan Lintang, 31100, Sungai Siput (U), Perak	05-597 4173

## 6.5 CONTINGENCY PLAN

The Contingency Plans in the EMP will address the following emergencies:

- Fires or Explosion
- Spillage
- Medical Emergency
- Landslide
- Flood
- Wildlife Attack
- General Accident

### 6.5.1 Fire or Explosion

#### ***Introduction***

A fire or explosion can be categorized into:

- Fire confine to construction site only
- Fire spread beyond construction site and affecting public

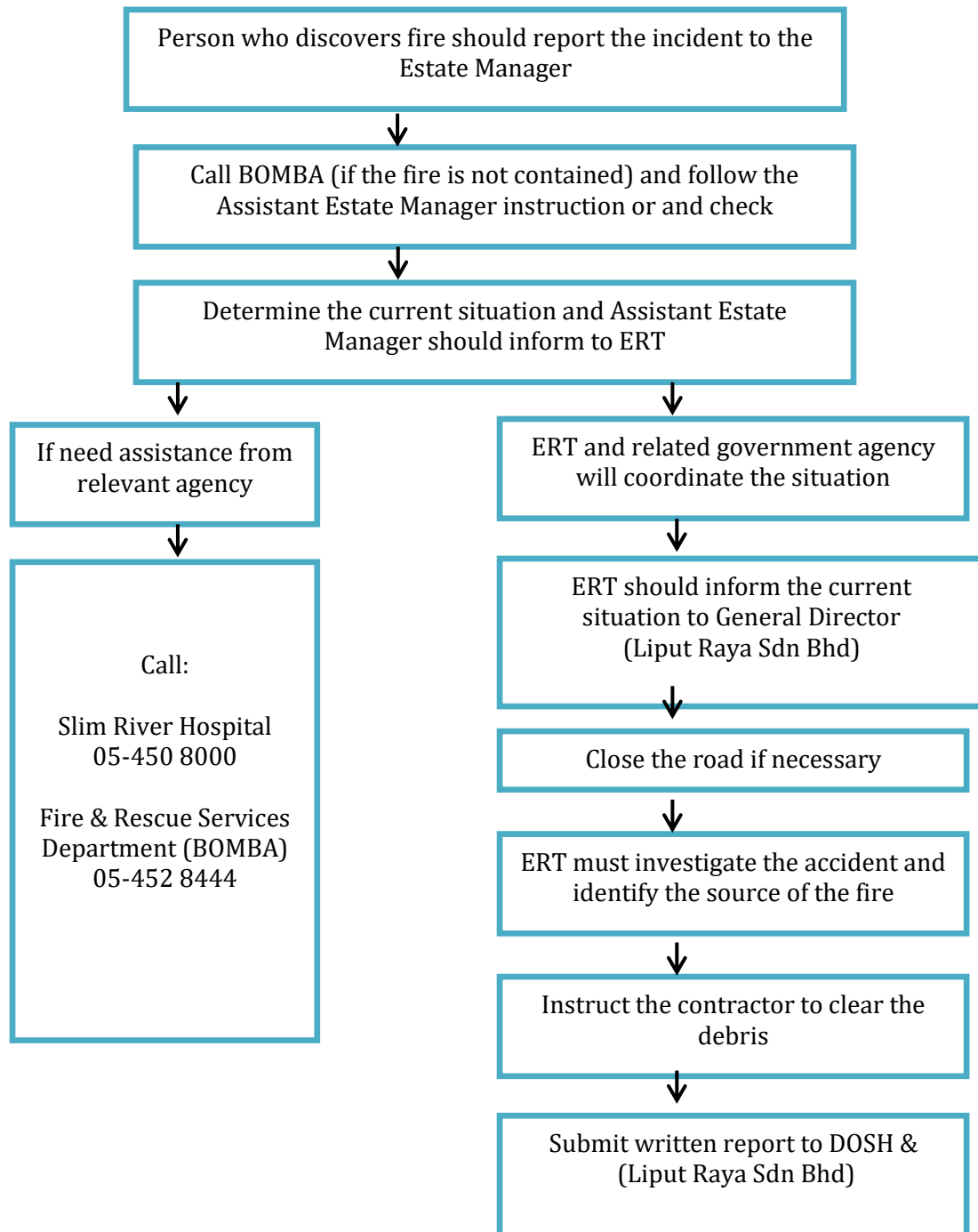
Fire confine to construction site is triggered by an event occurrence causing significant internal damage. The emergency is usually confined to a small area and is unlikely to pose external threat. Fire spread beyond construction site and affecting public is triggered by fires that can cause major internal damage and/with the potential to pose a threat to external area of the site. The areas of concerns are such as the skid tank yards where highly flammable materials are kept.

#### ***Response Strategy***

In case of fire incidents, the most important action is to starve the fire by insulating it from flammable debris or objects. This is the most safest and effective strategy for fire incidents. Besides taking the above priority action, the main duty in terms of a Contingency Response is to fight the fire directly, in order to minimise its effect

#### ***Response Procedure***

**Figure 6.1** shows the flow chart for the overall response in a fire emergency and together with the above information should be displayed in appropriate areas.



**Figure 6.1:** Fire/ Explosion Emergency Response Flow Chart



### 6.5.2 Spillage

#### *Introduction*

This is an emergency involving spillage or leakages of chemical compounds that can impose danger to life and property as well as cause environmental damage spillage are unintentional and uncontrollable release of material into the environment. Significant spillage, leakage or overflow may also result in fire or explosion and initiate other type of emergency. The two main risk of spillage are fire and environment pollution such as soil and water. The high-risk areas include the skid tank yards, the maintenance yards and other areas where chemical compound may be stored.

The spillage can be divided into 2 categories:

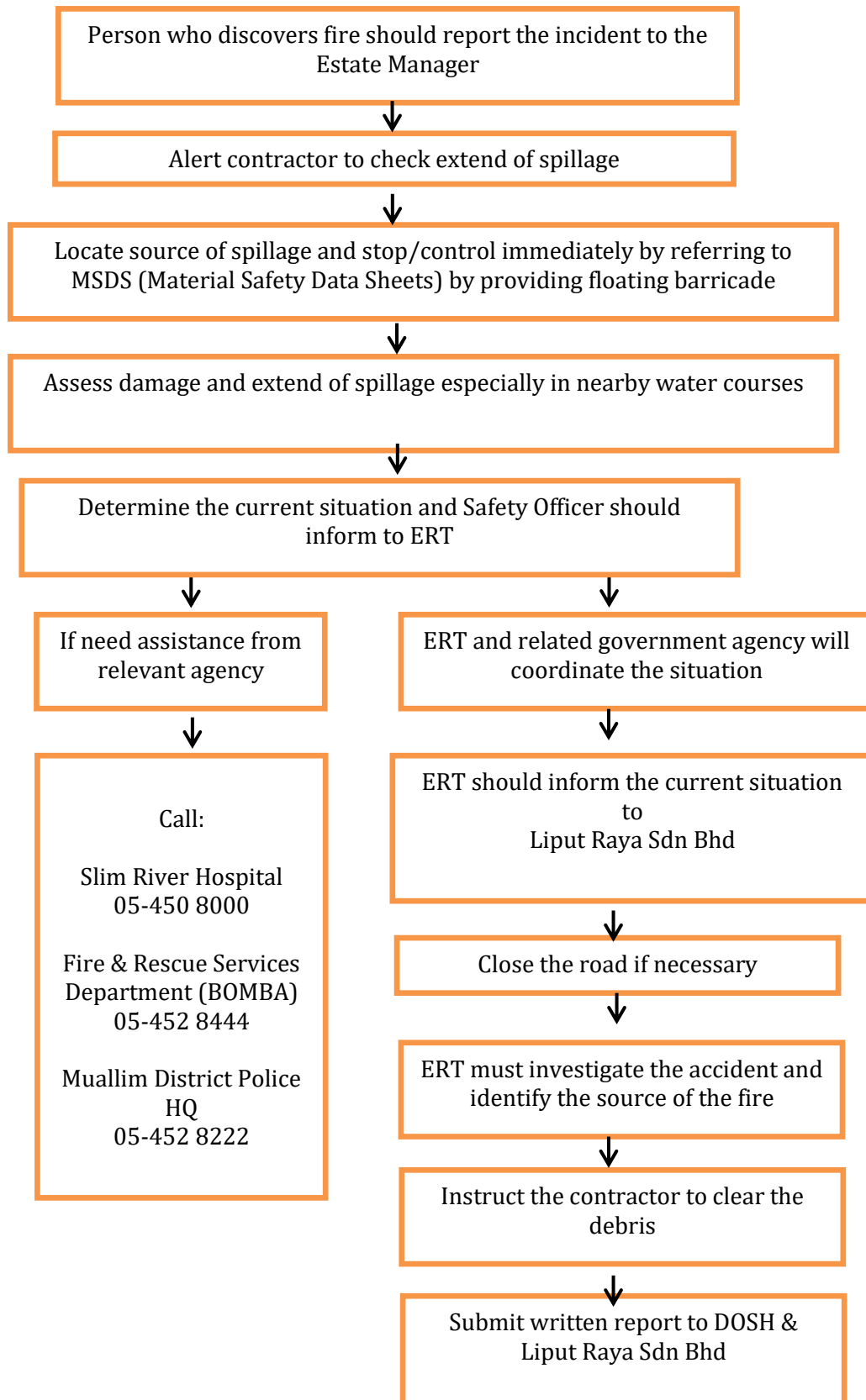
- Spillage confine to construction site only
- Spillage spread beyond construction site and affecting public

#### *Response Strategy*

In case of spillage, the most important action is to contain the spillage and prevent it from spreading where it may cause other types of predicaments such as fires or explosion to occur. Immediate response action must be taken in order to contain the threat whilst taking careful means to avoid igniting other crisis. It is therefore essential for those personnel be trained and thoroughly familiarized with handling spillage emergencies. Furthermore, it is also essential that ignition sources are extinguished, including preventing vehicles from entering any high-risk areas.

#### *Response Procedure*

**Figure 6.2** shows the flow chart for the overall response to a spill emergency and together with the above information should be displayed in appropriate areas



**Figure 6.2:** Fire/ Explosion Emergency Response Flow Chart

### **6.5.3 Medical Emergency**

#### ***Introduction***

Medical emergencies are related to the occurrence of severe injury to one or more individuals, and where urgent medical attention is required. The envisaged emergencies include head injuries, burns or other major injuries. These can be caused by accidents during construction related activities

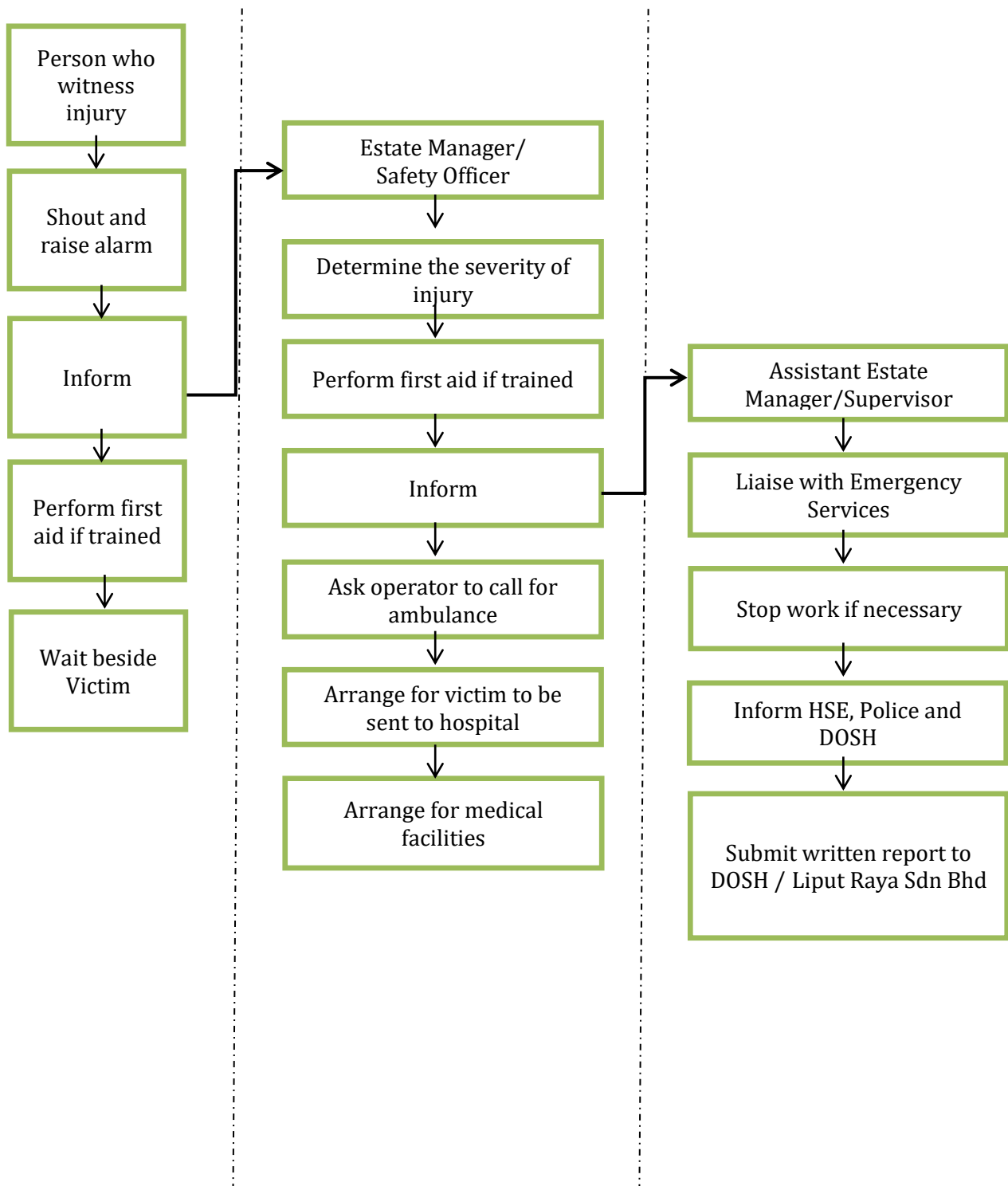
#### ***Response Strategy***

In a medical emergency situation, prioritising the patient wellbeing is most crucial. The main concern is identifying the slightest change in patient conditions and finding the right course of action to take. The longer a patient is left without proper treatment the faster the patient condition deteriorates. Alternatively premature movement before stabilisation of the patient may also cause deterioration in patient condition. The balance of the risk depends upon:

- The nature and severity of the injury
- The present condition of the patient
- The availability of local medical treatment
- The remoteness of appropriate specialised facilities

#### ***Response Procedure***

**Figure 6.3** shows the flow chart for the overall response to a medical emergency and together with the above information should be displayed in appropriate areas.



**Figure 6.3:** Medical Emergency Response Flow Chart

#### **6.5.4 Landslide**

##### ***Introduction***

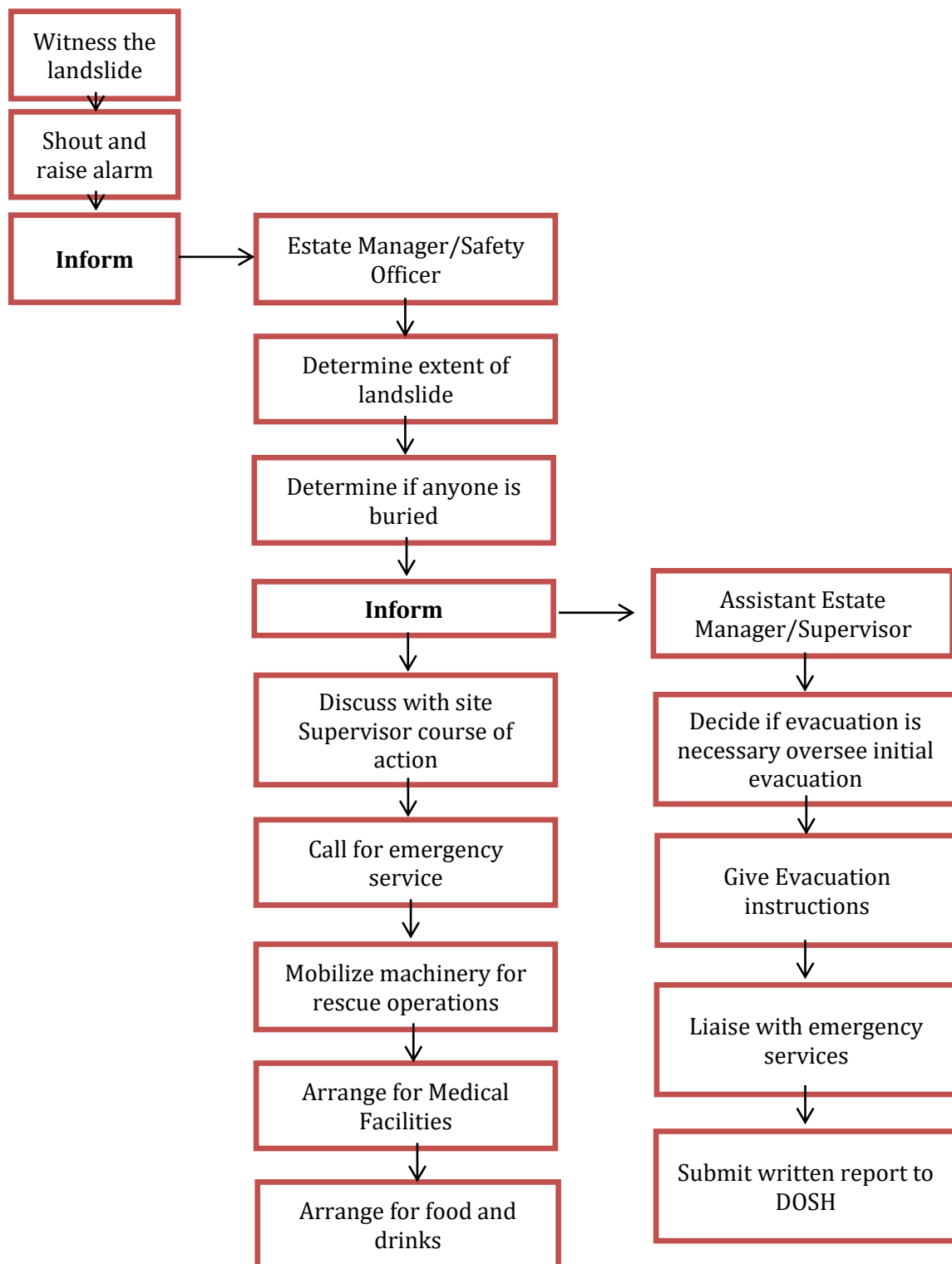
Landslide can be categorized into a minor or major emergency. Minor incident is triggered by an event occurrence causing significant internal damage. The emergency is usually confined to a small area such as blockage of an access. While a major landslide can result in a serious loss of life and property. Areas of concern are exposed slopes after long and heavy storms.

##### ***Response Strategy***

The important action is to assess the magnitude of the landslide. If the landslide is confined to a local area, then rescue must proceed immediately if there are people buried in the landslide. If there is a possibility of a large scale landslide happening, then the entire area in danger must be evacuated.

##### ***Response Procedure***

**Figure 6.4** shows the flow chart for the overall response to a landslide emergency and together with the above information should be displayed in appropriate areas.



**Figure 6.4:** Landslide Emergency Response Flow Chart

### **6.5.5 Flood**

#### ***Introduction***

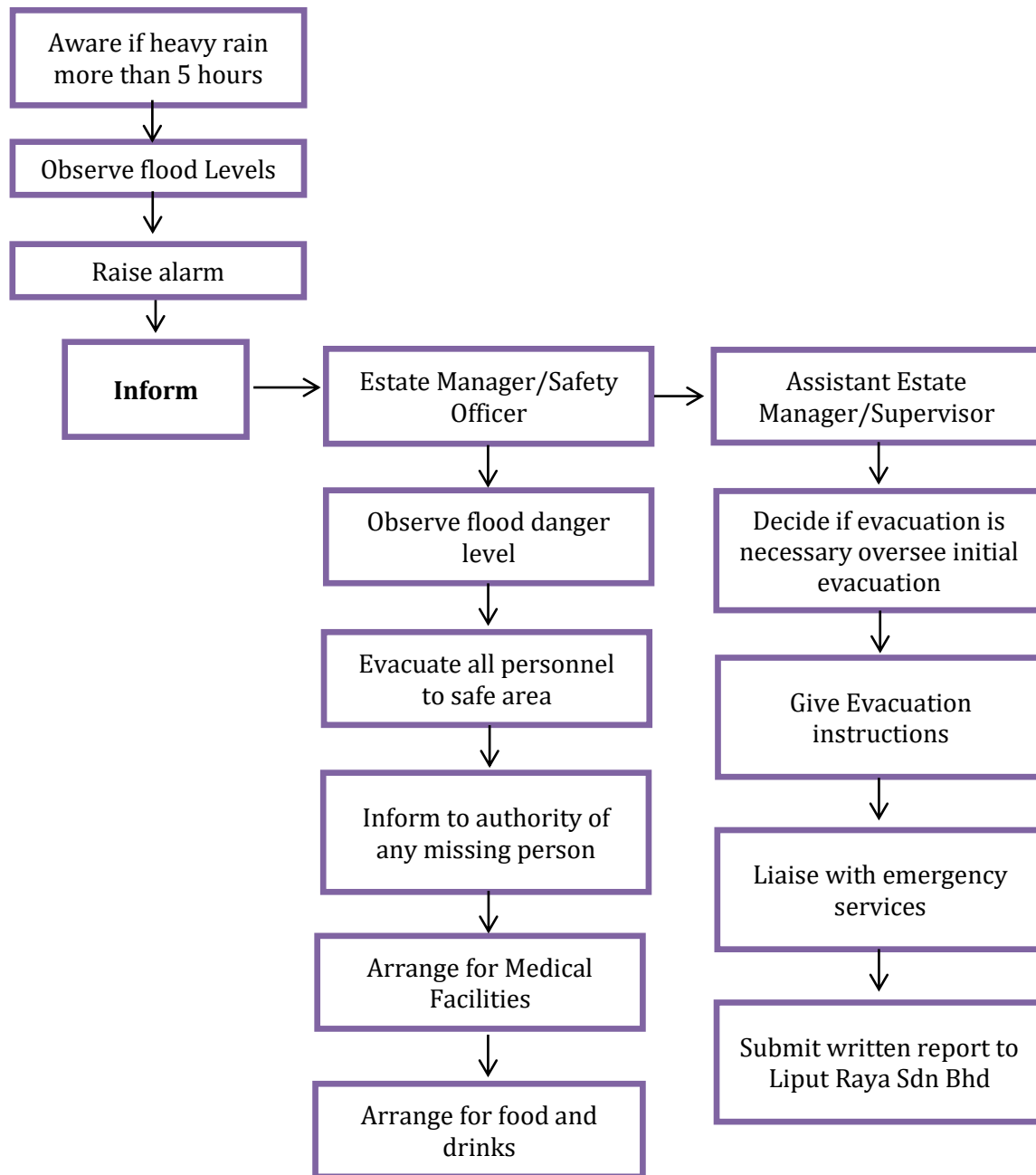
Normally flood events occur from November to January. Therefore mitigation measures shall be carried out to minimize flood damages to people living close to the project site. The emergency is usually confined to a small area such as blockage of an access, while a major flood event can result in a serious loss of life and/or properties.

#### ***Response Strategy***

Heavy rainfall for a long duration of more than 5 hours may trigger flash or regional flood in the low lying areas along the project site. Always refer to Jabatan Pengairan dan Saliran for flood warnings. In the event of a major flood, flood response plan shall be prepared by the ERP team for flood evacuation programme as well as the area that will be the common evacuation centre.

#### ***Response Procedure***

**Figure 6.5** shows the flow chart for the overall response to a flood emergency and together with the above information shall be displayed in appropriate areas.



**Figure 6.5:** Flood Emergency Response Plan Chart



### 6.5.6 Wildlife Attack

#### *Introduction*

A wildlife attack can be categorized into minor or major emergency wildlife encroachment. Minor emergency wildlife encroachment is an encroachment of non-dangerous animal such as wild boar, monkey and deer. Other animal encroachments such as tiger or elephant are categorized under major emergency for wildlife encroachment. Potential hazardous areas are found along the wildlife corridor area or near jungle areas.

#### *Response Strategy*

In any emergency event or an attack by wildlife animal the response procedure are as follows:

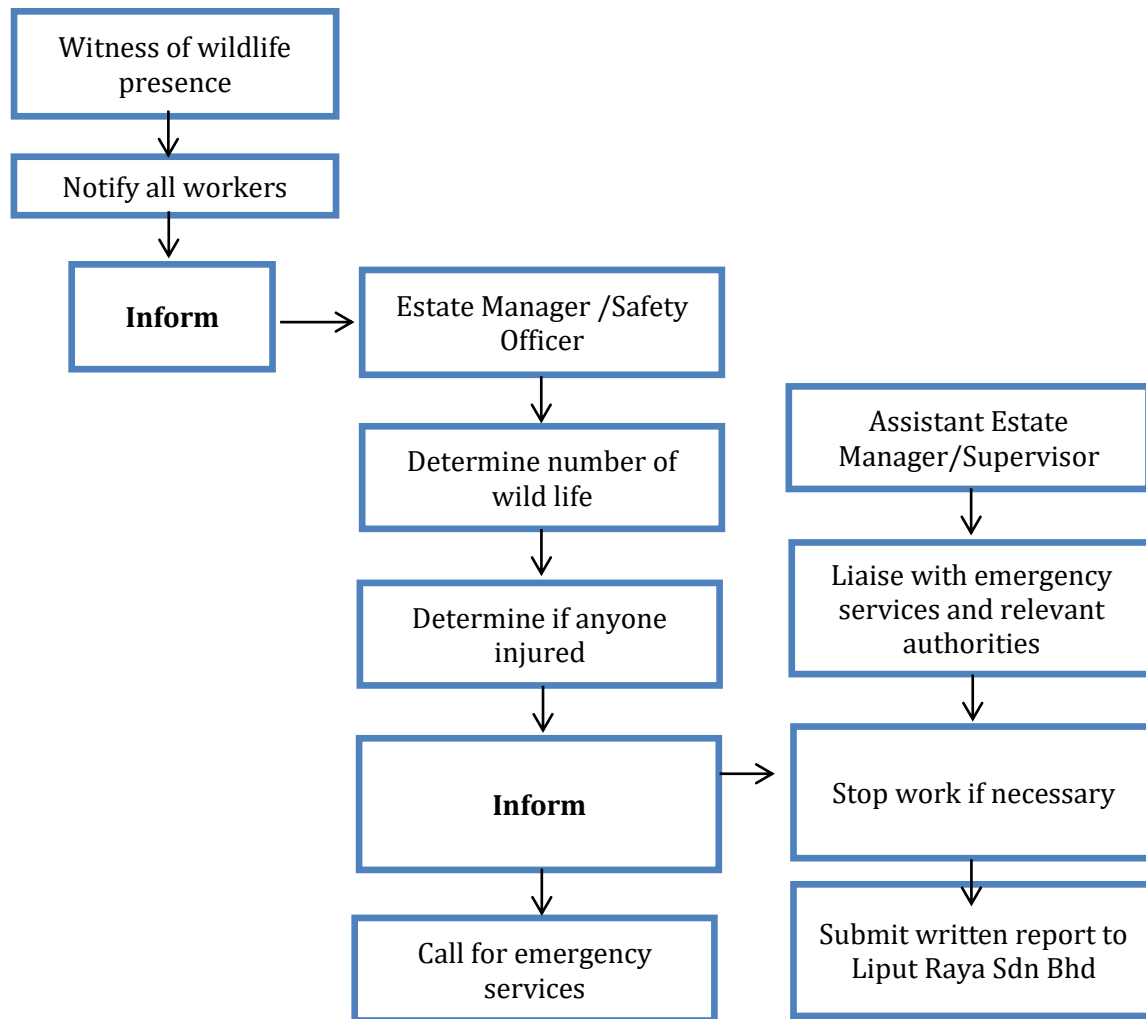
#### *Response Procedure*

**Figure 6.6** shows the flow chart for the overall response to a wildlife encroachment and together with the above information should be displayed in appropriate areas.

#### *Wildlife Attack Contingency Information*

In the presence of wildlife, personnel shall provide the following information:

- Telephone number of the relevant agencies i.e.: PERHILITAN, *Jabatan Pertahanan Awam* and Hospital. Contact number as tabulated in **Table 6.3**.
- The location and proper first aid kits
- List of personnel trained in first aid



**Figure 6.6:** Wildlife Attack Emergency Response Flow Chart

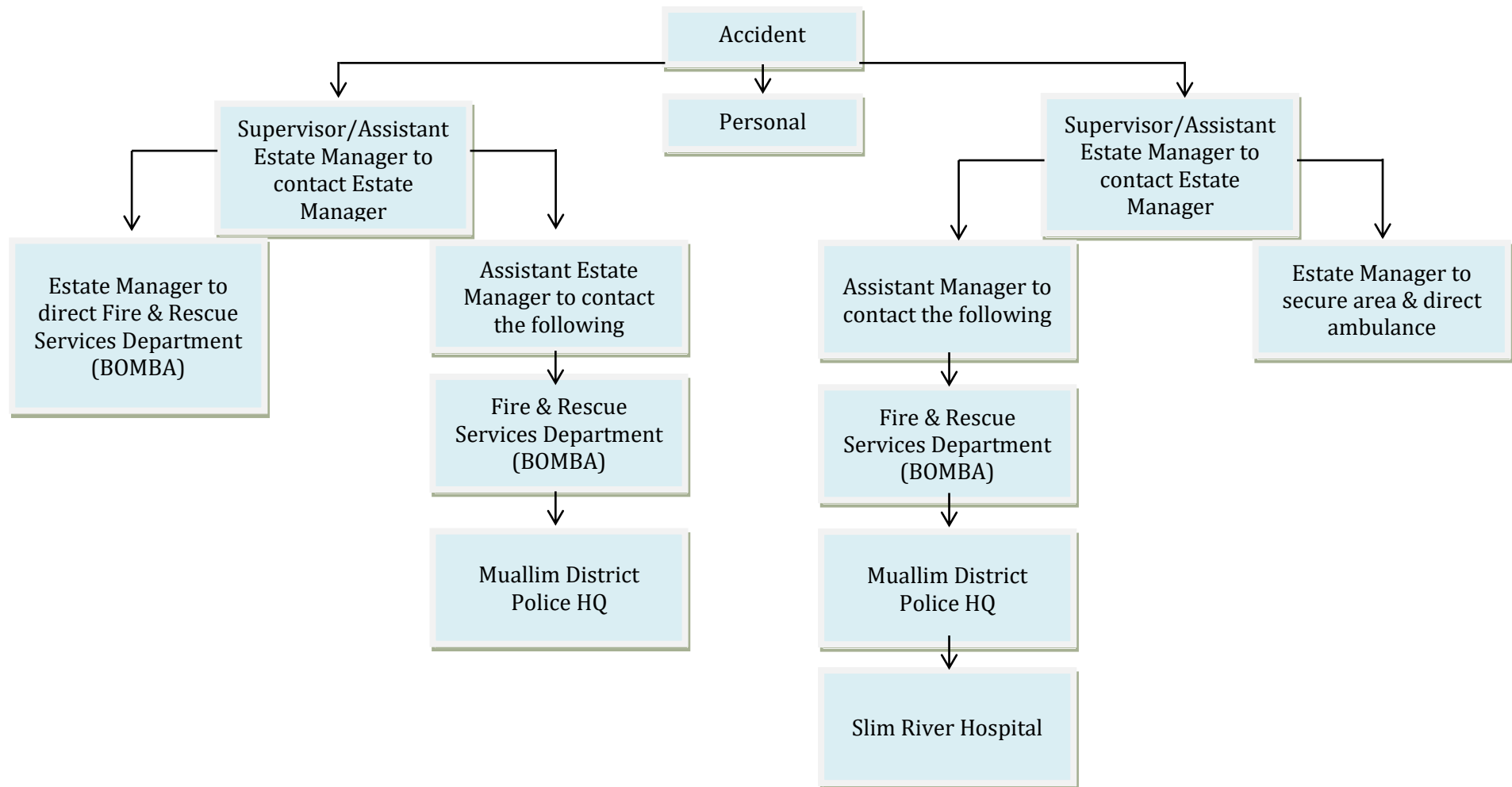
### 6.5.7 General Accident

An accident should be regarded as major when it has resulted in a fatal serious injury.

Should any accident occur:

- a) Assess the situation and shout for assistance
- b) Call Estate Manager immediately – advice the exact location, nature of injuries (if any) and request other emergency services as required.
- c) Unless trained, **DO NOT ATTEMPT** to give medical assistance/first aid assistance to injured person (if any)
- d) Evacuate the area safely
- e) Assistant Estate Manager shall report to Plantation Manager and other relevant authorities about the accident and the number of people injured.
- f) Write report and keep it for future references for a specific time frame

Flowchart of emergency response to general accidents is shown in **Figure 6.7**



**Figure 6.7:** Emergency Responses to general accidents