

Flood Emergency Warning Plan – Response and Evacuation

Development of Seniors Living and Aged Care facilities 24 Coronation Road, Congarinni North, NSW

Project Reference: 122896

Document No: 122896-MIE-Flood Emergency Warning Plan

Date of Issue: 17 February 2021

Revision: B

Prepared For: Congarinni North Pty Ltd

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1. Introduction

Meinhardt have been engaged to update the original Flood Emergency Warning Plan previously prepared for "Hamptons property Services". This report is a based on the current requirements for a Flood Emergency Warning Plan (FEWP) for the proposed Seniors Living Development located at 24 Coronation Road, Congarinni North NSW.

1.1 Report Objectives

The FEWP has been prepared to supplement the planning proposal prepared by 'Congarini North Pty Ltd', that is, to give consideration to:

- Whether the development is compatible with the flood hazard of the land;
- The impact of the development on flood behaviour;
- · Management measures to mitigate adverse flood impacts; and
- The need for emergency care and on-site evacuation in the event of flooding due to the nature of the development as a seniors living facility.

To address the flood conditions affecting the site, flood protection controls including compatible building components, responsive planning/space allocation and a Flood Emergency Warning Plan (FEWP) will be incorporated for the development.

The following objectives informed the preparation of the FEWP:

- To ensure safety of residents, staff and visitors with the secondary concern for the protection of assets:
- To provide information of flood warning to those persons affected;
- To have a process in place to relocate people from areas of risk from flooding to higher ground on-site; and
- A plan for the recovery after the event.

The FEWP addresses the following issues:

- Relocation of residents to higher ground within the site where above floor flooding is predicted to occur:
- Preparation to enable operations and non-flood affected residents to remain on-site;
- Evacuation of residents when and if directed by State Emergency Service (SES) Local Controller;
- Means of transport of residents; and
- The medical condition and ambulant levels of residents.

Refer Appendix B for FEWP.

1.2 Background

According to the Hydraulic Modelling Report of the Nambucca River and Warrell Creek prepared by WMA Water dated January 2013, parts of the site are mapped as a 'High' Flood Hazard Category in accordance with the NSW Government Floodplain Development Manual (FDM) 2005. A 'High' hazard category site is defined as presenting possible danger to personal safety; evacuation by vehicles is difficult; able-bodied adults would have difficulty in wading to safety; and potential for significant structural damage to buildings (FDM 2005). The 100-year ARI flood and Probable Maximum Flood (PMF) events encase the site; refer **Appendix A** for a diagram of flood extents. The flood levels obtained from the Hydraulic Modelling Report of the Nambucca River and Warrell Creek by WMA Water dated January 2013 are as follow.

- 100-year ARI Flood Level = RL4.20m AHD; and
- PMF Level = RL10.00m AHD.

Coronation Road in the vicinity of the proposed site access is at a low level (approximately RL2.5m) and is inundated in a range of storm events from the 5-year ARI up to the 100-year ARI event. It is proposed to raise and widen the formation of Coronation Road at the intersection to a minimum of RL4.2m to provide a flood free access between development and the Joffre street Taylors Arm bridge. A copy of the proposed intersection and Coronation roadworks can be found in the traffic report. Unfortunately, Joffre Street between the Taylors Arm Bridge and Tilly Willy Creek Bridge is lower than the 100-year flood level and nominally RL3.5m. Consequently, this section of Joffre Street is inundated in events greater than the 20-year ARI event and the site will become cut off from Macksville until this portion of the road is raised above the 100-year ARI event. There is no alternative road access to the site and the site will be isolated during extreme flood events.

The developable site area above the 100-year ARI flood level plus freeboard is in the order of 22 hectares whilst the flood free land above the PMF is in the order of 16 hectares.



The sites' habitable floor areas will be set at 500mm freeboard above the 100-year ARI flood level (i.e. RL4.70m AHD) in accordance with Council's Development Control Plan. The PMF level (RL10.00 AHD) will be considered in this Plan in accordance with the *NSW Government Floodplain Development Manual 2005*. We note that all building pad levels are greater that than the PMF of RL 10 please refer to Sketches **SK74715 & SK7416** in **Appendix C**.

1.3 Evacuation Strategy

Due to the nature of the site being proposed to be developed as a seniors living development, it is believed the risk associated with off-site evacuation is considered higher than the risk residents will be exposed to if they are to remain isolated on flood free land (extract from FMA Conference 2011 Tamworth NSW). The distance to the nearest evacuation Centre located at Macksville High School (Boundary Street, Macksville) is approximately 1.8km. The transportation of residents over this distance poses significant risks, particularly with the less mobile residents, than if the residents were to remain on site. It should be noted that access to the Macksville High School is via bridge over Taylor Arm which will be cut off during the during regular flood events. Furthermore, the site will contain appropriate facilities to accommodate people who require high care or treatment whereas an evacuation Centre will lack these facilities.

The evacuation strategy is to therefore keep residents within their homes until the SES Local Controller or the Local Emergency Controller (LECON) deem it appropriate for residents to evacuate to higher ground within the site.

The following points were considered in the development of the evacuation strategy:

- The development will contain higher levels of care on-site (nursing home) for residents with illnesses or limited mobility than if they were transferred to an evacuation Centre where limited or no care would be available;
- The Aged care facilities will be located above the PMF level on the site with a FFL of RL23.0
- All habitable areas and facilities of the development will be located above the 100-year ARI flood plus freeboard. Facilities required for residents with a higher level of care will be located above the PMF level;
- The development will contain emergency supplies including diesel power generators in the event
 of extended isolation. The SES have advised that the 'period of isolation' can range from a few
 hours to several days depending on the storm event. The extent of supplies that would be
 required includes food, water, and medical supplies. Medical supplies are always to be
 maintained on site. Food and water can be sourced upon receipt of a forecasted flood event from
 the Bureau of Meteorology; and
- The site will accommodate a helipad to cater for medical emergencies in the event that residents require relocation to a hospital. Based on the current layout the helipad is located directly to the west of the aged care facility.
- It can also be note that all lot levels for the entire site are above the PMF level of RL 10.0



2. Actions To Be Taken

2.1 Preparedness

The following strategies will be required for the successful implementation of the FEWP presented in Appendix B:

1) Education / Training:

- Education and training of staff on flood awareness and plan implementation is imperative for successful operations. Training of staff will be undertaken by the Village Manager;
- The Village Manager will assume the role of Flood Evacuation Officer (FEO) for the site as part of the Plan. The Village Manager will be a SES volunteer and will have undertaken a training course with the Local Emergency Controller (LECON); and
- The registered nurse on duty will be a Shift Flood Coordinator.

2) Activation:

On receiving or becoming aware of a SES flood weather warning for the area, the Village Manager or Shift Flood Coordinator will trigger the site flood procedures outlined in the FEWP presented in Appendix B.

The activation of evacuation to higher ground will be on instruction from the SES Local Controller or the Local Emergency Controller (LECON).

3) Roles and Responsibilities:

SES Local Controller – is responsible for directing the activities of the SES units operating within the Council area and coordinating the actions of supporting agencies including:

- Maintain Headquarters from which to control SES flood response operations and coordinate the actions of supporting agencies;
- Coordinate a public education program to ensure that the residents of flood prone areas are aware of the flood threat;
- Activate this flood plan and commence operations;
- Define and monitor people and/or communities at risk of flooding;
- Collect, collate and interpret flood intelligence and disseminate it to the SES and supporting agencies;
- Direct the conduct of flood rescue operations;
- Direct and arrange, in conjunction with Nambucca Shire Council, resources for temporary mitigation operations such as sandbagging;
- Direct the evacuation of people and/or communities if required;
- Coordinate the provision of emergency food and medical supplies to flood bound people and/or communities; and
- Provide, in conjunction with Nambucca Shire Council, an information service in relation to river and creek heights, flood behaviour, road conditions and closures, advice on temporary mitigation measures and the confirmation of evacuation warnings.

LECON – responsibilities include:

- Monitor flood response operations;
- Coordinate support to the SES Local Controller if requested to do so;
- As required by the SES Local Controller, evacuate persons at threat of inundation;
- Control Emergency Operations; and
- Issue the "all clear" when Emergency Operations have been completed.

FEO – responsibilities include:

- Carrying out a final check to ensure that everyone has evacuated the buildings on-site;
- Ensure all flood prone buildings are secured and any stray residents directed to the evacuation zone; and
- Coordinate Evacuation procedures such as roll call at the on-site evacuation Centre.

Shift / Site Flood Coordinator - responsibilities include:

- Maintaining close communication with the local SES Headquarters and be vigilant in observing media weather reports;
- Keeping the site FEO up to date as to weather predictions;
- Immediately inform the FEO who will inform all staff on duty of the potential to relocate to higher ground; and
- Once a warning is received to relocate initiate protocols to the emergency procedures plan to ensure the safe and timely relocation of residents to higher ground on-site.



3. Warning of Impending Flood

The following strategies and actions for the provision of flood information and warnings are adopted from the Nambucca Shire Local Flood Plan (Feb 2013).

3.1 Strategy

The NSW SES Nambucca Shire Local Headquarters provides advice to the NSW SES Clarence Nambucca Region Headquarters on current and expected impacts of flooding in the Nambucca Shire Council LGA. The NSW SES Clarence Nambucca Region Headquarters issues NSW SES Flood Bulletins, NSW SES Livestock and Equipment Warnings, Evacuation Warnings and Evacuation Orders to media outlets and agencies on behalf of all NSW SES units in the Region.

3.2 Actions

The NSW SES Nambucca Shire Local Controller will ensure that the NSW SES Clarence Nambucca Region Incident Controller is regularly briefed on the progress of operations.

NSW SES Nambucca Shire Local Headquarters operations staff will be briefed regularly so that they can provide information in response to inquiries received in person or by other means such as phone or fax.

Bureau of Meteorology Severe Thunderstorm Warning. These are issued direct to the media by the Bureau when severe thunderstorms are expected to produce dangerous or damaging conditions, including flash flooding. Severe thunderstorms are usually smaller in scale than events covered by Flood Watches and Severe Weather Warnings. The radio and television outlets utilised in the Nambucca Shire Council area for the delivery of evacuation warnings and evacuation orders include:

- ABC Local Radio
- 2CS-FM (106.3),
- Star FM (105.5 & 105.1),
- 2MC-FM (106.7)
- Triple J (91.5 & 96.3)
- Major free to air stations ABC,PRIME-7,WIN-9, and TEN,

Bureau of Meteorology Severe Weather Warnings for Flash Flooding. These are issued direct to the media by the Bureau and provide a warning of the possibility for flash flooding as a result of intense rainfall. These warnings are issued when severe weather is expected to affect land based communities with 6 to 24 hours. Severe Weather Warnings may also include other conditions such as Damaging Surf, Dangerous Surf or tides, or Damaging Winds.

Bureau of Meteorology Flood Watches. Flood Watches are issued by the Bureau to advise people of the potential for flooding in a catchment area based on predicted or actual rainfall. Flood Watches will be included in NSW SES Flood Bulletins issued by the NSW SES Clarence Nambucca Region Headquarters.

Bureau of Meteorology Flood Warnings. The NSW SES Clarence Nambucca Region Headquarters will send a copy of Bureau Flood Warnings to the NSW SES Nambucca Shire Unit. On receipt the NSW SES Local Incident Controller will provide the NSW SES Clarence Nambucca Region Headquarters with information on the estimated impacts of flooding at the predicted heights for inclusion in NSW SES Region Flood Bulletins.

NSW SES Local Flood Advices. The NSW SES Local Incident Controller may issue Local Flood Advices for locations not covered by Bureau Flood Warnings. They may be provided verbally in response to phone inquiries but will normally be incorporated into NSW SES Region Flood Bulletins.

NSW SES Flood Bulletins. The NSW SES Clarence Nambucca Region Headquarters will regularly issue NSW SES Flood Bulletins which describe information on the estimated impacts of flooding at the predicted levels (using information from Bureau Flood Warnings and NSW SES Local Flood Advices) to NSW SES units, media outlets and agencies on behalf of all NSW SES units in the Region. When operations relating to coastal erosion/inundation are being undertaken, NSW SES Region Bulletins will contain information and advice about property damage mitigation measures and evacuation in affected areas.

NSW SES Evacuation Warnings and Evacuation Orders. These are usually issued to the media by the NSW SES Region Incident Controller on behalf of the NSW SES Local Incident Controller.

Standard Emergency Warning Signal (SEWS). This signal may be played over radio and television stations to alert communities to Evacuation Warnings and/or Evacuation Orders. Approval to use the signal is associated with who approves the warning/order message.



The Public Information and Inquiry Centre (PIIC) (operated by the NSW Police Force) will answer calls from the public regarding registered evacuees.

The Disaster Welfare Assistance line is a central support and contact point for disaster affected people inquiring about welfare services advice and assistance.

The RMS Transport Information Line will provide advice to callers on the status of roads. The RMS website also lists road closure information.

Nambucca Shire Council will provide information on the status of roads.

Collation and dissemination of road information is actioned as follows:

- a) As part of Situation Reports, the NSW SES Nambucca Shire Local Incident Controller provides road status reports for main roads in the council area to the NSW SES Clarence Nambucca Region Headquarters.
- b) The NSW SES Clarence Nambucca Region Headquarters distributes information on main roads to NSW SES units.



4. Preparation for Evacuation

As outlined in Section 1.3 it has been determined that the safest and most appropriate response for residents is to remain on-site in the event of flooding. In the event of flooding, those residents located within the flood affected areas of the site will be required to move to higher ground. The process for evacuation is described below.

If the Shift Flood Coordinator receives information from the SES of a potential evacuation, they should immediately inform the Site Flood Evacuation Officer who will inform all staff on duty of the potential need to evacuate to higher ground on-site.

4.1 Relocation of Residents to Higher Ground

Once a warning is received to evacuate from the SES or media, the Site Flood Coordinator and Shift Controller will initiate the protocols of the on-site Emergency Flood Evacuation Plan to ensure the safe and timely relocation of flood affected residents to higher ground.

Buildings on-site that will cater for relocated residents include the Communal Centre, and the Wellness Centre. The Aged Care facilities are located well above the PMF flood level and will not be impacted during flood events. The buildings used for the relocation of residents will require beds / basic medical supplies, food and water, toilets. This area must be sustainable for the period of isolation noted in Section 1.3.

4.2 Recovery

The potential to relocate back to the flood free areas of the site will be undertaken following confirmation with the Site Flood Coordinator or the SES Local Controller.

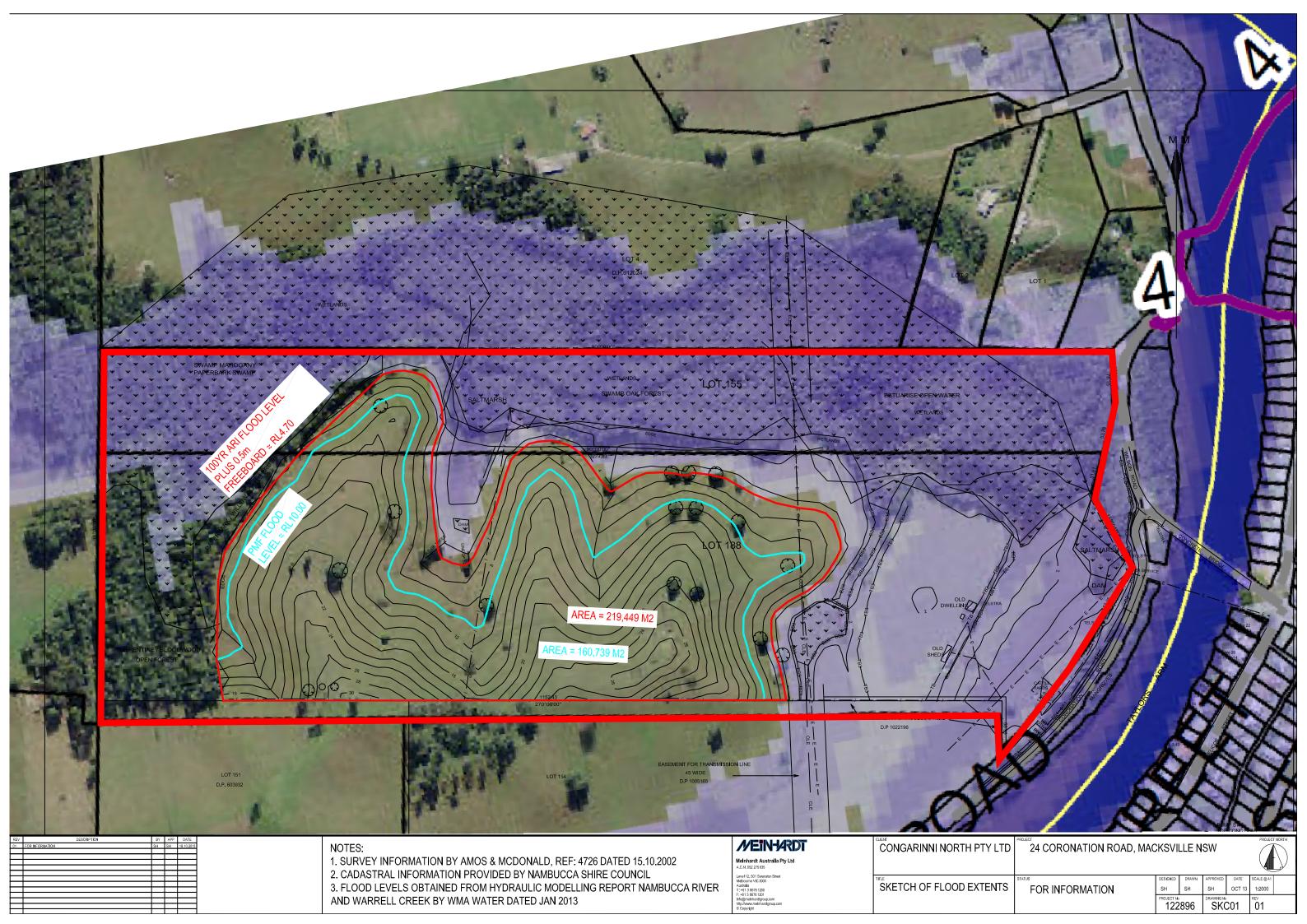
The Site Flood Controller will undertake a comprehensive visual survey of the facility to assess potential hazards such as:

- The structural safety of the buildings;
- The safety of electrical and gas supplies;
- Potential for slips and falls associated with mud and water; and
- · Presence of debris or arachnids that may have taken shelter in buildings.

Once cleaning and disinfectant of flood affected sections of the facility using appropriate safety apparel have been completed, the Site Flood Coordinator will give the "All Clear" to return.



5. Appendix A – Sketch of the Sites' Flood Extents





6. Appendix B – Flood Evacuation Warning Plan

6.1 Purpose

The plan covers the measures to be taken when the decision to prepare to evacuate or evacuation is given as a result of the flooding of the Taylors Arm Tributary at the Seniors Living Development at 24 Coronation Road, Congarinni North NSW.

The plan covers the operation of staff and residents of the facility in times of flood and outlines the protocols so that emergency response measures can be implemented, so the potential for flood damage and loss of life can be minimised.

6.2 Outcome

The outcome of the Plan includes:

- Ensuring the safety of staff, residents and visitors;
- Ensuring that staff, residents and visitors are not left stranded during flood; and
- Ensuring the potential damage to property and the development are minimised.

6.3 Preparedness

- Staff and residents are to be made aware of this Flood Evacuation Warning Plan (FEWP);
- A permanent senior member of staff is to be designated as the Site Flood Coordinator and is entrusted with the responsibilities of directing flood monitoring activities and distribution of evacuation warnings as and when required;
- The Registered Nurse on each shift is designated as the Shift Flood Coordinator, and is entrusted with the responsibilities of the Site Flood Coordinator in their absence. The team leader for each shift is designated as follows:
 - Monday to Friday AM Village Manager
 - Monday to Friday PM Registered Nurse in charge
 - o Saturday and Sunday Registered Nurse in charge
 - Night Shift Registered Nurse in charge
- All new staff members are to be introduced as part of their induction by Facility Managers and made aware of the protocols to be employed during the flood; and
- An Emergency Procedures Plan / Diagram with instructions to be visibly posted on all flood affected dwellings and buildings on the site. These plans are to be prepared in accordance with AS3745: 2010 – Planning for Emergencies in Facilities.

6.4 Alert

The Site or Shift Flood Coordinator will be vigilant in times of severe thunderstorm, weather warnings and continual rain. Staff are encouraged to check for warnings from local radio, television networks or the SES Local Controller –

- For flood help SES 132 500
- Local SES Controller all calls to be placed via Wollongong SES 132 500

The Site or Shift Flood Coordinator is to communicate an Alert to:

- Nursing facility and catering staff so as to enable advance ordering of supplies and to ensure
 adequate consumables reserves are available. This includes
 additional utilisation of medical supplies and kitchen cook-chill equipment to minimise reliance on
 deliveries should a flood eventuate.
- The Village Manager and Shift Flood Coordinator so as to be ready for the potential relocation of residents to buildings on higher ground in the case of an Extreme flood event eventuating.

6.5 Extreme Flood Warning

On receipt of an Extreme Flood Warning (i.e. early warning of flood events approaching, or in excess of, the 1% AEP event), the Site or Shift Flood Coordinator is to:

- a) Close access to buildings that may be inundated;
- b) Relocate any vehicles to above the PMF level; and
- c) Initiate flood protection controls;



6.6 Evacuation Warning

On receipt of a 'warning' alarm, the Site or Shift Flood Coordinator is to:

- a) Initiate flood protection controls; and
- b) Prepare residents for movement to buildings on higher ground within the site.

Evacuation warnings will be prepared by the SES Local Controller and passed onto the SES Division Headquarters.

The system of distributing evacuation warnings is as follows:

- a) The warning is passed to appropriate media outlets;
- b) Teams of Emergency Services will door knock under threat to deliver evacuation warnings; and
- c) Warnings may be distributed by telephone contact.

The SES have not been able to advise on the duration of inundation, but the site will cater for extended isolation in excess of 7 days or as may be necessary. There will be several hours from the time a warning is received to the time that the flood approaches. This will allow ample time for residents to relocate to higher ground in a safe and orderly fashion.

6.7 Activation

This Plan is to be activated by the Site or Shift Flood Controller on receiving or becoming aware of an SES flood weather warning for the area.

6.8 Action by Shift Flood Controller of Warning from SES

If out of normal hours the Shift Flood Controller would immediately advise the Site Flood Controller.

6.9 Preparation for Evacuation

- 1) All staff on duty to be advised;
- 2) Contact should be made with off duty staff to report to duty where possible;
- 3) Make a list of all staff on duty; and
- 4) Make a list of all residents in the facilities and request visitors to move to higher ground or evacuate prior to road closures.

6.10 Evacuation

Where evacuation is to commence advise Police, Ambulance and SES.

During complete evacuation to higher ground a roll call should be conducted to ensure all residents are accounted for. Evacuation protocol for grouping of residents should be as:

- Group 1 Ambulant, requires direction to safety
- Group 2 Semi Ambulant, requires some assistance
- Group 3 Non Ambulant, requires special assistance for example a wheel chair or is totally dependent and will need to be physically moved by special means
- Group 4 Resistive, will need to be physically moved

Transport residents by the on-site mini bus, staff vehicles or buggy cart in a westerly direction away from Coronation Road and towards the Communal Centre located on the main access road. A staff member should proceed to designated evacuation building to receive residents and record arrival. A record should be kept of each resident transported and by whom, and time transported.

6.11 Recovery

No staff member or resident is to return to flood affected areas of the site until it is declared to do so by the Site Flood Coordinator and/or the SES staff.

The Site Flood Coordinator will undertake a visual audit of flood affected areas of the site to ensure its suitability for occupation following the flood.

Where necessary, cleaning and disinfection of areas may be necessary as a result of flood inundation. This will be carried out before occupancy.

6.12 Relocation

Once premises are suitable for occupancy, residents may return to those evacuated areas.



7. Appendix C – Earthworks Plan

