Appendix B.12 Flood Emergency Management Plan

Stantec

Scenic Rim Agricultural Industrial Precinct – Flood Emergency Management Plan

Prepared for Kalfresh Pty Ltd

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Reference should be made to the '*State Planning Policy (1/03) – Mitigating Adverse Impacts of Flood, Bushfire and Landslide*' (SPP 1/03) to understand its purpose, application and use in ensuring that the natural hazards of flood, bushfire and landslide are adequately considered when making decisions about the development.

The following terms have been taken from the SPP 1/03:

***Annual Exceedance Probability (AEP)*:** the likelihood of occurrence of a flood of a given size or larger in any one year; usually expressed as a percentage. For example, if a peak flood discharge of 500 cubic metres per second has an AEP of 5%, it means that there is a 5% risk (i.e., probability of 0.05 or a likelihood of 1 in 20) of a peak flood discharge of 500m^3/s or larger occurring in any one year. The AEP of a flood event gives no indication of when a flood of that size will occur next.

CAFMP: Community Awareness Flood Management Plan.

Climate change: a change of climate that is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods.

Defined flood event (DFE): the flood event adopted by a local government for the management of development in a particular locality. The DFE is generally not the full extent of flood-prone land.

Flood: the temporary inundation of land by expanses of water that overtop the natural or artificial banks of a watercourse i.e., a stream, creek, river, estuary, lake or dam.

Floodplain: an area of land adjacent to a creek, river, estuary, lake, dam or artificial channel, which is subject to inundation by the Probable Maximum Flood (PMF).

***Floodway*:** those areas of the floodplain where a significant discharge of water occurs during the DFE. Floodways are often aligned with naturally defined channels and even if partially blocked would cause a significant redistribution of flood flow, or a significant increase in flood levels. What constitutes a floodway may vary from one floodplain or part of a floodplain management study or flood study where their importance in the overall behaviour of flood flows can be properly taken into account. Where a study to determine floodways using local criteria has not been undertaken, a floodway (for the purpose of the State Planning Policy) shall be an area where, at the DFE, the floodwater has:

A velocity – depth product of 0.3 square metres per second or greater; or

A velocity of 1 metre per second or greater.

Local governments may adopt an alternative definition of floodway in their planning scheme to provide a more accurate reflection of the flood characteristics in a particular locality.

Mitigation: any measure intended to reduce the severity of a natural hazard.

Natural disaster: a natural hazard event that severely disrupts the fabric of a community and requires the intervention of the various levels of government to return the community to normality.

Natural hazard: a naturally occurring situation or condition with the potential for loss or harm to the community, property or environment. The natural hazards addressed in the State Planning Policy are flood, bushfire and landslide.

Natural hazard management area: an area that has been defined for the management of a natural hazard (flood, bushfire or landslide), but may not reflect the full extent of the area that may be affected by the hazard (e.g., land above the 1% AEP floodline may flood during a larger flood event).

Nature of the natural hazard: the important characteristics of the hazard including the type of hazard and its severity.

Probable maximum flood (PMF): the largest flood that could reasonably occur at a particular location, resulting from the probable maximum precipitation. The PMF defines the extent of flood-prone land. Generally, it is not physically or financially possible to provide general protection against this event.

Risk: a concept used to describe the likelihood of harmful consequences arising from the interaction of hazards, community and the environment.

Unacceptable risk: a situation where people or property are exposed to a predictable hazard event that may result in serious injury, loss of life, failure of community infrastructure, or property damage that would make a dwelling unfit for habitation.

1 Introduction

The Kalfresh Development is comprised of an industrial agricultural precinct located on 6206 Cunningham Highway, Kalbar (Site Location available in Appendix A). This Flood Emergency Management Plan (FEMP) has been prepared by Stantec to provide suitable direction for management, staff and visitors of the Kalfresh Development during flood events. This manual is based on the following documents:

- *Integrated Water Management Plan,* dated 21 September 2023

This manual provides a summary of management measures developed to minimise risk to people and property during flood events. The management measures are designed to operate independently.

This manual document the procedures and strategies that will be employed in response to flood event (to support safety of staff and visitors of the Kalfresh Development prior to during and following flood events.

2 Flood Response Assessment

As outlined in Section 7 of the associated Integrated Water Management Plan (2023) completed by Stantec, proposed development site and the access route has a flood risk to be addressed. To ensure there is an effective flood response in the event of a regional Warrill Creek flood event, an assessment to determine the requirement for evacuation has been undertaken. Supporting safety of people and property during floods, requires the utilisation of many different risk management strategies and effective planning. Whilst physical evacuation is always the preferred method of managing direct flood risk, this is not always the most appropriate method. Outlined below is a short summary of the flood risk at the Kalfresh site, and an assessment of how users of the facility could prepare and/or evacuate in response to warning of a significant flood event.

2.1 Identification of risks

Taking into consideration the use of the site as an industrial agricultural precinct and the flood hazard outcomes outlined in the Integrated Water Management Plan, the safest option is to evacuate all persons from the site, if possible, prior to a flood event as this will minimise the risk of users of the Kalfresh location being isolated on site. The procedures to minimise risk, with regard to flood response, are therefore as follows (in preferential order):

a) **If flooding is forecast that is likely to isolate the site, evacuate the site of all non-essential personnel. Restrictions to be placed on transport movements to the site.**

b) **If flooding is forecast that will definitely isolate the site, evacuate all persons.**

c) **If unable to evacuate all persons due to flash flooding remain on site.**

d) The proposed site, including all buildings, will be flood immune for events up to Scenic Rim Regional Council's (SRRC) Defined Flood Event (DFE), the 1% AEP Annual Exceedance Probability which has a flood level of 84.4mAHD at the southern boundary dropping to 81.5mAHD at the North boundary.

(refer to Figure C-9 – 1% AEP Flood Depth, in the Integrated Water Management Plan).

If evacuation is required it must occur before flooding occurs, as the trafficable limits for standard sedan type vehicles along the evacuation route will be reached. Evacuation can occur at early stages of flooding if a vehicle with a higher clearance is available, such as a four wheel drive (refer Table 4-1 and Figure J.1 in *CSIRO (2000) 'Floodplain Management in Australia: best practice principles and guidelines - SCARM Report 73'*), however as the event progresses all access will be cut apart from boats. The triggers and corresponding actions have been developed and are documented in more detail in Section 4 of this document.

In addition to flood depths, the velocity of flood waters is another factor that affects the safe evacuation of people during flood events. Table 4-1 shows that DxV of less than 0.3 m^2/s are generally of a low hazard, as long as the depth of water and velocity are also at a low level. Hazard values greater than H4 will be present on access routes during the DFE. The following guidance is provided as an absolute last resort and driving through floodwater is never an advisable activity.

Table 1 Combined Hazard Curves (Table 6.7.4 Australian Rainfall and Runoff 2019)

Hazard Vulnerability Classification	Classification Limit (D and V) (m2/s)	Limiting Still Water Depth (D) (m)	Limiting Velocity (V) (m/s)
H1 Generally safe for vehicles, people and buildings	D*V < 0.3	0.3	2.0
H2 Unsafe for small Vehicles	D*V < 0.6	0.5	2.0
H3 Unsafe for Vehicles children and the elderly	D*V < 0.6	1.2	2.0
H4 Unsafe for Vehicles and People	D*V < 1.0	2.0	2.0
H5 Unsafe for Vehicles and People. All buildings vulnerable to structural damage.	D*V < 4.0	4.0	4.0
H6 Unsafe for Vehicles and People. All building types considered vulnerable to failure	D*V > 4.0	-	-

2.2 Flood Evacuation Assessment

The most effective method for managing an individual's risk to flooding is to physically evacuate from the location following receipt of a notification from a government authority. As previously mentioned, the Kalfresh location itself should have an effective defence up to the DEF level, however at this level the Kalfresh location will be significantly isolated. This means there needs to be significant and careful consideration given to ensuring people and property are safe during flood events.

Outlined below is an assessment of the options for evacuation or sheltering in place during flood events with the preferred options being outlined in Section 4 below.

2.2.1 Evacuation Route

In the case of a significant Warrill Creek flood event, stakeholders and users of the facility need a path of exit to travel from the site to a place of safety. This path or route to safety should be accessible and free from hazards when evacuation is required. The evacuation of the Kalfresh location will need to be undertaken via the road network and will need to occur early into the event. If there is a delay in the evacuation safe access via the proposed route will be severely hampered by floodwaters breaking out across the Warrill Creek floodplain. The trigger for evacuation to take place will be outlined in section 3.2.2 below.

With this in mind, the primary evacuation route from the site is via the Cunningham Highway North of the site for flood events below the 10yr ARI.

It is worthwhile noting that the proposed evacuation route (contained in Appendix B) is the most efficient and fastest route to safety. The evacuation route to the north of the facility is the preferred option as this road has the higher level of flood immunity. The secondary evacuation routes is also marked on Figure 3 and should only be used in the event of failure of primary evacuation route.

The primary evacuation route (refer Figure 3) is documented herein via the following turn-by-turn guidance:

1. Exit the Kalfresh Facility onto Cunningham Highway travelling either north (towards Ipswich) or south (towards Warwick).

2. If heading south earlier enough in the event, access to the Kalbar township is possible via turning east onto the Boonah-Fassifern Road and then north on the Kalbar Connection Road

Employees and visitors at the facility are assumed to be able bodied people capable of:

- driving a car or easily finding their way to a flood evacuation centre; and
- assisting persons who may require assistance in evacuating (car-pooling).

Further details on evacuation centres and supporting arrangements and procedures have been outlined in the Scenic Rim Regional Council's Disaster Preparedness website which is available here:

Disaster Preparedness – Scenic Rim Regional Council

2.2.2 Evacuation Trigger

Monitoring and responding to flooding will be enabled via a series of escalating triggers. A regional flood event will develop over a period of days and in some cases smaller lead up events may be recorded in the weeks and months preceding a large regional flood event. The Bureau of Meteorology (BoM) are responsible for providing forecasts and warnings for rainfall and flooding that may produce significant issues. Table 2 contains an explanation of the products and services that will be issued by the BoM during Severe Weather events and how they should be utilised by the Kalfresh management and staff in the lead up to flood impact.

It is worth noting that these products will be disseminated by the BoM via a variety of methods with the primary methods being via the BoM's website and app. Given the critical nature of these products, it is important that the Kalfresh management and staff subscribe to notifications from the official BoM app and relevant local council notification services to ensure they are aware of these products being issued as soon as possible.

Table 2 Bureau of Meteorology Weather and Flood Products

Product Name	Issuing Criteria	Likely action
Severe Weather Warning*	This product will be issued from several hours to potentially 24 hours ahead of heavy rainfall that could produce flash flooding over a broad area. More information is available here. This product may also be issued for strong winds or abnormally high tides/waves.	The issuance of this product should be treated extremely seriously. It is strongly recommended that the issuance of a Severe Weather Warning for heavy rainfall or winds be the trigger for the automatic closure of the Kalfresh facility.
Severe Thunderstorm Warning*	This product can be issued either to promote a broad area of risk (broad-based) or for a specific storm cell moving through an area (detailed). Severe Thunderstorm Warnings will be issued for a number of criteria including intense rainfall, hail, strong winds and tornadoes. Severe Thunderstorm Warnings will be issued multiple times during storm days to showcase the rapidly changing situation. More information is available here.	The issuance of a broad-based thunderstorm warning should be a trigger for a greater level of monitoring but not necessarily for a closure of the Kalfresh facility. Once a detailed thunderstorm warning is issued for a cell that is likely to impact the facility a a full closure may be required.
Flood Watch	This product is issued when forecast rainfall and current catchment conditions suggests riverine flooding is possible. This product will be issued approximately 1 – 4 days ahead of flood impact. More information on the Bureau's flood forecasting and warning services is available here.	The issuance of a Flood Watch should not be cause for imminent alarm. This product is designed to provide early advice in relation for flooding and allow for early preparation to take place. If the Kalfresh facility receives one of these, it is important to ensure early planning for evacuation is considered. More discussion on potential actions will be discussed in Section 3.1.3 and 4.1.
Flood Warning for the Bremer River and Warrill Creek	The product will be issued whenever a forecast location in the Logan/Albert catchment is expected to exceed the minor flood level. Specific service levels for each forecast location is available in Schedule 2 of the Bureau's Service Level Specification document here.	When the Bureau of Meteorology issue the Bremer and Warrill Flood Warning product, significant river level rises are expected somewhere in the catchment area. More discussion on the specific trigger for the Queensland Harness Centre will be discussed in section 3.13 and 4.1.

* Whilst widespread rainfall is possible when a Severe Weather or Severe Thunderstorm Warning is issued, the issuing criteria for these products is attached to the expected rainfall and does not infer regional flooding. Flood Watches and Flood Warnings should be primary mechanisms for Evacuation procedures to be triggered.

2.3 Shelter-In-Place Assessment

Evacuation (as outlined in Section 3.2) is the recommended first response if a Flood Warning for the Bremer or Warrill catchment is issued as it will be highly likely that the proposed site and surrounding area will be isolated. If limited lead time has been provided for evacuation to take place or a Kalfresh stakeholder did not evacuate in time, the recommended action is to Shelter-In-Place (SIP). To SIP

effectively, a refuge or location safe from the flood hazard needs to be identified and its limitations understood.

As outlined in Section 3.2, the Kalfresh site, including all buildings, will be flood immune for events up to SRRC's DFE, the 1% AEP Annual Exceedance Probability, however this is not sufficient for flood events above the DFE. In order to support site refuge in events larger than the DFE, Kalfresh management should direct people to SIP on the second flood of the office building proposed to be located in Lot 9 (refer to Site Location diagram in Appendix A or a zoomed view in Figure 2 below) if the option of evacuation by road is now longer an option.

Emergency medical, food and water supplies should be collated and located on the site as part of the normal operation of the facility. Due to this location being a working industrial site overall, adequate amenities to provide refuge for staff and visitors with an expected isolation period of no more than 24 hours should be provided at the office building proposed to be located in Lot 9.

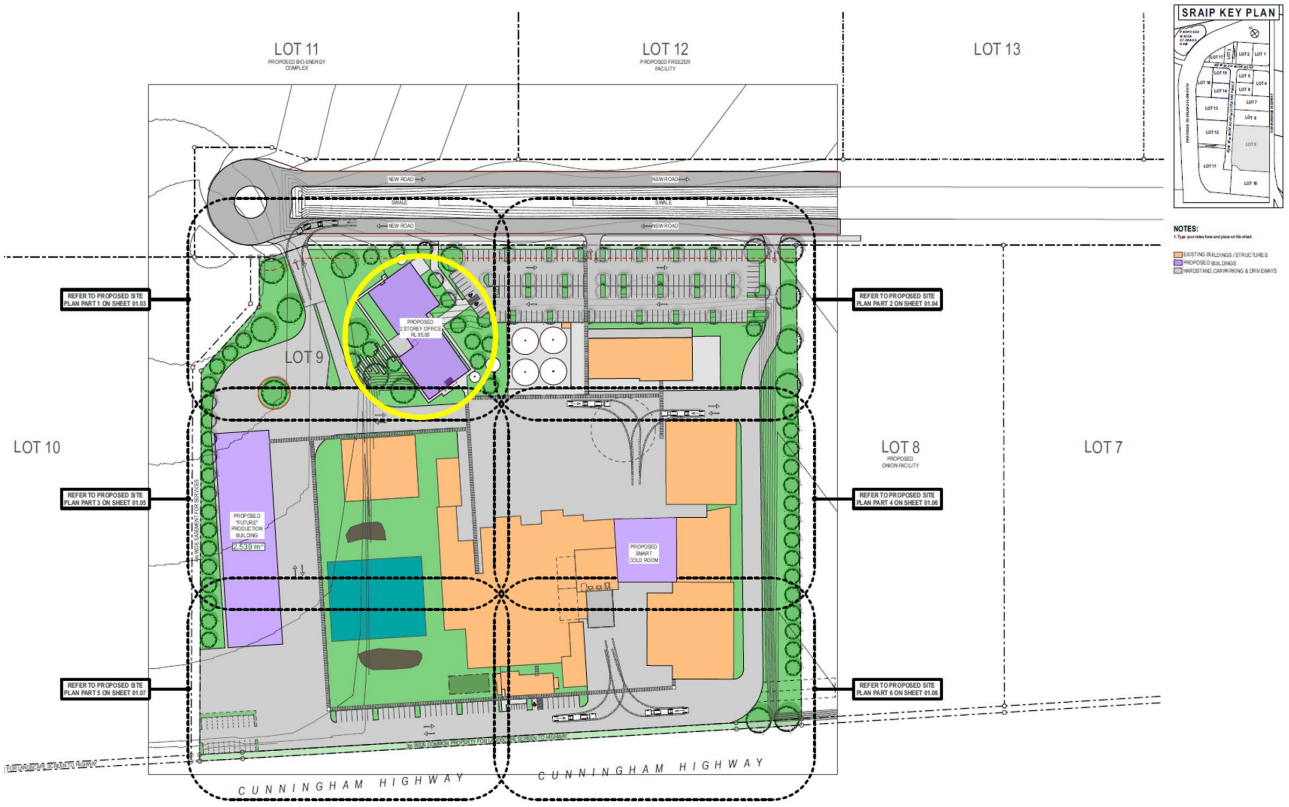


Figure 1 Proposed SIP location in Lot 9

3 Flood Emergency Management Plan

This section outlines the components for the Kalfresh FEMP which will detail the flood management and emergency response measures required to minimise risk from flooding to staff and visitors to the site. This plan aims to promote a culture of situational awareness before an event is recorded direct impacts are experienced at the facility and then provide support and guidance for the safe evacuation or SIP for the facility users during a flood event.

Outlined below is an overview of the Flood Warning System that is in place, the proposed roles and responsibilities of those at the facility during a flood event as well as a proposed training and review regime for the plan to ensure it remains targeted and effective.

3.1 Flood Warning System

The Flood Warning System that is in place across the country works as a collaborative effort by the Federal, State and Local Governments to keep people and property safe. The Kalfresh personnel should look to leverage as much of this system and its outputs as possible.

The current flood warning monitoring network contains nearly 3500 stations across 60 different owners in Queensland alone. The BoM is responsible for collaborating with all of these owners to ensure effective and timely data is available for the Bureau's own forecast services but also to ensure the community and disaster managers have access to the data as well. With respect to the Kalfresh location, there is a well-established network of rainfall and water level monitoring stations along Warrill Creek and the surrounding area as outlined below Figure 2.

Figure 2 Flood Monitoring network in relation to Kalfresh

Data from these stations is made freely available on the Bureau's website here:

Brisbane River Rainfall and River Conditions

With data from the nearest four water level stations available here:

- The Kalbar manual station does not have a live feed of data as this data is collected by a manual observer only during flood events.
- River Height data for Warrill Ck at Kalbar Weir <-- Near-real time water level station downstream of the Kalfresh location
- River Height data for Warrill Ck at Toohills Crossing <-- Near-real time water level station downstream of the Kalfresh location
- River Height data for Reynolds Ck at Moogerah Dam <-- Seqwater managed dam located upstream of Kalfresh location.

Data from these stations is ingested by the BoM as a key input into the delivery of its formal flood watch and warning services. Both of these services should play a critical role in Kalfresh stakeholders preparing and effectively responding to flood events.

Due to the rapid nature of flooding along Warrill Creek it is important that the Kalfresh stakeholders utilise the Flood Watch product as the initial trigger to consider evacuation. This message can be issued days in advance of flood impact and should be used to begin preparing for flooding and/or have an increased level of monitoring or awareness as the predicted weather arrives.

When heavy rainfall is recorded in the catchment area, the Bureau will continue issuing the Flood Watch until which time it becomes clear that predicted water level rises are sufficiently high enough to justify the issuance of a Flood Warning product. These Flood Warnings provide specific reference to a list of locations across the country which have been identified as requiring specific flood warning services due to the nearby impact. Fortuitously, one of these forecast locations is situated just downstream of the Kalfresh location – Kalbar Manual (refer Figure 2 above). Whenever this location is expected to exceed its minor flood level a flood warning will be issued providing an estimated level and timing for exceedance.

As outlined in the BoM's Service Level Specification document (Schedule 2), the BoM has committed to providing 6 hours-notice of water levels expecting to exceed the moderate flood level at the Kalbar manual flood warning station. This means Kalfresh staff can have confidence of receiving at least 6 hours-notice of water levels likely to negatively impact the Kalfresh facility. When this prediction is provided in the BoM's Flood Warning product, all staff and associated stakeholders should ensure the facility is prepared for potential inundation (i.e. flooding greater than the DEF) and staff and stakeholders have begun evacuation via the route outlined above in Section 3.2.

In order to showcase the amount of lead time that could reasonably be expected based on the proposed triggers a table has been provided below (Table 3). It is important to note that these are indicative lead times and every flood event is different. It is possible that both more and less lead time may be provided depending on the situation (antecedent conditions, rainfall intensity etc).

Table 3 Estimated lead time for each trigger

Product Name	Expected Lead time	Product source
Flood Watch	Flood Watches are designed to be issued approximately 1-4 days ahead of flood producing rainfall.	BoM app or council notification
Monitoring Stations	Following the issuance of a Flood Watch, upstream water level stations at Toohills Crossing and Moogerah Dam should be monitored for potential rises in water level or releases. Generally, water levels from these locations will arrive at Kalbar in less than 12 hours.	BoM website
Flood Warning	Flood Warnings are issued when a forecast location is expected to or already has exceeded the minor flood level. This product is designed to give at least 6 hours-notice of the exceedance of the moderate flood level at Kalbar	BoM app or council notification

3.2 Flood Response Procedures

Outlined below are the procedures for effective flood response at Kalfresh. A series of roles and responsibilities will be outlined as well as the specific actions required to be completed depending on the flood response activity being undertaken – evacuation or SIP.

3.2.1 FEMP Roles and Responsibilities

As previously mentioned, the most effective method of managing Kalfresh's flood risk will be to proactively respond as early in a flood event as possible. To ensure this occurs it is important to define a single role inside the staff cohort who will act as the Chief Flood Warden before, during and after flood events. This role should not be directed at a single person or title, rather several members of staff who can operate or step up as the Chief Flood Warden during periods of flooding.

A list of roles and responsibilities are outlined in Table 2 below. Some of these roles (first aid officer) may already exist to manage other workplace risks and if possible, it is encouraged to leverage other emergency arrangements that may already exist.

Table 4 Flood response personnel

Personnel	Location	Responsibilities
Chief Flood Warden	On-site	• Coordinate flood evacuation drills, • Provide and coordinate flood response emergency induction training for all personnel, • Monitor weather at 4pm daily for upcoming extreme rainfall events, • Receive notifications from BoM app or Local Council notification services, • Decide when Evacuation or SIP preparations are required or workplace closure may be required (issuance of a severe weather or severe thunderstorm warning), • Liaison with Emergency Services (including the Scenic Rim LDMG) personnel if they attend site. • Delegate roles and responsibilities as required (staff absence etc) to ensure no single point of failure. • Conduct annual audit, review and update to FEMP. • Handover of FEMP if Kalfresh ownership changes
First Aid Officer	On-site	• Prepare and maintain Flood Emergency Kit (SIP support systems), • Manage Individual Health Care Plans for staff and other QHC stakeholders as required, • Coordinate assistance for staff and Kalfresh stakeholders with mobility difficulties.
Staff, visitors or contractors	On-site	• Maintain calm and direct visitors or contractors through evacuation process, • Follow all directions provided by Chief Flood Warden.

3.2.2 Evacuation Procedures

The following procedures have been developed to support safe and effective evacuation in the event of a Warrill Creek flood event. As outlined in Section 4.1, formal flood watch and warning services should provide adequate lead time for evacuation to take place, but this requires proactive registration to receive these notifications.

In addition to this automated notification service, the Chief Flood Warden need to ensure the Kalfresh site be registered with the Scenic Rim Local Disaster Management Group (LDMG) as an industrial site that **will be** evacuating in times of flood, unless it is unsafe to do so, as advised by the Scenic Rim Local Disaster Coordination Centre (LDCC).

1. Upon automated receipt (via either BoM app notification or SRRC notification) of a Flood Watch being issued, the Chief Flood Warden will notify all staff (using existing and well-established communication pathways) of the expectations and contact the Scenic Rim LDMG if further forecast clarity is required.
2. If rainfall and flood potential is within 24 hours the Chief Flood Warden should look to begin evacuation preparations which should include:
    - Pathways and access to the areas designated for flood refuge are maintained and free from obstructions.
    - Provisions such as food and medical supplies for 24-hour self-sufficiency will be maintained for a potential flood emergency.
3. Continue monitoring the weather situation for further developments on a daily basis, including paying close attention to the notifications received by the Bureau of Meteorology and/or SRRC and the live rainfall and water level observations as outlined above in Section 4.1.
4. If a severe weather warning for heavy rainfall is issued (received by automated notification), look to close the Kalfresh facility as a potential indicator of flooding.
5. If a Flood Warning for Warrill Creek (received by automated notification) is received which specifically mentions the Kalbar forecast location exceeding the minor flood level, ensure the Kalfresh facility is closed immediately and staff evacuate in a safe and timely manner. This step assumes the facility has already been prepared for potential inundation (furniture raised, machinery moved etc) as part of step number 2 outlined above.
6. Once all staff have left the facility and the Chief Flood Warden is satisfied that all reasonable preparations have been made, contact should be made with the SRRC LDMG to notify them that the facility has successfully evacuated.

It is noted that flood events above the 10% AEP will cut local roads in the general vicinity of the Kalfresh facility. Using the combination of the Flood Watch (for early preparation) and the Flood Warning (to trigger the evacuation) will ensure all staff should have adequate lead time to evacuate the facility before local roads are impacted.

3.2.3 Shelter-In-Place SIP Procedures

It is possible in dynamic synoptic situations that warnings or notifications may not be available or may not deliver adequate lead time. In this situation it may be required that staff from the Kalfresh facility SIP until the flood event has passed. It is worth noting that this is absolutely the least preferred option but an important back-up approach.

If staff or stakeholders from the Kalfresh facility identify a developing flood situation which hasn't been forecast by BoM or other authorities and has already cut local roads and therefore removed the possibility for safe evacuation, the Chief Flood Warden should follow the following steps:

1. Produce a list of all staff that will be SIP during the flood event. This list should include any known medical issues to be anonymously recorded and all staff/stakeholders to be moved to a central location.
2. Contact to be made with Emergency Services or the SRRC LDMG so there is awareness of the Kalfresh staff intention to SIP due to the dynamic situation.
3. Ensure all life support facilities (which should be in good condition – refer Section 5 below) are gathered and available to support SIP during the flood event.

4. Remain on site until the flood has passed which should be no more than 24 hours given the location of the Kalfresh facility in the upper part of the Warrill Creek catchment.
5. Should leaving the site during a flood become necessary, or for an emergency entry to the site the following options are available:
    - Dial 000 or the SES for evacuation by boat.
    - Dial 000 for evacuation by helicopter
    - Other contact numbers are available below in Section 4.2.4 and 4.2.5.

3.2.4 Government Agency and Emergency Services Contacts

There are various agencies responsible for the implementation and mobilisation of emergency response plans or disaster management plans.

This plan and the associated support for the site allows the facility to monitor and manage the safety of those onsite in the event of a flood. As secondary support, site management may contact BoM for additional information on flood forecasting.

Below are telephone numbers for the B0M and the LDCC, as well as the telephone numbers of other relevant government agencies and emergency services. The telephone numbers below should be checked for currency at least annually by the delegated Chief Flood Warden.

Table 5 Agency/Service Contact Numbers

Agency/Service	Phone Number
BoM – Recorded Voice Flood Warning System	Main Directory – 1900 955 360 Flood Warnings – 1300 659 219
Bureau of Meteorology (BoM)	1300 659 219
Scenic Rim Regional Council	(07) 5540 5111
Energex	13 19 62 Loss of supply 13 62 62
Emergency Response	000
State Emergency Service	132 500
Police (non-emergency)	131 444
Ambulance (non-emergency)	13 12 33
Fire Brigade (non-emergency)	1300 369 003

3.2.5 Other Contacts or Information Links

The following links may assist with information on regional and local disaster events:

Table 6 Agency/Service Websites

Contact	Link
Scenic Rim Regional Council	https://www.scenicrim.qld.gov.au/
Scenic Rim Regional Council Disaster Hub	http://disasterdashboard.scenicrim.qld.gov.au/
Scenic Rim Regional Council Facebook	https://www.facebook.com/ScenicRimRC
Bureau of Meteorology	www.bom.gov.au
Emergency Management Australia	www.ema.gov.au
Queensland Government	www.emergency.qld.gov.au www.disaster.qld.gov.au/disasters https://qldtraffic.qld.gov.au/ https://www.qld.gov.au/emergency/dealing-disasters/disaster-types/flood
South-East Queensland Lightning Tracker	www.energex.com.au

4 FEMP Training and Review Regime

The success of this FEMP will depend on the effectiveness of the training that underpins it. Ensuring that all parties associated with the proposed development facility understand the risk posed by flooding at this location and subsequently know how to respond effectively and in a timely manner is critical for keeping people and property safe during future flood events.

In addition to this training, it is equally important to ensure that the FEMP is regularly reviewed to ensure all further changes on the floodplain or at the proposed development itself are taken into account. If changes are required, these need to be communicated via updating training for the previously outlined reasons. Outlined below is a proposed Training and FEMP review regime for the Kalfresh facility to utilise to ensure the effectiveness and longevity of the FEMP is maintained.

4.1 FEMP Training

FEMP awareness training is highly recommended to provide to all Kalfresh staff and stakeholders with the relevant context around flood risk at the site, the controls necessary to manage them appropriately and the arrangements for effectively responding to a flood event in the future.

The induction training should be delivered via the Chief Flood Warden or a delegated party who has completed training previously. It is proposed that all staff and selected stakeholders are re-inducted annually to ensure any developments or changes to the roles and responsibilities or response activities be made clear. It is proposed that a combination of an emergency response handbook, PowerPoint presentation and physical tour of the Kalfresh facility be utilised as part of this annual induction training process.

If delivered effectively this method of FEMP awareness training ensures that:

- Kalfresh staff and stakeholders are aware of what to do in case of a flood emergency.
- Evacuation drills are undertaken on a regular basis.
- Plans and procedures are updated based on lessons learned from exercises and actual flood events.

4.2 FEMP Drills

Drills are an effective way to ensure key personnel are well prepared for a flood event. It is a requirement under Australian Standard as 3745:2010 to have written emergency management plans for buildings and workplace with procedures to follow in the event of a flood or emergency occurring.

To ensure compliance with this Australian Standard, FEMP drills should focus on ensuring the following aspects are completed as part of the drills:

- Flood induction training (as outlined in Section 5.1 above)
- Evacuation drills (as outlined in section 5.2.1 and 5.2.2 below)
- Evacuation routes via maps to be given displayed around the site and provided as part of the Flood Induction training package (as outlined in Figure 3)
- Education of flood risks and behaviour (as outlined in the Integrated Water Management Plan)
- Preparation and maintenance of a Flood Safe Emergency Kit is another important step. Given the most likely on-site response will either be physical evacuation or SIP, it is likely that a personal evacuation kit won't be required. Guidance and support for what a business may require to prepare for a flood event is available here: Flood preparation checklist | Business Queensland

4.2.1 Evacuation Drills

Evacuation drills are designed to increase flood awareness and are to be undertaken every twelve months for familiarisation of procedures when responding to a flood event and to also ensure all Kalfresh staff and stakeholders are aware of any changes that might have been made to the FEMP in the previous twelve months. The evacuation drills will be focussed on the roles and responsibilities for Kalfresh staff and stakeholders to follow to prepare and evacuate from an impending regional flood event. The drill will also need to include relevant planning around evacuating stakeholders from the Kalfresh facility who may not be aware of the risks and process that needs to be completed to effectively evacuate.

4.2.2 Shelter in Place Refuge Drills

SIP drills should be undertaken every 12 months to ensure that the life support systems (food and water etc) are in good condition and do not need replacement. The drills should also practice preparing the SIP refuge and on-site evacuation to the refuge so these activities can occur smoothly if required.

4.3 FEMP Audit, Review and Update

The FEMP that has been outlined above is fit for purpose at the time of writing (September 2023) and has leveraged the latest modelling and guidelines to prepare the Kalfresh facility for a future flood event. Triggers to update this FEMP in line with updates include:

- Flood modelling is updated.
- New flood information relevant to the site is provided.
- There are changes to local infrastructure that could impact details in this plan (a local road was upgraded to provide enhanced flood immunity)
- The above information requires a review of safe evacuation routes and SIP requirements.

It is for these reasons that an annual audit of the FEMP be completed and if required updated based on this new information. This annual audit will be the responsibility of the Chief Flood Warden who will arrange for a review of Scenic Rim Regional Council's Local Disaster Management Plan, as well as check with the Scenic Rim Regional Council Local Disaster Management Group (LDMG) to ensure that this sites Development Flood Management Plan is kept current. In particular, the following shall be reviewed to ensure the site meets flood emergency requirements:

Checklist Requirements

a) Pathways and access to the areas designated for flood refuge are maintained and free from obstructions.

b) Provisions such as food and medical supplies for 24-hour self-sufficiency will be maintained for a potential flood emergency.

c) Any key infrastructure that is likely to become dysfunctional due to flood inundation shall be located above the DFE or be designed to exclude floodwater intrusion.

d) People must be advised that the evacuation routes are subject to inundation and are not trafficable for the flood events greater than a 10yr ARI with a normal car and 4WD, therefore their time of departure must be considered carefully.

e) Flood management infrastructure shall ensure protection of people and property during and immediately after a flood event.

f) Communication links shall be provided and maintained within the site to ensure a coordinated response to emergency situations.

g) Chief Flood Warden shall ensure maintenance of the open space/floodway areas necessary to provide passage of flood waters and protection of property.

h) Maintenance or future construction works shall ensure that there are no alterations to adjacent watercourses or flood bypass areas that are not consistent with the recommendations of the approved hydraulic assessment report for the site.

i) The FEMP be a standing discussion item to be discussed as part of regular management meetings to promote awareness of such disaster management measures.

j) The flood warning protocol shall be maintained, and the staff made aware of its intent.

q) The onsite manager is to ensure notification services provided by the BoM and the LDMG in relation to possible Warrill Creek flooding are still operational and will continue providing timely and adequate advice of such reports to all persons on the site.

r) The Chief Flood Warden shall ensure that the FEMP is incorporated within the Company Management Statement or equivalent.

If the annual audit does identify changes required to the FEMP it is important that these changes be discussed and agreed by staff and then these changes will need to update the training material and exercised through evacuation and SIP drills (outlined above).

Appendices

Appendix A: Site Location

Site Location

Property Boundaries
Project:

Legend

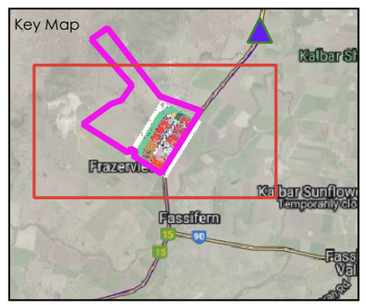
Site_boundary

layour_rev2_modified1
Band 1 (Red)
Band 2 (Green)
Band 3 (Blue)
QLD Globe Imagery

Notes:
1. Map displayed in EPSG:28356

References:
1. Qld Globe

Key Map



100 0 100 200 300 400 m

Scale at A3: 1:10000

Client: - Kalfresh Pty Ltd
Project Code: - 304701259
Drawn By: Zac McCosker, Checked By:
Date: (2023-02-22)

Stantec

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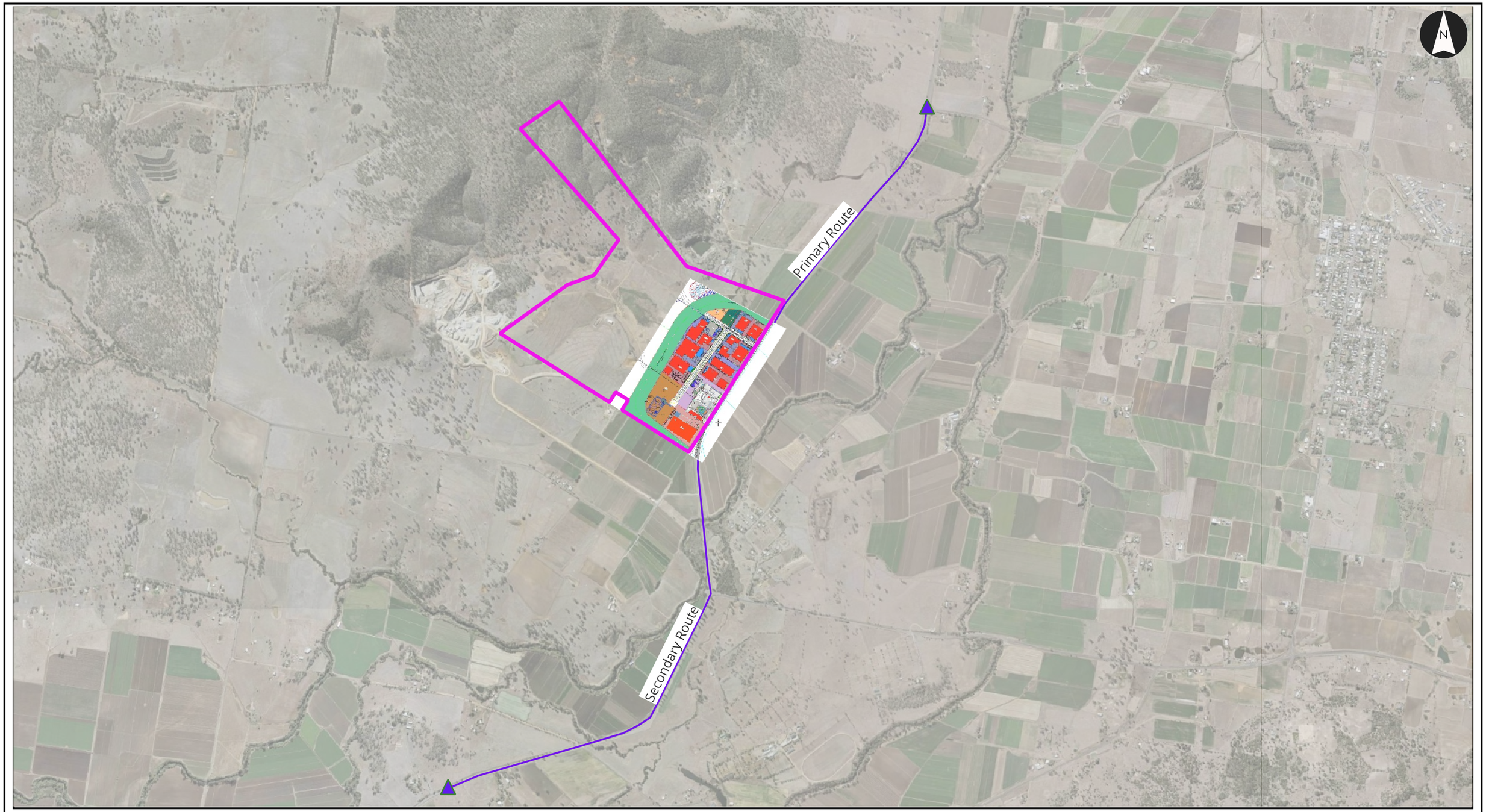
Appendix B: Evacuation Routes



Evacuation Route

Property Boundaries
Project: Kalfresh

Legend

Travel Direction
Site_boundary
layour_rev2_modified1
Band 1 (Red)
Band 2 (Green)
Band 3 (Blue)
Evacuation_Route
QLD Globe Imagery

Notes:
1. Map displayed in EPSG:28356

References:
1. Qld Globe

Key Map

300 0 300 600 900 1,200 m

Scale at A3: 1:25000

Client: - Kalfresh Pty Ltd
Project Code: - 304701259
Drawn By: Hopp, Jenna, Checked By: LH
Date: (2023-09-21)

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Design with community in mind