

# Flood Risk Management Plan

Proposed Change of Use

Part of Lot 11 DP 805091, 29 Chifley St, Smithfield

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## Document Control

Revision	Date	Description	Prepared	Reviewed	Approved
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3	23.03.17	Revised to Council comments	MW	MW	MW

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## Introduction

Sparks & Partners have been engaged by TIC (Mattress Recycling) Pty Ltd to provide civil engineering services to support the proposed change of use Development Application (DA) at part of 29 Chifley St, Smithfield. The engineering services include a review of flood controls associated with the site, and development of measures to address the Councils management requirements.

The purpose of the flood risk assessment is to determine the flood risk associated with the proposed development and to recommend measures to mitigate these risks. The risk assessment has been undertaken with reference to the following documents:

- Fairfield City Councils DCP 2013, Chapter 11 – Flood Risk Management – Amendment No. 9 (FRM 2013);
- New South Wales Government, Floodplain Development Manual, the management of flood liable land, April 2005 (FDM 2005);

## Existing Site

The existing development is located at 29 Chifley St, Smithfield and consists of an industrial warehouse facility that has been divided into individual tenancies. The property itself is rectangular in shape running in a north south direction. It is bounded by Chifley St on the south, 27 Chifley St to the north, 23 Chifley St to the east, and 81-89 Market St to the west. The existing site is occupied by an office building in the south west corner with a warehouse located in the north-east portion of the site, with carparking and hardstand areas located in between. The topography is that the site is relatively flat ranging in level from RL21.620 to 21.999 AHD. A survey of the site is in Appendix A for reference, with an aerial image provided in figure 1 below.

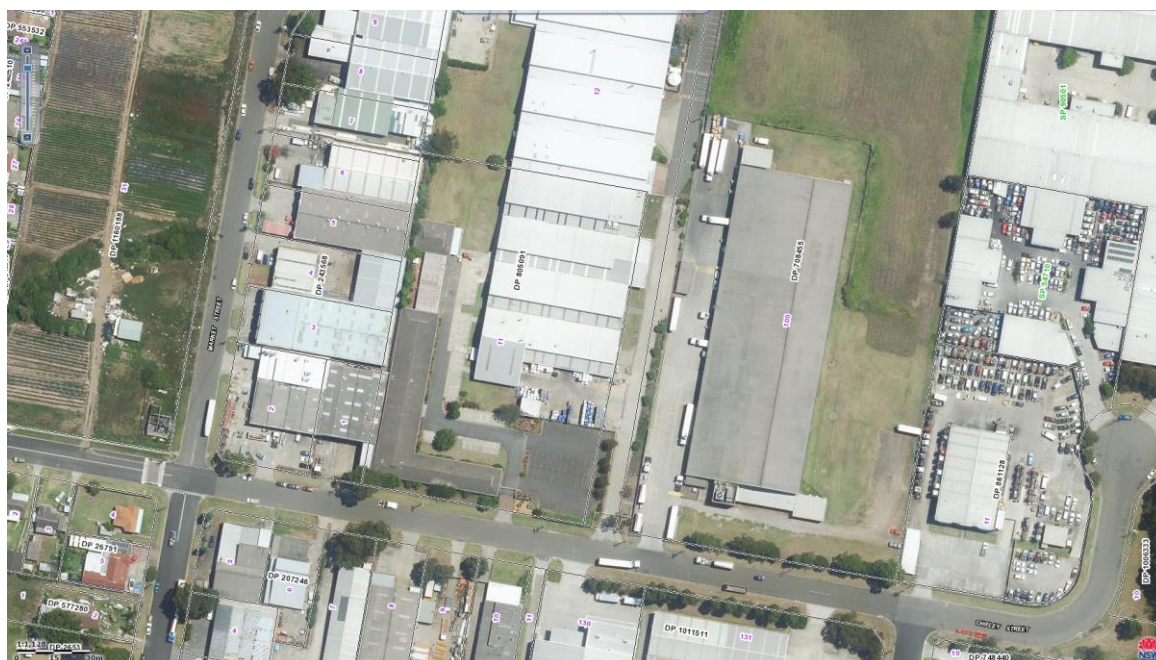


Figure 1 - Site Image (Source: Six Maps)

## Proposed Development

The proposed development consists of a change of use for the warehouse area which is to be leased to TIC Group. The existing office in the south west corner is to remain with the current tenant. This proposed change of use is for a mattress deconstruction facility and associated administration areas.

The proposed development will utilise the existing warehouse and office with no changes to the built form, and only fitout works being proposed.

## Flood Risk Assessment

### *Land Use Category*

With reference to Schedule 2 of the FRM 2013 the land use is classified as Commercial or Industrial and falls under *Concessional Development*. This classification is in accordance with *Schedule 2, Concessional Development, (b), In the case of other development: C. A change of use which does not increase flood risk having regard to property damage and personal safety.*

### *Flood Risk Precinct*

A Section 194 certificate was received from Council which identifies the site being located in the low, risk flood for mainstream flooding and medium risk for local overland flow, a copy of item 7A of the certificate is provided in Appendix B for reference. Reference has also been made to the Prospect Creek – Flood Planning Map, with the site overlaid to demonstrate where the site is located in the flood precinct, refer to figure 2 for reference. A copy of the map is also provided in Appendix C. This shows that the site is located above the 1:100-year flood level but within the extents of the probable maximum flood. Flood Risk Mapping for the 100year ARI for local overland flow has been obtained from Council and is located in Appendix D with the survey overlaid for reference, along with a figure. The mapping shows the site is located within in the medium flood risk precinct.

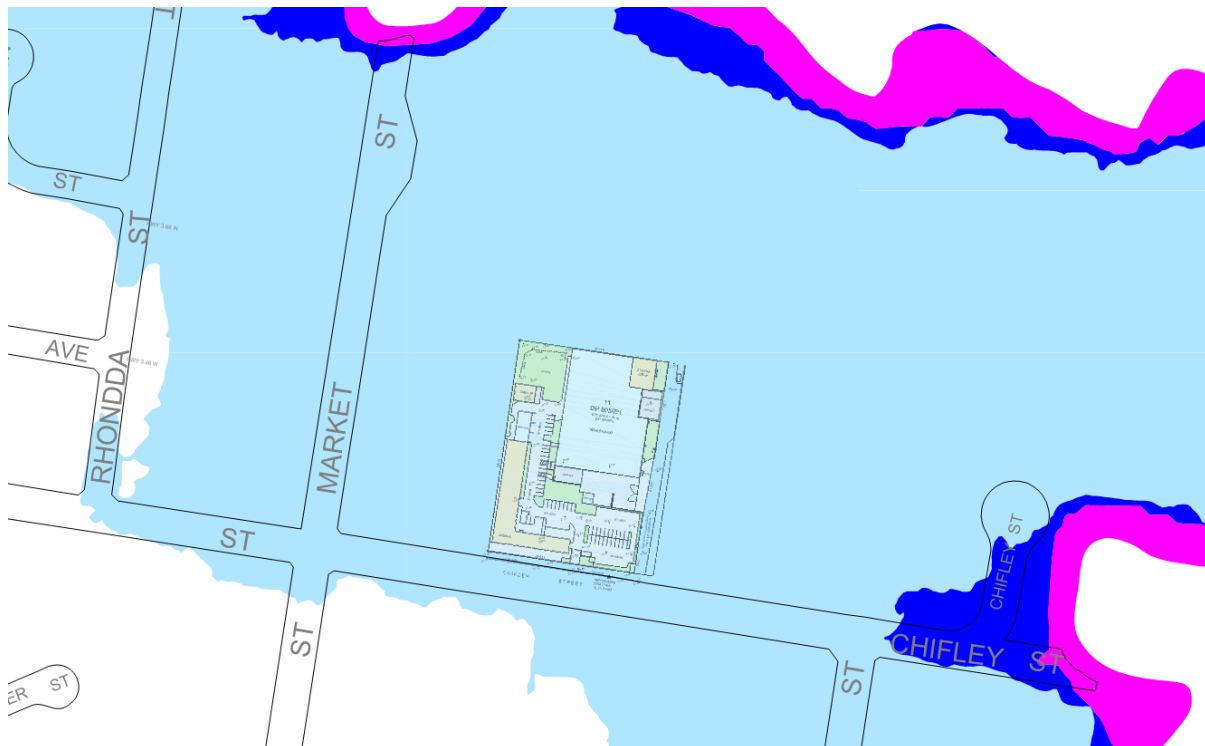


Figure 2 - Flood Planning Map Site Overlay

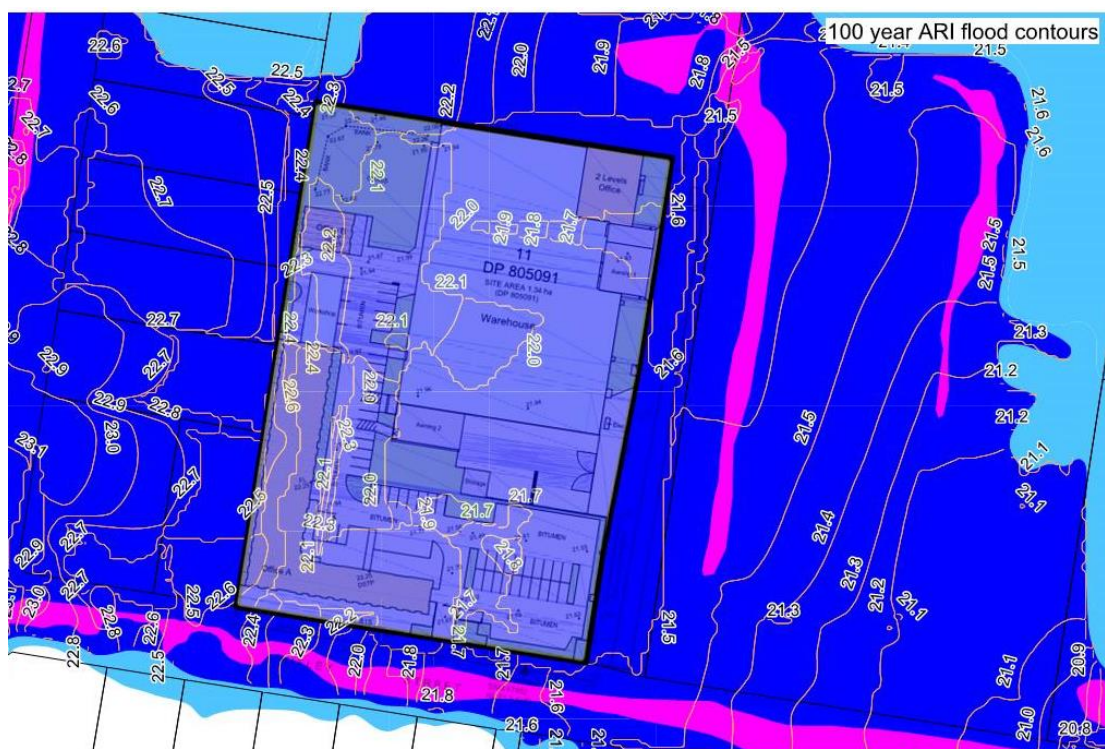


Figure 3 - Local Overland Flooding Map Site Overlay

## Floodplain

The site is located within the All Other Floodplains areas of the LGA and is therefore assessed against Schedule 6 of the FRM 2013.

## Prescriptive Controls

The prescriptive controls applicable to the development are detailed in Schedule 6 of the FRM 2013. The development responses to these prescriptive controls are provided below.

Planning & Development Controls – Low Flood Risk Precinct – Concessional Development	Development Response
<b>Floor Level</b>	
4. Floor levels to be no lower than the design floor level. Where this is not practical due to compatibility with the height of adjacent buildings, or compatibility with the floor level of existing buildings, or the need for access for persons with disabilities, a lower floor level may be considered. In these circumstances, the floor level is to be as high as practical, and, when undertaking alterations and additions, no lower than the existing floor level	As the development consists of a change of use only, there is no change proposed to the existing floor level. Refer to supplied survey in Appendix B for reference of the existing floor level.
7. A restriction is to be placed on the title of the land, pursuant to S.88B of the conveyancing act, where the lowest habitable floor area is elevated more than 1.5m above finished ground level, confirming that the undercroft area is not to be enclosed.	No restriction is required. The lowest habitable floor level is on ground and not elevated, therefore no undercroft area exists for a restriction to be placed on.



<b>Building Components</b>	
<i>1. All structures to have flood compatible building components below the 100-year flood level plus freeboard.</i>	The existing building consists of concrete slab on ground, with steel portal frames and colorbond type wall cladding. All building components for wiring that are required to be installed during the fitout are to be located above the floor level a minimum of 500mm. Due to local overland flooding this results in the components being located at minimum RL22.600.
<b>Structural Soundness</b>	
<i>2. Applicant to demonstrate that the structure can withstand the forces of floodwater, debris and buoyancy, up to and including a 100-year flood plus freeboard. An engineer's report may be required.</i>	The existing structure consists of a monolithic slab on ground construction, with steel portal frame and colorbond type wall cladding. It is considered that the main floodwaters consist of rising waters and not direct flowing forces. The forces exerted by these waters and any possible floating debris are considered to be minor with the existing structure capable of withstanding these forces.
<b>Flood Effects</b>	
<i>2. The flood impact of the development to be considered to ensure that the development will not increase flood effects elsewhere, having regard to: (i) loss of flood storage; (ii) changes in flood levels and velocities caused by alterations to the flood conveyance; and (iii) the cumulative impact of multiple potential development in the floodplain. An engineer's report may be required.</i>	No changes are proposed to the existing levels of the site. In this regard, there will be no change to the existing flooding regime, with no changes to the existing flood storages, flood levels and velocities. Refer to Appendix B for a copy of the existing site survey.
<b>Car Parking &amp; Driveway Access</b>	
<i>6. Enclosed car parking and car parking areas accommodating more than 3 vehicles (other than on rural zoned land), with a floor level below the 20-year flood level or more than 0.8 below the 100-year flood level, shall have adequate warning systems, signage and exists.</i>	No changes to the existing parking layout and regime are proposed. Additional signage is to be installed to alert users that the car parking is located within a flood zone, noting safe exit locations west along Chifley St during minor storms.
<i>7. Restraints or vehicle barriers are to be provided to prevent floating vehicles leaving a site during a 100year flood.</i>	No changes to the existing parking layout and regime are proposed. Local overland flow results in approximately 100mm of depth of flooding, which will not result in vehicles becoming buoyant in a flood event.
<i>8. Driveway and parking space levels to be no lower than the design ground/floor levels. Where this is not practical, a lower level may be considered. In these circumstances, the level is to be as high as practical, and, when undertaking alterations or additions, no lower than the existing level.</i>	No changes to the existing parking layout and regime are proposed. As such there are no changes proposed to the existing surface levels. Refer to Appendix B for a copy of the existing site survey.
<b>Evacuation</b>	
<i>2. Adequate flood warning is available to allow safe and orderly evacuation without increased reliance upon the SES or other authorised emergency services personnel.</i>	A site emergency flood response plan has been prepared that addresses evacuation procedures during major storm events. This considers both mainstream and local overland flooding and is located in Appendix E for reference.

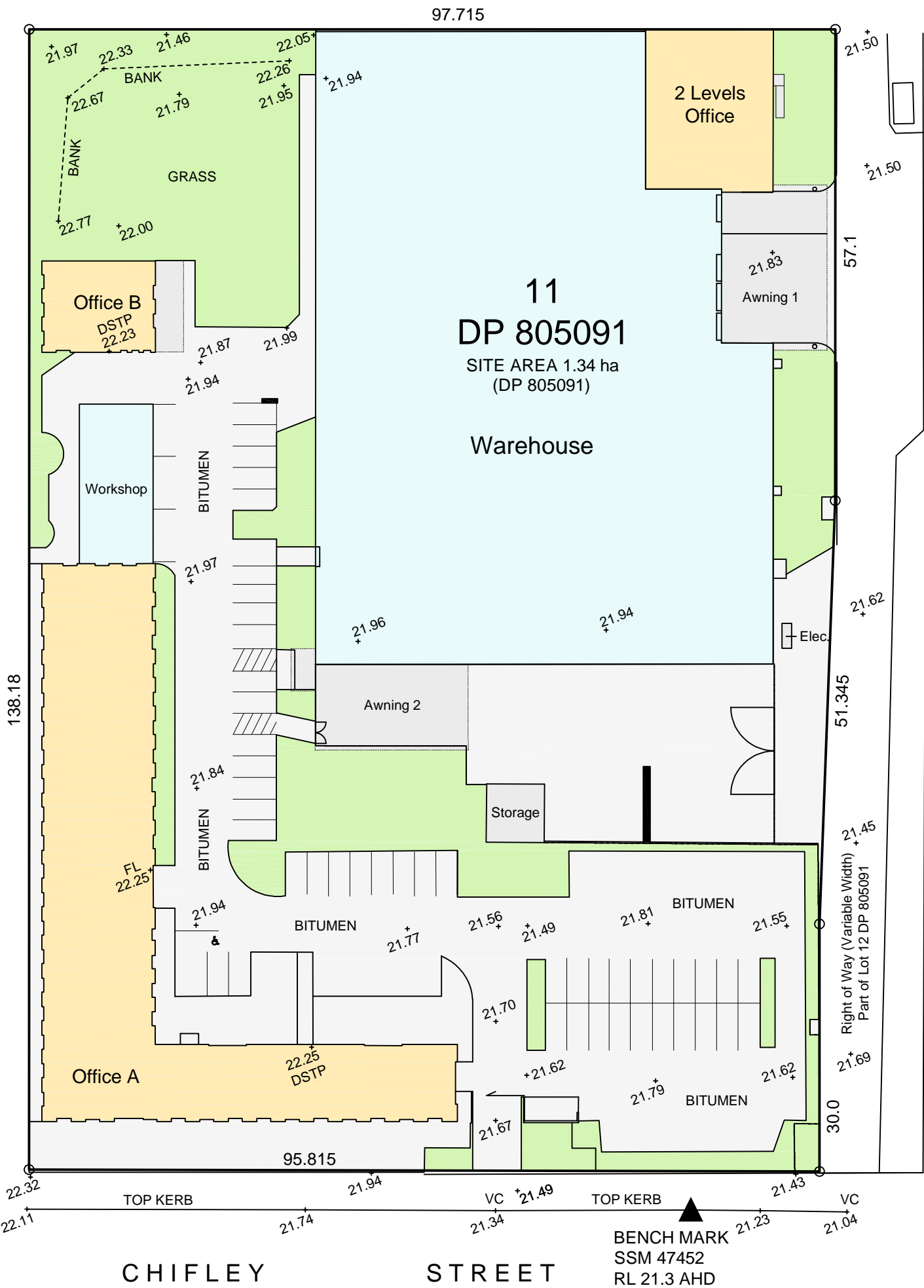
3. <i>The development is to be consistent with any relevant flood evacuation strategy.</i>	Currently no specific flood evacuation strategy is in place for the prospect creek catchment, therefore the development will provide its own flood emergency response plan in accordance with item 2 noted above.
<b>Management and Design</b>	
2. <i>Site emergency response plan required where floor levels are below the design floor level</i>	A site emergency flood response plan has been prepared that addresses evacuation procedures during major storm events. This considers both mainstream and local overland flooding and is located in Appendix E for reference.
3. <i>Applicant to demonstrate that area is available to store goods above the 100-year flood level plus freeboard.</i>	Goods are able to be stored on the second floor of the office area.
5. <i>No storage of materials below the design floor level which may cause pollution nor be potentially hazardous during any flood.</i>	No hazardous materials are used within the facility and its operations.

## Conclusion

It is concluded that the development falls under concessional development as per Schedule 1 of Chapter 11 of the Fairfield Council DCP as it consists of a change of use to the existing building. The proposal does not change the built form of the building and therefore has no effect on the existing flooding regime. The development has incorporated a site emergency response plan to ensure the safe evacuation of occupants in a flood event, with adequate measures taken during fitout in respect to building components in accordance with schedule 1 of the DCP.



## Appendix A – Existing Site Survey



DSTP - DOOR STEP  
FL - FLOOR LEVEL  
VC - VEHICLE CROSSING

### GENERAL NOTES

THESE NOTES ARE AN INTEGRAL PART OF THIS PLAN. THE INFORMATION SHOWN ON THIS PLAN OR IN THE ASSOCIATED CAD FILE IS SUPPLIED ON THE CONDITION THAT THESE GENERAL NOTES ARE ALWAYS SHOWN/KEPT ON ANY COPY OR EXTRACT OF THE HARD COPY/DATA FILE.

THIS PLAN HAS BEEN PREPARED FOR SITE LEVEL PURPOSES ONLY OVER THE SUBJECT SURVEY AREA.

LEVELS ARE BASED ON AUSTRALIAN HEIGHT DATUM (AHD) THE ORIGIN OF WHICH IS SSM 47452 RL 21.3 AHD (SOURCE: SCIMS 1-2-17).

THE BOUNDARIES HAVE NOT BEEN SURVEYED. BOUNDARIES, DIMENSIONS & AREAS HAVE BEEN COMPILED FROM PLANS & RECORDS OBTAINED FROM LAND & PROPERTY INFORMATION N.S.W AND ARE SUBJECT TO FINAL SURVEY.

NO EASEMENTS, RESTRICTIONS OR COVENANTS BENEFITING OR BURDENING THE SUBJECT LAND HAVE BEEN INVESTIGATED OR SHOWN

THE LOCATION AND NATURE OF SERVICES (VISIBLE OR OTHERWISE) ON THE SUBJECT PROPERTY HAVE NOT BEEN LOCATED OR SHOWN.

## PLAN SHOWING SITE LEVELS

LOT 11 DP 805091  
No. 29 CHIFLEY STREET, SMITHFIELD, NSW

PLAN PREPARED FOR:  
**TUBB & ASSOCIATES PTY LTD**

DATUM : A.H.D	SCALE : 1:600 @ A3	DATE : 2-2-2017
ORIGIN OF LEVELS : SSM 47452	LOCALITY : SMITHFIELD	SURVEY : DM
CONTOUR INTERVAL : -	L.G.A. : FAIRFIELD	DRAWN : DM
SHEET No. 1 OF 1	REF : 62329DM	CHECKED : DM

DATE	REV	COMMENTS

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## Appendix B – Section 149 Certificate Excerpt

**7A. Flood related development controls information**

1. Whether or not development on that land or part of the land for the purposes of dwelling houses, dual occupancies, multi dwelling housing or residential flat buildings (not including development for the purposes of group homes or seniors housing) is subject to flood related development controls.

**This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.**

**Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.**

**This parcel is within the floodplain and identified as being within a Low Flood Risk Precinct as a result of mainstream flooding. The term mainstream flooding means inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam. The term Low Flood Risk Precinct is defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.**

**This parcel is within the floodplain and identified as being within a Medium Flood Risk Precinct as a result of overland flooding. The term overland flooding means inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam. The term Medium Flood Risk Precinct is defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties.**

2. Whether or not development on that land or part of the land for any other purpose is subject to flood related development controls.

**This land is subject to the flood related development controls included in the Fairfield City-Wide Development Control Plan 2013 in relation to the above development types. These controls apply (either directly, or indirectly by reference in site-specific DCPs) to all land in the Fairfield Local Government Area.**

**Generally, development controls will apply to development if the land (or part of the land) is within the floodplain or is affected by overland flooding.**

**This parcel is within the floodplain and identified as being within a Low Flood Risk Precinct as a result of mainstream flooding. The term mainstream flooding means inundation of normally dry land occurring when water overflows the natural or artificial banks of a stream, river, estuary, lake or dam. The term Low Flood Risk Precinct is defined as all land within the floodplain (i.e. within the extent of the probable maximum flood) but not identified within either a High Flood Risk or a Medium Flood Risk Precinct. The Low Flood Risk Precinct is that area above the 100-year flood event.**

**This parcel is within the floodplain and identified as being within a Medium Flood Risk Precinct as a result of overland flooding.**

**The term overland flooding means inundation by local runoff rather than overbank discharge from a stream, river, estuary, lake or dam.**

**The term Medium Flood Risk Precinct is defined as land below the 100-year flood level that is not within a High Flood Risk Precinct. This is land that is not subject to a high hydraulic hazard or where there are no significant evacuation difficulties.**

The flood information is the current information to date. However, Council reviews flood studies on an on-going basis and new information may become available in future. Please contact Council's Catchment Planning Division on 9725 0222 for any updated information.

**Note:**

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3. Words and expressions in this clause have the same meanings as in the instrument set out in the Schedule to the Standard Instrument (Local Environmental Plans) Order 2006.
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**8. Land reserved for acquisition**

Whether or not any environmental planning instrument or proposed environmental planning instrument referred to in clause 1 makes provision in relation to the acquisition of the land by a public authority, as referred to in section 27 of the Act.

**The land is not reserved for acquisition under Fairfield Local Environmental Plan 2013.**

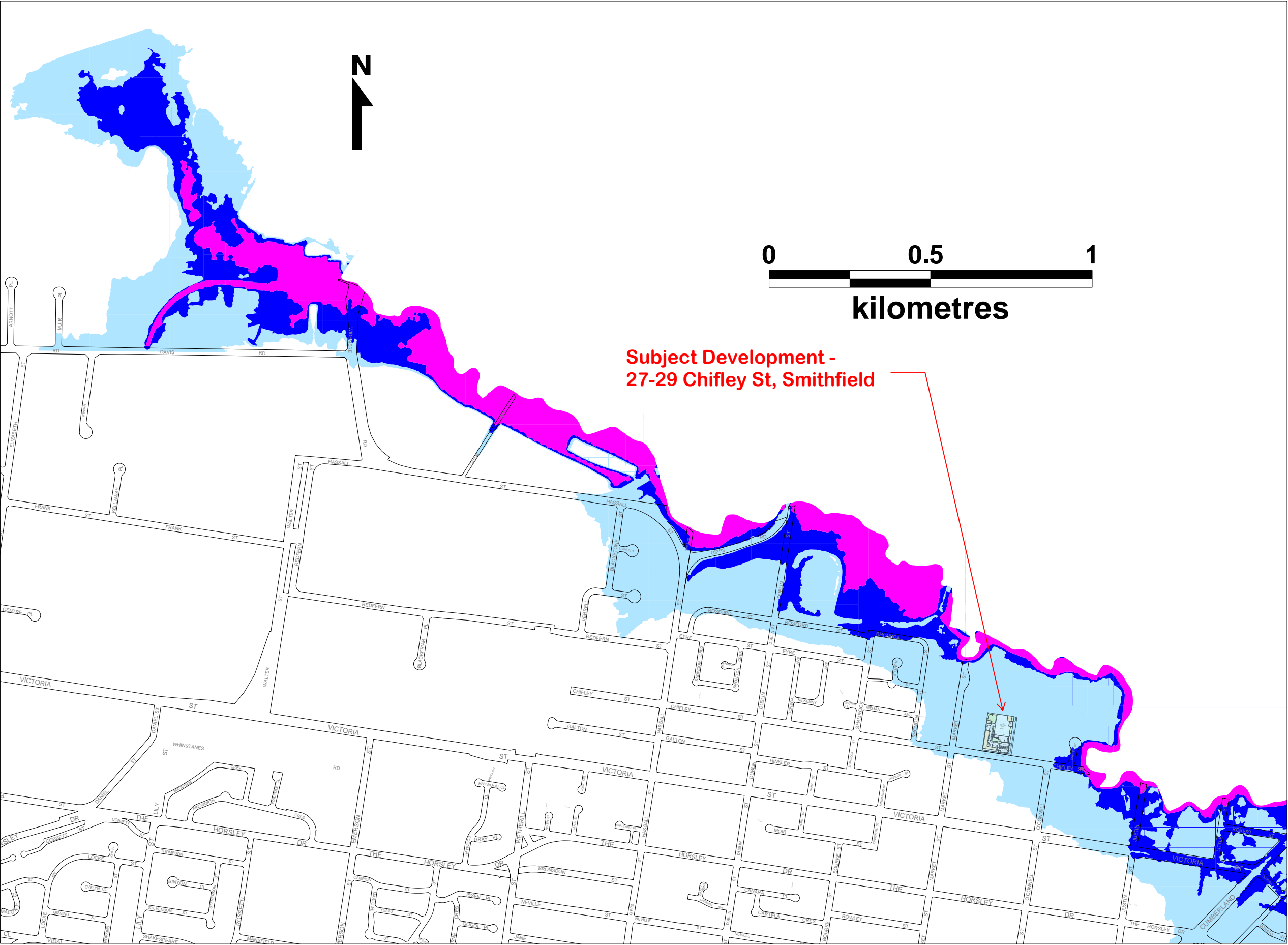
**9. Contributions plans**

The name of each contributions plan applying to the land.

**Fairfield City Council Direct (Section 94) Development Contributions Plan 2011 applies to this land.**

## Appendix C – Flood Planning Map





**High Flood Risk Precinct**

Land below 100 year flood that is either subject to a high hydraulic hazard or where there are significant evacuation difficulties.

**Medium Flood Risk Precinct**

Land below the 100 year flood that is not subject to a high hydraulic hazard and where there are no significant evacuation difficulties.

**Low Flood Risk Precinct**

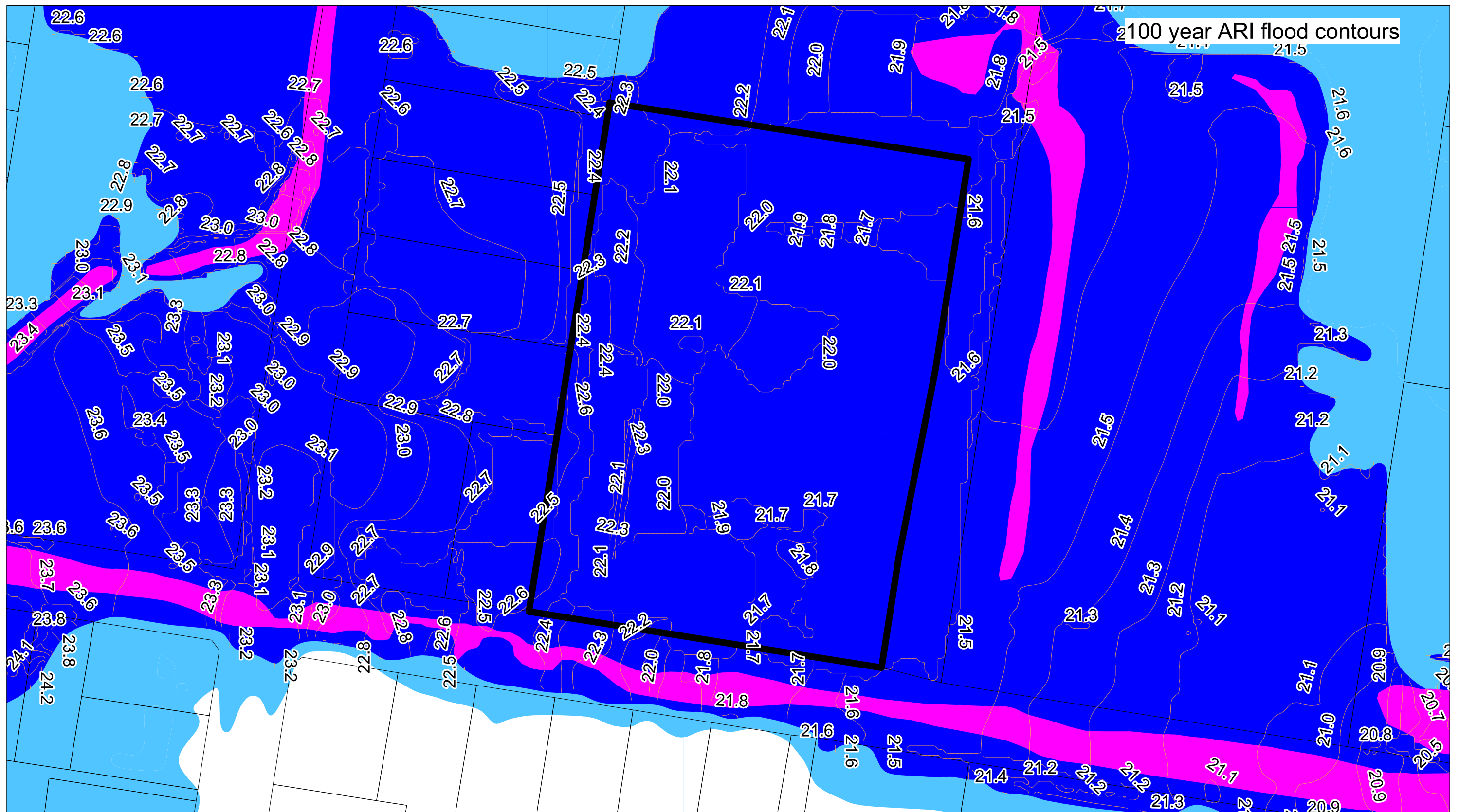
All other land within the floodplain i.e. within the Probable Maximum Flood (PMF) extent, but not identified as within the high or medium flood risk precinct.

**Important Notes**

Mapping does not include local stormwater flooding.

Sheet 3 of 3

## Appendix D – Local Overland Flood Mapping



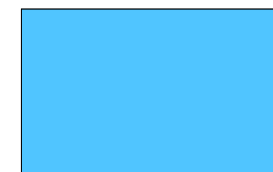
2100 year ARI flood contours



High Flood Risk Precinct



Medium Flood Risk Precinct



Low Flood Risk Precinct

29 Chifley St, Smithfield

Lot 11 DP 805091

Flood Risk Mapping has been extracted from the  
Catchment Simulation Solutions (2016) Smithfield West Overland Flood Study.

8 March 2017

## Appendix E – Site Emergency Flood Response Plan

## SITE EMERGENCY FLOOD RESPONSE PLAN FOR 29 CHIFLEY STREET, SMITHFIELD

### Background

Council has advised that this property is affected by overland surface flows in the 1% AEP (1 in 100 year ARI) storm event. Overland flows travel from the **West** along Chifley Street and head **East** toward **Prospect Creek**. The flood risk exposure of the site is classified as **Medium Risk**.

The relevant overland flow and building levels are as follows:

- **Chifley Street 1% AEP Flow Level** = RL21.600 (South East Corner) to RL22.400m (South West Corner) Australian Height Datum (AHD)
- **Site 1% AEP Flow Level** = RL21.600 (Eastern Driveway) to RL22.100m (Western Warehouse Wall) AHD
- **Warehouse Floor Level** = RL21.940m AHD
- **Office First Floor Level** = RL24.940m AHD
- **Chifley St Boundary Levels** = RL21.430 (South East Corner) to 22.320m (South West Corner) AHD

The above levels give an indication of how the overland flows will impact this property. The main warehouse, carpark area and driveway would be inundated during the 1% AEP storm due to local overland flow. This flow would range in depth from approximately 90mm to 140mm inside the site, and up to 400mm in Chifley Street. Due to the depth of flow in Chifley Street and its High-Risk categorization refuge is to be sought on the first-floor office level during a major storm event until the storm and flood waters pass.

### Procedure

1. During floods, many local and major streets and roads will be cut by floodwaters. Traveling through floodwaters on foot, or in a vehicle can be very dangerous as the water may be polluted, obstructions can be hidden under the floodwaters, or you could be swept away. It is recommended to stay within the premises as much as practical as this is the safest option;
2. As the flood level approaches the warehouse floor level (but only if safe to do so) turn off all electrical equipment at the main switch, relocate any items that may be damaged by water, or poisons, or wastes to as high a level as possible or the office first floor;
3. All persons on the premises are to move to the first floor of the office and wait for the floodwaters to pass;
4. Do not evacuate the premises unless instructed to do so by the SES or the Police. Remember floodwaters are much deeper and flow much faster outside;
5. In the case of a medical emergency ring 000 as normal, but explain about the flooding;
6. A laminated copy of this flood plan should be permanently attached (glued) to the inside of entrance doors and form part the induction to any persons entering/working on the site.
7. This flood management plan should be reviewed every 5 years, particularly with the potential sea level rise due to Climate Change.