

FLOOD MANAGEMENT PLAN

FOR

NSW DEPARTMENT OF EDUCATION: GREYSTANES PUBLIC SCHOOL

781 MERRYLANDS ROAD, GREYSTANES NSW 2145

DATE: 29TH JUNE 2018

OUR REFERENCE: CRPT-20161275.03A

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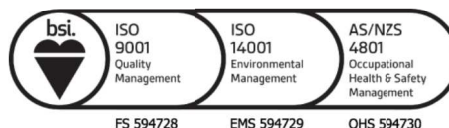
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OFFICE LOCATIONS

BRISBANE
GOLD COAST
SINGLETON
SYDNEY-CBD
SUTHERLAND
WOLLONGONG
MOSS VALE
NOWRA
GOULBURN

REVISION HISTORY

REVISION	DATE	BY	CHECKED	COMMENTS
A	29/06/18	TH	JB	Issued for submission

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APPENDIX A: SITE FLOOD MANAGEMENT PLAN

1 INTRODUCTION

Objective

The main objectives of an Emergency Flood Evacuation Plan are to:

- Assist in protecting staff, students and visitors of the school from the potential dangers arising from flooding;
- Ensure a planned and co-ordinated approach is taken to evacuation and/or flood management;
- Identify potential evacuation locations.

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

Outcome

- To ensure the safety of staff, students and visitors;
- To ensure that staff, students and visitors are not left stranded without supplies during flooding;
- To ensure potential damage to the property and facility are minimised.

2 BACKGROUND INFORMATION

Jones Nicholson has been engaged to complete a Flood Management Plan in relation to the proposed redevelopment works at Greystanes Public School.

Greystanes Public School has an area of approximately 3 hectares. The site fronts Merrylands Road to the south, and is bound by residential properties to the north, east and west. The site locality and proposed site plan are depicted in Figures 1 and 2 respectively.



Figure 1: Greystanes Public School – Site Locality



Figure 2: Greystanes Public School – Proposed Site Layout

The major redevelopment works focus on two separate areas, a new administration building and adjoining COLA structure is proposed to the south-west of the site and a new 3 storey learning classroom building is proposed to the east in the location of the existing demountables. In addition to this major redevelopment, Block A is being refurbished and large areas of soft landscape are proposed.

The site is located within the Prospect Creek catchment. The north-eastern corner of the site is identified as being affected by the 1% Annual Exceedance Probability (AEP) Flood, based on information available to Cumberland Council from the “Draft Prospect Creek Overland Flood Study”, prepared by Lyall and Associates in March 2015. The site has been assessed as a medium flood risk category. The flood extent in relation to the proposed building layout is depicted in Figure 3, it is noted that the proposed floor level of 61.44m AHD is a minimum of 3 metres above the 1% AEP level.

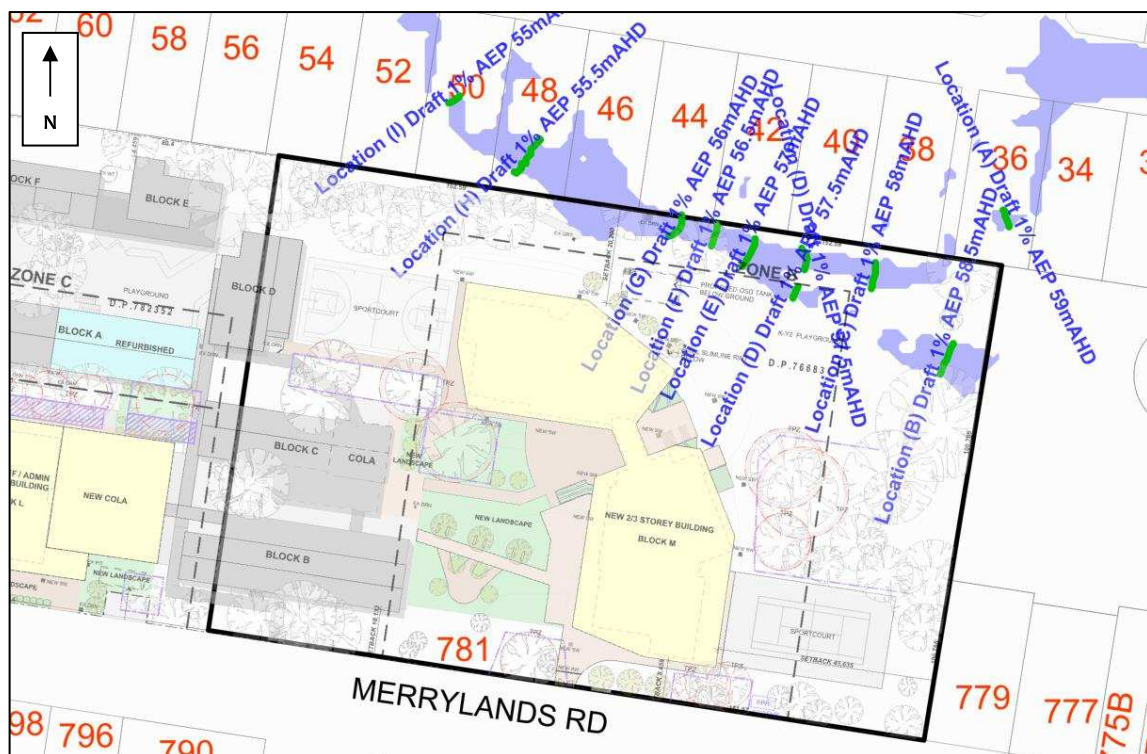


Figure 3: Greystanes Public School – Flood Extent

3 WARNING OF IMPEDING FLOOD

The Bureau of Meteorology provides flood advice, flood forecasting and warnings relevant to the local area which are conveyed to emergency service agencies.

The Bureau of Meteorology will advise on severe weather or thunderstorm warnings for the local area to the SES Local Controller. In addition to this, information will also be made available through media outlets to disseminate evaluation warnings.

Severe Weather Warnings

The Bureau of Meteorology issues Severe Weather Warnings whenever severe weather is occurring in an area or is expected to develop or move into an area. The warnings describe the area under threat and the expected hazards. Warnings are issued with varying lead-times, depending on the weather situation, and range from just an hour or two up to about 24 hours.

Severe Weather Warnings are issued for:

- Sustained winds of gale force (63 km/h) or more
- Wind gusts of 90 km/h or more
- Very heavy rain that may lead to flash flooding
- Abnormally high tides (or storm tides) expected to exceed highest astronomical tide
- Unusually large surf waves expected to cause dangerous conditions on the coast
- Widespread blizzards in Alpine areas

Flood Watch

A Flood Watch is issued by the Bureau of Meteorology if flood producing rain is expected to happen in the near future and flooding is expected to be above Minor level.

Preliminary Flood Warnings

These warnings usually predict which class of flooding (minor, moderate or major) will occur rather than providing quantitative forecasts. They are the first in a series of warnings and will typically be followed by more detailed flood warnings. These products are disseminated directly to media outlets by the BoM and are published on the BoM website.

Flood Warnings

These normally predict flood heights (in metres and centimetres at a gauge) which will be reached at a location at a specified time in the future. After the issuing of a Preliminary Flood Warning, Flood Warnings are renewed at frequent intervals until the relevant stream drops to below the minor flood level.

The local SES is responsible in covering operations for all levels of flooding within the council area and caters for both SES control of operations and where appropriate, the handover to the Local Emergency Controller (LECON).

Local Emergency Operations Controller (LECON)

- Mentor 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
- Issue the 'all clear' when Emergency operations have been completed

NSW Police Service (Merrylands Patrols)

- Assist with the distribution of evacuation warnings
- Assist with the conduct of evacuations
- Conduct road control operations in conjunction with the Roads and Maritime Service (RMS) and Cumberland Council
- Ensure all evacuees are registered
- Secure evacuated area

NSW Fire Brigades (Merrylands Fire Station)

- Assist with the distribution of evacuation warnings
- Assist with the conduct of evacuations
- Carry out clean up operations, including the hosing down of flood affected premises

4 ACTIONS TO BE TAKEN

4.1 PREPAREDNESS

In preparation for any flood event the following items should be addressed:

- Education and training to staff on flood awareness and plan implementation is intrinsic to its successful operation. All members of staff are to be familiarised with this document.
- A permanent member of staff will be designated as the Site Flood Coordinator and is entrusted with the responsibility of monitoring flood activities and dissemination of evacuation warning as and when required.
- Signage is to be installed within the flood-prone north-eastern corner of the site notifying all staff, students and visitors that the area is subject to flooding – and that all persons should familiarise themselves with the emergency evacuation procedures.
- One designated person should attend the flood events and seminar held by the community in the Holroyd area to meet the local SES members and learn about flood safety. The event dates area found on the following website, <http://www.floodsafe.com.au/local-flood-information-and-events/sydney-western-region>. This person allocated the responsibility is to return and provide a presentation to the rest of the staff members after each session.
- The Flood Safe Guide for the local area is required to be distributed to every staff member with a copy kept in the group home. The Flood Safe Guide is a customised brochure addressing flooding in the local context.
- All new staff members are to be introduced to this plan as part of their induction by Facility Managers and made aware of the protocols to be employed during a flood event.
- All exit signs to be clearly visible at all times and not be obstructed or covered at any time. All exit signs are to be installed as per the relevant Australian Standards and requirements.

Alert

The Site Flood Coordinator will be vigilant at all times of severe thunderstorms, weather warning and continual rain. Staff are encouraged to check with warning from local radio, television or the SES Local Controller.

For flood help: SES 132 500

**Local SES Controller: Local NSW SES Holroyd Unit located at 1 Foray Street, Guildford West.
All calls to be placed through main SES line: 132 500**

Emergency Contacts

The list below should be updated regularly.

Parties to Contact	Phone Number
Site manager	TBA
SES Holroyd Unit	132 500 (Emergency Help)
Bureau of Meteorology NSW Flood Warning Centre – Sydney Regional Office	1300 659 218 9296 1555 http://www.bom.gov.au/nsw/warnings/
Local Fire Brigade	000 (Emergency)
Police	000 (Emergency)
Cumberland Council	(02) 8757 9000
Sydney Water (Water and Sewer)	132 090
Endeavour Energy	131 003
RMS Traffic Enquiry	132 701

Emergency Kit

In order to be prepared for an evacuation, it is recommended an emergency kit be prepared and located on all levels so that it is readily available at all times.

Suggested items for inclusion in the emergency kit appropriate for the number of expected staff and visitors are:

- Portable radio and torch with fresh batteries
- Candles and waterproof matches or a gas lantern
- Reasonable stocks of fresh water and tinned food (with a can opener) or dried food
- First aid kit
- Good supplies of essential medication
- Strong shoes and rubber gloves
- Waterproof bag for warm clothing, toiletries and valuables
- List of emergency contact numbers
- Bedding or sleeping bags

The availability, capability and durability of resources should be regularly checked. An emergency kit maintenance checklist should be prepared and form a part of regular inspection program.

4.2 EVACUATION

Evacuation is the temporary movement (relocation) of people from a dangerous or potentially dangerous place to a safe location, and their eventual return. It is a proactive emergency management strategy that uses distance to separate people from danger created by a hazard.

The flood prone area at Greystanes Public School is localised to the north-eastern corner of the playground, away from all proposed and existing building. During heavy rainfall and at the first sign of any flooding, the north-eastern corner of the playground shall be established as 'out of

bounds' to both students and staff, with witches hats used to cordon off the low lying area as indicated in 'Site Flood Management Plan' in Appendix A. The area shall be monitored by the Site Flood Coordinator.

Whilst the building is expected to remain well clear of floodwater, even in extreme events, it is recommended that rising flood waters be monitored by Site Flood Coordinator.

Actions, Responsibility & Procedures

Establish a line of communication with emergency services so updated warning information can be relayed to the evacuees. The local SES, Bureau of Meteorology, Police and Fire Brigade are listed in table above. These phone numbers should form a part of the flood evacuation kit and be kept in a location that is easily accessible.

Evacuation actions, responsibilities and procedures are outlined below:

Action	When	Who
Monitor local radio and TV for flood warning	During heavy rain and prior to predicted heavy rain	Designated Site Flood Coordinator
Monitor BOM and SES website	Daily	Designated Site Flood Coordinator
Review Site Flood Management Plan	Weekly	All staff and visitors
Cordon off flood prone area of playground	After warning of flash flooding is made by BoM	Designated Site Flood Coordinator

Steps to follow during a flood event

- Obtain information from BOM, SES, radio stations and local observations to ensure occurrence of event
- Warn other staff of the pending flooding and the expected action
- Designated Site Flood Coordinator to inspect flood prone area to ensure no one is present
- Designated Site Flood Coordinator to cordon off flood prone area and establish as temporality 'out of bounds'

Maintenance Schedule

A maintenance schedule for the site is outlined below:

Items	Maintenance Activity	Interval	Who
Communications items (TV, radio, phone, Mobile, internet)	Check operation	Daily	Designated Site Flood Coordinator
Backup water supply	Check volume and water proofing	6 months	Qualified Installer
Backup power supply	Check function and fuel supply	6 months	Qualified Installer

4.3 RECOVERY

Recovering from a disaster will be easier if you are prepared. To help people recover, the NSW SES, NSW RFS and Fire & Rescue NSW have Recovery Kits available on their websites and in hard copy.

Disaster Recovery Centres may be established following some disasters. These can provide a range of welfare services including financial assistance, personal support, organising temporary accommodation and providing information and referrals.

SES Assistance with Recovery Functions

Concurrently with response operations, the SES is responsible for ensuring that the evacuation and immediate welfare of affected persons is coordinated. This requires early and close liaison with the Welfare Services Functional Area.

The SES will:

- a. Provide information to flood-affected people on safety matters and the restoration of belongings which have been in contact with flood waters;
- b. Provide impact information to recovery agencies;
- c. Assist with clean-up operations after floods (if sufficient volunteers are available); and
- d. Assist with the return of evacuees to their homes (if sufficient volunteers are available).

SES Controllers should brief the following on details of the flood operation:

- a. Any Recovery Coordinating Committee;
- b. The Welfare Services Functional Area; and
- c. Relevant Emergency Management Committees

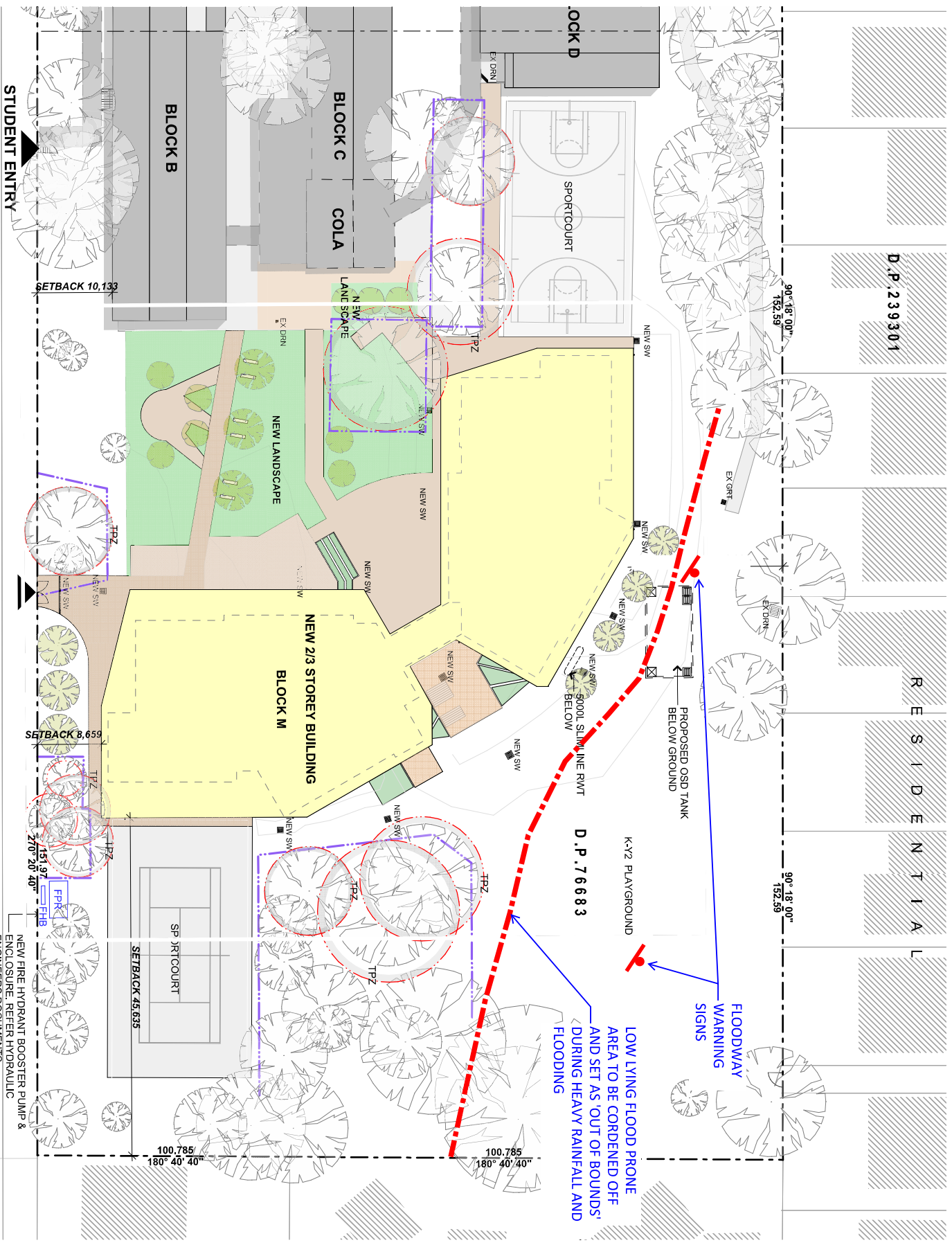
SES Controllers should participate in recovery committees as required

Disaster Welfare Services - 1800 018 444

After the flood event, the designated Site Flood Coordinator is required to check with the relevant authority that it is safe to enter the flooded area. Flooded areas pose health risks to residents and the following procedures should be followed after entering the residence:

- Have electrics and gas fixtures checked by qualified personnel prior to use
- Beware of snakes and spiders
- Beware of health risks from wading through muddy water
- Don't use food or drinks which have been in contact with floodwater
- Boil all water until supplies are declared safe to drink
- Report damaged utility lines to appropriate authorities
- Plan which items and areas should be cleaned first
- Use disinfectant for cleaning
- Wear shoes and gloves in any area which has been flooded

APPENDIX A – SITE FLOOD MANAGEMENT PLAN



D.P. 239301

R E S I D E N T I A L

90° 18' 00"

90° 18' 00"

152.59'

152.59'

FLOODWAY
WARNING
SIGNS

LOW LYING FLOOD PRONE
AREA TO BE CORDONED OFF
AND SET AS 'OUT OF BOUNDS'
DURING HEAVY RAINFALL AND
FLOODING

D.P. 7.6683

K-12 PLAYGROUND

PROPOSED OSD TANK
BELOW GROUND

5000 SLIM LINE RWT
BELOW

Block D

SPORTCOURT

Block C
COLA

Block B

NEW 2/3 STOREY BUILDING
BLOCK M

SP SPORTCOURT

STUDENT ENTRY

NEW ENTRY

SETBACK 10,133

SETBACK 8,659

SETBACK 45,635

100.785'
180° 40' 40"

100.785'
180° 40' 40"

151.91'
270° 20' 40"

FFPR
FFHB

NEW FIRE HYDRANT BOOSTER PUMP &
ENCLOSURE, REFER HYDRAULIC
ENGINEERS DOCUMENTS



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