



Public Notice Details

Application Details

Application No	DA2600058
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Property Details

Property Location	4 Old Hunting Ground Road Kempton
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Application Information

Application Type	Discretionary Development Application
Development Category	Change of use to Childcare Centre
Advertising Commencement Date	5/6/26
Advertising Closing Period	20/6/26
<small>If the Council Offices are closed during normal office hours within the above period, the period for making representations is extended.</small>	

If you need any further information, you're welcome to contact the Planning Department. A planner in the Development and Environmental Services section can be reached on 6254 5050 or at planningenquiries@southernmidlands.tas.gov.au.

Representations on this application may be made to the General Manager in writing either by

Post: PO Box 21, Oatlands Tas 7120
Email: mail@southernmidlands.tas.gov.au
Fax: 03 6254 5014

All representations must include the authors full name, contact number and postal address and be received by the advertising closing date.

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PROPERTY/ PROJECT DETAILS

CLIENT: SOUTHERN MIDLANDS COUNCIL
 PROPERTY IDENTIFICATION NUMBER: 7625548
 ADDRESS: 4 OLD HUNTING GROUND ROAD, KEMPTON TAS 7030
 LOCAL AUTHORITY: SMC
 OVERLAYS: N/A
 ZONE: 7
 BUSHFIRE ATTACK LEVEL: N/A
 CORROSION ENVIRONMENT: LOW

DRAWING CONTENTS:	
ARCHITECTURAL : PLANNING	
SHEET No	DRAWING TITLE
C01.0	COVER PAGE
C02.0	SITE PLAN
C02.1	SITE SECTION
C03.0	ORIGINAL FLOOR PLAN
C03.1	PROPOSED FLOOR PLAN
C04.0	ELEVATIONS
C05.0	DETAIL

Note:

Builder and subcontractors to verify all dimensions and levels prior to the commencement of any work. Give 24 hours minimum notice where amendments are required to design of working drawings. These drawings are to be read in conjunction with engineers and surveyors drawings and notes. Do not scale drawings. Dimensions are to take preference over scale. Building specification and Engineers drawings shall override architectural drawings. All construction work shall be carried out in accordance with the state building regulations, local council by-laws and relevant BCA and AS codes.

Important Notice for Attention of Owner:

The owners attention is drawn to the fact that foundations and associated drainage in all sites requires continuing maintenance to assist footing performance. Advice for foundation maintenance is contained in the CSIRO building technology file 18 and it is the owners responsibility to maintain the site in accordance with this document.

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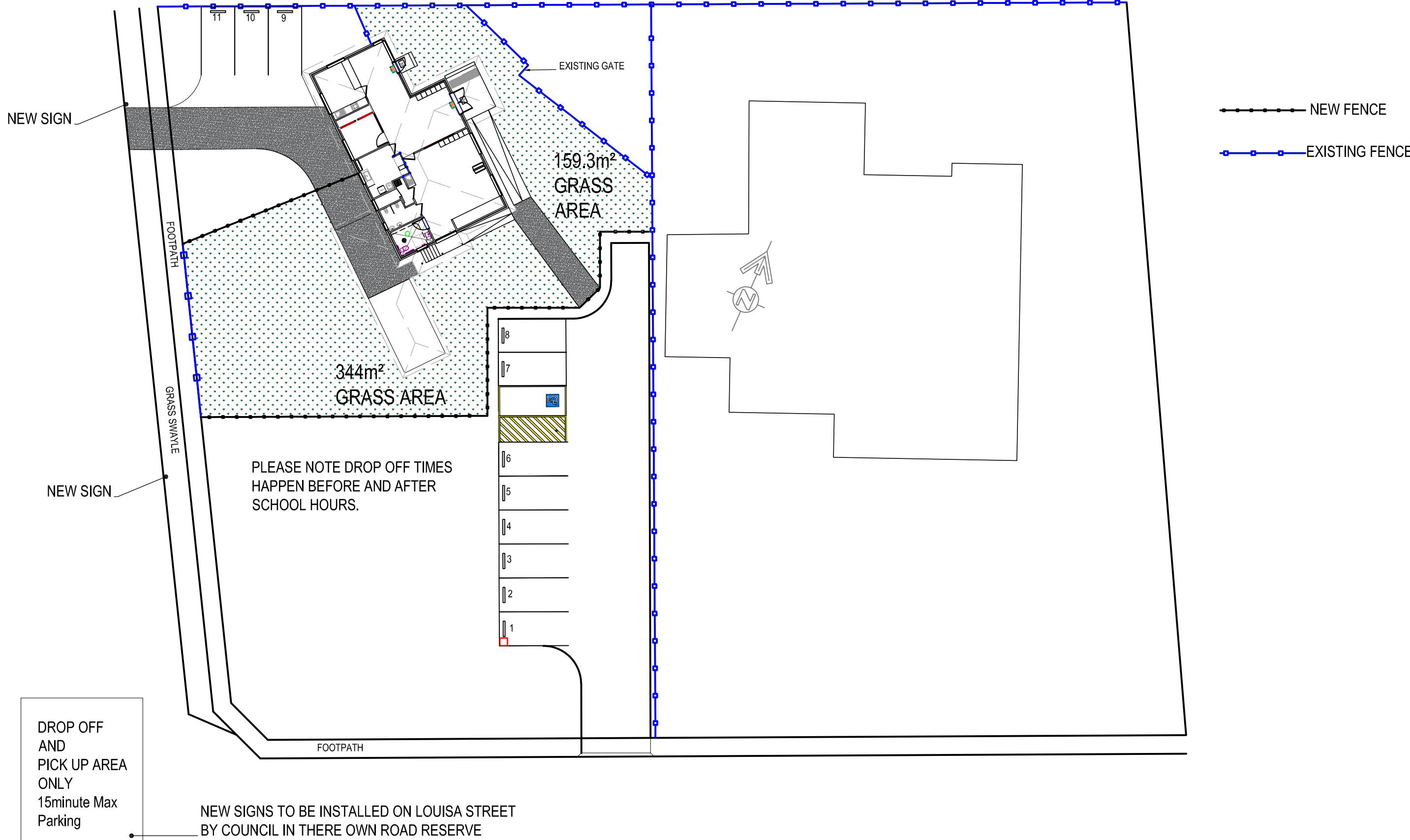


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CLIENT NAME:
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 PROJECT ADDRESS:
4 OLD HUNTING RD, KEMPTON TAS 7030
 PROJECT:
CHANGE OF USE TO CHILD CARE FACILITY

DRAWING TITLE:
COVER SHEET

DATE: 24/02/2026	SCALE: N/A	DRAWN BY: CK
REVISION No: R-0	SHEET SIZE: A3	JOB No: 26-004
		SHEET No: C01.0



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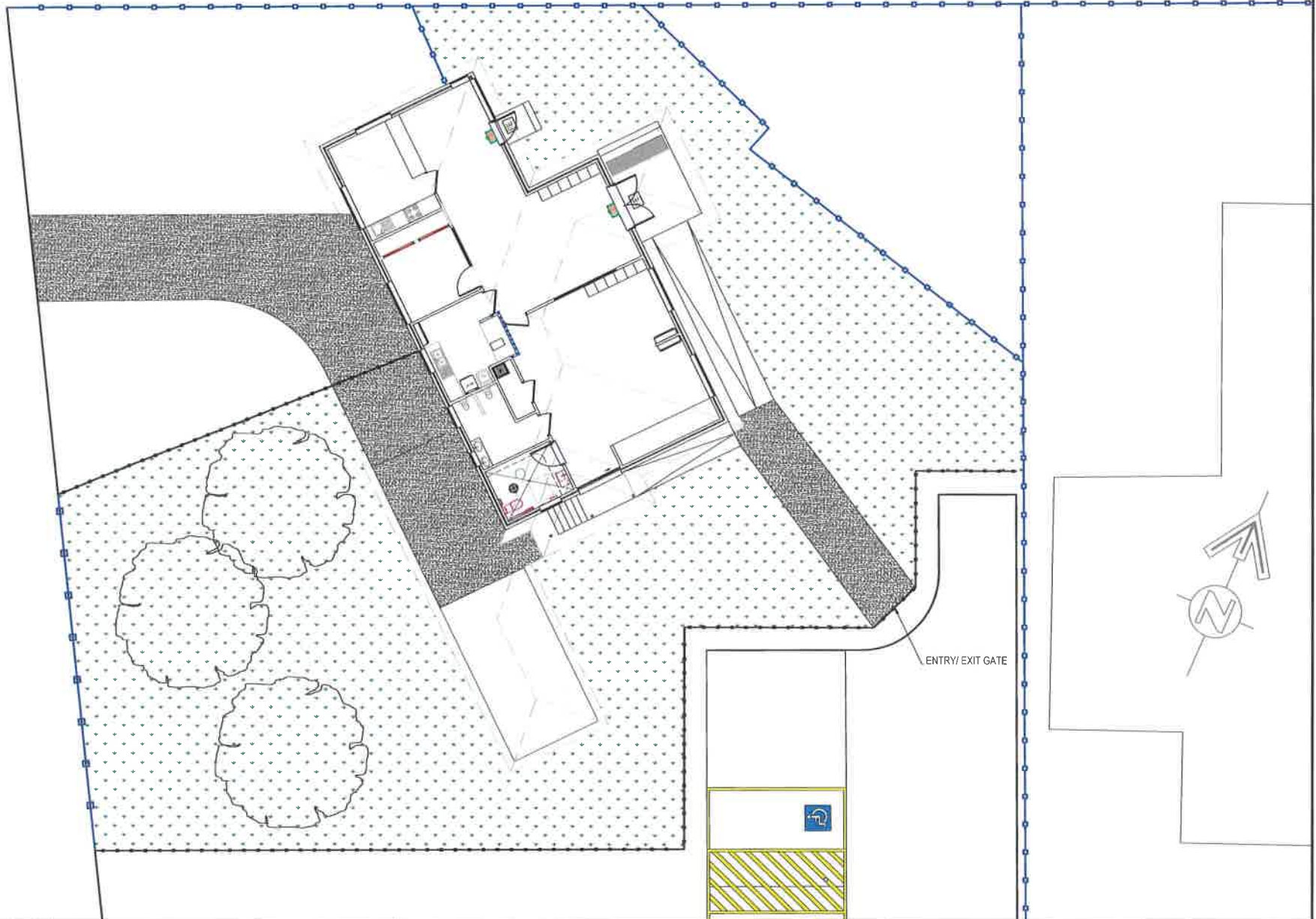
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PROJECT:
CHANGE OF USE TO CHILD CARE FACILITY

DRAWING TITLE:
SITE PLAN

DATE: 1/06/2026	SCALE: 1:300	DRAWN BY: CK
REVISION No: R:0	SHEET SIZE: A3	JOB No: 26-004
		SHEET No: C02.0

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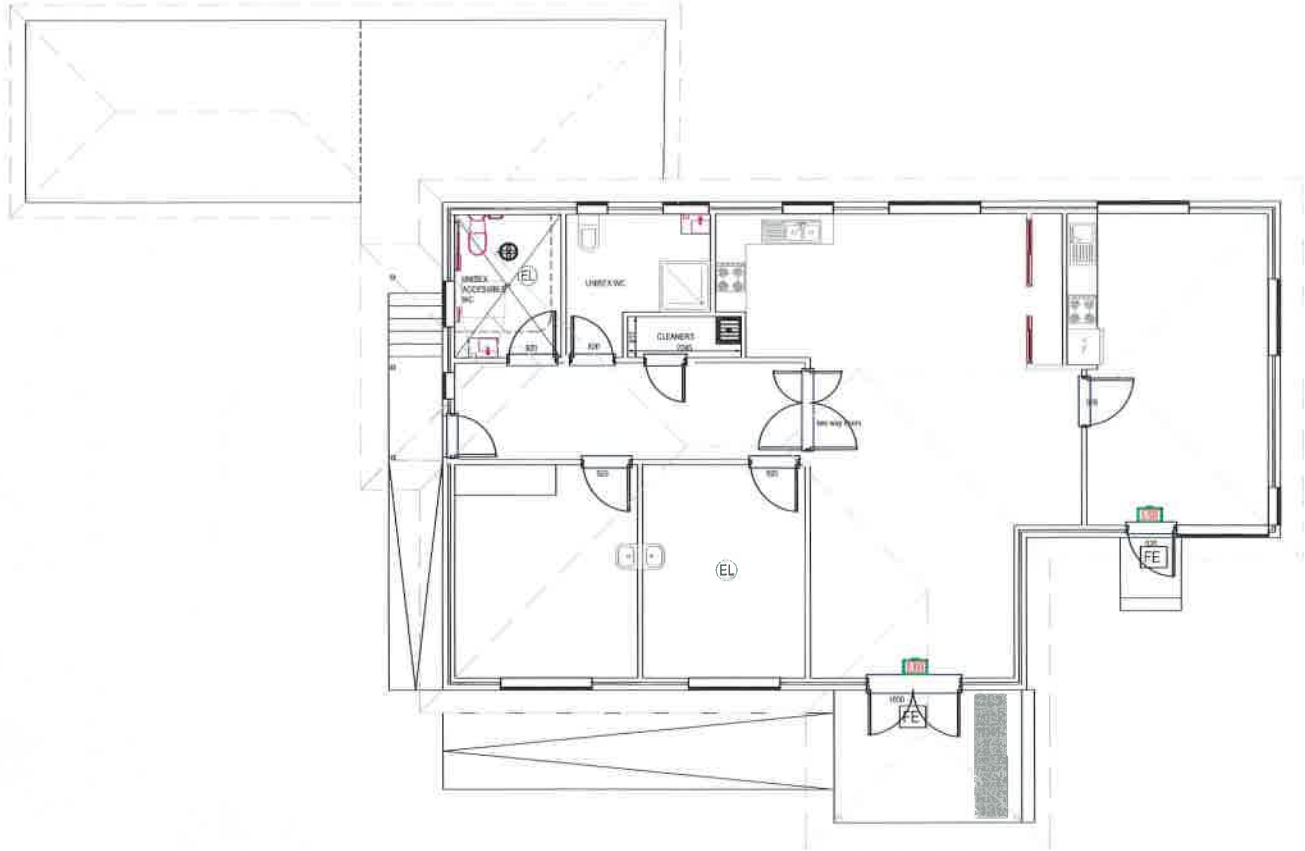


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DRAWING TITLE:
PART SITE PLAN

DATE: 24/02/2026	SCALE: 1:125	DRAWN BY: CK
REVISION No: D-0	SHEET SIZE: A3	JOB No: 26.004
		SHEET No: C02 1

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E EXISTING FLOOR PLAN
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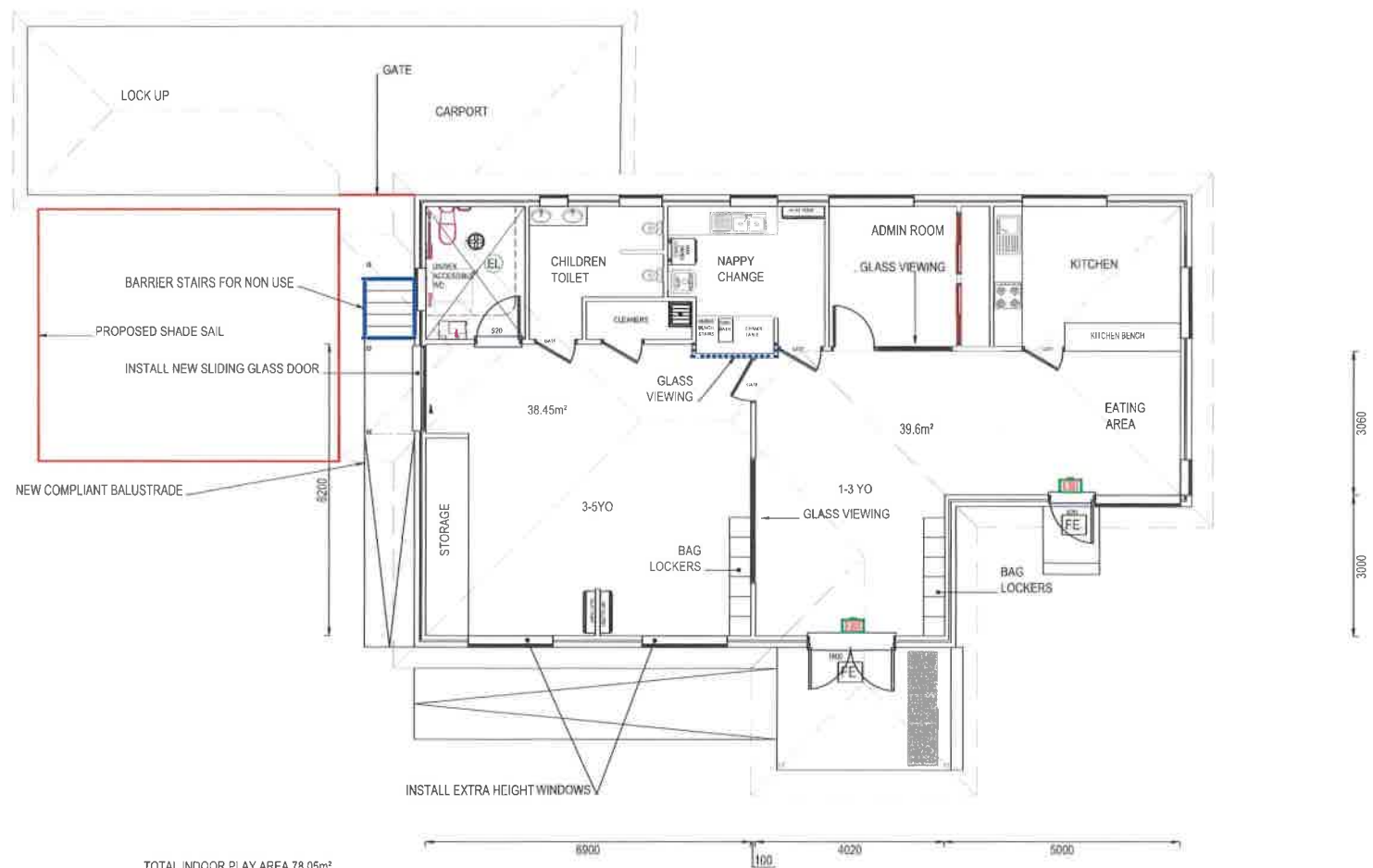
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DRAWING TITLE:
EXISTING FLOOR PLAN

DATE: 24/02/2026	SCALE: 1:100	EXAMIN BY: CK
REVISION No: R-0	SHEET SIZE: A3	JOB No: 26-004
		SHEET No: C03.0



TOTAL INDOOR PLAY AREA 78.05m²
78.05 / 3.25 = 24.01 CHILDREN

P PROPOSED FLOOR PLAN
Scale: 1:100

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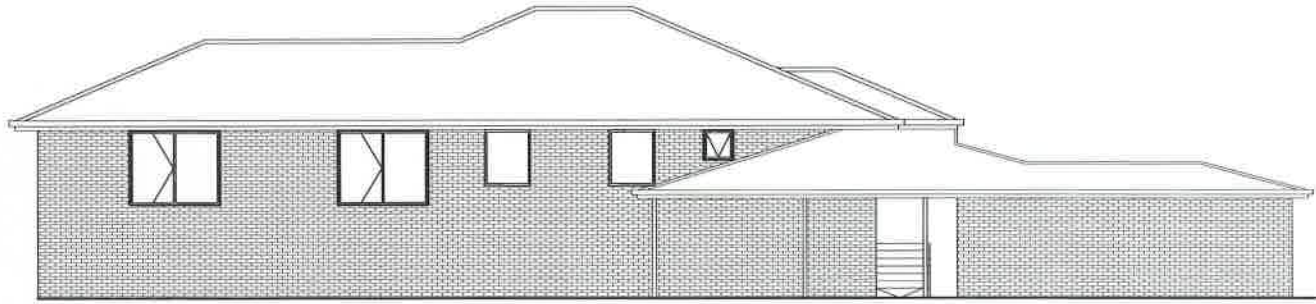
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PROPOSED FLOOR PLAN

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SHEET No: C03 1		

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NE NORTH EASTERN ELEVATION
Scale: 1:100



SW SOUTH WESTERN ELEVATION
Scale: 1:100



SE SOUTH EASTERN ELEVATION
Scale: 1:100



NW NORTH WESTERN ELEVATION
Scale: 1:100

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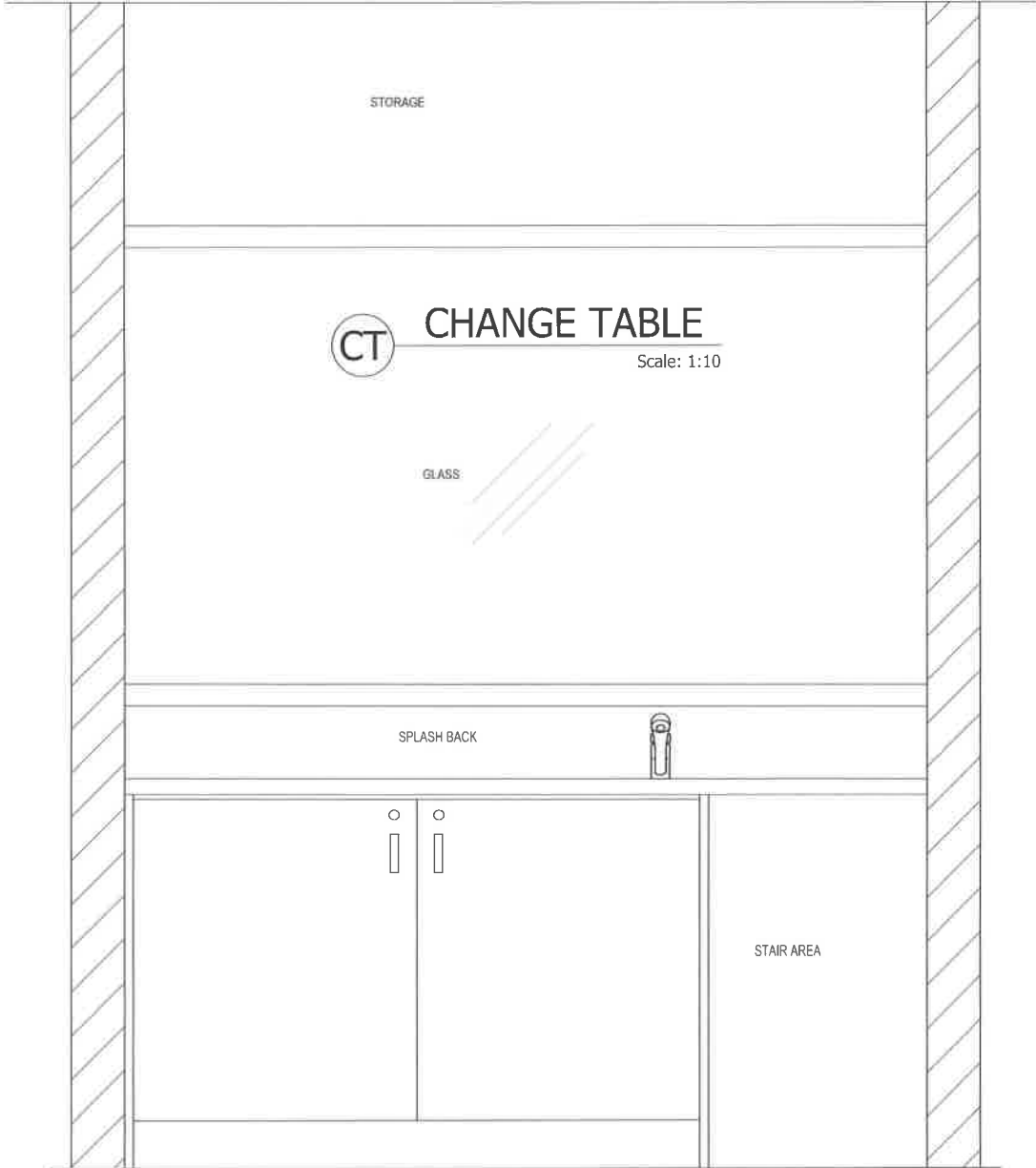
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DRAWING TITLE:
ELEVATIONS

DATE 24/02/2026	SCALE 1:100	DRAWN BY CK	
REVISION No. R:0	SHEET SIZE A3	JOB No. 26-004	SHEET No. C04.0



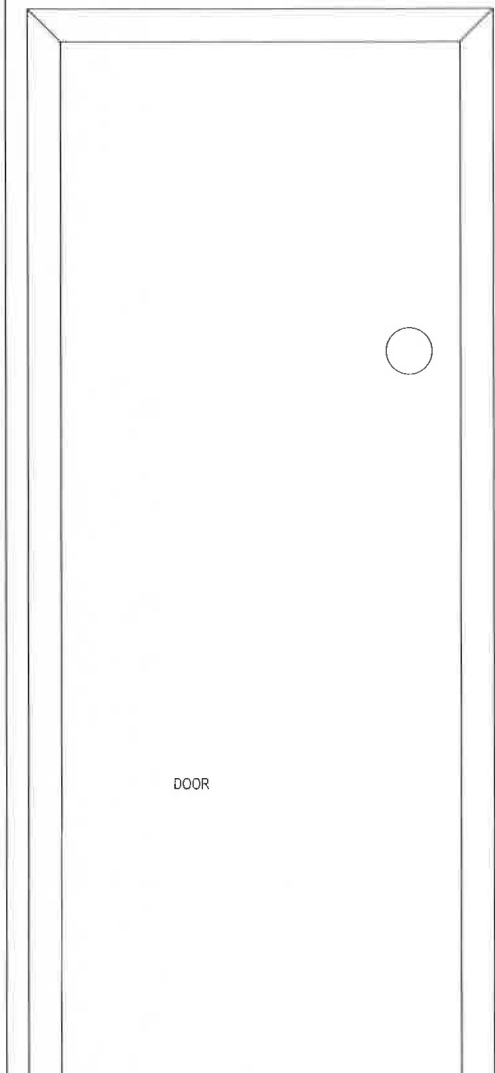
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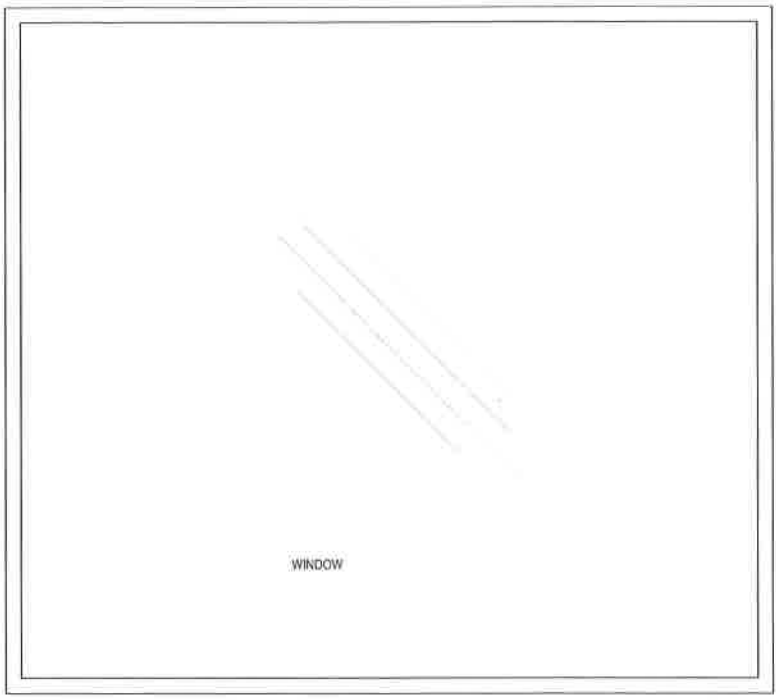


CLIENT NAME SOUTHERN MIDLANDS COUNCIL		DRAWING TITLE DETAIL 1	
PROJECT ADDRESS 4 OLD HUNTING RD, KEMPTON TAS 7030		DATE 24/02/2026	SCALE 1:10
PROJECT CHANGE OF USE TO CHILD CARE FACILITY	REVISION No R:0	SHEET SIZE A3	JOB No 26-004
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DOOR



WINDOW



ADMIN DOOR/ WINDOW

Scale: 1:10

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PROJECT: CHANGE OF USE TO CHILD CARE FACILITY

DRAWING TITLE DETAIL 2		DATE 24/02/2026	SCALE 1:10	DRAWN BY CK
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Prepared for:

Southern Midlands Council

Kempton Primary School Kempton

FLOOD HAZARD REPORT

Project Number: **FE_26102**
First Release: 19 May 2026

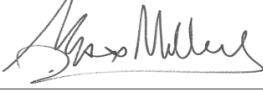




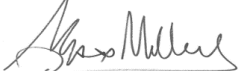
flüssig
Engineers

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Document Information

Title	Client	Document Number	Project Manager
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Document Initial Revision

REVISION 00	Staff Name	Signature	Date
Prepared by	Max W. Moller <i>Principal Hydraulic Engineer</i>		12/05/2026
Prepared by	Ash Perera <i>Senior Hydraulic Engineer</i>		12/05/2026
Prepared by	Christine Keane <i>Senior Water Resources Analyst</i>		12/05/2026
Prepared by	Fraser Cumming <i>Graduate Civil Engineer</i>		15/05/2026
Reviewed by	John Holmes <i>Senior Engineer</i>		17/05/2026
Authorised by	Max W. Möller <i>Principal Hydraulic Engineer</i>		19/05/2026

Rev No.	Description	Prepared by	Authorised by	Date

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1. Introduction

Flüssig Engineers has been engaged by **Southern Midlands Council** to undertake a site-specific Flood Hazard Report for the development at Kempton Primary School, Kempton in the Southern Midlands Council municipality. The purpose of this report is to determine the flood characteristics on the existing development flood inundation hazard scenarios for the 1% AEP plus climate change, for the purpose of the planning application for a change of use.

1.1 Development

The proposal involves a change of use of the existing buildings to Educational and Occasional Care. The site is located at No. 4 to 6 Old Hunting Ground Road, Kempton, and currently contains two main building structures, car parking areas, sheds, play courts, and open areas used for recreation and sporting activities.

1.2 Objectives and Scope

This report is to assess the proposed development at Kempton Primary School, Kempton under Clause C12.5.2, Critical use, hazardous use or vulnerable use, of the Flood Prone Hazard Areas of the Tasmanian Planning Scheme. The objectives of this study are:

- Provide an assessment of the site's flood characteristics under the 1% AEP plus climate change (CC) scenario.
- Provide comparison of flooding against acceptable solution and performance criteria.
- Provide flood mitigation recommendations where appropriate.

1.3 Limitations

This investigation is constrained by the defined objectives set forth by our clients, the accessibility and dependability of available data, and includes the following considerations:

- The flood model is specifically tailored to a worst-case scenario, encompassing a 1% Annual Exceedance Probability (AEP) in combination with the effects of climate change (CC)
- All model parameters have been extrapolated from best practice manuals and relevant studies within the area, ensuring alignment with established methodologies.
- Any data supplied by the client or governmental bodies for the purposes of this study is assumed to be fit for its intended purpose. However, it should be noted that a comprehensive accuracy check of the origine of the data has not been conducted on the provided information.
- The study has been prepared specifically to assess the flood implications of the proposed change of use of the existing facility. The proposed works are understood to be internal to the existing buildings and do not alter the external site geometry, introduce new structures, or modify flood behaviour.

These limitations are integral to the study's context and should be taken into consideration when interpreting the findings and applying them in decision-making processes.

1.4 Relevant Planning Scheme Requirements

Table 1. Tasmanian Planning Scheme Requirements

Planning Scheme Code	Objective
C12.5.2 Critical use, hazardous use or vulnerable use	That critical, hazardous and vulnerable uses, located within a flood-prone hazard area can achieve and maintain a tolerable risk from flood.

2. Model Build

2.1 Overview of Catchment

The contributing catchment for Kempton Primary School, Kempton is approximately 1500 ha extending to the Quoin Mountain and Spencer Hill from the south of the site with an average slope of 8.0 %.

The land use of the catchment is General Agriculture and Rural with the specific site being listed as Village. Figure 1 below outlines the approximate contributing catchment for the site at Kempton Primary School, Kempton.

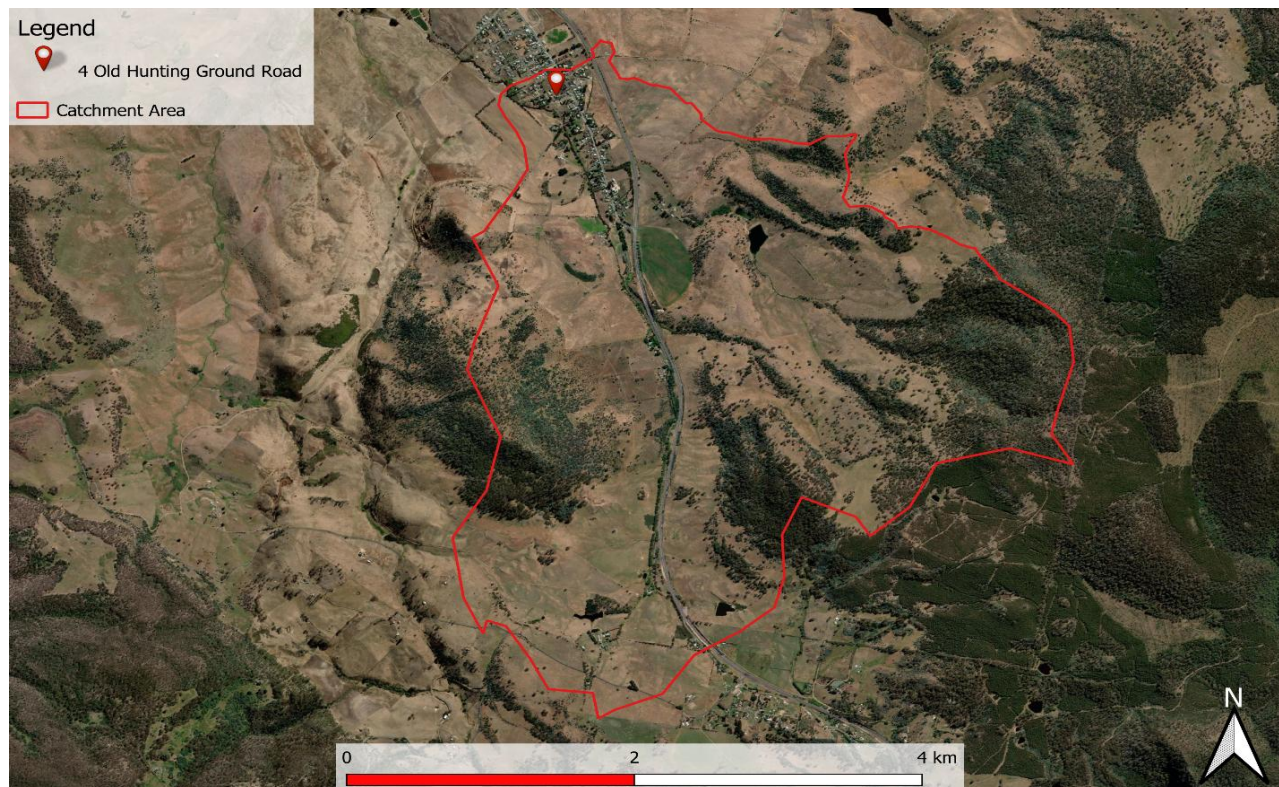


Figure 1. Contributing Catchment, Kempton Primary School, Kempton

2.2 Hydrology

The following Table 2 states the adopted hydrological parameters for the RAFTS catchment. The adopted initial and continuous rainfall losses values were conservatively adopted from best practices and from Australian Rainfall & Runoff Revision Project 6 Loss Models for Catchment Simulation – Urban Catchments Stage 2 Report.

Table 2. Parameters for RAFTS catchment

Catchment Area (ha)	Initial Loss Perv/imp (mm)	Continuing Loss Perv/imp (mm/hr)	Manning's N pervious	Manning's N impervious	Non-linearity factor
1500	24-12/1	4.7-2/0.0	0.045	0.02	-0.285

2.2.1 Design Rainfall Event

In Figure 2, the box and whisker plot visually represent the output generated by the model run. The results show that the 1% Annual Exceedance Probability (AEP) 1 hour storm with temporal pattern 4 emerged as the most severe in terms of median storm characteristics. This particular storm event was selected as the worst-case scenario for further integration into the hydraulic model. The utilisation of this specific storm pattern ensures a comprehensive assessment of the system's response under conditions representing a high level of hydrological stress, thereby enhancing the model's ability to simulate and address extreme weather scenarios.

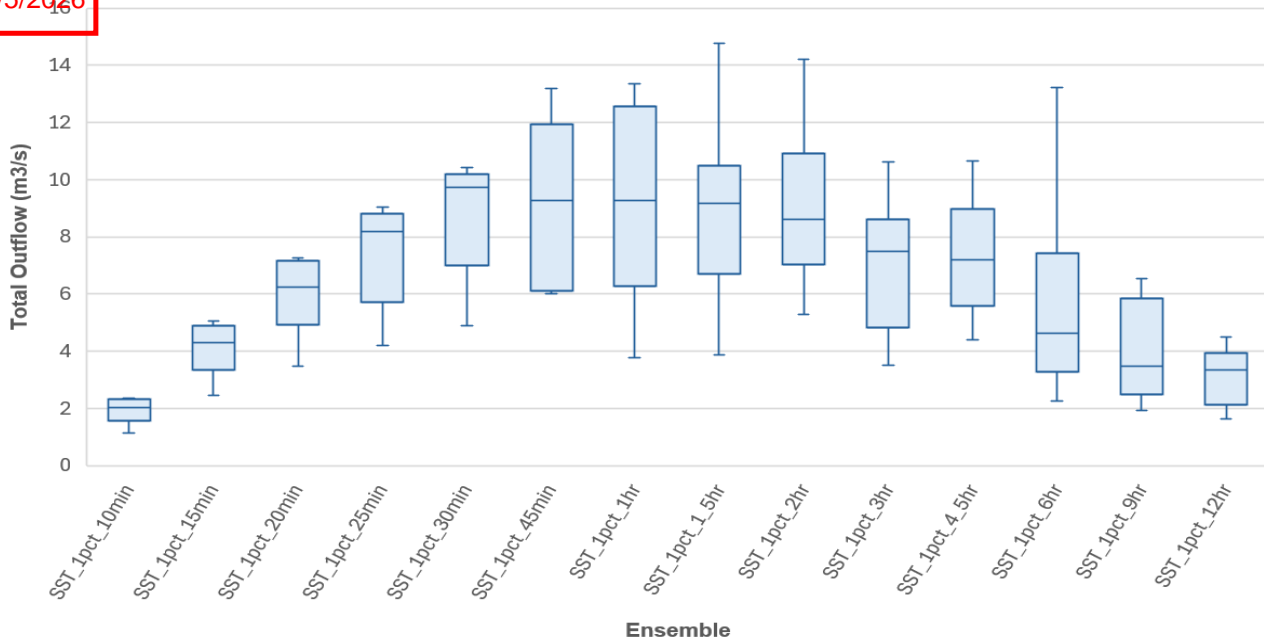


Figure 2. Comparison of Storm Ensembles of Different Durations - 1% AEP Flood Event Model

2.2.2 Calibration/Validation

This catchment has no stream gauge to calibrate the model and limited available past flood analysis undertaken to validate against the flows obtained in the model. A Regional Flood Frequency Estimation model (RFFE) has been used to calibrate our rain on grid rainfall estimation. The RFFE values are listed in Table 3 below.

Table 3. Regional Flood Frequency Estimation model (RFFE) v/s Flussig Result.

AEP (%)	Discharge (m³/s)	Lower Confidence Limit (5%) (m³/s)	Upper Confidence Limit (95%) (m³/s)	Flussig Discharge (m³/s)
50	2.94	1.27	6.95	3.47
20	4.93	2.13	11.5	5.65
10	6.54	2.45	17.2	7.01
5	8.29	2.61	25.3	9.12
2	10.9	2.73	40.6	11.35
1	13.2	2.77	56.6	15.35
Input Data				
Date/Time	2026-05-15 09:36			
Catchment Name	Kempton			
Latitude (Outlet)	-42.532			
Longitude (Outlet)	147.191			
Latitude (Centroid)	-42.548			
Longitude (Centroid)	147.217			
Catchment Area (km²)	15.0			
Distance to Nearest Gauged Catchment (km)	24.08			
50% AEP 6 Hour Rainfall Intensity (mm/h)	4.211626			
2% AEP 6 Hour Rainfall Intensity (mm/h)	8.723344			
Rainfall Intensity Source (User/Auto)	Auto			
Region	Tasmania			
Region Version	RFFE Model 2016 v1			
Region Source (User/Auto)	Auto			
Shape Factor	0.72			
Interpolation Method	Natural Neighbour			
Bias Correction Value	0.464			

2.2.3 Climate Change

As per the ARR 2019 Guide for Flood Estimation (Version 4.2), the recommended approach for estimating increases in rainfall due to climate change projections for the year 2100 is to use the SSP-3-7.0 (Shared Socioeconomic Pathway 3) scenario.

According to Table 3 of the guide, a multiplication factor of 1.66 is adopted for rainfall durations of 1 hour under the SSP-3-7.0 2100 scenario. This factor accounts for the anticipated intensification of extreme rainfall events due to climate change impacts.

Table 4. Climate Change Increases

Parameter	SSP3-7.0 @ 2100
1 hour Rainfall Intensity	66% Increase

2.3 Hydraulics

2.3.1 Survey

The two-dimensional surface model was developed using a combined Digital Elevation Model derived from the Kempton/ SouthEast LiDAR 2019 dataset obtained from Geoscience Australia, together with detailed design drawings and site survey information for the proposed works and existing conditions.

For this assessment, the adopted resolutions are sufficient to accurately capture surface gradients and overland flow paths. The hill shaded DEM is presented in Figure 3. Hydraulic structures are represented as one-dimensional or two-dimensional elements, with one-dimensional to two-dimensional links provided to allow realistic flow exchange between the pipe network and surface domain.



Figure 3. 1.0m DEM (Hill shade) of Lot Area

2.3.2 Roads

Roads often form the basis for overland flow in high frequency events; however, the kerb and channel are not always picked up by DEM surface. To correct for the drainage lines, mesh polygons were used to delineate road corridors with the roads being incorporated a z-line along the gutter to ensure the kerb invert is represent in the mesh.

In our Digital Elevation Model (DEM), a "z-line" refers to a line representing a constant elevation or contour line. These lines connect the existing kerb points of equal elevation on the terrain surface, allowing for visualisation of the terrain's shape and elevation changes.

2.3.3 Buildings

Specifically, residential houses and commercial buildings were integrated into the DEM by elevating the corresponding grid cells representing these structures by a standardised height of 0.3 meters above the natural ground surface. Subsequently, the re-sampled grids were utilised to establish the InfoWorks ICM model, thus forming a foundational framework for the subsequent analysis and simulation of flood dynamics.

This method allows for flow through the building if the flood levels/ pressure become great enough. The aim is to mimic flow through passageways such as doors, windows, and hallways.

2.3.4 Boundary Conditions

InfoWorks ICM operates as a single-use software, streamlining the hydrology and hydraulic modelling processes within a unified framework. This unique feature eliminates the necessity for separate inflow boundary conditions, as the hydrology model seamlessly integrates with the hydraulic model through a 1D or 2D link.

For this model a rain on grid, boundary conditions were applied for the design rainfall interaction with the surface, influencing factors such as runoff generation, infiltration, and subsequent flow through the catchment. This properly defined boundary conditions were crucial for ensuring that the model accurately represents real-world hydrological processes.

2.3.5 Structures

In the process of crafting a two-dimensional grid to depict the ground surface of the floodplain, we initiated by re-sampling LiDAR data to generate a digital elevation model (DEM) through the utilisation of ARC GIS software.

Within this procedure, the attention was directed towards identifying and incorporating pertinent features such as residential structures, commercial buildings, walls, and roadways. Ensuring the comprehensive inclusion of these features within the re-sampled DEM was of utmost importance.

2.3.6 Structures Blockage

In alignment with the ARR2019 guidelines and insights gained from Project 11, specific blockage factors have been carefully determined for the culvert situated at the Green Ponds Rivulet under the Sugarloaf Road.

For the above culvert, a conservative blockage factor of 20% has been applied. This figure has been calculated based on a thorough assessment of the potential for debris accumulation, encompassing both natural materials such as branches, leaves, and the inclusion of 10% of sediment accumulation, as well as human-made obstructions that may impede the flow.

The choice of a 20% blockage factor is informed by site-specific observations, which collectively indicate a medium risk of blockage. The surrounding vegetation, coupled with the area's topography, presents significant potential for debris to obstruct the culvert, justifying the need for a conservative approach in modelling.

2.3.7 Roughness (Manning's n)

The model grid's roughness and equivalent Manning's n values were derived from land use data. The specific values utilised are outlined in Table 5 provided below. These parameters have proven effective in previous flood mapping projects undertaken in Tasmania.

Table 5. Manning's Coefficients (ARR 2019)

Land Use	Roads	Open Channel	Rural	Residential	Parks	Buildings	Piped Infrastructure
Manning's n	0.018	0.035	0.04	0.045	0.05	0.3	0.013

3. Model Results

3.1 Existing Conditions Flood Scenario

The existing conditions flood scenario for Kempton Primary School at No. 4 to 6 Old Hunting Ground Road, Kempton, has been assessed for the 1% AEP flood event including climate change to the year 2100. The assessment reflects the site layout, including the existing school buildings, hardstand areas, recreation spaces, surrounding roads, local drainage controls and adjoining properties. The results represent flood behaviour before any proposed change of use, mitigation works or site modifications are applied.

The year 2100 climate change rainfall allowance has been adopted in accordance with ARR 2019 Version 4.2, using the SSP 3 7.0 pathway.

The flood mapping indicates that the main inundation influence occurs along the south-western portion of the school site, adjacent to Old Hunting Ground Road and the lower ground near the existing access, car parking and hardstand areas. Floodwater appears to approach the site from the broader overland flow path to the west and south, with water spreading across low lying areas and entering the southern section of the property.

The central and northern portions of the school grounds remain largely outside the mapped inundation extent, with the building footprints generally positioned away from the deeper and faster moving floodwater.

Mapped flood depths across the affected portion of the site are generally moderate, with spot depths between approximately 0.31 m and 0.61 m. Localised deeper areas are shown near the southern car park and adjacent low points, while shallower depths are present near the margins of the inundation extent. These depths indicate that flooding is present within the school property, but is not uniformly distributed across the full site. Instead, the inundation follows the natural low point and road corridor, with the more elevated open space and the principal building area remaining less affected.

The flood hazard mapping indicates that most of the affected school area is within lower hazard categories, generally H1 to H2, with higher hazard classifications mainly located outside the central school building area and within the broader flow path to the south and west. Velocity mapping shows that higher velocities are concentrated along the western and southern overland flow corridor, particularly near Louisa Street and Old Hunting Ground Road.

Within the school site, velocities reduce toward the existing buildings, although some localised flow movement remains evident through the southern portion of the property. Overall, the existing conditions scenario indicates that flood affectation is present, but it is largely confined to the lower southern part of the site, while the main school building area remains outside the main flood conveyance corridor.

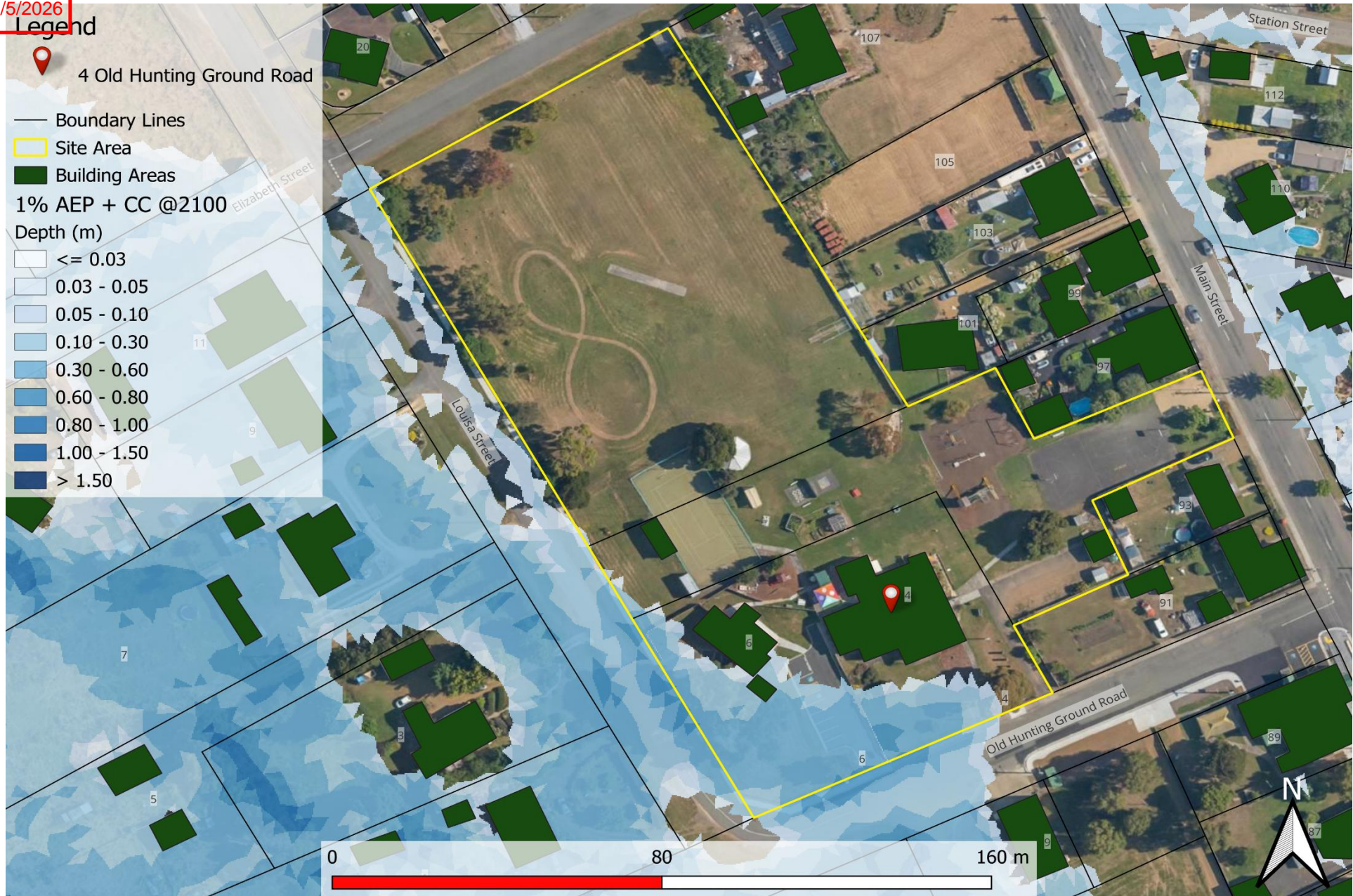


Figure 4. Existing Conditions 1% AEP + CC 2100 Depth.

4. Flood Hazard

The flood hazard categories adopted for this assessment are described in Figure 5, while the spatial distribution of hazard across the site is presented in Appendix A. The mapping relates to the existing conditions 1% AEP flood event, including climate change to year 2100, for Kempton Primary School at No. 4 to 6 Old Hunting Ground Road, Kempton.

The results indicate that flood hazard within the school property is generally limited to the southern and south western portions of the site, where overland flow interacts with Old Hunting Ground Road, Louisa Street and lower access areas. The main school building footprint is generally located outside the mapped inundation and higher hazard areas, reducing flood risk to the building.

Within the affected parts of the school site, the hazard is predominantly within the lower categories, generally H1 and H2. These areas are associated with shallow to moderate inundation and reduced velocities compared with the broader external flow path. Localised H3 conditions may occur near the southern boundary of the site and adjoining road corridor, where greater flood depth and flow concentration are shown.

The higher hazard categories, including H4, H5, are generally concentrated outside the main school buildings and sport grounds, particularly within the broader low lying overland flow corridor to the west and south. These areas represent conditions where flood depths, velocities, or the combined depth velocity product become less suitable for safe movement and should be avoided.

Overall, the existing flood hazard is constrained, with the principal concern being access, hardstand inundation and management of south-western site areas during extreme events.

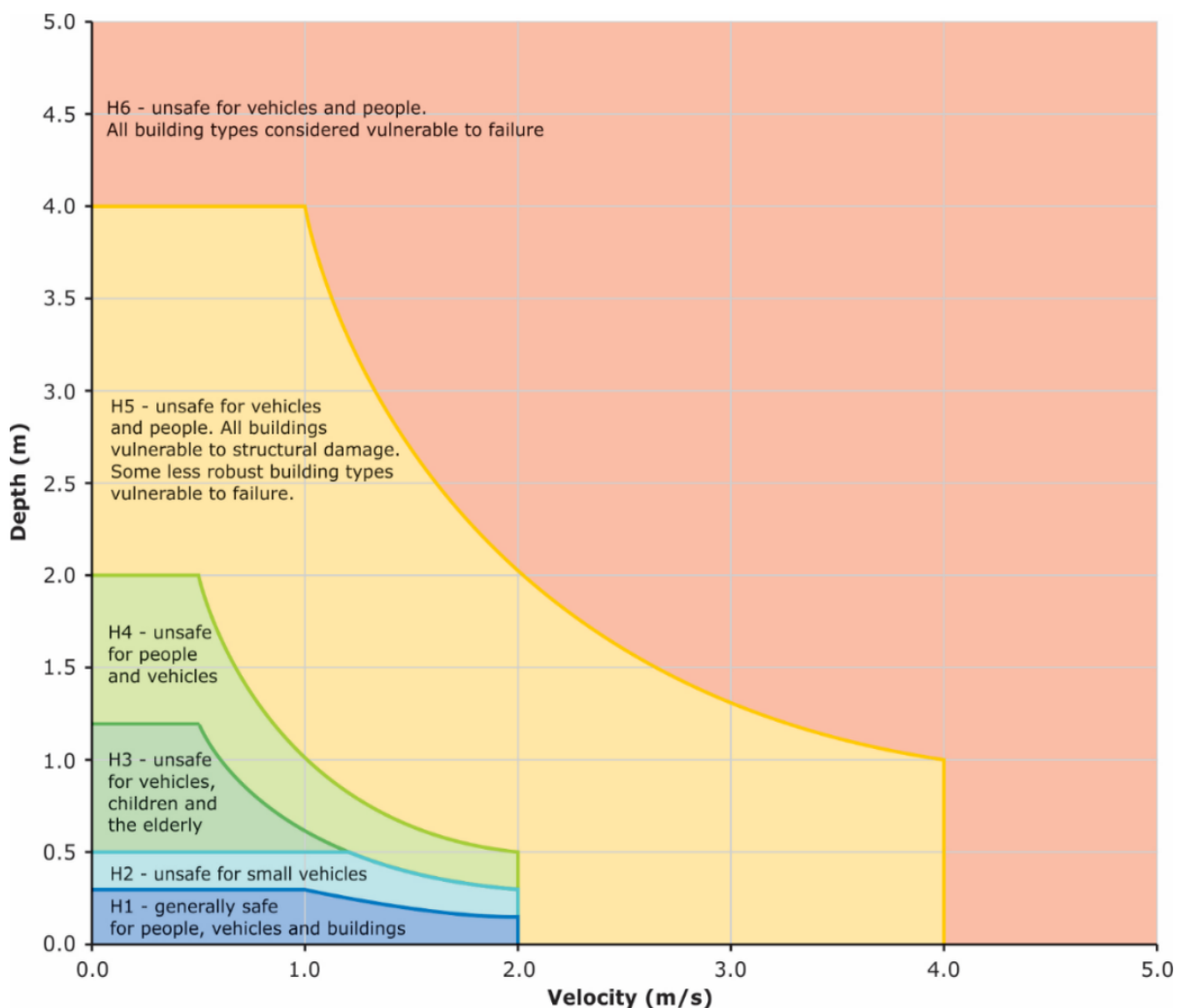


Figure 5. Hazard Categories Australian Disaster and Resilience Handbook

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4.1 Tolerable Risk

The assessment of tolerable risk for Kempton Primary School at No. 4 to 6 Old Hunting Ground Road, Kempton, has been undertaken with particular consideration of the proposed change of use to Educational and Occasional Care. This use is sensitive to flood risk because the facility may be occupied by children, staff, carers, visitors and other vulnerable people who may have limited capacity to recognise flood danger, move independently, or respond quickly during an emergency.

The existing conditions flood modelling indicates that the main school building footprint is located outside the mapped higher hazard areas for the 1% AEP flood event, including climate change to year 2100. The principal flood affectation is located within the southern and south western portions of the property, where overland flow interacts with Old Hunting Ground Road, Louisa Street, access areas, car parking and hardstand surfaces. Within the school site, the mapped flood hazard is generally within the lower categories, predominantly H1 and H2, with localised areas of increased hazard near the road and external flow corridor.

Although the modelling indicates that the existing building areas are not subject to the highest hazard classifications, the presence of vulnerable occupants means that the risk cannot be assessed only by reference to flood depth and hazard category. Tolerable risk also depends on warning time, supervision, evacuation capability, staff procedures, safe refuge, access arrangements, flood awareness and the ability to prevent children from entering inundated external areas during a flood event.

For this reason, a full assessment of flood risk and operational management has been developed within the Flood Risk Inundation Management Plan. That plan should be read in conjunction with this flood assessment, as it provides the practical management framework required to support the proposed use of the facility. The plan sets out flood triggers, communication pathways, staff responsibilities, site management procedures, restricted access areas, evacuation considerations and response actions required before, during and after a significant rainfall event.

The tolerable risk outcome relies on the ongoing implementation of those management measures. In particular, staff must remain aware that the southern portion of the site and adjoining road corridor may become inundated during extreme rainfall events. Children and vulnerable users should not be permitted to enter flooded hardstand, driveway, car parking or external play areas when floodwater is present. Any movement through inundated areas should be avoided, because floodwater can conceal hazards, create instability and restrict safe access.

The proposed use may therefore be considered capable of achieving a tolerable flood risk outcome, provided that the Flood Risk Inundation Management Plan is implemented, maintained, reviewed and understood by staff. The plan should be incorporated into emergency management procedures for the site and should be available to staff responsible for daily operation, supervision and emergency response. Regular review is recommended, particularly if site layout, building use, drainage conditions, staffing arrangements or access arrangements change in future.

It is also important that the tolerable risk conclusion is not interpreted as meaning that the site is free from flood hazard. Rather, the conclusion recognises that the highest hazard areas are generally outside the main building footprint and that the remaining flood risk can be managed through appropriate operational controls. This is particularly relevant for an Educational and Occasional Care use, where duty of care obligations require a higher level of planning than would normally apply to other types of building use.

On this basis, the flood risk is considered tolerable for the intended use, subject to strict adherence to the Flood Risk Inundation Management Plan and the recommendations of this assessment. The management plan provides the necessary link between the modelled flood behaviour and the day to day procedures required to protect vulnerable occupants during extreme rainfall and inundation flood events.

Table 6. TPS C12.5.2 Critical use, hazardous use or vulnerable use.

C12.5.2 Critical use, hazardous use or vulnerable use	
Objectives: That critical, hazardous and vulnerable uses, located within a flood-prone hazard area can achieve and maintain a tolerable risk from flood	
Performance Criteria	
P1	P1
A critical, hazardous, or vulnerable use within a flood-prone hazard area must achieve a tolerable level of risk from flood, having regard to:	Response from flood report
(a) the type form and duration of the use; and	(a) Level of risk within the site is tolerable for an educational facility considered as vulnerable use as the hazard classification within the site and outside the building areas are a majority H1 - H3.
(b) a flood hazard report that demonstrates that: (i) any increase in the level of risk from flood does not warrant any specific hazard reduction or protection measures; or (ii) the use can achieve and maintain a tolerable risk from a 1% annual exceedance probability flood event for the intended life of the use without requiring any flood protection measures.	(b, i) No increase in risk level following proposed change of use. (b, ii) Flood protection measures not required for risk to be considered tolerable in a 1% AEP flood event.
P4	P4
In addition to the requirements in clause C12.5.2 P1, a vulnerable use within a flood-prone hazard area, must be protected from flood, having regard to:	Response from flood report
(a) any protection measures, existing or proposed;	(a) N/A
(b) the ability and capability of people in a flood event who may live, work or visit the site, to: (i) protect themselves (ii) evacuate in an emergency; and (iii) understand and respond to instructions in the event of an emergency;	(b, i) Vulnerable people would be able to protect themselves in a 1% AEP event as site is classified majority H1/ H3 hazard as the building area remains free from inundation. (ii) Evacuation to areas within the site that do not experience inundation can be achieved via areas on the western side of the facility near the outdoor undercover area. (iii) Children and people with reduced abilities would be able to respond to emergency instructions.
(c) Any emergency evacuation plan	(c) An emergency evacuation plan for a flood event could readily be achieved as there are areas free from inundation on the western side of the site which is accessible via clear pathways within the building.
(d) the level of risk for emergency personnel involved in evacuation and rescue tasks;	(d) The level of risk to emergency personnel in an evacuation/ rescue scenario would be considered low as the areas of highest flood hazard can be avoided to gain access to the building from either the eastern side Main St., or via the sport grounds on Elizabeth St.
(e) the advice contained in a flood hazard report; and	(e) See recommendations contained within this report.
(f) any advice from a State authority, regulated entity or a council.	(f) N/A

5. Conclusion

The flood assessment for Kempton Primary School at No. 4 to 6 Old Hunting Ground Road, Kempton, has considered the proposed change of use to Educational and Occasional Care under the existing site conditions.

The 1% AEP flood event, including climate change to year 2100, indicates that flood affectation is generally limited to the southern and south western portions of the site, near Old Hunting Ground Road, Louisa Street, the lower access areas, car parking and hardstand surfaces. The main school building footprint is generally outside the mapped higher hazard areas and outside the main overland flow conveyance corridor.

The hazard mapping provided in Appendix A shows that the affected areas within the site are mostly within the lower hazard categories, generally H1 to H2, with higher hazard areas mainly located outside the core school facilities.

Given the vulnerable nature of the proposed use, the flood risk relies on the implementation of the Flood Risk Inundation Management Plan. Subject to that plan being adopted, maintained and followed by staff, the proposed change of use is considered capable of achieving a tolerable flood risk outcome.

6. Recommendations

Based on the flood assessment undertaken for Kempton Primary School at No. 4 to 6 Old Hunting Ground Road, Kempton, the following recommendations are provided:

1. The Flood Risk Inundation Management Plan should be adopted and implemented as part of the operational procedures for the proposed Educational and Occasional Care use.
2. Staff should be made aware of the mapped flood affected areas, particularly the southern and south western portions of the site near Old Hunting Ground Road, Louisa Street, the access areas, car parking and hardstand areas.
3. Children, visitors and other vulnerable occupants should not be permitted to enter flooded external areas during or immediately after significant rainfall events.
4. Site access and evacuation procedures should be clearly understood by staff, with flood response actions included in the facility's emergency management procedures.
5. The Flood Risk Inundation Management Plan should be reviewed periodically and updated if there are changes to the site layout, building use, drainage conditions, access arrangements, or staffing procedures.
6. Any future works within the mapped flood prone area should be assessed by a suitably qualified hydraulic engineer to confirm that the works do not increase flood risk to the site or adjoining properties.
7. No filling, obstruction, fencing, landscaping, or new structures should be placed within the main overland flow affected areas unless supported by further hydraulic assessment.
8. Any future building works within the mapped flood prone area, particularly habitable or regularly occupied areas, should be assessed against the relevant requirements of the Tasmanian Planning Scheme and the National Construction Code.

Subject to the above recommendations being implemented, the proposed change of use is considered capable of achieving a tolerable flood risk outcome.

7. Limitations

Flüssig Engineers was engaged by Southern Midlands Council to prepare a site specific Flood Hazard Report for Kempton Primary School, No. 4 to 6 Old Hunting Ground Road, Kempton.

This report has been prepared specifically in response to Council's Request for Information, which requested a Flood Hazard Report prepared by a suitably qualified professional to demonstrate compliance with Clause C12.5.2, Critical use, hazardous use or vulnerable use, of the Tasmanian Planning Scheme.

The assessment relates only to the proposed change of use to Educational and Occasional Care under the existing site conditions. It is based on the information available at the time of preparation, including supplied site information, topographic data, adopted rainfall and climate change inputs, and hydraulic modelling assumptions.

The flood results are specific to the assessed 1% AEP event, including climate change to year 2100. Other storm events may produce different flood depths, velocities, extents and hazard conditions.

The tolerable risk conclusion relies on the adoption and implementation of the Flood Risk Inundation Management Plan. This report should not be relied upon for future building works, civil design, drainage design, structural design, or site modifications without further review.

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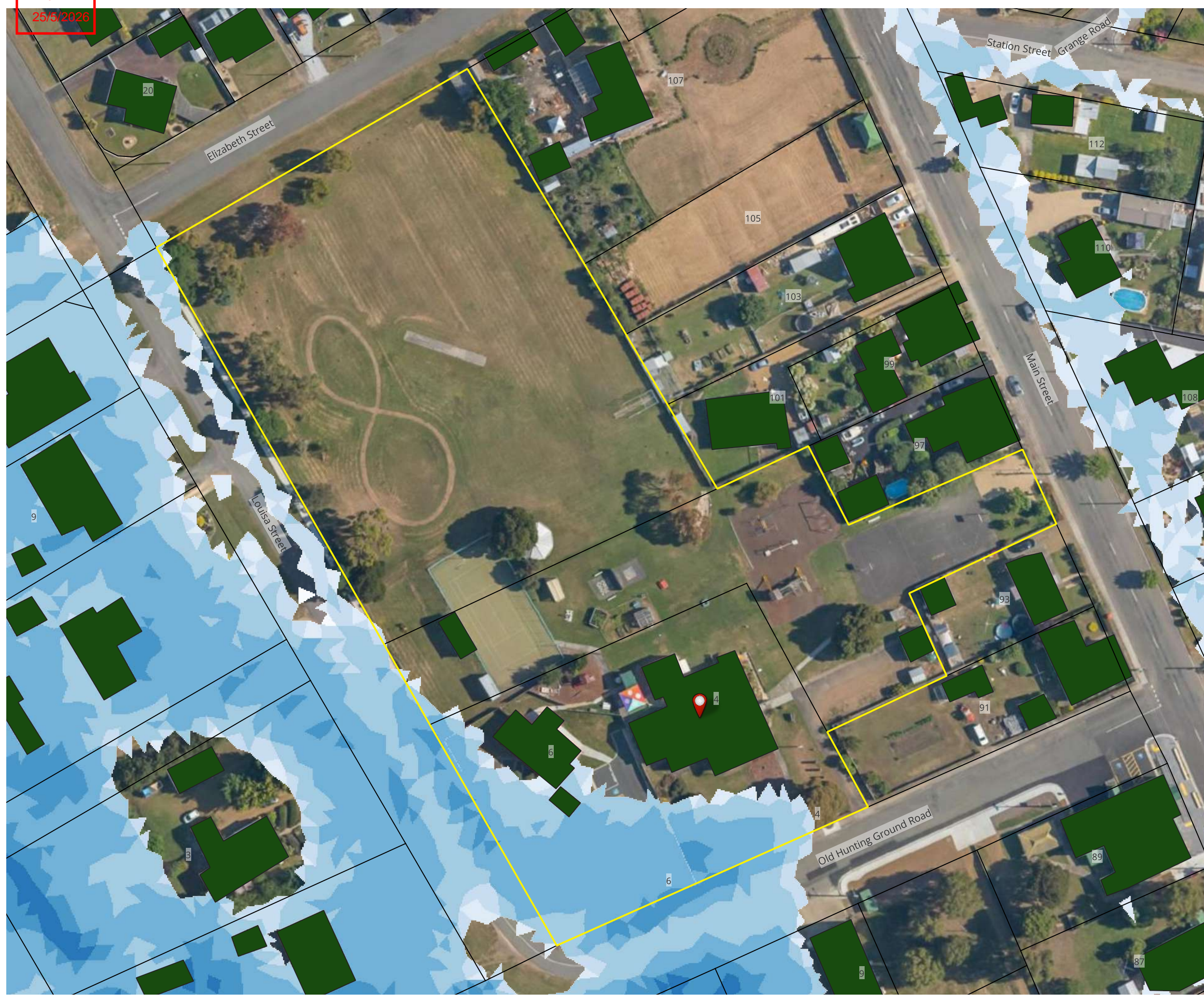
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Appendices

Appendix A: Flood Study Maps

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1% AEP + CC @ 2100



Legend

- 4 Old Hunting Ground Road
- Boundary Lines
- Site Area
- Building Areas
- 1% AEP + CC @2100**
- Depth (m)**
- <= 0.03
- 0.03 - 0.05
- 0.05 - 0.10
- 0.10 - 0.30
- 0.30 - 0.60
- 0.60 - 0.80
- 0.80 - 1.00
- 1.00 - 1.50
- > 1.50



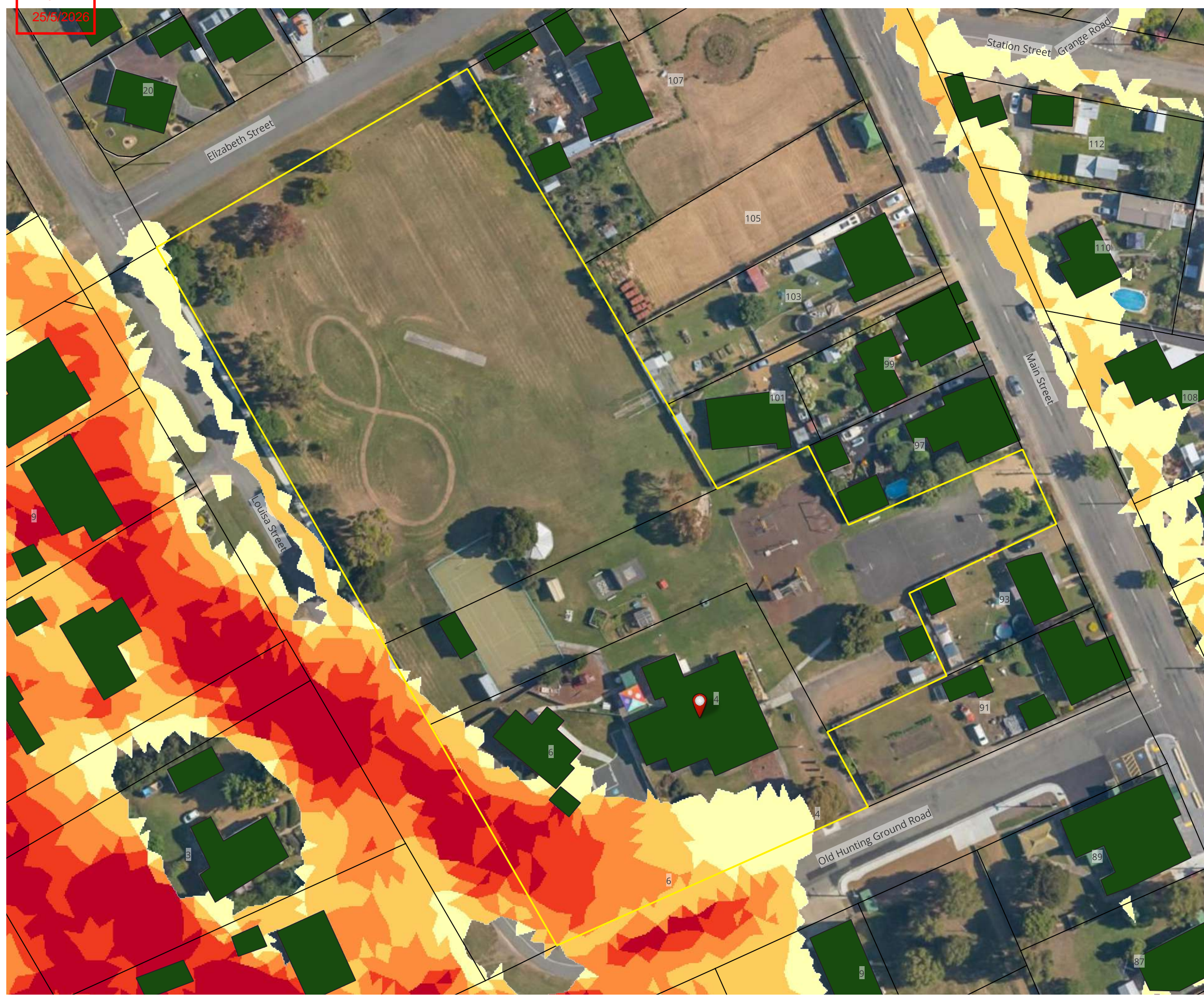
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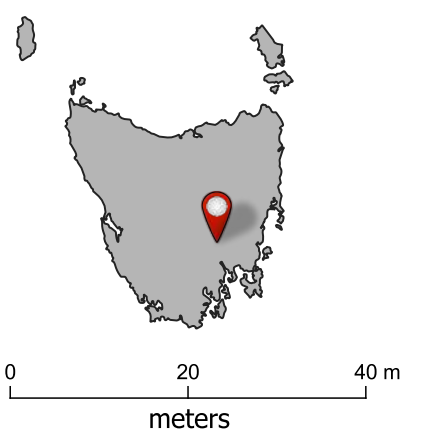
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1% AEP + CC @ 2100



Legend

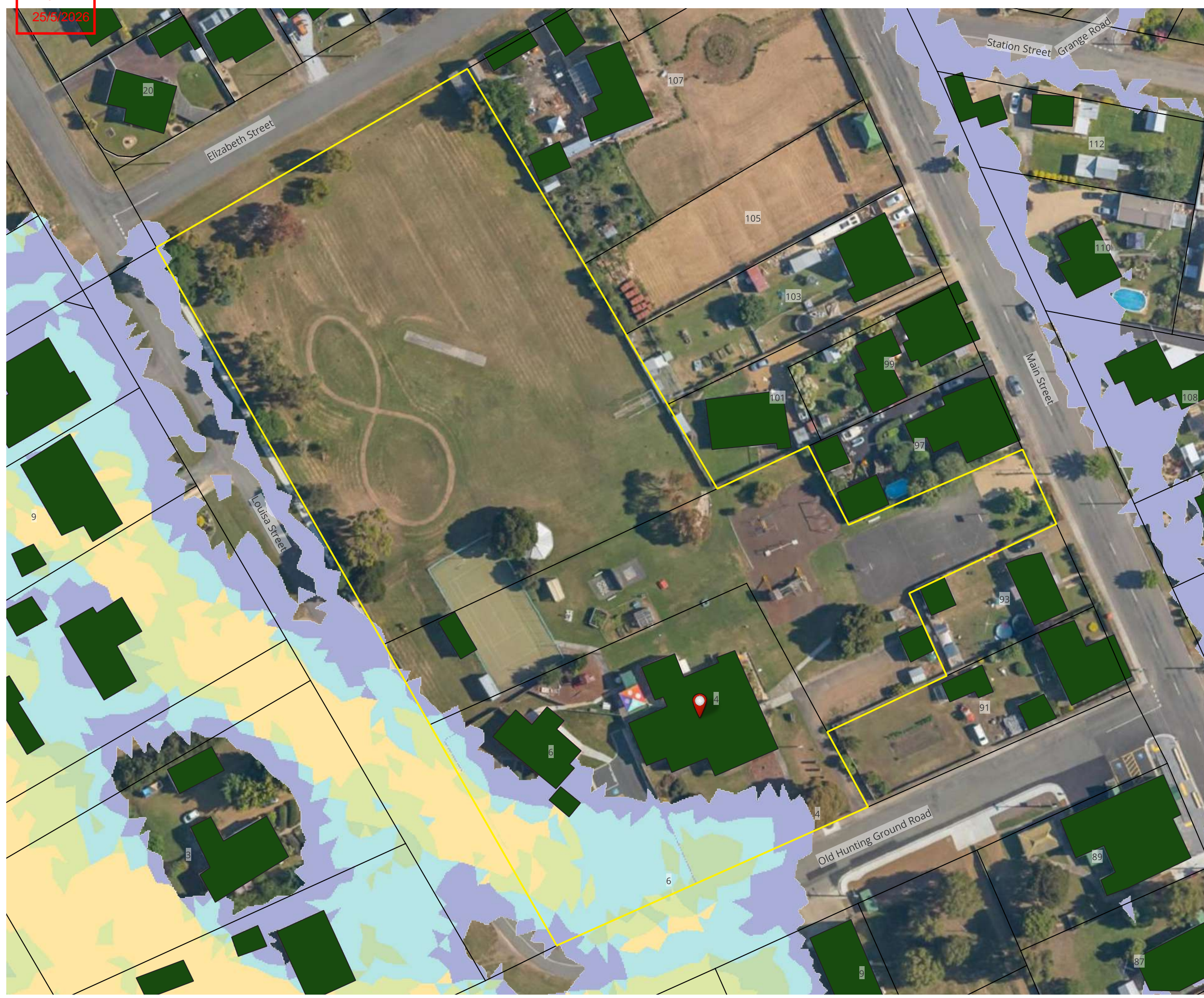
- 4 Old Hunting Ground Road
- Boundary Lines
- Site Area
- Building Areas
- 1% AEP + CC @2100**
- Velocity (m/s)**
- <= 0.50
- 0.50 - 1.00
- 1.00 - 1.50
- 1.50 - 2.00
- > 2.00



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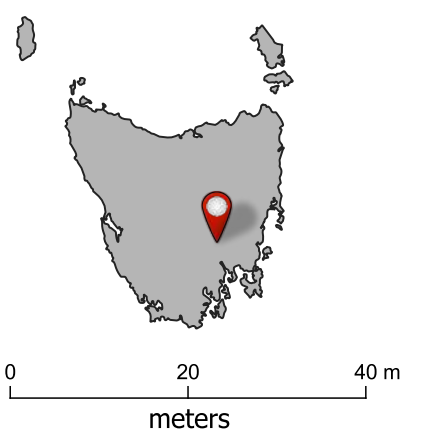
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1% AEP + CC @ 2100



Legend

- 4 Old Hunting Ground Road
- Boundary Lines
- Site Area
- Building Areas
- 1% AEP + CC @2100**
- Hazard**
- H1
- H2
- H3
- H4
- H5
- H6



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Prepared for:
Southern Midlands Council

Kempton Primary School 4 Old Hunting Ground Rd Kempton







FLOOD RISK INUNDATION
MANAGEMENT PLAN (FRIMP)

FE_26102
21 May 2026

Document Information

Title	Client	Document Number	Project Manager
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Document Initial Revision

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Authorised by	Max W. Moller <i>Principal Hydraulic Engineer</i>		21/05/2026

Document Revision

Rev No.	Description	Prepared by	Authorised by	Date

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Acronyms

- AEP: Annual Exceedance Probability
- ARR: Australian Rainfall and Runoff
- CC: Climate Change
- TPS: Tasmanian Planning Scheme
- FRIMP: Flood Risk Inundation Management Plan
- DEM: Digital Elevation Model

1. Introduction

Flüssig Engineers has been engaged by **Southern Midlands Council** to undertake a Flood Risk Inundation Management Plan (FRIMP) considering the proposed change of use to Educational and Occasional Care at 4 - 6 Old Hunting Ground Road, Kempton. This site is susceptible to flooding due to the presence of an overland flow that impacts the site from a southerly direction resulting in ponding in low-lying areas of the lot. The purpose of this report is to identify risks to safety of the occupants and management plan in case of flooding due to the nature of the facility being considered as a vulnerable use due to it being proposed as an educational facility.

In accordance with the TPS, *C12.5.2 Critical use, hazardous or vulnerable use*, the FRIMP aims to ensure that vulnerable users located within flood-prone areas can achieve and maintain a tolerable risk from flooding. The objective is to assess and manage potential flood risks to the site, given the facility's use, which involves the presence of vulnerable users, including children.

To help design out and to mitigate these risks, the development was assessed in line with the requirements of the Tasmanian Work Health and Safety Act 2012 ("the Act"). The Act is used as the primary instrument to determine risk profile and method, hazard ratings, and recommendations, to protect life safety.

The Act's stated aim is to address and mitigate work and occupational risks. It is also regarded as applicable here, as the primary risks to life apply equally to:

- Workers and contractors;
- Occupants and property owners;
- Visitors;
- Any other occupants.

The methods adopted from The Act are therefore applicable to protect life safety for all foreseeable occupants.

1.1 Legislative and Statutory Requirements

It is the responsibility of people involved in the design of a workplace to comply with the Tasmanian Work Health and Safety Act 2012.

The Tasmanian WHS Act 2012 obliges all designers to ensure, so far as is reasonably practicable, that the plant, substance or structure is designed to be without risks to the health and safety of persons who, either as an employee or a resident, use the plant, substance or structure for a purpose for which it was designed.

Section 20 of the WHS Act 2012 also obliges the employer to provide a workplace, the means of entering and exiting the workplace and anything arising from the workplace are without risks to the health and safety of any person. This includes making arrangements for ensuring, so far as is reasonably practicable, safety and the absence of risks to health in connection with the use, handling, storage or transport of substances.

This report will provide advice consistent with the requirements of the Act and forms part of the trail of evidence in support of the requirements. No physical testing of any plant or equipment was undertaken by Flüssig Engineers in the preparation of this report.

1.2 Objectives and Scope

The objectives of this Flood Risk Inundation Management Plan are:

- The risk of inundation in the site during a 1% AEP + CC event, with respect to the location of buildings, within applicable timeframes (current, year 2050 and/or year 2100) as outlined in the Flood Hazard Report (Flüssig Engineers).

- Assessment of the risk of flooding for the users of the facility through flood information derived from the Flood Hazard Report.
- Assessment of flood risk management options (structural and non-structural).
- Review of proposed works to determine the compatibility of the proposed change of use with the predicted flood conditions.

2. Summary of post-development flood conditions

2.1 Flooding on site

Flooding on site primarily arises from riverine inundation caused by a 1500 ha catchment that lies to the south and south-west of the site, originating from Quoin Mountain and Spencer Hill. The dominant overland flood path enters from the southern edge of the site resulting in ponding forming in a natural depression to the south and south-west corner of the site. The existing buildings remain relatively free from inundation, with flooding limited to the south-west corner of the site where there is an existing carpark and access areas to the school.

2.2 Impact on the school

Flooding during a 1% AEP + CC storm event has been analysed based on the flood inundation study conducted by Flüssig Engineers. The analysis indicates that the site is affected by overland flooding originating from the south that accumulates in low-lying areas to the south-west of the site in an existing carpark area. As stated in the Flussig Engineers Flood Hazard Report, flooding is considered as having an acceptable risk, however, due the facility being classified as being for vulnerable use, having an awareness of residual flooding on site needs to be understood and communicated to staff, students and visitors to ensure the safety of people during a major storm event.

Clear signage and having an emergency response plan should be utilised to warn staff and visitors of the potential dangers posed by the by flooding in a 1% AEP + CC flood event, preventing accidental entry into hazardous zones, placing people at risk.

2.3 Impact on evacuation routes

To identify and define the safest and most appropriate flood emergency management approach for the school facility, a detailed review of the 1% Annual Exceedance Probability flood event, inclusive of climate change allowance, was undertaken against clearly defined safety thresholds.

For the purpose of assessing risk to occupants, a depth threshold of 0.30 m and a velocity threshold of 2.0 m/s were adopted. These criteria align with recognised best practice and are consistent with the Australian Disaster Resilience Handbook flood hazard guidance. Under this framework, flood conditions where depths are less than 0.30 m and velocities are less than 2.0 m/s are generally considered tolerable for people, light vehicles, and buildings, provided exposure is managed appropriately. However, given the educational use of the facility and the presence of vulnerable occupants, including children or mobility impaired users, a more conservative and risk averse interpretation of these thresholds is required. The emergency management strategy must therefore ensure that occupants are not exposed to areas where depth, velocity, or combined hazard could compromise personal safety during a major storm event.

Flood modelling undertaken by Flüssig Engineers indicates that portions of the site are subject to higher hazard classifications during the 1% AEP plus climate change event. In isolated areas, flood hazard reaches up to H5, which is categorised as unsafe for vehicles and unsafe for children and the elderly. These areas represent a material safety consideration and must be managed through operational controls, physical measures, and a clearly documented Flood Emergency Management Plan.

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Figure 1 illustrates the spatial distribution of predicted flood depths across the developed site. The greatest depths across the broader property are concentrated along the south-western corner within the lot boundary adjacent to the corner of Louisa Street and Old Hunting Ground Road.

Within this area, the existing car park is predicted to experience flood depths of up to 0.52 m and velocity of up to 1.2 m/s near the southern entrance from Old Hunting Ground Road.

Although depths are generally less than 0.5 m, higher velocities on the south western boundary adjacent to Louisa Street of up to 2.4 m/s pose a greater hazard classification. While the building footprint itself remains protected, the presence of perimeter inundation increases the importance of controlled access and personal movement management during extreme rainfall conditions.

Given that inundation impacts a main thoroughfare to and from school buildings during the critical phase of the storm event, the preferred emergency management approach is for occupants to remain within the building during major storm conditions unless directed otherwise by emergency services. Shelter in place provides a controlled and safer environment compared with attempting to traverse external areas where flood depths and hazard classifications exceed safe limits particularly on the southern side of the school site facing Old Hunting Ground Road. Should evacuation be formally required by emergency authorities, a predefined and clearly marked evacuation route must be implemented. This route must avoid areas classified as H3 or greater and must not require movement through deep or fast flowing water. Appropriate signage, staff training, and operational procedures must be established to ensure that vulnerable occupants are not directed toward hazardous areas during an emergency.

In general, the flood response strategy for the site must prioritise controlled internal refuge during peak storm conditions, supported by clearly defined trigger levels, communication protocols, and a documented evacuation pathway that avoids high hazard zones.

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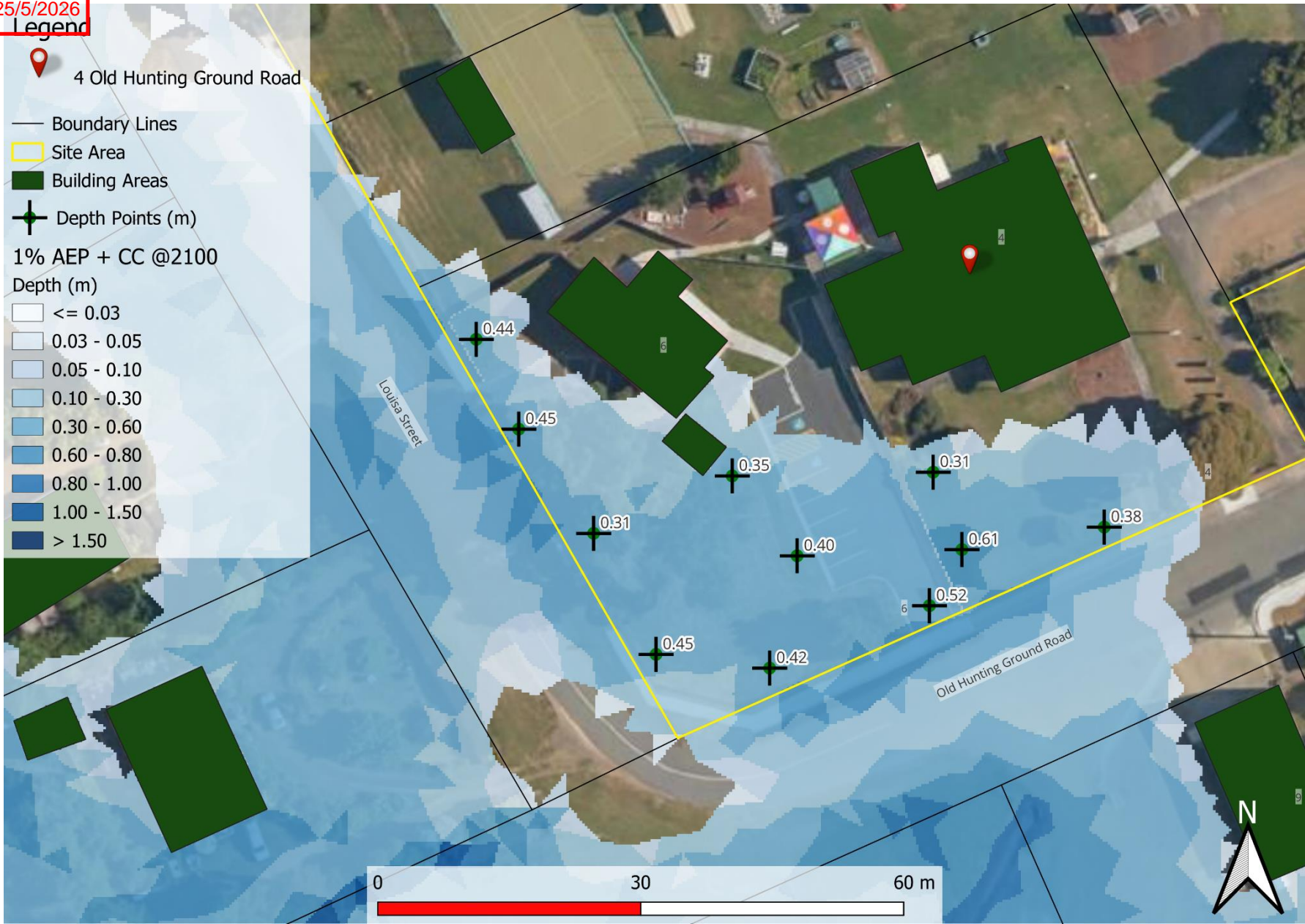


Figure 1. Post-Development 1% AEP + CC flood inundation depth

3. Assessment of FRIMP Options

The assessment conducted for the Flood Risk Inundation Management Plan (FRIMP) for the Kempton Primary School at 4 - 6 Old Hunting Ground Road, Kempton is derived from a comprehensive review of the site plan, site observations, and the flood report prepared by Flüssig Engineers. This evaluation aims to ensure that the development remains safe for all occupants, visitors, contractors, and the general public under potential flood scenarios specifically being occupied by vulnerable people. The FRIMP identifies specific flood risks and outlines a series of control measures to mitigate these hazards effectively, ensuring the safety and resilience of the development.

3.1 Hierarchy of Risk Controls

The hierarchy of risk controls is a structured approach to managing flood risks, prioritising proactive and preventive measures. The controls are categorised as follows:

1. Eliminate the Hazard:

The most effective method of flood risk management is the complete elimination of the hazard. For this development, it wasn't feasible to action full elimination of hazard.

2. Substitute or Isolate the Hazard:

Where elimination is not possible, the next best strategy is to substitute or isolate hazard. For this site, it is not practicable to isolate the hazard while maintaining access to the school during normal operation.

3. Implement an Engineered Solution:

No engineered solutions were applicable for this site as the extent of flooding was considered to be relatively acceptable risk as it is contained to the south-west area of the site and only minimally affects an existing building.

The above three controls are the proactive, preventive controls to manage hazards. The next two controls are the weakest in the hierarchy, only to be used when the above three controls are found to be not reasonably feasible.

4. Administrative Controls:

Administrative controls are essential for the ongoing management of flood risks. These measures include regular maintenance schedules for associated drainage infrastructure by conducting routine inspections to ensure that the drainage remains free of obstructions. Additional administrative controls include flood awareness training for residents and staff, and the development of emergency response plans tailored to the specific flood risks of the site.

5. Personal Protective Equipment (PPE):

As the least preferred method of risk control, PPE is reserved for scenarios where other measures are not sufficient. Maintenance personnel working near drainage features should be equipped with appropriate PPE as required by the specific maintenance task being undertaken.

3.2 Implementation of the Reasonably Practicable Principle

The "reasonably practicable" principle, as defined in Section 18 of the Tasmanian Work Health and Safety Act 2012, is applied to evaluate the suitability of each risk control measure. This principle balances the level of risk against the effort and resources required to mitigate it, considering the following factors:

a) Likelihood of the hazard occurring

The likelihood of hazard within the site is low as the flood affected area is contained within a carpark area of the school grounds, with buildings and play areas remaining free from inundation.

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b) Degree of Harm

The potential harm includes property damage and risk to life. The degree of harm is minimised, by low depths of less than 0.3 m affecting the school building on the western side adjacent to Louisa Street which is unlikely to inundate the building. By directing occupants of the school to remain inside during a major storm event and to avoid the carpark area, the degree of harm can be minimised.

c) Knowledge of the Risk:

The Flood Hazard Report identifies flood risks within the site that together with this FRIMP, provides comprehensive guidance on the identified risks and the necessary controls to manage them effectively.

d) The availability and suitability of the control measures:

The proposed controls are readily available and suitable for the identified flood risks. These measures provide a high level of protection and are appropriate for the sites specific conditions.

e) The cost versus risk:

The cost of implementing the FRIMP is minimal compared to the potential flood risks associated with the site.

3.3 Evaluation of FRIMP Options

The following flood risk management options were evaluated as part of the FRIMP for the Kempton Primary School:

Property Modification Measures:

- Major structural modifications such as elevated floor levels and the use of flood-resistant materials were not implemented as flooding only reaches a depth of less than 0.3 m at the building which was not deemed significant.

Response Modification Measures:

- Emergency response planning is crucial for the safety of occupants of the school and visitors. Public awareness initiatives, such as informational signage and emergency response plans are recommended to ensure that all occupants understand the flood risks and appropriate actions to take during a flood event.

Flood Forecasting, Warning, and Evacuation:

- Collaboration with the Bureau of Meteorology and local emergency services is essential for effective flood forecasting and warning. A comprehensive warning system, including digital alerts and on-site warning signs, will provide timely information to occupants and facilitate orderly evacuation if necessary.

Depending upon the level of risk for each hazard, the standards make recommendations for the most appropriate method for mitigation of the risk. There will be occasions where local conditions or usages could work against the implementation of these recommendations. Under such conditions alternative solutions may be implemented so long as it can be demonstrated that these solutions provide at least an equivalent level of safety.

Section 18 of the Act provides the concept of reasonably practicable that will be used by authorities when determining whether the obligations of the design team have been met:

[...] reasonably practicable, in relation to a duty to ensure health and safety, means that which is, or was at a particular time, reasonably able to be done in relation to ensuring health and safety, taking into account and weighing up all relevant matters including —

- a) the likelihood of the hazard or risk concerned occurring;*
- b) the degree of harm that would result from the hazard or the risk;*
- c) what the person concerned knows, or ought reasonably to know, about*

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- i) the hazard or the risk; and
- ii) ways of eliminating or minimising the risk; and
- d) the availability and suitability of ways to eliminate or minimise the risk; and
- e) the cost associated with available ways of eliminating or minimising the risk, including whether the cost is grossly disproportionate to the risk.

3.4 Tolerable Risk

As described in the flood hazard report conducted by Flussig Engineers, the south-west corner of the Kempton Primary School site is susceptible to a moderately moving and shallow flood flow, with the site classified in the range H1-H3 hazard rating in the 1 % AEP + climate change flood event with some small localised areas of up to H5 near the lot boundary.

These hazard classifications established in the Australian Disaster and Resilience Handbook can be used to guide risk mitigation strategies that can be considered reasonably practicable. The hazard classifications are shown below in Figure 2.

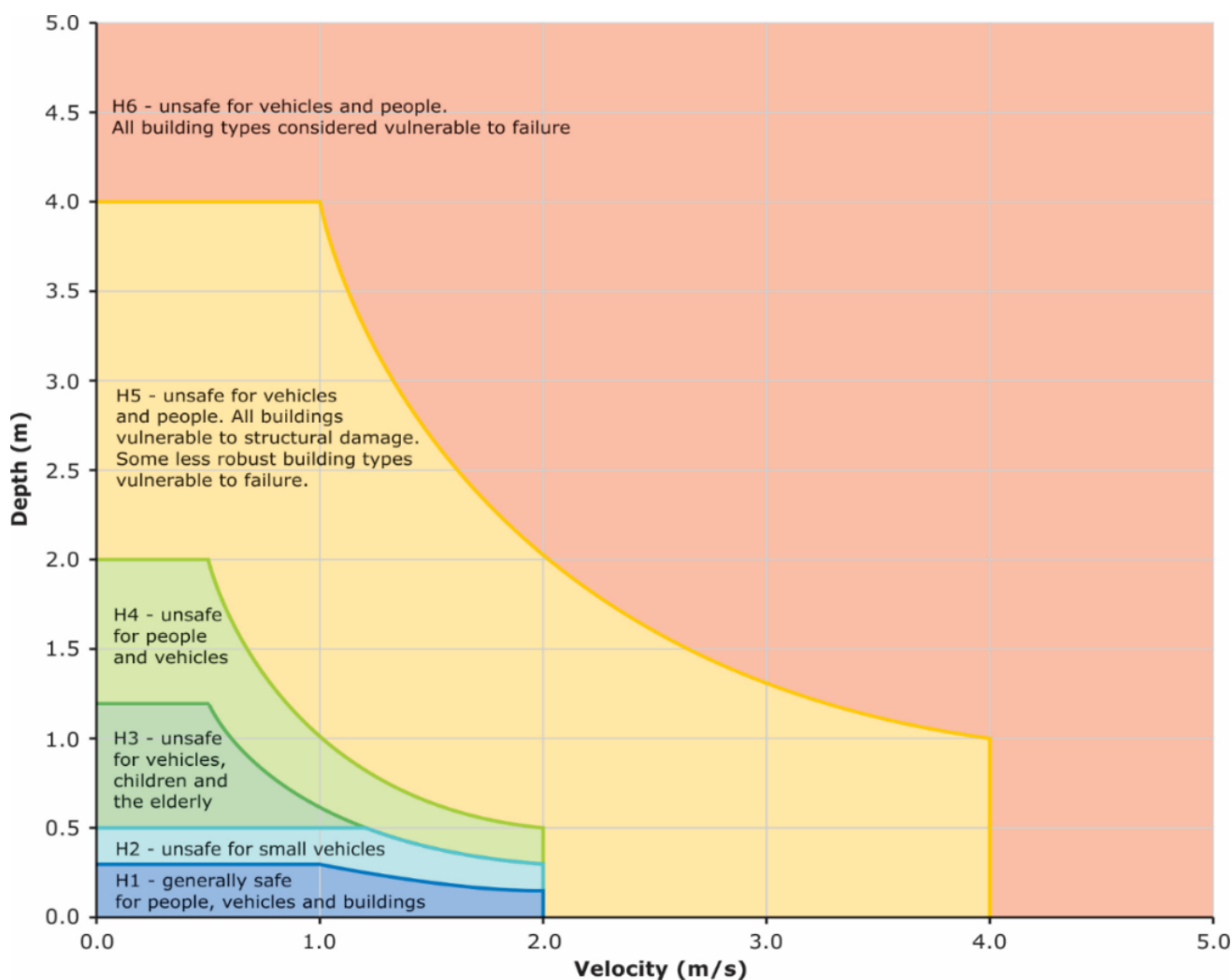


Figure 2. Flood Hazard Categories Australian Disaster and Resilience Handbook

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The following locations described in Table 1 identify areas within the lot boundaries where various hazard classifications are located.

Table 1. Hazard rating summary within the lot boundaries.

Hazard Rating	Extents within Property
H1 - H2	Grassed area entrance from Old Hunting Ground Rd to main school building
H1 – H2	Sealed carpark from Old Hunting Ground Rd
H1 – H2	Driveway access to building on western side of the site from Louisa Street
H3	Southern corner of grassed area in front of main school building and boundary with Old Hunting Ground Rd
H3 – H5	Grassed area on western side of carpark and boundary with Louisa Street

3.5 Potential Management Options

Flood risk management measures may have both advantages and disadvantages. For the current flood scenario, there are two categories of flood management options, response modifications and property modifications which are described in more detail below.

3.5.1 Response Modifications

Flood Forecasting and Warning

Flood warning and forecasts are undertaken by the Bureau of Meteorology (BoM) which provides forecasts of river water heights and severe weather warnings at specified locations to the relevant local State Emergency Services (SES) units and to the public via broadcast media and the BoM's website. Flood forecasting and warning can be an effective flood management measure if there is sufficient warning time for the community to react.

As described in Flussig Engineering's flood hazard report the flood response to rainfall in the local catchment (i.e. from the commencement of runoff producing rainfall to the occurrence of the flood peak) is relatively short, 1-hour storm for the 1% AEP + CC flood event. This type of flooding is called flash flooding, with inundation occurring quickly with little or no warning resulting in inundation of properties without residents having a chance to protect their property or to evacuate and currently present the most challenges due to the limited warning time.

While the BoM provides severe weather warnings (e.g. the risk of flash flooding), specific flash flood forecasts and warnings (i.e. including specific location and timing information) are not generally provided by BoM due to the limited warning time.

Public Awareness and education

It is essential for staff and visitors to the school develop an awareness and understanding of the existing flood hazards in the area. One key aspect of preparedness for flooding is fostering "flood awareness" among all individuals. This includes understanding the specific flood risks affecting the facility and knowing how to respond effectively to ensure safety. Over time, this awareness can diminish as past flood events fade, making it important to reinforce preparedness regularly.

3.5.2 Property Modifications

Property modification measures involve implementing physical changes to the development to reduce flood risks and enhance safety. These modifications are specifically designed to control the movement of floodwaters and prevent accidental access to high-risk areas. Property modifications are generally assessed based on the risk to the site and a cost of implementing the design according to what is considered reasonably practicable regarding cost versus risk as described in section 3.2.

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3.6 Summary of Potential Management Options

Based on the initial assessment in the preceding sections, a summary of the options and commentary on whether or not the measure is recommended for implementation is shown in Table 2.

Table 2. Summary of Recommendations for Further Detailed Assessment

Option\ measure	Recommended for implementation
Property Modification Measures	
Zoning and development control	No
Voluntary floor raising	No
Flood proofing of buildings	No
Installation of physical barriers (bollards)	No
Installation of signs and evacuation point	Yes
Establishment of maintenance plan for drainage network	N/A
Response Modification Measures	
Patrons flood awareness and readiness	Yes
Flood predictions and warnings	Yes
Emergency response planning for floods	Yes

4. Detailed Assessment of Recommended Measures

To ensure the safety of the development and its occupants, specific modifications to the property and communication strategies are outlined below.

4.1 Response and Administrative Modification Measures

Response modification measures are critical for ensuring that occupants of the facility are prepared to respond effectively to potential flood risks. These measures involve the implementation of robust warning systems and clear communication protocols to provide timely and accurate information during flood events.

4.1.1 General Flood Warning System Requirements

An effective flood warning system is essential for managing flood risks and ensuring that all occupants receive timely and actionable information. Although the greatest risk for flooding is due to flash flooding which can be difficult to predict, weather forecasts can predict if high rainfall may occur in Tasmania which should be considered. Key elements of the system include:

- Rainfall data should be monitored in real-time to anticipate potential flood events. This data should be used to assess the likely impact of flooding on the site and inform the preparation of warning messages.
- Information must be disseminated through various channels, including emails, text messages, social media, and the facility's website. This multi-channel approach ensures that all occupants receive the information, regardless of their preferred method of communication.
- Warning messages should be clear, concise, and consistent. They must outline the nature of the flood risk, recommended actions, and the timeframe for these actions. Personalised messages for vulnerable groups, such as children, individuals with disabilities or language barriers, should be considered to ensure comprehensive coverage.
- The use of multiple trusted sources, including the Bureau of Meteorology (BoM) and the State Emergency Service (SES), increases the credibility of warnings and encourages community compliance.

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The warning system must be capable of operating under extreme conditions, such as power outages or communication disruptions. Implementing backup communication methods, like battery-powered alert systems or community wardens, ensures the system's effectiveness during critical times.

4.1.2 Occupant Awareness and Education

Raising awareness among staff and visitors about flood risks and appropriate responses is critical for ensuring safety during flood events at the school. The following strategies are recommended:

- **Educational Materials:** Provide staff with educational resources, such as the SES Flood-Safe guide, containing practical advice on preparing for and responding to floods.
- **Regular Updates:** Use the facility's communication channels (e.g., newsletters, emails, or noticeboards) to regularly inform parents and staff about flood risks, changes to the FRIMP, expected weather conditions, and any ongoing maintenance activities.
- **Community Engagement:** Arrange briefings or safety workshops for staff to reinforce preparedness, ensuring everyone understands their roles during a flood event.

4.1.3 Emergency evacuation and assembly point

As Flussig Engineers flood report (FE_26102_01) shows that pre-existing flood conditions result in flooding occurring in the south-west corner of the site near the corner of Old Hunting Ground Road and Louisa Street.

It is therefore advised that occupants of the building adopt a shelter-in-place approach during a major flood event, however, should evacuation of the building be required, it is essential that staff, students and visitors assemble in a safe area and are not directed to high hazard flood areas.

4.1.4 Communication protocol with emergency services

Establish a communication protocol with local emergency services, such as SES Tasmania, to ensure they are informed about the site-specific flood risks and the safety measures in place. This coordination will support efficient emergency response during a flood event and ensure that emergency personnel are familiar with access routes and potential hazards.

4.1.5 Web-based and site-based communication systems

A robust communication strategy is essential for providing timely information to occupants and ensuring that everyone is aware of the flood risks and emergency procedures:

- The school's website and/ or social media pages should include a dedicated section for weather and flood warnings. This section should provide links to BoM, SES Tasmania, and local council websites, offering real-time updates, emergency procedures, and educational resources.
- Place flood warning signs in areas at risk of inundation. These signs should be simple pictorial signs and direct occupants to stay inside the facility during a storm event unless instructed otherwise by emergency personnel.

4.1.6 Routine drainage network maintenance

A thorough maintenance and monitoring programme is advised to ensure the long-term efficacy of the drains on site, including nearby council assets. These components should undergo routine inspections to detect and address any obstructions, debris buildup, or structural issues. Proactive maintenance will help preserve their capacity and functionality, preventing unplanned overflow or performance deterioration. This maintenance schedule should form part of the routine maintenance at the school with council assets being maintained by Southern Midlands Council.

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4.2 Property Modification Measures

Property modification measures involve implementing physical changes to the site to reduce flood risks and enhance safety. Due to the low-level pre-existing flooding that affects the site, property modifications specifically designed to control the movement of floodwaters is not necessary, however, installation of signage on site is an appropriate measure commensurate with the flood risk to enhance safety and prevent accidental entering of flood water.

4.2.1 Signage

Australia Warning System description poster as per Figure 3 should be incorporated into the flood emergency management plan and specific actions determined depending on the level of advice given by emergency services.

Signage should be placed around the flood affected areas of the school, particularly near the school entrance and carpark on Old Hunting Ground Road, and on the western boundary fence on Louisa Street advising to keep these areas clear during a flooding event. Signage should be weather-resistant and highly visible, with clear symbols and simple text that can be easily understood by children, adults, staff, and non-English speakers.

Additionally, ‘Do not exit when flooded’ signage should be placed internally next to the exit door on the south side of the building near Louisa Street to prevent occupants from entering high flood hazard areas. Examples of such warning signs and are shown in Figure 5 and Figure 6.

An evacuation route should be established to direct occupants to a high point on the site if evacuation is deemed necessary by emergency services. This should direct people to north-eastern side of the building on Louisa Street and into the main school grounds to assemble at the Main Street side entrance. Locations and types of signs recommended for installation are detailed in the site map in Figure 7.




AWS Warning Level	Action Statements
 <p>Advice</p>	<ul style="list-style-type: none"> Stay informed Monitor conditions Reduced threat: return with caution
 <p>Watch and Act</p>	<ul style="list-style-type: none"> Do not enter flood water Prepare to evacuate Prepare to isolate Avoid the area
 <p>Emergency Warning</p>	<ul style="list-style-type: none"> Evacuate Now / Before [time] Shelter Now Move to Higher Ground

Figure 3. Australian Warning System



Figure 4. Designated safe zone for evacuation



Figure 5. External flood warning sign



Figure 6. Internal warning sign near affected exits

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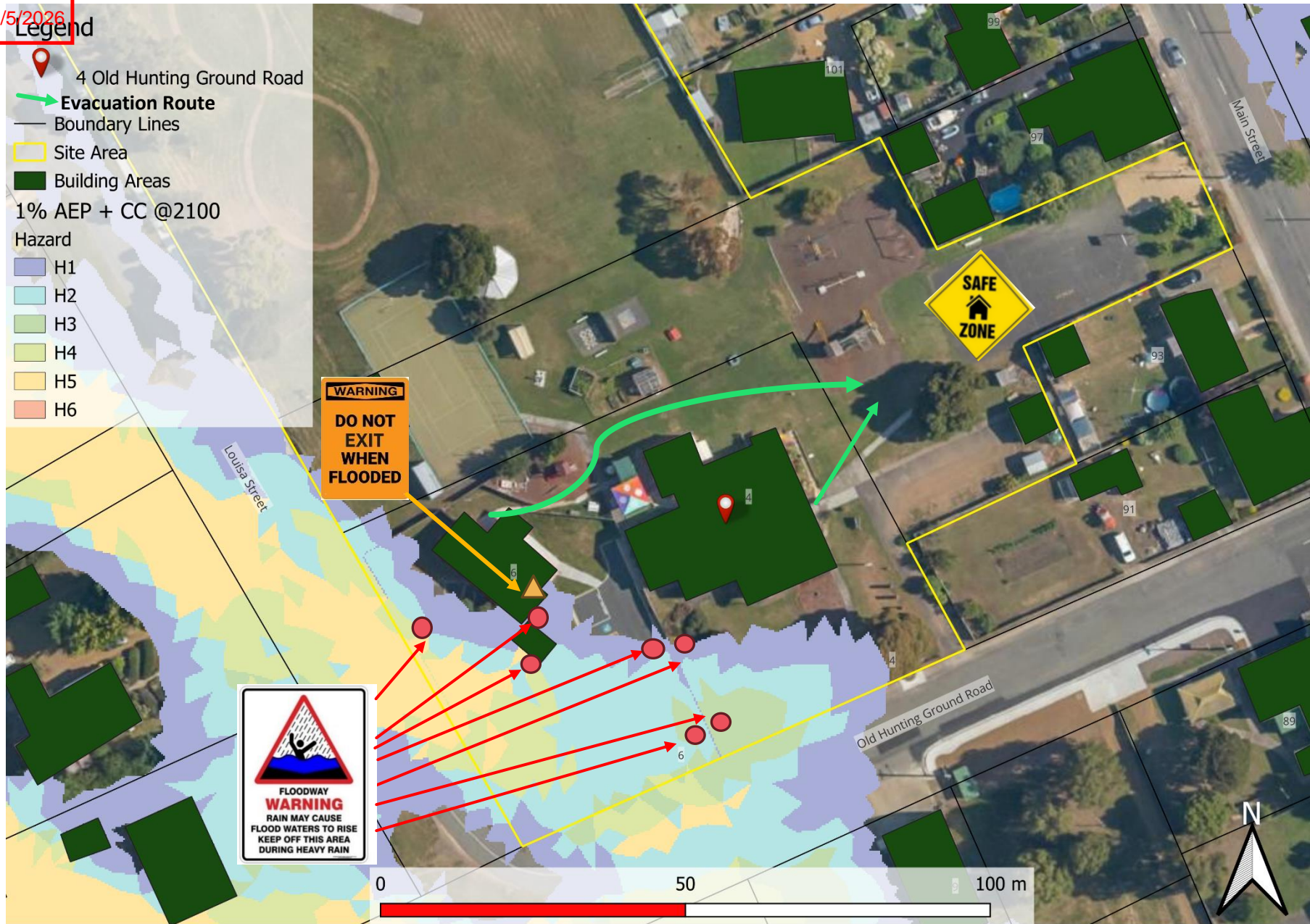


Figure 7. Flood Warning Signs locations

4.3 Communications

4.3.1 Communication protocol with emergency services

Establish a communication protocol with local emergency services, such as SES Tasmania, to ensure they are informed about the site-specific flood risks and the measures in place. This coordination will support efficient emergency response during a flood event and ensure that emergency personnel are familiar with access routes and potential hazards.

4.3.2 Web-based and site-based communication systems

A robust communication strategy is essential for providing timely information to occupants and ensuring that everyone is aware of the flood risks and emergency procedures:

- The school's website and/ or social media pages should include a dedicated section for weather and flood warnings. This section should provide links to BoM, SES Tasmania, and local council websites, offering real-time updates, emergency procedures, and educational resources.
- Place flood warning signs in areas at risk of inundation along the perimeter fences on the western and south-western corner of the site as shown in Figure 7.

The recommended measures for Kempton Primary School focus on mitigating flood risks through effective property modifications and comprehensive communication strategies. By identifying the high hazard risk areas and incorporating a flood safety preparedness plan, the school will be well-prepared to handle potential flood events. These measures ensure that localised flooding is contained and that occupants including vulnerable uses are informed, safe, and resilient in the face of flood hazards.

5. Flood Risk Management Plan

Based on the outcomes of the initial and detailed assessment of floodplain risk management measures in the preceding sections, Table 3 presents a summary of the flood management measures recommended for inclusion in the Flood Risk Inundation Management Plan and future implementation by site managers and administrators. This plan should be distributed and available to all people that use or work in the property.

Table 3. Summary of measures recommended for inclusion in the flood risk management plan.

Measures	Responsibility	Priority	Cost
Distribution of the SES Flood-Safe guide "Preparing for storms & floods".	School Management	High	Low
Establish maintenance plan for existing drainage structures to ensure functionality at all times.	School Management & Council	High	Low
Information about BoM, SES Tasmania and Council's existing flood warning system.	School Management	High	Low
External and internal signs restricting access to high hazard flood areas.	School Management	High	Low
Establish a safe route for evacuation if deemed necessary	School Management	High	Low
Community Awareness and Education	School Management	High	Low
Integrate a weather and flood warning section with BoM, SES and Council's website	School Management	High	Low

6. Conclusion

To enable efficient implementation of the flood risk management strategy for the Kempton Primary School at 4-6 Old Hunting Ground Road, Kempton and ensure the safety of all occupants, the following details should be considered:

- The flood risk management strategy should include measures direct people to stay inside the building, unless otherwise instructed by emergency personnel.
- If emergency personnel direct the occupants to evacuate the building, occupants to move towards the eastern side of the school grounds towards Main Street where the identified safe zone is located.
- Emergency services should be contacted to provide early warning of potential flood events, allowing for timely communication with school management and staff. This will ensure that everyone is adequately prepared before a flood event occurs.
- Emergency training for staff should include flood emergency response protocols and how they may differ from other types of emergencies such as fire.
- Signage should be installed as shown on Figure 7 along flood-prone areas to clearly inform occupants of flood risks and emergency procedures. While specific regulatory requirements may not apply to the signage, it is essential that the signs are clear, easily visible, and legible, using a style consistent with other signage within the school.
- Internal signage should be installed on the southern door of the building adjacent to Louisa Street to prevent occupants from exiting the building that could direct people towards high flood risk areas which have been identified near the south west corner of the site.
- No additional hard landscaping or placement of solid structures are to be constructed in outdoor areas that may impede or affect the natural overland flow of floodwater, to prevent increased risk of flooding in areas not identified in this report.
- A maintenance plan should be implemented to ensure on-site drainage systems are functioning effectively and do not contribute to excessive flooding.

By following these recommendations, the school will be better equipped to handle flood events effectively and ensure the safety and well-being of all occupants, particularly vulnerable people such as children and those with disability.

7. Limitations

Flüssig Engineers has been commissioned by **Southern Midlands Council**, to conduct a Flood Risk Inundation Management Plan (FRIMP) for the Kempton Primary School at 4 – 6 Old Hunting Ground Road, Kempton. At the time of the study, this analysis is deemed appropriate for its intended purpose. However, should conditions at the site change, the report will necessitate review to account for any alterations.

This report is written to address flood risks during a 1% AEP + CC storm event to what would be considered reasonably practicable based on the level of risk within the property. Any storm event greater than 1% AEP is outside the scope of this report.

This report is intended for comprehensive use and may not be excerpted or utilised partially to support objectives other than those explicitly outlined, unless explicit written consent is obtained from Flüssig Engineers.

Please note that Flüssig Engineers assumes no liability for the accuracy of third-party documents provided for the purpose of this plan.

8. References

- Australian Disaster Resilience Guideline 7-3: Technical flood risk management guideline: Flood hazard, 2014, Australian Institute for Disaster Resilience CC BY-NC
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- Syme W.J. (2008) Flooding in Urban Areas - 2D Modelling Approaches for Buildings and Fences, presented at 9th National Conference on Hydraulics in Water Engineering, Engineers Australia.
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APPENDIX A – FLOOD RISK MATRIX

Site/ job number FE_26102_Kempton Primary School Flood Risk Inundation Management Plan

Risk Identification (1% AEP + CC)				Recommendations					
Risk Ref No	Risk Type A - Asset P - Project F - Financial S - Safety	Risk Description	Risk with no Treatment			Treatment	Risk following recommended		
			Likelihood	Consequence	Risk Level		Likelihood	Consequence	Risk Level
D1	S	There is a risk of injury to people from entering inundated areas in the south-west corner of the school grounds near the carpark and school entrance from Old Hunting Ground Road.	Unlikely	Catastrophic	Extreme	Incorporate flood evacuation into an emergency management plan. Train staff in emergency response procedures to direct occupants to stay inside the school during a 1% AEP storm event, unless directed otherwise by emergency personnel. Install signs identifying areas of high hazard flooding. Install appropriate signage around the facility directing people to move to safe zone on the site if required to evacuate.	Rare	Catastrophic	High
D2	A, F, S	There is a risk that the on-site drainage infrastructure can become blocked with debris or rubbish causing it to overflow during 1% AEP storm events, exacerbating flooding.	Possible	Moderate	High	Ensure maintenance for the drainage network to be part of established a routine maintenance plan within school grounds and external assets (Council).	Rare	Moderate	Low
D3	A, F, S	There is a risk that solid structures, such as sheds or solid landscaping, could alter the overland flow regime resulting in an increase in flooding affecting areas not identified in the flood hazard report.	Unlikely	Moderate	Medium	No large solid structures including sheds, landscaping, solid fences to be constructed or installed in flood affected areas near the south-west corner of the site.	Rare	Moderate	Low

RISK ASSESSMENT MATRIX

			CONSEQUENCE				
			1	2	3	4	5
			Insignificant	Minor	Moderate	Major	Catastrophic
LIKELIHOOD	A	Almost Certain	High	High	Extreme	Extreme	Extreme
	B	Likely	Medium	High	High	Extreme	Extreme
	C	Possible	Low	Medium	High	Extreme	Extreme
	D	Unlikely	Low	Low	Medium	High	Extreme
	E	Rare	Low	Low	Low	High	High

Likelihood

A	Almost Certain	Is expected to occur at some time in the near future
B	Likely	Will probably occur in most circumstances
C	Possible	Might occur at some time
D	Unlikely	Could occur at some time
E	Rare	May occur in exceptional circumstances

Consequence Matrix

1	Insignificant	Minimal impact, minimal property damage, minimal financial loss, minimal risk to personal safety.
2	Minor	Some potential for property damage & financial loss, Limited impact on project, issue resolved at a local level with minor rectification, potential for minor safety issue (first aid).
3	Moderate	Some impact on project, possibility of scheduling changes. Some impact on property damage requiring rectification, high financial loss, risk to human safety requiring medical treatment.
4	Major	Significant property/ asset damage, major financial loss Significant impact on project, considerable changes to schedule and some objectives not met, Extensive/serious injury.
5	Catastrophic	Extensive property/ asset damage, high financial loss, Project cancelled, not delivered. Death/ or serious injury with permanent detrimental effect.

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Contact Project Manager: Max Moller

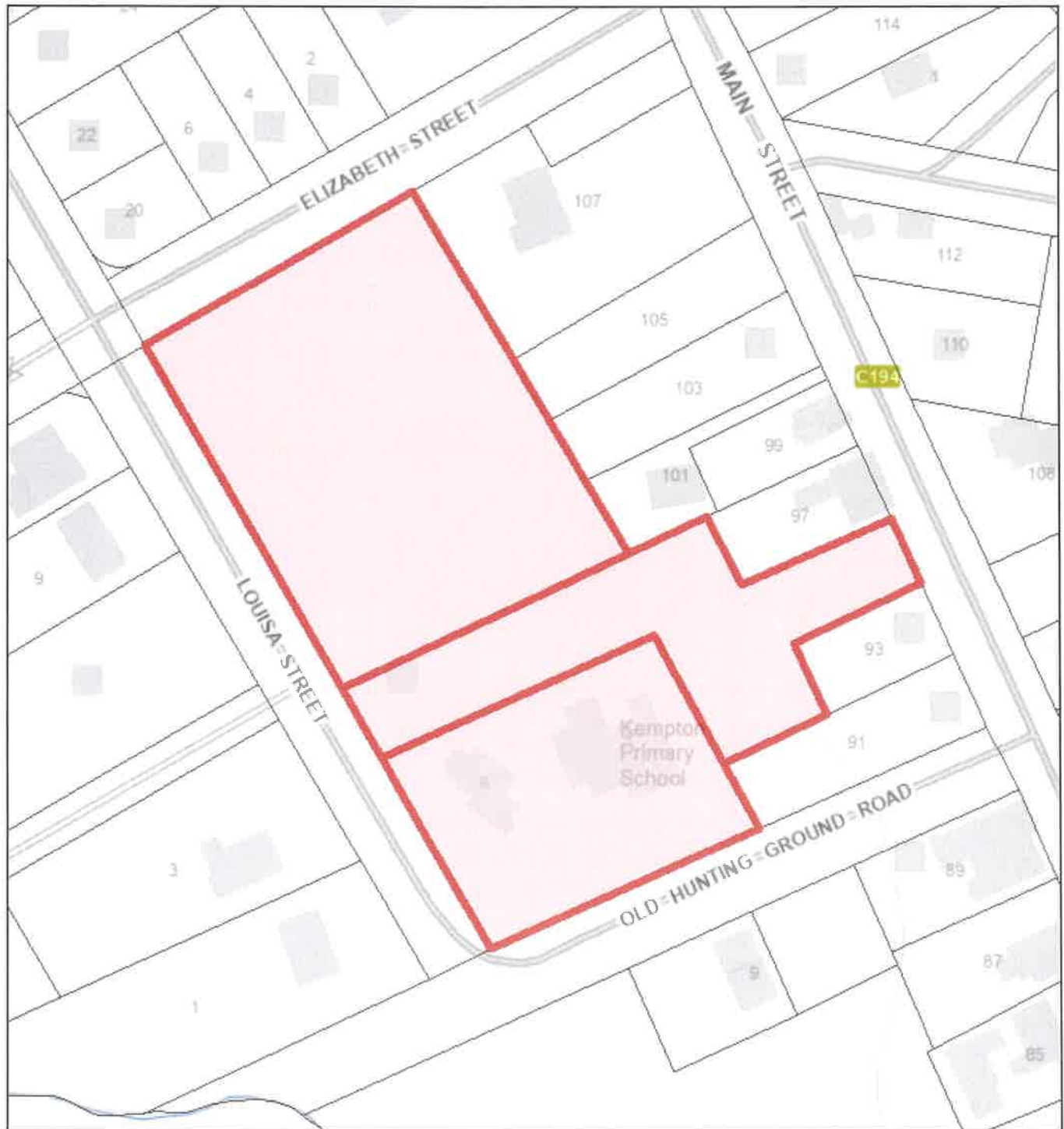


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PROPERTY ID: 7625548

PROPERTY ADDRESS: KEMPTON PRIMARY SCHOOL
4 OLD HUNTING GROUND ROAD
KEMPTON TAS 7030

CONSTRUCTION YEAR: 1961



PREMIUM PROPERTY Information Report

PROPERTY DETAILS - 4 OLD HUNTING GROUND RD KEMPTON

Property Name:	KEMPTON PRIMARY SCHOOL		
Land Use:	Community Services - SCHOOL-PRIMARY,SECONDARY (valuation purposes only)		
Improvements:	KEMPTON PRIMARY SCHOOL AND MEDICAL		
Improvement Sizes (Top 3 by Size):	Improvement:	Area:	
	SCHOOL	409.0 square metres	
	PROFESSIONAL ROOMS	149.0 square metres	
	COVERED AREA	100.0 square metres	
Number of Bedrooms:			
Construction Year of Main Building:	1961		
Roof Material:	Colorbond		
Wall Material:	Weatherboard		
Land Area:	1.857 hectares		
Title References:	22/5154		
Municipality:	SOUTHERN MIDLANDS View Municipality Information Report		
Title owner:	22/5154 :		
Interested parties:	DEPARTMENT FOR EDUCATION, CHILDREN AND YOUNG PEOPLE		
Postal address: (Interested Parties)	GPO BOX 169 HOBART TAS 7001		

OWNERSHIP HISTORY - 4 OLD HUNTING GROUND RD KEMPTON

TYPE	NAME	ADDRESS	FROM	TO
State Government Rental Comm.	DEPARTMENT FOR EDUCATION, CHILDREN AND YOUNG PEOPLE	GPO BOX 169 HOBART TAS 7001	23/03/1994	
Crown Land Administration	DEPARTMENT FOR EDUCATION, CHILDREN AND YOUNG PEOPLE	GPO BOX 169 HOBART TAS 7001	08/03/1994	
Ownership	DEPARTMENT FOR EDUCATION, CHILDREN AND YOUNG PEOPLE	GPO BOX 169 HOBART TAS 7001	30/03/1990	

SALES STATISTICS - (Community Services - SCHOOL-PRIMARY,SECONDARY) - KEMPTON (Last 12 Months)

Number of Sales:	0
Highest Sales Price:	
Median Sales Price:	
Mean Sales Price:	
Lowest Sales Price:	