

68 - 80 Beauchamp Road, Hillsdale

Flood Impact and Risk Assessment

March 2026



Acknowledgment of Country

On behalf of Mott MacDonald, we would like to begin by acknowledging the Traditional Custodians of the land on which we meet today, and pay our respects to their Elders past and present.

We recognise and respect their cultural heritage, beliefs, continued connection to the land and water and commit to building a brighter future together.

This page left intentionally blank for pagination.

Mott MacDonald
Level 7, Tower 1
Darling Park
201 Sussex Street
Sydney
NSW 2000
PO Box Q1678
QVB Sydney NSW 1230
Australia

T +61 (0)2 9098 6800
mottmac.com

Homes NSW
4 Parramatta Square
12 Darcy Street
Parramatta NSW 2150

68 - 80 Beauchamp Road, Hillsdale

Flood Impact and Risk Assessment

March 2026

Issue and Revision Record

Revision	Date	Originator	Checker	Approver	Description
A	29/10/2025	N. McNamara	D. Chick	A. Tarshan	Initial Draft
B	04/11/2025	N. McNamara	D. Chick	A. Tarshan	Issue for SSDA
C	03/03/2026	N. McNamara	J. Mail	A. Tarshan	Issued with Response to SSDA comments
D	18/03/2026	N. McNamara	J. Mail	A. Tarshan	Issued with Response to further SSDA comments

Document reference: 703103419-009 | 01 | D

This document is issued for the party which commissioned it and for specific purposes connected with the above-captioned project only. It should not be relied upon by any other party or used for any other purpose.

We accept no responsibility for the consequences of this document being relied upon by any other party, or being used for any other purpose, or containing any error or omission which is due to an error or omission in data supplied to us by other parties.

This document contains confidential information and proprietary intellectual property. It should not be shown to other parties without consent from us and from the party which commissioned it.

Contents

Executive summary	8
1 Introduction	11
1.1 Purpose of this FIRA	11
1.2 Background	11
1.3 The Site	12
1.4 Proposed Development	13
1.5 FIRA Requirements	13
2 Background	15
2.1 Study Area	15
2.2 Existing Flood Behaviour	15
2.2.1 Mainstream Flooding	16
2.2.2 Overland Flow	16
2.2.3 Coastal Flooding	17
2.3 Flood History	17
3 Methodology Approach	18
3.1 Available information	18
3.1.1 Basis of Flood Model	18
3.1.2 TUFLOW Software Package	18
3.1.3 Modelling Scenarios	19
4 Flood Related Requirements	20
4.1 Australian Rainfall and Runoff (2019)	20
4.2 Bayside Council Documents	20
4.2.1 Bayside Council Local Environment Plan (2021)	20
4.2.2 Bayside Council Development Control Plans (2022)	21
4.3 NSW Flood Risk Management Manual (June 2023)	22
4.4 Emergency Management	22
4.5 Flood Risk Management Guideline LU01 (2023)	22
4.6 Shelter in Place Guideline for Flash Flooding (2025)	23
5 Hydraulic Modelling	24
5.1 Flood Model Development	24
5.1.1 Critical Storm Durations	24
5.2 Existing Case Flood Behaviour	25
5.2.1 Design Storm Events	25
5.3 Design Case Flood Behaviour	29

5.3.1	Design Storm Events	30
5.3.2	Afflux	33
5.4	Managing Flood Risks	36
5.4.1	Existing Stormwater Networks	37
5.5	Managing Flood Risks	37
6	Design Recommendations	39
6.1	Flood Planning Levels	39
6.1.1	Habitable Floor Levels	39
6.1.2	Non-Habitable Floor Levels	40
6.1.3	Basement Entry Points	43
6.2	Flood Emergency Management	43
6.3	Emergency Planning	43
6.3.1	Emergency Management Strategy – Prior to Storm	44
6.3.2	Emergency Management Strategy – Evacuations during a Storm	44
6.3.3	Emergency Management Strategy – Shelter in Place (SIP) during a Storm	45
6.3.4	Compatibility with Shelter in Place Guideline for Flash Flooding	45
6.3.5	Emergency management strategy – Residual risks	46
6.3.6	Emergency Management Considerations	46
6.4	Compatibility with Design Controls	47
6.5	Summary of Flood Emergency Management	48
7	Conclusions	49
A.	Flood Mapping	52
B.	Simulations Log	73
C.	Submission Comment Responses	100

Tables

Table 5.1:	Design event critical duration	24
Table 5.2:	Bayside DCP Planning Compliance	37
Table 6.1:	Flood Planning Levels	39
Table 6.2:	Compatibility with Shelter in Place Guideline	45
Table 6.3:	Emergency Management Considerations	47

Figures

Figure 1.1: Project Specific SEARs	11
Figure 1.2: Site Location	12
Figure 1.3: Site Plan	12
Figure 2.1: 68-80 Beauchamp Road, Site Boundary Location and Topography	15
Figure 2.2: Birds Gully and Bunnerong Road Catchment (Flood Study, 2018)	16
Figure 2.3: Birds Gully and Bunnerong Road Flood Study - Tidal Boundary Peaks	17
Figure 4.1: General Flood Hazard Vulnerability Curve	22
Figure 5.1: 10% AEP Flood Depth and Extent	25
Figure 5.2: 10% AEP Flood Hazard	26
Figure 5.3: 1% AEP Storm Flood Depth and Extent	27
Figure 5.4: 1% AEP Storm Flood Hazard	27
Figure 5.5: 1% AEP Storm Flood Velocity	28
Figure 5.6: PMF Flood Depth and Extent	29
Figure 5.7: PMF Storm Flood Hazard	29
Figure 5.8: 10% AEP Flood Depth and Extent	30
Figure 5.9: 10% AEP Flood Hazard	31
Figure 5.10: 1% AEP Flood Depth and Extent	32
Figure 5.11: 1% AEP Flood Hazard	32
Figure 5.12: 1% AEP Flood Velocity	33
Figure 5.13: 68 - 80 Beauchamp Road - Afflux - 1%AEP	34
Figure 5.14: PMF Flood Depth and Extent	35
Figure 5.15: PMF Flood Hazard	35
Figure 5.16: PMF Afflux	36
Figure 6.1: 68-80 Beauchamp Road Site Plan with Site ID Locations for Flood Planning Levels	41
Figure 6.2: Flood Planning Levels	42

Executive summary

This Flood Impact and Risk Assessment (FIRA) has been prepared by Mott MacDonald Pty Ltd (Mott MacDonald) on behalf of Homes NSW for a State Significant Development Application (SSD-83256478) for the construction of 179 social housing dwellings within 8-storey residential flat buildings.

The aim of the FIRA is to support the development proposal where specific elements of the design may alter flood behaviour or introduce additional flood risk, to identify and analyse:

- The potential impacts of the proposed development on the flood risk to the existing community.
- The impacts and risks of flooding on the development and its users.
- How these impacts can be managed to minimise the growth in risk to the community due to the development.

The 1% AEP and probable maximum flood (PMF) have been assessed as they relate to the flood planning levels for the development. The PMF is the largest flood that could conceivably occur at a location and defines the maximum extent of flood-prone land. Dry habitable areas above the PMF level are expected to be free from flooding under all scenarios.

The proposed design ensures all habitable floors and basement car park entrances are set above both the 1% AEP flood level + 500 mm freeboard and the PMF level, in accordance with Bayside DCP 2021 and Shelter in Place guidelines. These measures guarantee that the building and basement car parking remains flood-free under all scenarios, including the PMF.

Flood Impact Assessment

The key results of the flood assessment are summarised below:

- Changes in peak 1% AEP water level:
 - 0.16m increases and decreases in water level within the drainage channel outside the boundary. This is deemed acceptable as does not show any clear detriment to the surrounding area and is localised within an existing channel.
 - A 0.45 m increase in peak water level is predicted as a consequence of the development, this is deemed to be acceptable as is recorded within the new above ground flow path as part of the architectural and flood design and captured within the designated flow path.
- Change in 1% AEP flood hazard
 - there are no changes in flood hazard outside the site boundary and flood hazard is limited to H3 within the site boundary

Development Controls

The Bayside Local Environmental Plan (LEP) 2020 outlines flood planning provisions in Clauses 3.10 *Flood prone Land*.

The flood planning level for Residential Buildings and below-ground carpark entrances is to be greater than or equal to the 1% AEP flood level + 500 mm freeboard and PMF levels. These are in accordance with the Bayside Council Development Control Plan (DCP) FPLs and shelter in place guidelines. Site specific flood planning levels are listed in Table 6.1 within the body of the report.

This FIRA has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing and Infrastructure

(DPHI) for the subject SSDA. Whilst the Flood Risk SEAR requests a FIRA for the site (, the housing development falls within land identified by the Peak flood 1% AEP Design event, meaning the standard LEP clauses related to flooding apply. To ensure a robust design, this FIRA has been developed to support the SSDA as outlined by Flood Risk Management Guideline LU01 (FIRA guide).

By implementing the design recommendations outlined in this report, direct flood risk to any person could be reduced and that the residual flood risk could be also reduced by complying with the Bayside DCP, 2021. Compliance can be achieved without negatively affected existing flood risk to the surrounding areas.

To summarise the outcome of the design:

- Flood Planning Level requirements and other Development Controls
 - The minimum finished floor level of all habitable room(s) is to be at the height of the 100-year Average Recurrence Interval flood level plus 0.5 metre freeboard
 - Basement car parks must be physically protected from inundation by floods equal to or greater than the 1% AEP flood level plus 0.5m freeboard
 - Shelter in Place requires the floor level of the shelter in place part of the development be above the PMF

The flood emergency management (EM) strategy for the development has been assessed following advice provided in Birds Gully and Bunnerong Road Flood study (DFS) (Randwick and Bayside City Councils, 2018), Botany Bay Precinct Emergency Sub Plan and relevant plans from the NSW SES.

The assessment established that the site is at risk of flash flooding as critical storm durations are less than 6 hours for a high-intensity, 1% AEP event. Inundation caused by flash flooding can typically occur with little or no warning and cause a rapid rise in water level over a brief period. Flood events of this nature do not last more than a few hours.

Flood impacts are present across all events up to and including the 1% AEP as the proposed buildings within the site are identified as being flood prone within the 1% AEP.

Based on the findings of this FIRA, shelter in place policy during a flood emergency is deemed to be the most logical EM approach to protect life, given the following constraints:

- The site is at risk from flash flooding; the interval between the observable causative event and the flood is within 6 hours. Consequently, there is insufficient warning time to adequately evacuate the population of the precinct. Additionally:
 - the opportunities for horizontal evacuation during a storm are limited as the only surrounding street of the site, Beauchamp Road, is subject to high flood hazards that present an unacceptable risk to people. NSW SES advice is not to venture out during a storm or cross any area of flood inundation
 - the rate of rise and extent of flooding in the most extreme events means that emergency evacuation centres may not get set up and evacuees would generally have to take shelter in private premises
- The time of isolation is short, based on the duration of flooding around the precinct. A development which is isolated for a few hours by low-hazard flood water in PMF does not pose a significant risk to life
- The redevelopment affords a means of creating a safe, on-site shelter above the 1% + 0.5m and PMF levels suitable for vertical evacuation:
 - redevelopment which caters for sheltering in place can be used to reduce existing risk to life for individuals who currently occupy the floodplain

- Additional development controls can be imposed, which seek to manage the residual secondary risks to life caused by flood isolation to ensure that risks remain tolerable. This includes measures to manage risks relating to medical emergencies, fire, health and well-being. Bayside Council must consult NSW SES, Ambulance NSW, Health, and fire agencies to manage secondary risks during flooding and for 48 hours after, as no clear area-wide strategy exists.
- The current submission (Rev C) includes updates to comments raised, with full responses included as part of Appendix C.

1 Introduction

1.1 Purpose of this FIRA

This Flood Impact and Risk Assessment (FIRA) has been prepared by Mott MacDonald Pty Ltd on behalf of Homes NSW for a State Significant Development Application (SSDA) (SSD-83256478) for the construction of two new residential flat buildings up to 8 storeys, equating to 200 social and market dwellings located at 68-80 Beauchamp Road, Hillsdale, NSW.

The purpose of this FIRA is also for additional specific purposes being:

- The provision of flood assessment information to relevant agencies and approval authorities
- The demonstration of appropriate flood risk management to relevant agencies and approval authorities, including consistency of the project in addressing the Secretary’s Environmental Assessment Requirements (SEARs)

This FIRA supports the proposed redevelopment where specific elements of the design may alter flood behaviour or introduce additional flood risk and to address the SEARs for the project issued on 31 July 2025, which identified the following specific assessment requirements:

Figure 1.1: Project Specific SEARs

SEAR	SEAR Description	Section of the Report where the response is provided
19. Flood Risk	<ul style="list-style-type: none"> • Identify the flood planning area and level as set out in the relevant EPI and other supporting documents to determine. • The flood extent and velocity up to the Probable Maximum Flood and risk on-site having regard to adopted flood studies and, floodplain risk management studies and plans <ul style="list-style-type: none"> ○ The site access and egress routes ○ the potential effects of climate change, ○ any relevant provisions of the NSW Flood Risk Management Manual, and any other relevant guidelines 	The 68-80 Beachamp Road Flood Impact and Risk Assessment (FIRA) Flood planning controls, Sections 6.1 and 6.3 Egress route Section 6.3. Climate change Section 3.1.3.1 Relevant guidelines
	<ul style="list-style-type: none"> • Where the development is occurring on flood prone land a flood impact and risk assessment (FIRA) must be prepared having regard to the Flood Impact and Risk Assessment – Flood Risk Management Guide LU01. When determining the scope and category of the FIRA the requirements outlined in the FIRA guide must be considered. • Detail any flood risk management measures that are to be incorporated as part of the development having regard to relevant guidelines (including any design solutions, flood modification measures, property modification measures, operational procedures or Flood Emergency Response Plan). 	The 68-80 Beauchamp Road Flood Impact and Risk Assessment (FIRA) Flood risk management measures are detailed in Section 4.5

1.2 Background

The proposed development sites, located at 68-80 Beauchamp Road, Hillsdale, are currently owned by Homes NSW. The location of the site is shown in Figure 1.2. The site is located 1.7km south of Westfield Eastgardens and is in a well-located area that is serviced by a high level of amenity, services and public transport.

1.3 The Site

The site is located at 68-80 Beauchamp Road, Hillsdale, in the Bayside Council local government area (LGA). The site has a total area of 16,368 m² and has only one street frontage: Beauchamp Road refer to Figure 1.2. The site currently has existing dwellings and trees present within the lot boundary.

Figure 1.2: Site Location



Source: Google Maps, 2025

Figure 1.3: Site Plan



Source: Studio SC, 2025

1.4 Proposed Development

The proposed development comprises the construction of two new two 6-8 storey residential flat buildings to accommodate approximately 179 dwellings to be used for affordable housing. The proposal also includes a community room, excavation for basement car parking, tree removal and associated servicing, landscaping and public domain works. Refer to proposed site Plan above (Figure 1.3).

1.5 FIRA Requirements

The FIRA will demonstrate compatibility of the development with any existing relevant state environmental planning policies (SEPPs), local environmental plans (LEPs), Development Control Plans (DCP) or policies, as well as existing industry guidance, government guidance and reference documents.

This site is located within an existing Flood Study - *Birds Gully and Bunnerong Road Flood Study, 2018*, which was requested from Bayside Council and has been used as the basis of this FIRA due to being the best available flood information for the development area.

For this FIRA, to meet the desired aims of the guidance, it requires an understanding of:

- A range of flood risk examining minor, major and extreme storms events
- The constraints that flood places on the land (flood ways, flood storage, flood hazard and emergency response issues)
- The appropriateness of the development or development types for the location based on the flood constraints on the land

- The adequacy of management measures and controls to:
 - Effectively address these constraints to ensure the flood risks to the proposed development and its users are acceptable
 - Manage flood and associated emergency management (EM) impacts to the existing community due to the development

2 Background

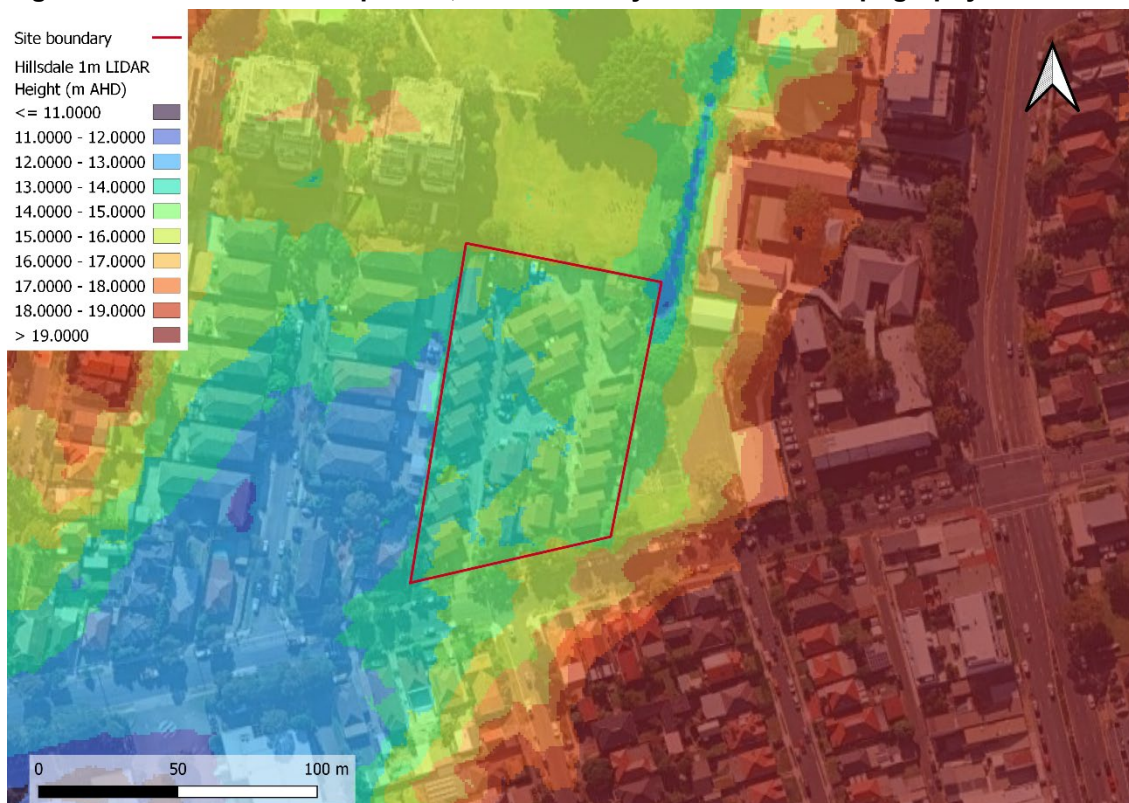
2.1 Study Area

The subject site is identified in Figure 1.2 and Figure 2.1, located North of Beauchamp Road, with an approximate area of 7,857m². This includes 179 social dwellings within two 6-8 storey residential flat buildings and basement car parking. The site is situated next to Matraville Public School.

The site is accessible by public transport with frequent bus services that run along Beauchamp Road.

The area around the site has a minor slope from East to West with a gradient between 0.5 - 1%, with the road level elevated over the site. The area around the Beauchamp Road is relatively low lying, with elevations across the site itself ranging from 15.0m AHD in the Southeast to 13.00m AHD in the West.

Figure 2.1: 68-80 Beauchamp Road, Site Boundary Location and Topography



Source: GOOGLE SATELLITE IMAGERY, 2024

2.2 Existing Flood Behaviour

The Bayside LGA is subject to three possible sources of flood risk:

- Mainstream flooding from elevated water levels in open channels
- Overland flow from rainfall over the local catchment

- tailwater levels in Botany Bay for the southern part of the catchment

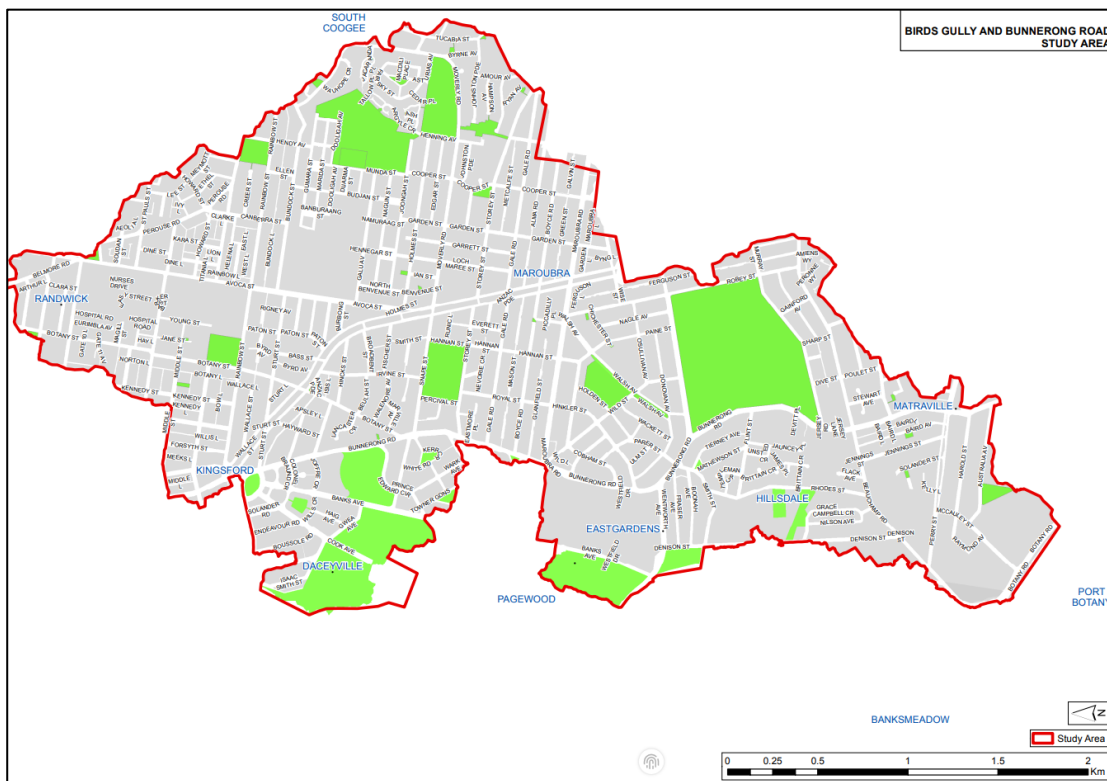
2.2.1 Mainstream Flooding

The *Birds Gully and Bunnerong Road Catchment Study* was prepared in June 2018 to provide the basis for future management of the floodplain of Hillsdale within the Bayside Council LGA.

There is no major watercourse within the catchment, as many of the creeks have been replaced with trunk drainage, with the Birds Gully catchment draining to the Botany Bay wetlands at the Eastlakes Golf Course, and the Bunnerong Road catchment discharging to both Botany Bay and Lurline Bay. One example of such trunk drainage is the open concrete-lined channel upstream of the site of development at 68 – 80 Beauchamp Road.

The Birds Gully and Bunnerong Road Catchment is shown in Figure 2.2.

Figure 2.2: Birds Gully and Bunnerong Road Catchment (Flood Study, 2018)



Source: Randwick City Council, 2018

2.2.2 Overland Flow

Overland flow occurs when rainfall intensity exceeds the capacity of stormwater systems. It is the most prominent flood scenario in the catchment, particularly where flat terrain and poor drainage lead to ponding and shallow flooding under lower AEP events. Areas affected are across the entire catchment, with Beauchamp Road hosting 3 defined hotspots:

- Flack Avenue, adjacent to the site of development
- Sag along Jersey Road
- Denison Street and Nilson Avenue sag

Areas around Beauchamp Road, including the development site, are impacted by overland flow paths that develop once the drainage capacity is exceeded. In a 1% AEP event, the volume of

overland flow expands significantly. Floodwaters overtop trunk drainage channels upstream, and the area around Beauchamp Road becomes inundated, resulting in the subject site being impacted by overland flow flooding. The site’s current extent and depths are shown within Figure 5.3

2.2.3 Coastal Flooding

In addition to stormwater runoff from the catchment, the lower reaches of the estuary can also be influenced by backwater effects resulting from elevated ocean levels. Hence, the height of the tide at the time of the arrival of the peak runoff from the catchment can also have an influence on flood levels in the lower reaches.

Design tidal hydrographs in the Birds Gully and Bunnerong Road Flood Study were based on the following (Table 16, Birds Gully and Bunnerong Road Flood Study).

Figure 2.3: Birds Gully and Bunnerong Road Flood Study - Tidal Boundary Peaks

Design Event (AEP)	Design Tidal Level Botany Bay
1 EY	1.2
50% AEP	1.2
20% AEP	1.2
10% AEP	1.2
5% AEP	1.4
2% AEP	1.42
1% AEP	1.43
PMF	1.45

Source: Birds Gully and Bunnerong Flood Study, 2018

Based on the design tide levels compared to the elevations at the development site (Figure 2.1), coastal flooding is not expected to affect Beauchamp Road.

2.3 Flood History

From the Flood Study, 2018, it is highlighted that the Council receives frequent complaints of flooding from events exceeding the capacity of the drainage network and flooding due to overland flow. Historic newspaper articles, SES reports, the Bureau of Meteorology (BoM) and council websites indicate that there has been previous flooding in 1959, 1984, 1989, 1998, 1999, 2009, 2014 and 2015, with the October 1959 event possibly being the largest event on record.

3 Methodology Approach

3.1 Available information

WMAwater were engaged by Randwick City Council and Bayside Council to develop a Flood Study for the Birds Gully and Bunnerong Road Catchment.

The objectives of the flood study, 2018 were to define and map flood behaviour in the catchment in order to provide Council with the planning tools necessary to mitigate flood risk for current and future development. The information and results obtained from this study will provide the basis for the development of a subsequent *Floodplain Risk Management Study and Plan* (FRMS&P), which explores flood modification works, various planning instruments and flood response measures. This flood risk management plan will build off the Flood Study completed in 2018 and is currently in development by WMAwater, however has not been released to the public.

The Birds Gully and Bunnerong Road model provides the base for this update, is a comprehensive catchment-wide flood model, ensuring that recent (and known upcoming) major developments are accurately accounted for and that current best practice data and methods for estimating design floods are applied. The model used incorporates existing buildings

The extent of the catchment is shown in Figure 2.2 and is sufficiently large to represent the hydrological catchments around the proposed site at 68-80 Beauchamp Road to analyse potential flood risks.

3.1.1 Basis of Flood Model

A TUFLOW model was developed for the 2018 study and calibrated against a number of observed storms between 1999 and 2015.

3.1.2 TUFLOW Software Package

TUFLOW is a one and two-dimensional (1D/2D) hydraulic modelling program that simulates the flow of water across a landscape and through any conveyance structures such as pipes or culverts.

The 2D component of the TUFLOW software package determines overland flow paths by dividing the landscape into a grid of individual cells. The flow of water between cells is then computed repeatedly at regular time steps by solving two-dimensional shallow water equations to estimate the spread and flow of the water. Flows are routed in the direction water that will naturally follow the modelled topography.

The 1D component (called ESTRY) is a separate calculation engine incorporated into TUFLOW to manage flows through structures which cannot be accurately represented with 2d grid cells. ESTRY is a network dynamic flow program suitable for mathematically modelling floods and tides (and/or surges) in a virtually unlimited number of combinations. ESTRY has been developed in conjunction with TUFLOW to resolve complex 1D-2D flows across the floodplain interface.

3.1.3 Modelling Scenarios

Flood model scenarios for 68 – 80 Beauchamp Road precinct were based on the following:

- Existing conditions
 - An assessment of the current flooding conditions based on existing survey of the site
- Design conditions
 - An amendment to the existing conditions model was built to incorporate the proposed development layout as building block-outs with appropriate level changes

The 10%, 1% AEP and probable maximum flood (PMF) events have been assessed as they relate to the flood planning levels for the development and cover extreme flooding scenarios to enable emergency planning for the site. The PMF is the largest flood that could conceivably occur at a location and defines the maximum extent of flood-prone land. Dry areas above the PMF level are expected to be free from flooding under all scenarios.

3.1.3.1 Influence of Climate Change

The Birds Gully and Bunnerong Road flood model was provided with hydrological rainfall increased outputs for 10%, 20% and 30% increases in design rainfalls in line with Climate Change in New South Wales (CSIRO, 2007) as well as a 0.4m increase in sea level by 2050 and 0.9m increase by 2100 to account for future climate scenarios.

The flood study adopted the following 1% AEP scenarios to assess the sensitivity to climate change:

- 0.4m rise in tailwater level in the Botany Bay
- 0.9m rise in tailwater level in Botany Bay
- 10% increase in design rainfall intensity
- 20% increase in design rainfall intensity
- 30% increase in design rainfall intensity
- Combinations of the above

The impacts of both rainfall increase and tailwater rise show a general increase in flood levels across the entire catchment. The results concluded that even in the worst-case combination, with 0.9m rise in tailwater level and 30% increase in design rainfall intensity to the 1% AEP results in a negligible (2mm) maximum increase in peak levels within the site boundary.

Based on the proposed floor levels, the flood level increase remains below the 500 mm freeboard applied to the Flood Planning Level (FPL). Therefore, projected climate change impacts would not result in exceedance of the prescribed floor level.

The guidance of the latest version of ARR (v4.2) on applying climate change relates to the consideration of Shared Socioeconomic Pathways (SSP). A range of SSPs are considered in the guidance, which is based on a range of climate modelling futures, reported in the Intergovernmental Panel on Climate Change's (IPCC) Assessment Report 6.

Using the global warming projections provided by ARR datahub for the Hillsdale area, SSP2 rainfall uplifts for the 2030 to 2100 range of future horizons is 16 to 35%, applicable to short duration flooding. For the longer 12-hour duration flooding these same SSP2 rainfall uplift projections are 11 to 24% for the 2030 to 2100 future year horizons. These projections indicate that the already assessed 10%, 20% and 30% rainfall uplifts provide a reasonable range of climate futures that are equivalents of the latest projections from ARR v4.2.

4 Flood Related Requirements

The following guidelines and standards relate to civil works as they potentially influence flood behaviour and form the basis of engineering decisions regarding stormwater management and the provision of overland flow.

4.1 Australian Rainfall and Runoff (2019)

Prepared by the Institution of Engineers, Australian Rainfall, and Runoff – *A Guide to Flood Estimation* was written to provide “*Australian designers with the best available information on design flood estimation.*” It contains procedures for estimating stormwater runoff for a range of catchments and rainfall events as well as design methods for urban stormwater drainage systems. The document has been updated from the previously used 2001 version with a more refined methodology for hydrological analysis based on the latest hydrological data gathered.

4.2 Bayside Council Documents

4.2.1 Bayside Council Local Environment Plan (2021)

Bayside Local Environmental Plan 2021 outlines the flood planning provisions in accordance with the relevant standard environmental planning instrument under Section 3.20 of the Act. Additionally Bayside Council has not adopted Clause 5.22 *Special Flood Considerations* as part of their LEP 2021

1. The Objectives of this clause are as follows-
 - a. To minimise the flood risk to life and property associated with the use of land,
 - b. To allow development on land that is compatible with the flood function and behaviour on the land, taking into account projected changes as a result of climate change,
 - c. To avoid adverse or cumulative impacts on flood behaviour and the environment,
 - d. To enable the safe occupation and efficient evacuation of people in the event of a flood.
2. Development consent must not be granted to development on land the consent authority to be within the flood planning area unless the consent authority is satisfied the development-
 - a. Is compatible with the flood function and behaviour on the land, and
 - b. Will not adversely affect flood behaviour in a way that results in detrimental increase in the potential flood affectation of other development or properties, and
 - c. Will not adversely affect the safe occupation and efficient evacuation of people or exceed the capacity of existing evacuation routes for the surrounding area in the event of a flood, and
 - d. Incorporates appropriate measures to manage risk to life in the event of a flood, and
 - e. Will not adversely affect the environment or cause avoidable erosion, siltation, destruction of riparian vegetation or a reduction in the stability of riverbanks or watercourse.
3. In deciding whether to grant development consent on land to which this clause applies, the consent authority must consider the following matters-

- a. The impact of the development on projected changes to flood behaviour as a result of climate change
- b. The intended design and scale of buildings resulting from the development,
- c. Whether the development incorporates measures to minimise the risk to life and ensure the safe evacuation of people in the event of a flood,
- d. The potential to modify, relocate or remove buildings resulting from development if the surrounding area is impacted by flood or coastal erosion.

4.2.2 Bayside Council Development Control Plans (2022)

The Bayside Council's Development Control Plans (2022) chapter 3.10, Flood Prone Land outlines the policy required to be undertaken to flood prone areas within the council. Land which this policy applies to are all flood-prone land within the Bayside Council, being all land potentially inundated by floods up to and including probable maximum flood (PMF).

Chapter 9.5.4 states that where a new development may impact the flood behaviour in a flood affected area the flood impacts are to be assessed for the existing and proposed development to ensure that the existing flood hazard is not increased.

Floor levels for both high and low flood hazard based on residential land use are to follow the planning controls A1 and A3:

A1 – Habitable floor levels to be no lower than the 1% AEP flood level plus 0.5m freeboard.

A3 – non-habitable floor level to be no lower than 1% AEP flood level.

Basement car parks and driveway access for both high and low flood hazard based on residential land use are to follow the planning controls E1, E2 and E3.

E1 – The minimum finished floor level of open car parking spaces or carports shall be at or above natural ground level. A flow-through roller door (or horizontal louvers) is permitted for a carport structure. Carports must be of open design, with at least 2 sides completely open such that flow is not obstructed up to the 1% AEP flood level. Otherwise, it will be considered to be enclosed.

E2 – For above ground level garages, the minimum surface level shall be no lower than the 1% AEP flood level.

E3 – Basement garages/storage/car parking, low-level driveways must be physically protected from inundation by floods equal to or greater than the 1% AEP flood level plus 0.5m freeboard. The crest of the driveway shall be located within the property boundary. All access, ventilation, driveway crests and any other potential water entry points to any enclosed car parking shall be above the 1% AEP flood level plus 0.5m freeboard level to meet the requirements of the DCP.

The Council will not accept any options that rely on the electrical, mechanical, or manual exclusion of floodwaters from entering the enclosed car park for new development.

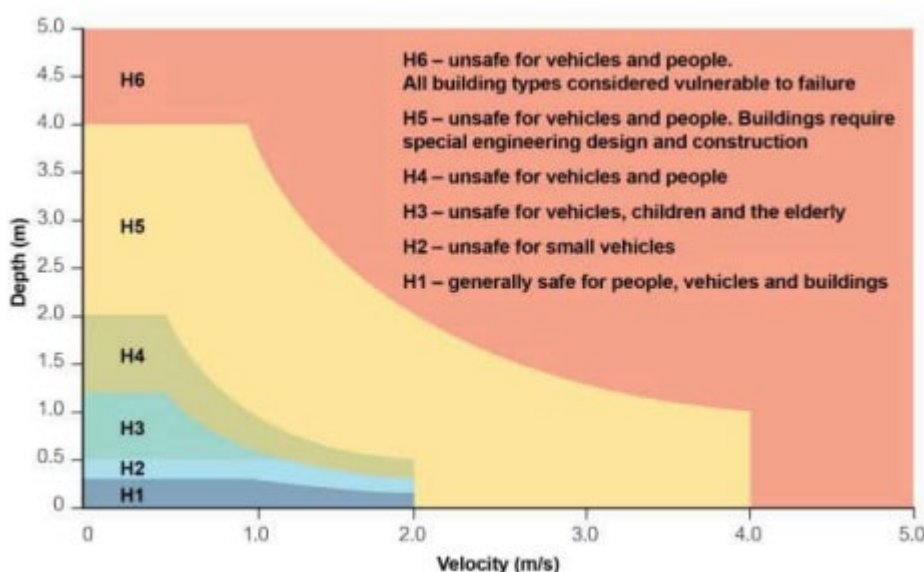
It is also specified that intensification of any residential, commercial or industrial use is identified as unsuitable within the flood-affected part of the land where Flood Hazard is classified as H5 to H6. However, Council may allow the development where flood hazard can be reduced by appropriate flood mitigation such as trunk drainage upgrade, diversion of stormwater asset etc to reduce flood risk in the development site. Consolidation with an adjoining lot may provide flood-free access to the site and a safe evacuation route.

4.3 NSW Flood Risk Management Manual (June 2023)

The NSW Government’s manual supersedes the previous *Floodplain Development Manual – the Management of Flood Liable Land* (2005) and is concerned with the management of the consequences of flooding as they relate to the human occupation of urban and rural developments. The manual outlines the floodplain risk management process and assigns roles and responsibilities for the various stakeholders.

The manual applies to all development and provides additional guidelines for ensuring safe overland flow paths are provided. These guidelines adopt the hazard categorisation which has been developed by Australian Emergency Management Institute in 2014, defining hazard into six categories. The categories relate to the flood vulnerability curves shown in Figure 4.1.

Figure 4.1: General Flood Hazard Vulnerability Curve



Source: Australian Emergency Management Institute (2014)

4.4 Emergency Management

NSW State Emergency Services (SES) provides community advice for urban areas throughout Sydney during flooding events. General advice for residents living in the Hillsdale catchment is provided by Bayside Council and also NSW SES FloodSafe guide for Flash Floods and the StormSafe guide. The NSW Communities FloodSafe guide relating to riverine flooding which is not applicable to riverine flooding is not applicable to the Hillsdale proposed development.

4.5 Flood Risk Management Guideline LU01 (2023)

Published by the Department of Planning and Environment (DPE), this guideline provides advice on the scope and scale of a flood impact and risk assessment. It does not replace the processes or requirements of the consent authority. It should be read in conjunction with and address any other assessment requirements for the development proposal/application.

It should be read in conjunction with and address any other assessment requirements for the development proposal/application, including those of referral authorities. For example, for state significant development proposals being considered by the NSW Government, this guideline should be read in conjunction with the Planning Secretary’s environmental assessment requirements (SEARs) issued for the development.

In the case of proposed development at Hilldale the following index provides reference to how sections of LU01 has been used to guide the preparation of this FIRA:

- Section 2.1 – the need for a FIRA is established through the anticipated impact of development on flooding conditions
- Section 2.2 – the scope of FIRA is best aligned off the existing floodplain risk management study, this was obtained from Council. Council has developed requirements associated with the understanding of flood risk (refer 4.2)
- Section 2.6 – the category of FIRA for this development application is best suited to *FIRA based on existing flood requirements such as those specified in a council LEP and DCP*
- Section 2.7 – based on the FIRA category, requirements of Council (Section 4.2) provide guidance to the level of detail and technical discussion required in the flooding assessment
- Tables 5 & 6 –discussion sections in the FIRA have been prepared which respond to the key considerations of the typical assessment scope provided in LU01, noting the category of FIRA being *FIRA based on existing flood requirements such as those specified in a council LEP and DCP*.

4.6 Shelter in Place Guideline for Flash Flooding (2025)

Published by the Department of Planning, Housing and Infrastructure (DPHI), this guideline aims to assist consent authorities to undertake site specific, risk-based assessment to assess if shelter in place is a suitable emergency management strategy for development proposed in flash flood environments.

The intent of the guideline is to:

- guide proponents on where shelter in place may be considered in land use planning
- provide consent authorities guidance on matters that may be considered in assessing planning proposals and development applications where shelter in place is proposed
- assist councils when considering the role of shelter in place within their own local guidelines, policies, and development control plans.

The shelter in place guideline defines the following:

- Shelter in place – the internal movement of a building’s occupants to an area within the building above the probable maximum flood (PMF) level before the property becomes inundated by flood waters
- Flash flooding – flash flooding is “flooding that occurs within 6 hours of the precipitating weather event, and often involves rapid water level changes and flood water velocity”¹
- Flood behaviour
 - Flash flooding is the only flood risk present at the site, whether it be from overland flooding, a nearby creek or riverine flooding
 - The flooding occurs within less than 6 hours from the commencement of causative rain and the duration of shelter in place due to isolation by floodwaters is less than 12 hours from the commencement of rainfall
 - The development is not subject to high hazard flooding (e.g. floodways, high hazard H5 or H6 areas) or surrounding roadways are not subject to high hazard flooding²

¹ Flash flooding as defined in Emergency Planning and Response to Protect Life in Flash Flood Events (2018) AFAC (Australasian Fire and Emergency Service Authorities Council)

² Flood Risk Management Guideline FB03 Flood Hazard, DCCEEW, 2023

5 Hydraulic Modelling

5.1 Flood Model Development

TUFLOW model for the Birds Gully and Bunnerong Road catchment was based upon the following:

- Existing conditions
 - An assessment of the present flooding conditions based on open-source LiDAR.
- Design conditions with mitigation measures
 - An assessment of the proposed design flooding conditions was conducted. This was an amendment to the existing conditions model that was built to incorporate the proposed options as building block-outs, proposed regarding and amendments to the drainage network to include a bridge structure to maintain the existing flowpath. These adjustments to the base existing model allow for the assessment of the impacts of the proposal and provide design recommendations, such as flood planning levels.

The following storm Annual Exceedance Probabilities (AEP) have been assessed in relation to the proposed development site:

- 10% AEP (1 in 10-year storm) – analysis of flood impacts, definition of flood planning levels and emergency management.
- 1% AEP (1 in 100-year storm) – analysis of flood impacts, definition of flood planning levels and emergency management.
- Probable Maximum Flood
- 1% AEP CC events with varying Sea level rise and rainfall intensity

A blockage scenario of the bridge structure and below site culvert will be completed as part of the detailed design stage, to understand the maximum inundation potential for surrounding properties.

5.1.1 Critical Storm Durations

The critical storm durations identified in the Birds Gully and Bunnerong Road Catchment flood model were adopted for this model. The critical durations that were used for each duration are shown in Table 5.1.

Table 5.1: Design event critical duration

Design Event	Overland Critical Duration	Mainstream Critical Duration
1 EY	30 min	120 min
0.5 EY	30 min	120 min
20% AEP	30 min	120 min
10% AEP	60 min	180 min
5% AEP	60 min	180 min
2% AEP	60 min	90 min
1% AEP	60 min	90 min
0.5% EP	60 min	90 min
PMF	60 min	

Source: Birds Gully and Bunnerong Road Flood Study

5.2 Existing Case Flood Behaviour

5.2.1 Design Storm Events

5.2.1.1 10% AEP Storm (1 in 10 year)

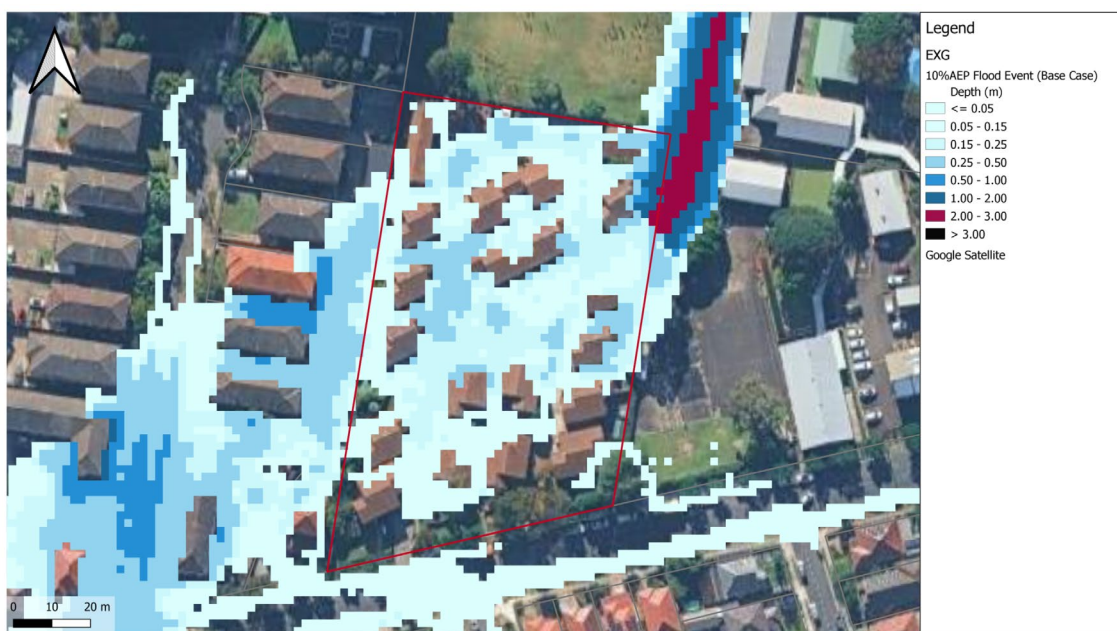
Flood Depths and Extents

The received Council flood model 10% AEP storm has been used to represent a minor storm event. While 'minor' in the context of flood risk, the 10% AEP storm has an average annual recurrence of 1 in 10-years and is still considered uncommon. During a 10% AEP storm, flooding is present in the adjacent road and shallow flooding within the site with the greatest depths within the existing channel, shown in Figure 5.1.

Flood Hazard

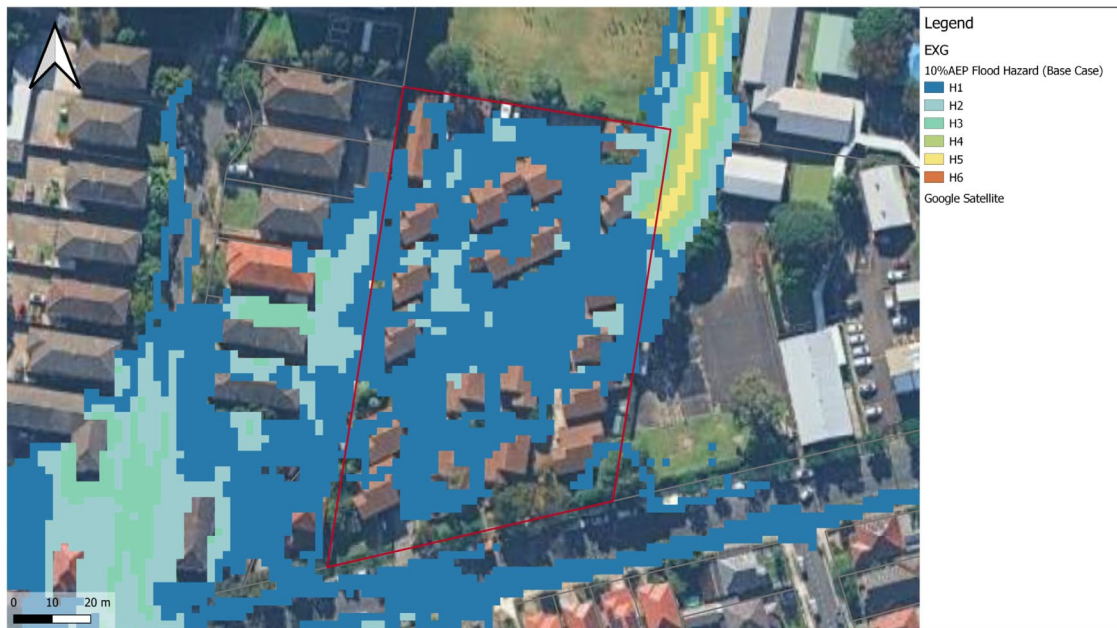
Category H1 to H4 is considered low hazard, however, they can still present a risk to vehicles, children and the elderly (see Figure 4.1) while H5 and H6 are considered high hazard. The entirety of the site falls within low H1 flood hazard as shown in Figure 5.2. The surrounding roads begin to show increasing risk but no sign of high hazard anywhere within the surrounding area for a 10% AEP flood event. Velocities across the site are less than 1m/s.

Figure 5.1: 10% AEP Flood Depth and Extent



Source: SATELLITE IMAGERY © GOOGLE 2024

Figure 5.2: 10% AEP Flood Hazard



Source: SATELLITE IMAGERY © GOOGLE 2024

5.2.1.2 1% AEP Storm (1 in 100 year ARI)

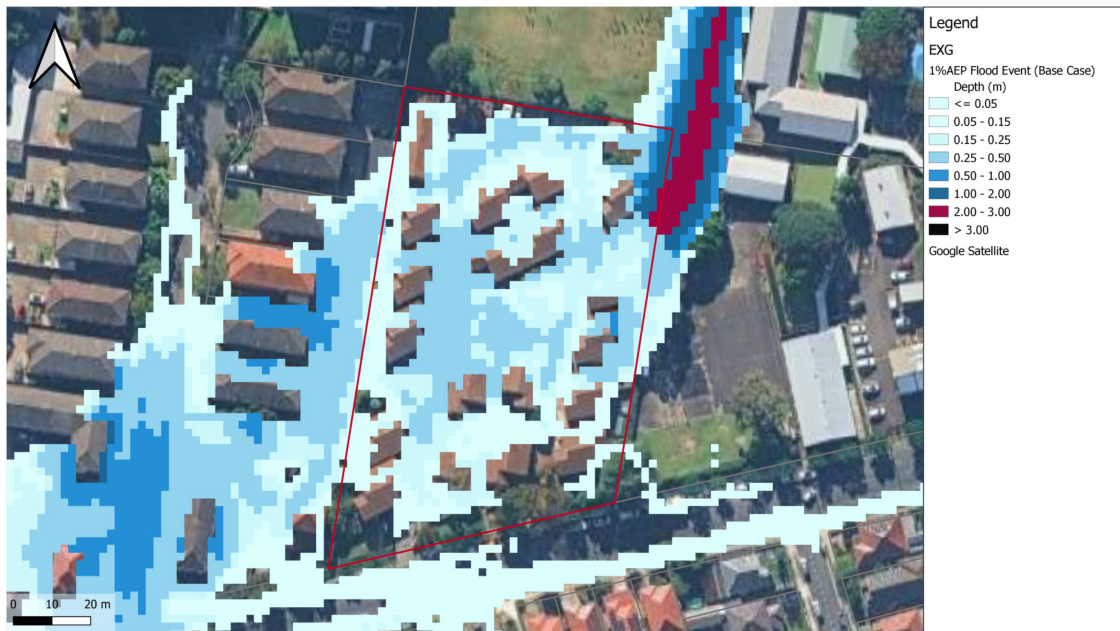
The 1% AEP storm forms the basis of Council’s flood planning levels. The storm is very rare, having a 1% chance of occurring during any given year. It is equivalent to the 1 in 100-year ARI.

The modelling for the 1% AEP flood event at the proposed development shows significant flooding to the subject site (See Figure 5.3). Flooding occurs across the full footprint of the site, with the northeast area adjacent to the trunk drainage experiencing the greatest depths, up to 3.0 m within the channel, while depths outside the drainage channel rise to 0.5 m.

Flood hazard mapping indicates predominantly low hazard (H1–H2) around the site, with isolated high hazards of H3 and H4 near the trunk drainage (See Figure 5.4)

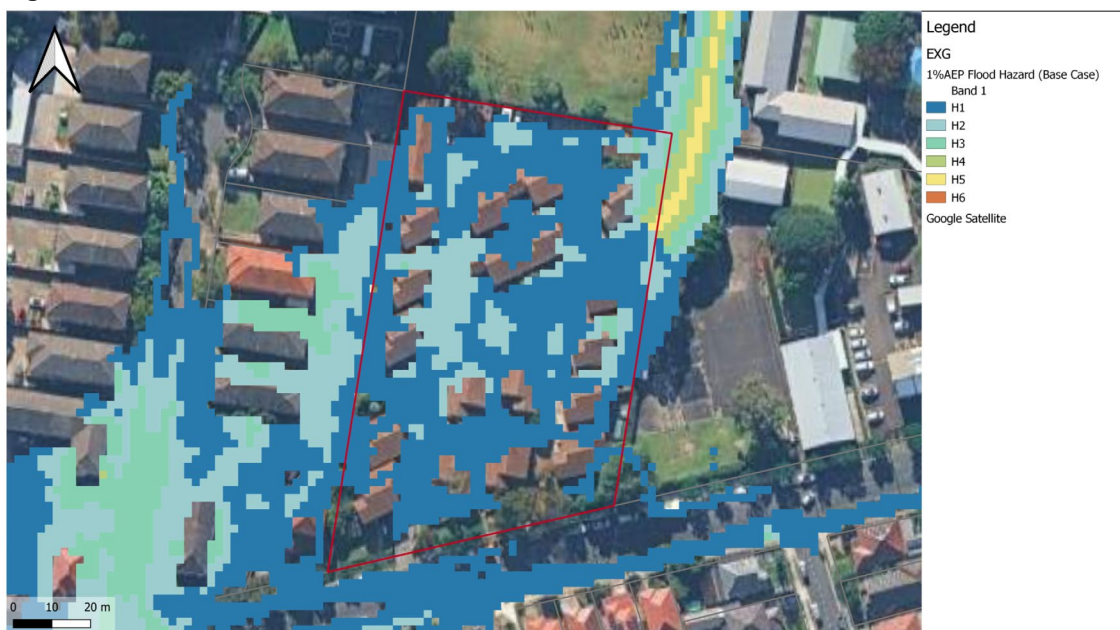
The peak velocity within the site boundary is 1.57m/s, in the Northwest. Most of the site possesses velocities within 1m/s. See Figure 5.5 for more details.

Figure 5.3: 1% AEP Storm Flood Depth and Extent



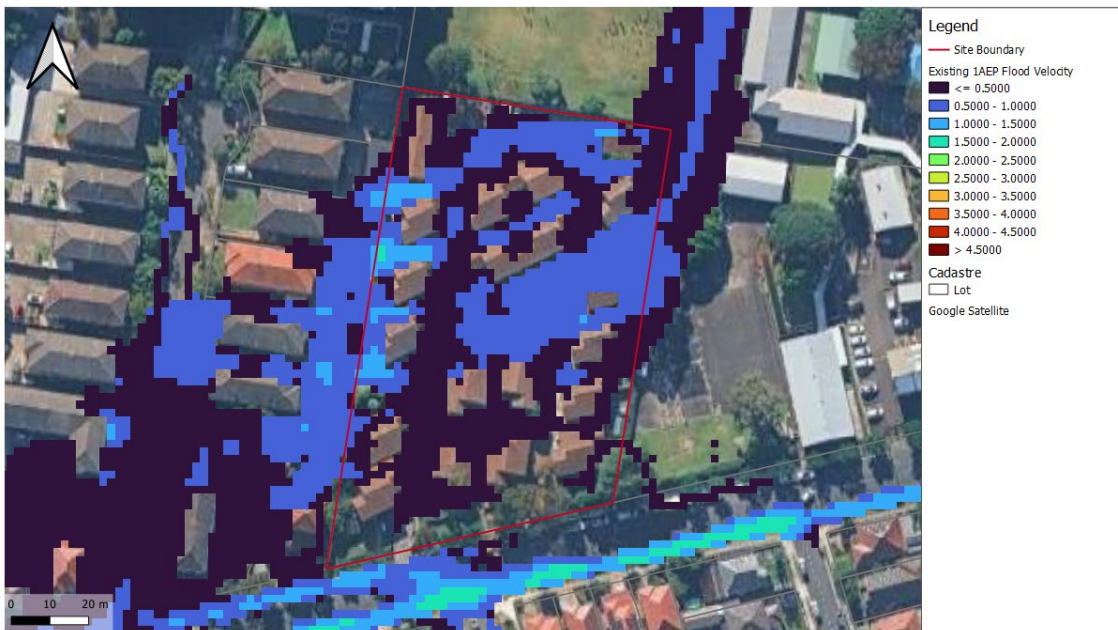
Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.4: 1% AEP Storm Flood Hazard



Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.5: 1% AEP Storm Flood Velocity



Source: GOOGLE SATELLITE IMAGERY, 2024

5.2.1.3 Probable Maximum Flood (PMF)

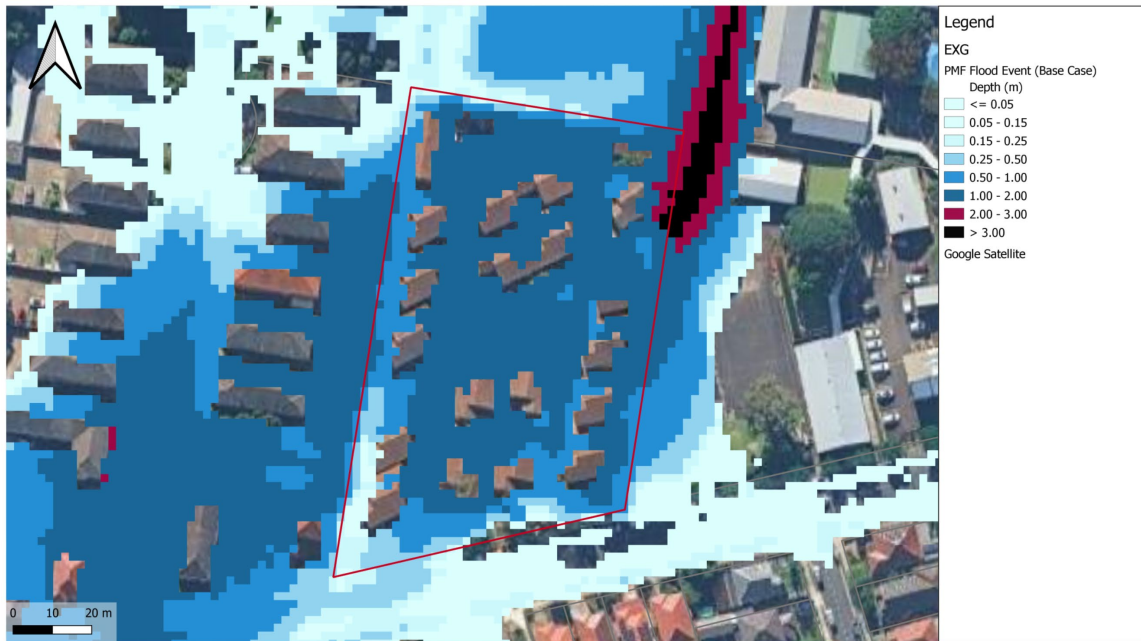
PMF results are provided for flood planning requirements but do not form part of the flood impact assessment. The PMF is a theoretical maximum flood that can occur at a location with a probability of occurring between 1 in 100,000 and 1 in 10,000,000 in any year.

The area around the site is subject to high water inundation during the PMF with increased velocities and depth of water throughout the site. Flood depths and extents are shown in Figure 5.6.

For the PMF flood hazard, the approach followed categorisation from the NSW Governments Floodplain Development Manual (2005). is shown in. Category H1 to H4 is considered low hazard, while H5 and H6 are considered high hazard.

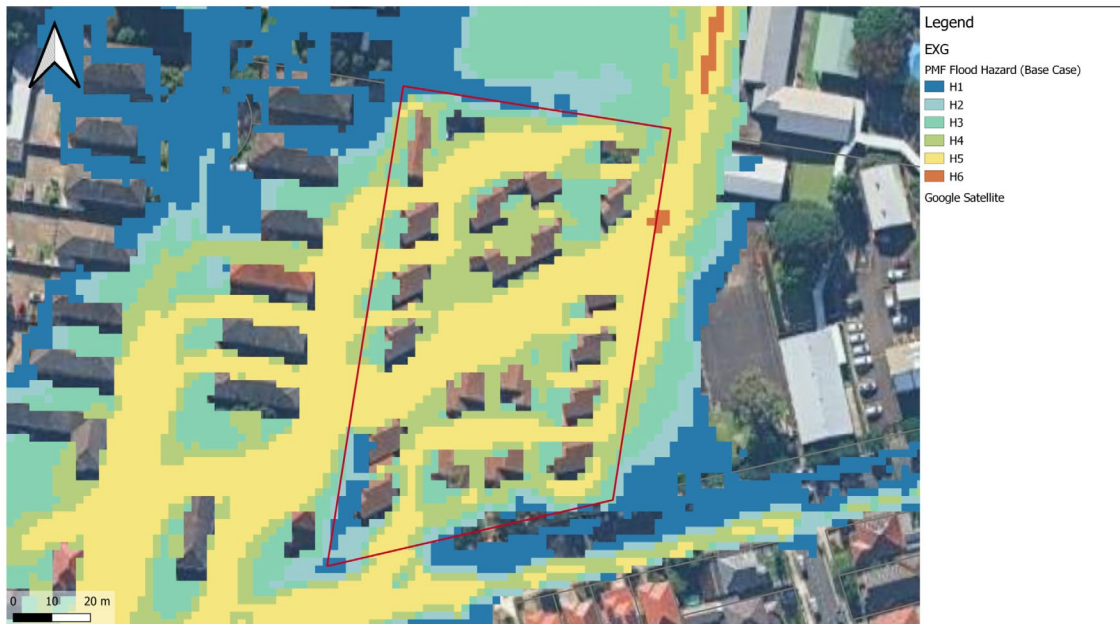
The model predicts high flood hazard almost completely throughout the site with a clear northeast to southwest flow path clearly shown as H5.

Figure 5.6: PMF Flood Depth and Extent



Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.7: PMF Storm Flood Hazard



Source: GOOGLE SATELLITE IMAGERY, 2024

5.3 Design Case Flood Behaviour

To represent the 68 – 80 Beauchamp Road post-development case, a new building block was included in the model covering the proposed site. This assumes that the buildings will be immune from flooding in the 1% AEP storm by adopting the Council Flood Planning Level (1% AEP + 500 mm freeboard), preventing any water ingress to the site itself. The significant change in design narrows but, importantly, maintains the south-westerly flow path through the site. In

order to enable floor level flood compliance for the new developments and not adversely impact the surrounding catchment area, this is required despite the consolidated higher hazard and depth floodway.

Driveway access across the major event overland flow path is via a bridge of 10m clear span, providing an opening beneath of 1.3m height for passage of the overland flow. This design provides driveway immunity for 1% AEP flows.

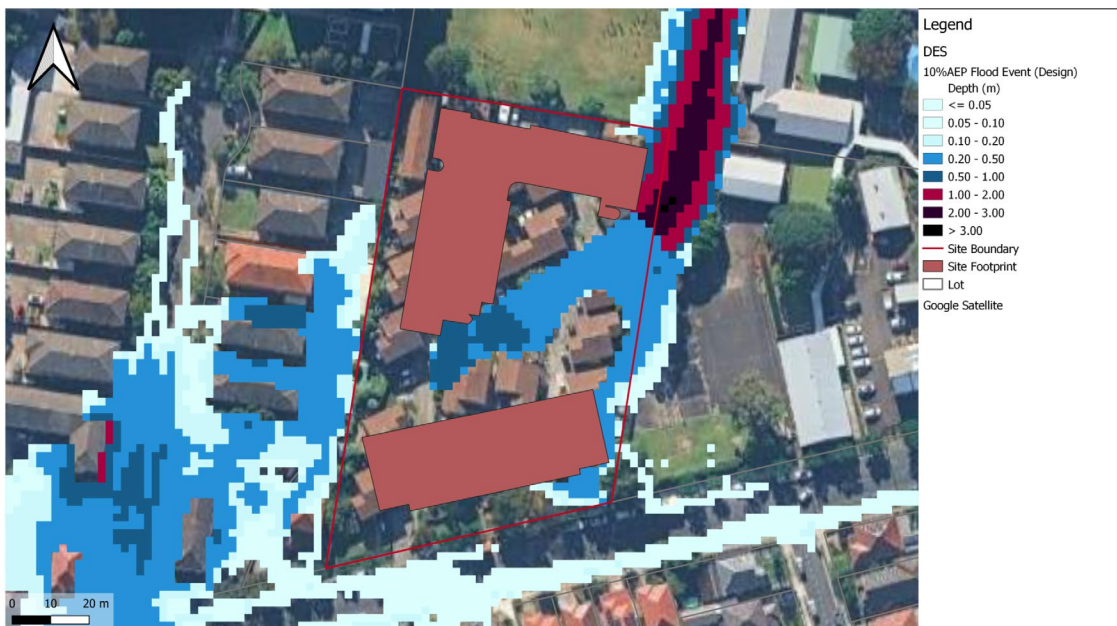
5.3.1 Design Storm Events

5.3.1.1 10% AEP Storm (1 in 10 year)

The design case 10% AEP flood risk differs from the base case within the site due to the footprint changes of the site. The flow path is focused through the centre of the site as designed. Depths in the channel rise to 3m and remain within the channel upstream of the site. The runoff from Beauchamp Road does not impact the site and the flow remains within the above ground formed channel within the site reaching depths up to 0.60m.

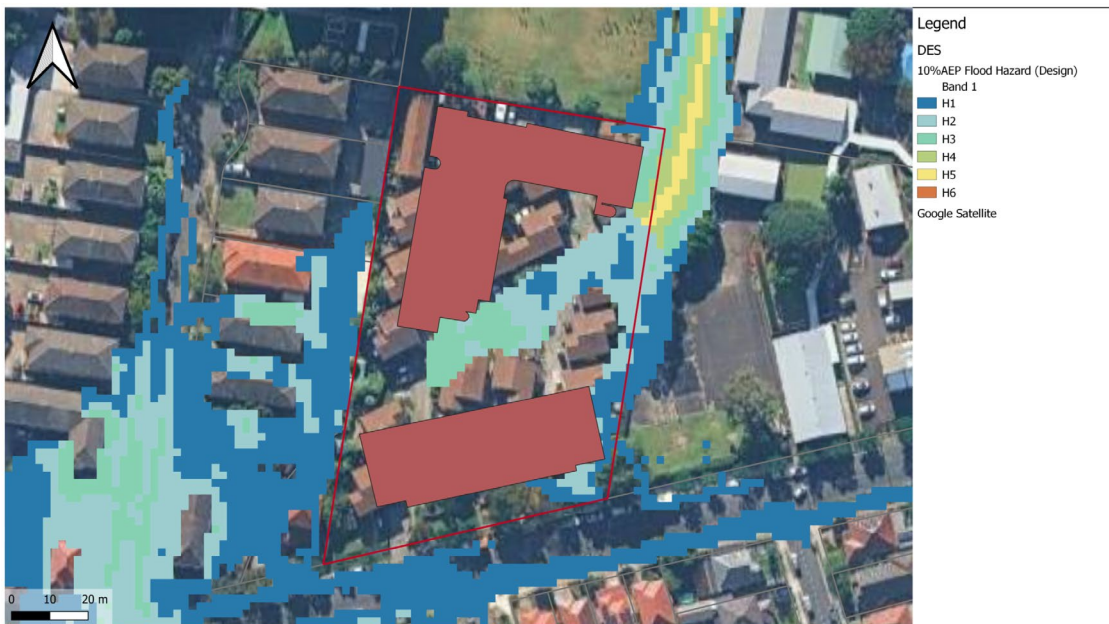
The site still shows low hazard risk in the 10% AEP event, similar to the existing scenario, although there is noticeably more H2 and H3 in the above ground channelled section through the site. There are also signs of H4 and H5 within the upstream channel due to the depth within, although this is external to the site. See Figure 5.9 for more details.

Figure 5.8: 10% AEP Flood Depth and Extent



Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.9: 10% AEP Flood Hazard



Source: GOOGLE SATELLITE IMAGERY, 2024

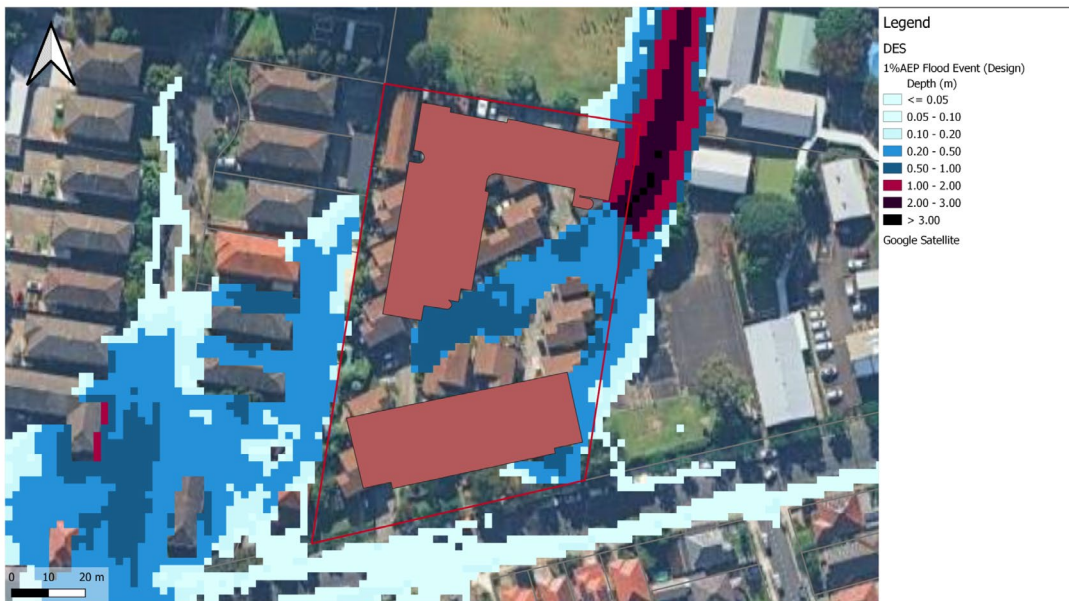
5.3.1.2 1% AEP Storm (1 in 100 year)

The design case 1% AEP flood risk shows significant change from the base case within the site due to the footprint changes of the site. Rather than a flow spread across the entire site, the flow path remains in the South Westerly direction but is more densely focused through the centre of the site. Depths in the channel rise to over 3m and overtop to run additionally to the low point in the Southeastern section. The runoff from Beauchamp does not significantly impact the site and the flow remains within the above ground channelled section within the site reaching depths up to 1m and peak flood levels around 15.00 m AHD.

The site still shows low hazard risk in the 1% AEP event, similar to the existing scenario, although there is noticeably more H2 and H3 in the above ground channelled section through the site, as opposed to H1 spread across the entire footprint of the site. See Figure 5.11 for more details.

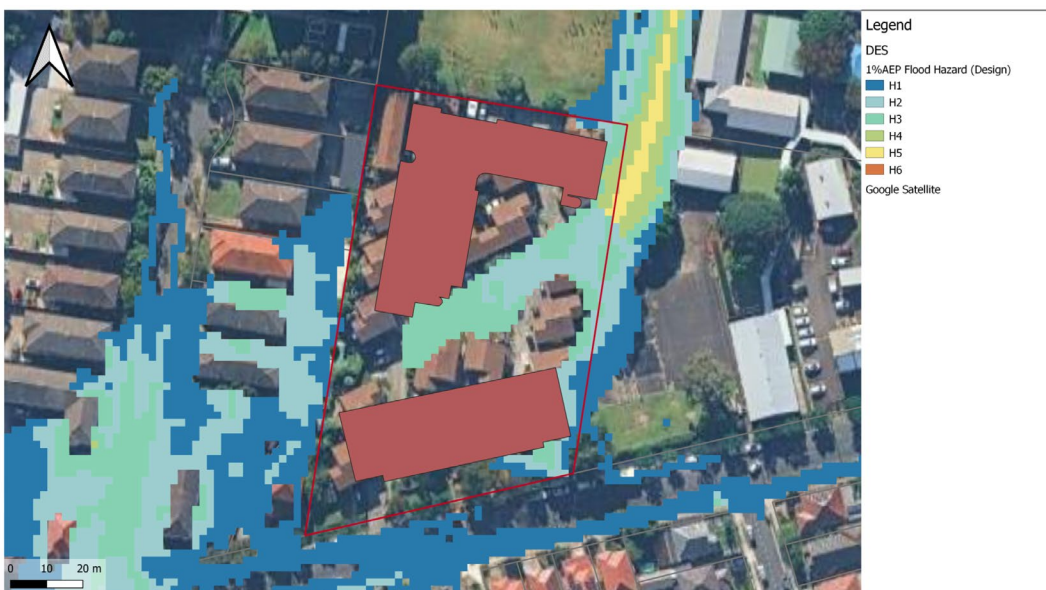
The peak velocity within site for the 1% AEP is lower than the existing condition, at 1.40 m/s, approximately 0.17m/s slower. Like the existing conditions, most of the site sits within 1 m/s max velocities.

Figure 5.10: 1% AEP Flood Depth and Extent



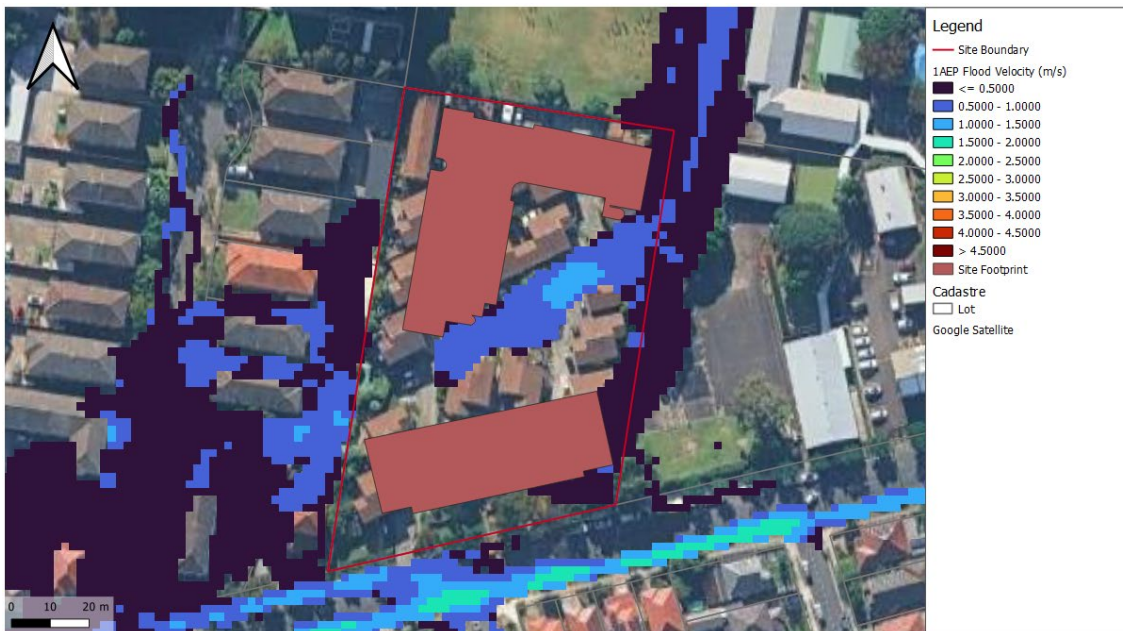
Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.11: 1% AEP Flood Hazard



Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.12: 1% AEP Flood Velocity



Source: GOOGLE SATELLITE IMAGERY, 2024

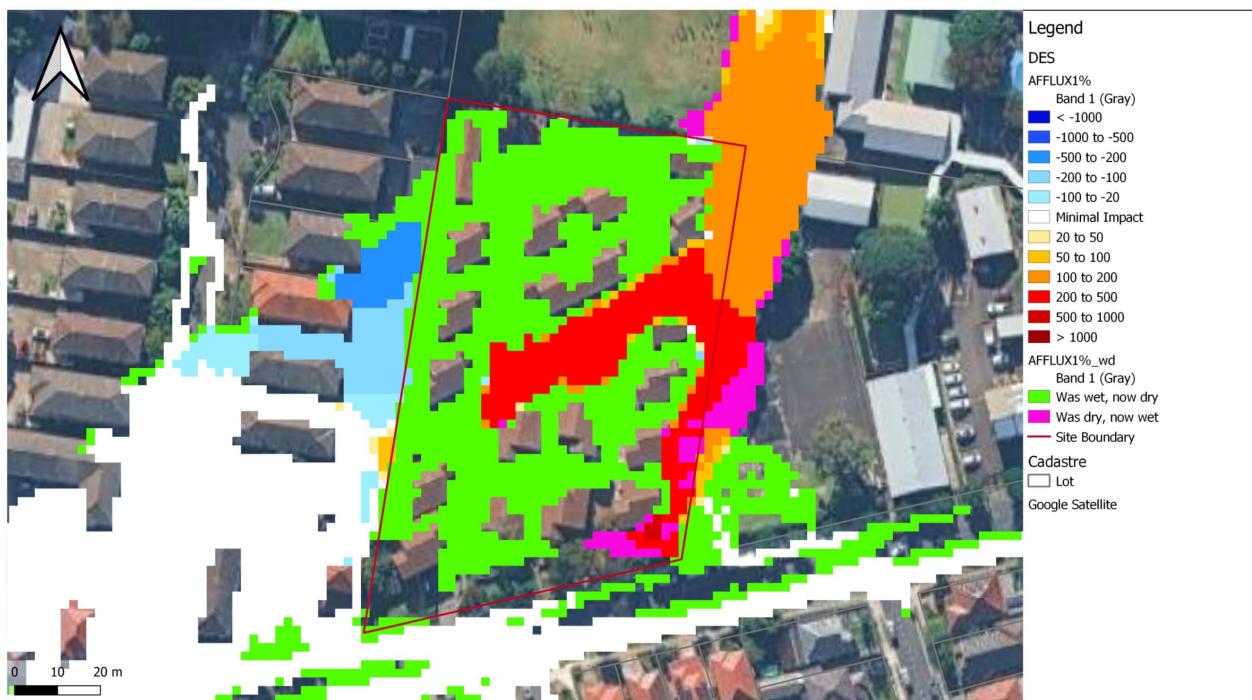
5.3.2 Afflux

The inclusion of the development is not predicted to cause adverse changes in flooding, as indicated by the water level difference map in Figure 5.13.

The mapping shows some flood depth decreases both surrounding and downstream of the site where the ground level has been raised, with a maximum of 0.16 m decrease in locational flood depth compared to the existing development. A section of increased water level predicted is shown throughout the channelised zone within the site and the trunk drainage channel up to 80m upstream of the site, showing a maximum increase in depth of 0.17m within the existing channel and 0.45 m within the site, which is to be expected given the newly formed flow path.

Outside the site boundary, off-site impacts are low as only the depth within the channel and a small area east of the site exceeds 10mm afflux, with it predominantly contained within the existing stormwater channel and negligible further upstream of the site. This is outweighed by the benefit of the reduced flooding impact on the homes West of the site, which sees up to a 250mm reduction, highlighting the benefit of the development on these existing homes. This is reinforced significantly for the PMF, with the only increase in depths being directed within the channel, North of the site in an unoccupied field and a small addition of the adjacent school playground, which is deemed unlikely to create any further risk to the area compared to the baseline flood footprint.

Figure 5.13: 68 - 80 Beauchamp Road - Afflux - 1%AEP



Source: GOOGLE SATELLITE IMAGERY, 2024

5.3.2.1 Climate Change Runs

Climate change sensitivity testing indicates that projected climate change has a negligible influence on flood behaviour across the site for the 1% AEP event. The modelled climate change case results in only a marginal increase in flood depth, with changes generally limited to maximum 50 mm increase across the channel section and lower for most of the broader site.

Sea level rise has a negligible effect on the site's flood depths and extents, indicating that tailwater conditions are not the controlling mechanism for flooding at this location. This is consistent with the site's flood response being dominated by localised, short-duration ("flash") flooding, where rainfall intensity is the primary driver of peak depths and hazards rather than downstream boundary conditions.

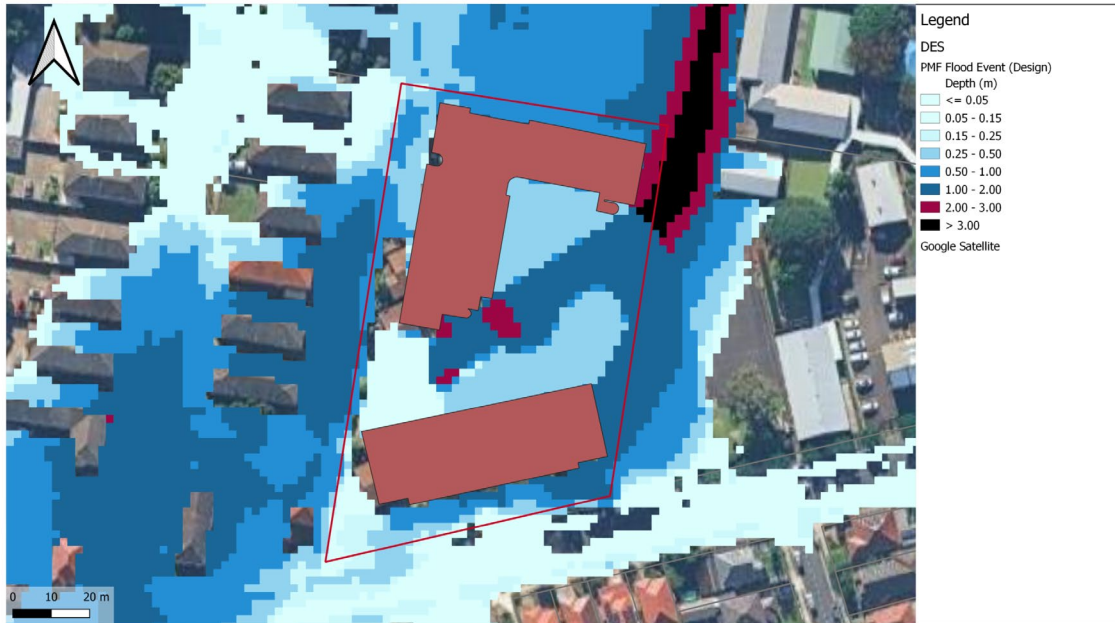
Climate change mapping (including the Year 2100 sea level rise condition and +30% rainfall intensity uplift scenario) is provided in Appendix A, including outputs of flood depth/extent/hazard for combined rainfall uplift and sea level rise scenarios.

5.3.2.2 Probable Maximum Flood (PMF)

The design case PMF flood depth and extent (see Figure 5.14) shows minimal change outside the site boundary from the base case. Within the site boundary, there is a clear flow pattern change with increased depths through the centre of the site and the South of the site. The largest increase in depth unsurprisingly sits within the newly formed overland flow channel, showing up to 0.78m increase in depth. This mirrors the fact that areas that are raised in the design case to offer protection to the new building are now dry and subsequently show up to 0.80m reduction in depth.

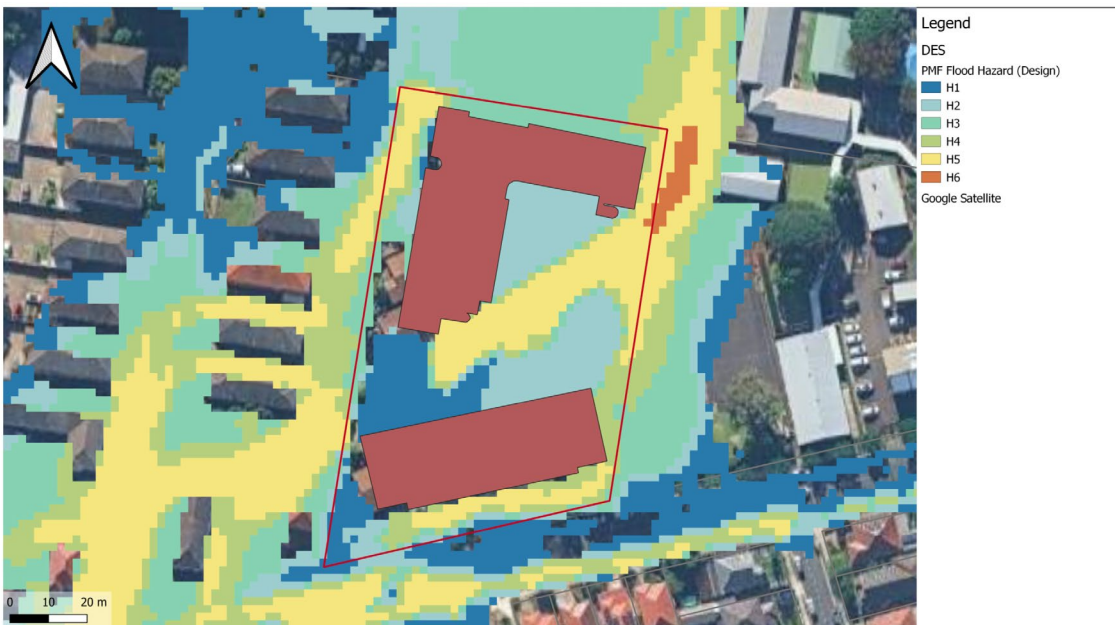
The design case PMF flood hazard (see Figure 5.15) within the site is significantly reduced, as instead of the full site under H5 risk, only the central channel is. There is a minor patch of H6 where the drainage channel meets the site boundary as it enters the culvert below the site; however, this is not dissimilar from the base case, where there were already signs of H6. Flood velocities do not change significantly, with peak velocities for the design case being 3.70 m/s, which is significant and unsafe. This is effectively unchanged from the existing case, which suggested 3.60 m/s.

Figure 5.14: PMF Flood Depth and Extent



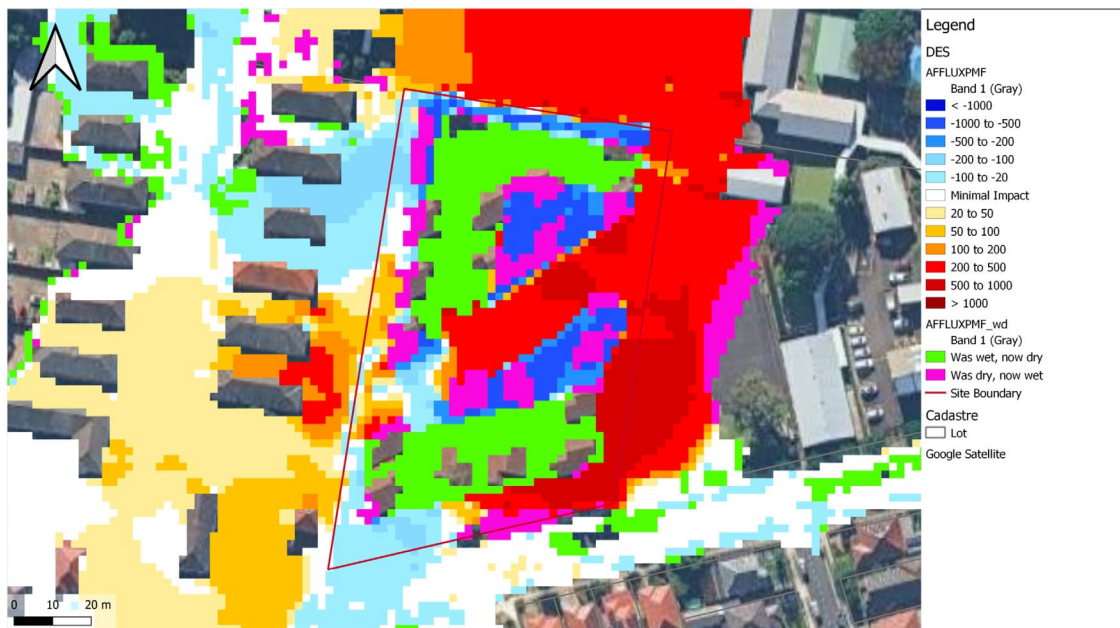
Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.15: PMF Flood Hazard



Source: GOOGLE SATELLITE IMAGERY, 2024

Figure 5.16: PMF Afflux



Source: GOOGLE SATELLITE IMAGERY, 2024

5.3.2.3 Post Development Flood Impacts

The flood impact assessment has identified significant change in flood risk around the site due predominantly to landscaping, however they show minimal detriment to surrounding properties.

The key parameters of the flood assessment are summarised below:

- Changes in peak 1% AEP water level
 - the changes in peak water level because of the development do not exceed the recommended thresholds for habitable buildings or residential zoned land
 - no cumulative impacts predicted
 - no new areas of flood inundation
- Changes in peak 1% AEP flow
 - the changes in peak flow are negligible
- Changes in 1% AEP inundation duration and time to peak
 - no increases in duration of inundation from existing scenario
 - no change in the time to peak flooding conditions
- Change in 1% AEP flood velocity
 - flood water velocities are not significantly changed by the development
 - there are no changes in flood water velocity outside the site boundary
- Change in 1% AEP flood hazard
 - there are no changes in flood hazard outside the site boundary

5.4 Managing Flood Risks

The area around the Beauchamp Road is significantly flood affected with regional flooding issues identified by the Birds Gully and Bunnerong Road flood model. It is beyond the scope of this development to alleviate these flooding issues, however, the overall intent behind the design is to make the proposed site as resilient to flooding as is practicable.

The PMF depths along the Southern aspects are the only area that show significantly greater flood levels than the 1% AEP depth which limit opportunities to prevent water ingress into the

basement via lift shafts and basement access in the building A. The Bayside DCP allows basement openings to be at the Flood Planning Level (1% AEP + 500 mm freeboard).

The access levels for both buildings are above the level of the PMF and the new multi-storey building will be stable during flooding up to the PMF and all non-ground floor residents in multi-storey development would be only exposed to an indirect flood risk. Ultimately, the two proposed buildings at 68 – 80 Beauchamp Road are still flood affected; therefore, the safest course of action is to remain in place in a flood event and wait for flood waters to recede.

5.4.1 Existing Stormwater Networks

The site at 68–80 Beauchamp Road is underlain by a heritage stormwater culvert that conveys water underground from the trunk drainage channel traversing the property. This culvert plays a critical role in managing overland flow and flood risk across the site, which is situated within a low-lying area of the Bayside LGA. According to the updated survey data in the CN226021 Hillsdale Survey and Hillsdale - Updated SWC Survey, the culvert sections and dimensions are detailed across multiple sheets, with benchmark elevations ranging from IL 10.74 to IL 11.94 (AHD). The culvert alignment cuts diagonally through the site and its presence imposes specific constraints on the building design. To accommodate the culvert and ensure compliance with flood planning levels (FPL), the architectural design has incorporated elevated finished floor levels (FFLs) and extended basement ramps.

Additionally, the easement requirement necessitates that no structural loads be imposed directly above the culvert, and that cast-in services bridge over it without compromising hydraulic capacity or access for maintenance.

5.5 Managing Flood Risks

The overall intent behind the design is to make the proposed site as resilient to flooding as is practicable. Please see Table 5.2 for more information and compliance with the Bayside DCP.

Table 5.2: Bayside DCP Planning Compliance

Bayside DCP Planning Consideration	Compliance	Further comments
A1 – Habitable floor levels to be no lower than the 1% AEP flood level plus 0.5m freeboard.	Yes	Habitable Floor levels have been set to PMF flood levels with the vehicle access ramp crest set to PMF level to prevent water ingress.
A3 – non-habitable floor level to be no lower than 1% AEP flood level.	Yes	
B1 – All structures must use flood-compatible materials (Schedules – Chapter 9.5.3) below the 1% AEP flood level plus 0.5 m freeboard. Any building elements at or below this level must be constructed from flood-compatible materials.	Yes	Structural material up to 1% + 0,5m freeboard will be constructed with flood-compatible materials Any provided fencing shall enable floodwater passage New electrical equipment will be waterproof and/or located above the 1% + 0.5 m freeboard
B3 – New fencing and gates up to the 1% AEP flood level must be flow-through (e.g., louvred or pool-style) to allow floodwater to pass through.	Yes	
B4 – All new electrical equipment, wiring, power points, fuel lines, sewerage systems and other service connections must be waterproofed and/or located above the 1% AEP flood level plus 0.5 m freeboard. Existing electrical equipment and power points below this level must be fitted with residual-current devices that automatically shut off power when floodwaters are detected.	Yes	
C1 – All new development must be designed and certified to withstand flood forces—including water pressure, wave action, debris impact, buoyancy and immersion—up to the 1% AEP flood level plus 0.5 m freeboard. Where a shelter-in-place refuge is required, the refuge must maintain structural integrity up to the PMF level. Structural certification is required.	Yes	As shelter-in-place refuge is required, the refuge maintains structural integrity up to the PMF level.

Bayside DCP Planning Consideration	Compliance	Further comments
<p>D1 – The development must not increase flooding elsewhere in the floodplain. A flood assessment report (see Schedules – Chapter 9.5.4) must show that the development:</p> <ul style="list-style-type: none"> • does not divert floodwaters to the detriment of other areas; • does not increase flood levels or velocities elsewhere; • does not cause a harmful loss of flood storage; • reduces existing flood hazard where practicable. 	Yes	The development does not increase flooding elsewhere.
<p>E1 - The minimum finished floor level of open car parking spaces or carports shall be at or above natural ground level. A flow-through roller door (or horizontal louvers) is permitted for a carport structure. Carports must be of open design, with at least 2 sides completely open such that flow is not obstructed up to the 1% AEP flood level. Otherwise, it will be considered to be enclosed.</p> <p>E2 - For above ground level garages, the minimum surface level shall be no lower than the 1% AEP flood level.</p> <p>E3 - Basement garages/storage/car parking, low-level driveways must be physically protected from inundation by floods equal to or greater than the 1% AEP flood level plus 0.5m freeboard. The crest of the driveway shall be located within the property boundary. All access, ventilation, driveway crests and any other potential water entry points to any enclosed car parking shall be above the 1% AEP flood level plus 0.5m freeboard level.</p>	<p>N/A</p> <p>N/A</p> <p>Yes</p>	The basement parking is physically protected up to both 1% AEP flood level + 0.5m and PMF. Emergency stairways and lifts are also protected up to the PMF level.
<p>F1 - A qualified civil engineer shall be engaged to prepare an onsite emergency response flood plan is required to detail whether evacuation procedures are required and if so, how they will be initiated, warning signs and preservation of flood awareness as owners and/or occupants change through time. Adequate flood warning systems (such as water level sensors, and alarm stations), signage and exits shall be available to allow safe and orderly evacuation without increased reliance upon the SES or other authorised emergency services personnel. The evacuation plan shall be easily accessible to current and future occupants.</p> <p>If safe evacuation cannot be achieved within a sufficient response time then a shelter-in-place refuge is required, together with a plan for self-sufficiency for up to 12 hours. This plan must consider as a minimum: sufficient area for all the occupants, adequate clean water for all occupants; portable radio with spare batteries; torch with spare batteries; first-aid kits; emergency power; and a practical means of medical evacuation.</p>	Yes	This FIRA serves as the response to Item F1. Based on the site's flood behaviour and available warning time, safe external evacuation cannot be reliably achieved; therefore, a shelter-in-place strategy is required. The FIRA outlines this approach and confirms the need for a refuge capable of supporting occupants for up to 12 hours, including adequate space, potable water, emergency equipment, power, and provisions for medical evacuation.
<p>G2 - Storage of materials that may cause pollution or are potentially hazardous during any flood is not permitted below the 1% AEP plus 0.5m freeboard.</p> <p>G4 - Where a building is elevated to retain the existing floodway, overland flow path and flood storage, the undercroft area is to remain open to permit the free flow of water under the building. A positive covenant is required.</p> <p>G5 - Pools located within the 1% AEP flood extent are to be in-ground, with coping flush with natural ground level. Where it is not possible to have pool coping flush with natural ground level, it must be demonstrated that the development will result in no net loss of flood storage and no impact on flood conveyance on or from the site. All electrical equipment associated with the pool (including pool pumps) is to be waterproofed and/or located at or above the 1% AEP plus 0.5m freeboard level. All chemicals associated with the pool are to be stored at or above the 1% AEP plus 0.5m freeboard level.</p>	<p>Yes</p> <p>N/A</p> <p>N/A</p>	Storage of materials mentioned are to PMF level.

6 Design Recommendations

6.1 Flood Planning Levels

The Flood Planning Level is to be greater than or equal to the 1% AEP flood level + 500mm freeboard according to the Bayside DCP 2021. To meet requirements for shelter in place, the site must enable people to safely shelter above the PMF level. A full list of FPLs can be found in Table 6.1, Figure 6.1 and Figure 6.2 has been driven by the requirements for shelter in place.

Table 6.1: Flood Planning Levels

Location ID of building access locations	Description	1% AEP Water Level (mAHD)	PMF Water Level (m AHD)	Flood Planning Level (1% AEP + 0.5m mAHD)	Adopted Flood Planning Level (mAHD)
A – Access Road	Basement Car Park ramp / Vehicle entry	N/A	14.71	N/A	15.91
B – Building A	Utility Room Access	N/A	15.05	N/A	15.91
C – Building A	Basement fire egress and lift entries	14.96	15.93	15.46	15.91*
D – Building A	Basement Fire Stair Egress	14.96	15.93	15.46	15.91*
E – Building A	Lobby and Main Building Access / Lifts	N/A	15.93	N/A	15.91*
F – Building A	Basement Fire Stair Egress	14.17	15.18	14.67	15.91
G – Access Road	Basement Car Park ramp / Vehicle entry	N/A	N/A	N/A	15.97
H – Building B	Basement Fire Stair Egress	N/A	15.86	N/A	15.97
I – Building B	Basement Fire Stair Egress	14.52	15.83	15.02	15.97
J – Building B	Lobby and Main Building Access / Lifts	N/A	15.66	N/A	15.97
K – Building B	Lobby and Main Building Access / Lifts	N/A	16.00	N/A	15.97*
L – Building B	Lobby and Main Building Access	N/A	16.00	N/A	15.97*

*Given the proposed property sits within a low flood hazard classification for the 1% AEP flood event, there is a requirement for basement car parking to have all access and potential water entry points above the Flood Planning Level (1% AEP flood level plus 0.5m freeboard). This requirement has been increased to PMF level to permit the required shelter in place. Levels determined from latest available LiDAR data and may be slightly elevated, as it does not fall within the intended footprint. Ground levels are subject to variation due to changes in the surrounding landscape or adjacent level adjustments during detailed design. The 0.02/3 level difference is negligible and will be accounted for by this conservative approach with updated drainage and grading during detailed design.

6.1.1 Habitable Floor Levels

Habitable floor levels have been set at a minimum of the Flood Planning Level as per the Bayside DCP 2021 (1% + 500mm freeboard level) and Shelter in Place guidance (PMF level).

The proposed design ensures all habitable floors and basement car park entrances are set above both the 1% AEP flood level + 500 mm freeboard and the PMF level, in accordance with

Bayside DCP 2021 and Shelter in Place guidelines. These measures guarantee that the building and basement car parking remains flood-free under all scenarios, including the PMF.

6.1.2 Non-Habitable Floor Levels

Table 13 of Bayside DCP 2021 states “non-habitable floor levels to be no lower than 1% AEP flood level.” Non-habitable areas, such as the basement car parking area in building B, have also been set above the PMF. This design approach ensures full compliance with both Shelter in Place guidelines and Bayside Council flood planning controls.

Figure 6.1: 68-80 Beauchamp Road Site Plan with Site ID Locations for Flood Planning Levels



Studio.SC

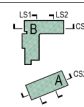
Studio.SC
 2500 Hill Street
 Suite 1000
 Sydney NSW 2000
 www.studio.sc.au
 +61 2 955 73888

General Notes

Notified Aspects
 Designated Flood Level 780
 Planning Services 509
 Elected 18th May
 Thomas Hansen 1877

Rev	Date	For
A	21.02.2025	FOR INFORMATION
B	26.10.2025	ISSUED FOR SDCA
C	25.10.2025	ISSUED FOR SDCA
D	18.02.2026	RTS UPDATES

Keyplan



North



Scale
1 : 250 @ A1
 0 2.5 5 7.5 10
 Metres 1:250

Client
 HOMES NSW

Project Address
 68-80 BEAUCHAMP RD,
 HILLSDALE

Project
 HILLSDALE

Project Status
 CONCEPT DESIGN

Project No.
 20250036

Drawing Title
 GA PLAN - GROUND FLOOR

Drawn By
 JP

Checked By
 AW

Revision
 D

Source: Studio SC, 2025

Figure 6.2: Flood Planning Levels



Source: GOOGLE SATELLITE IMAGERY, 2024

6.1.3 Basement Entry Points

68 – 80 Beauchamp Road has a two-levelled basement car park with entry through a ramped section West of the site.

There are two primary means for water to enter the basement car park: via the vehicular entry ramps or via lift shafts that link the basement to the ground floor level.

All potential water entry points to the basement have been set to the Flood Planning Level (PMF) to meet both the requirements of shelter in place and Bayside DCP requirements. This aligns with the DCP requirement: “basement garages/ storage/ car parking, low-level driveways must be physically protected from inundation by floods equal to or greater than the 1% AEP flood level plus 0.5m freeboard and all access, ventilation, driveway crests and any other potential water entry points to any enclosed car parking shall be above the 1% AEP flood level plus 0.5m freeboard level”.

6.2 Flood Emergency Management

The flood emergency management (EM) strategy for 68 – 80 Beauchamp Road has been assessed following advice provided in Flood Risk Management Guideline EM01 - Support for emergency management planning (DPE 2023), Bayside Local Emergency Management Plan, 2021, relevant plans from the NSW SES and the Birds Gully and Bunnerong Road Study, 2018.

The EM01 guideline provides advice on how the flood risk management (FRM) framework and process described in the Flood Risk Management Manual: the policy and manual for the management of flood liable land (DPE 2023) can consider and support flood EM. Emergency Management in NSW is run at three levels of scale, at a state-wide level, at a regional level, and a local level. Each subsequent level provides additional local detail in emergency management.

To help minimise the flood risk to future occupants, developments must consider flood emergency response. Two main forms of response may be adopted:

- Evacuation
 - Horizontal evacuation of occupants from the floodplain before the properties and/or evacuation routes becomes flooded
- Shelter-in-place
 - Vertical evacuation of occupants in a building to a level higher than the PMF level who then shelter from the flood until it is safe to return to external areas

6.3 Emergency Planning

It has been established that roads around the site are at risk of flash flooding as critical storm durations cause inundation within less than 6 hours, with all the runs only showing time to peak and total inundation within 3 hours. Inundation caused by flash flooding can occur with little or no warning and cause a rapid rise in water level over a brief period of time. Flood events of this nature do not last more than a few hours.

Severe storms can arrive with little warning or intensify over a short period of time posing a challenge to evacuation as an EM strategy. An EM strategy for the site has been considered for two separate time periods with the emphasis of self-preparation and self-evacuation:

- The period of time prior to the arrival of a storm when surrounding roads are free from flooding
- The period of time during and after the storm when surrounding roads may be inundated

6.3.1 Emergency Management Strategy – Prior to Storm

SES advises that when flash flooding is likely, the best action to take is to leave low-lying homes and businesses (evacuation) well before flooding begins, but only if it is safe to do so. This self-evacuation would need to take place in the hours preceding a predicted storm event before flooding begins to impact the road network.

There are no evacuation centres identified within the NSW State Flood Sub Plans or NSW State Emergency Management Plan (EMPlan). It is recommended that evacuation centres for flood events be reviewed and updated for use in all types of emergencies.

The surrounding arterial roads do not provide the means of moving to safer locations, whether that is the nominated evacuation centre or away from a forecasted storm area. Evacuation centres are set up at the discretion of the SES incident controller however they may not be operating or may take time to get up and running in the event of a flash flood.

Enacting this strategy would require local monitoring of forecasts issued by Bureau of Meteorology (BoM), including the daily Thunderstorm Forecast and the more specific Regional Severe Thunderstorm Warning and Detailed Severe Thunderstorm Warnings. This could be undertaken by a nominated flood warden for the precinct via the PA system for the buildings.

The forecasts have the following approximate lead times:

- Thunderstorm Forecast
 - 24-48 hours – forecasts likelihood of severe thunderstorms developing across NSW from ‘possible’ through to ‘likely’
 - if the forecast indicates severe thunderstorms are likely then advice should be issued to residents to prepare accordingly. This may entail more active monitoring of BoM forecasts, activating a Home FloodSafe Plan, preparing their property (if located on ground floor) or preparing to self-evacuate
- Regional Severe Thunderstorm Warning
 - 3 hours - forecasts broad areas where severe thunderstorms are occurring or may occur in the next 3 hours
 - the regional warning indicates severe storms are likely, giving less than three hours warning. This time period is the last feasible window where occupants could evacuate to safer areas prior to the storm arriving. However, due to local storm activity and storm tracks, arterial roads surrounding the precinct area may already be affected by flooding
 - a previous state of readiness should allow the rapid mobilisation to evacuate to a nearby hub or to seek shelter in higher parts of the buildings prior to the arrival of a severe storm
- Detailed Severe Thunderstorm Warning
 - less than 60 minutes - detailed warnings are issued when individual severe thunderstorms are within range of the city weather radars
 - they indicate the forecast direction of movement for 60 minutes and immediate Threat Area ahead of the storm
 - if the Detailed Severe Thunderstorm Warning or Threat Area encompasses the site of 68 – 80 Beauchamp Road then it is likely too late to safely evacuate before the storm arrives

6.3.2 Emergency Management Strategy – Evacuations during a Storm

68-80 Beauchamp Road is located in an area of flooding concern. It is noted that the rate of rise, resulting flood depths and the size of the floodplain would make it unsafe to evacuate

through the surrounding roads during a storm. Time to peak is typically less than 3 hours and duration of inundation for critical duration flooding also less than 3 hours.

Evacuation by either vehicle or on foot from this area will be difficult for affected occupants. SES and emergency access to the site during flooding may also be difficult as it is adjacent to the roads within areas of the floodplain showing significant flood depths. Due to these problems special shelter-in-place provisions should be provided as the primary evacuation method if conditions to not allow for safe horizontal evacuation to higher, non-inundated roads.

The Birds Gully and Bunnerong Road Flood study highlights that “the quick response of the catchment pre-flood evacuation is unlikely to occur” and “there may be significant difficulties evacuating people who become trapped in their house as there is very little, if any, warning time”, reinforcing the need for a shelter in place strategy.

6.3.3 Emergency Management Strategy – Shelter in Place (SIP) during a Storm

NSW SES StormSafe advises the following during a storm:

- never enter or travel through floodwater,
- stay indoors,
- stay clear of creeks, drains, causeways, gutter and streams.

Section 5.1.7 in the NSW State Flood Plan describes Shelter in Place (SIP) is an appropriate strategy to be considered where significant constraints to evacuation exist. Shelter-in-place is determined as a refuge occurring above the PMF level and may occur when there is a risk to public safety and other means of evacuation are not possible.

The site is embedded within an existing road network that was not designed to be free from flooding during extreme storms. It is beyond the scope of the proposal to consider upgrades to local drainage networks to provide flood-free evacuation routes. Consequently, SES advice would preclude evacuating when local roads are flooded as it poses a significant risk to life as entering flood waters is the main cause of death during a flood event.

6.3.4 Compatibility with Shelter in Place Guideline for Flash Flooding

The Shelter in place guideline for flash flooding (DPHI 2025) indicates that SIP is a suitable emergency management strategy for development proposed in flash flood environments. Table 6.1 outlines the decision-making process for 68 – 80 Beauchamp Road, based on the advice provided in the Shelter in place guideline for flash flooding.

Table 6.2: Compatibility with Shelter in Place Guideline

Shelter in Place Consideration	Decision	Relevant FIRA Section
Understanding the full range of flood behaviour up to, and including the PMF	A range of storms has been assessed to understand the range of flood behaviour from minor (10% AEP) to major (1% AEP) and the PMF	5.2.1
Does shelter in place align with existing emergency management strategies for the area	Yes – There is no formal evacuation procedure or routes identified for the site	6.3.1
Has evacuation off-site (the primary emergency management strategy) been investigated and determined to be unachievable	Yes – Access has been investigated and is unachievable in both 1% and PMF events.	6.3.2
Does the development include medical centres, emergency service and community facilities, and sensitive and hazardous land uses, some of which may not be suitable for shelter in place	No	6.3.2
Shelter in place for greenfield development is not supported	The site is not a greenfield development	1.3

Shelter in Place Consideration	Decision	Relevant FIRA Section
Whether there is existing government developed flood warning systems that give advanced detailed forecasts of flash flooding to allow sufficient time to evacuate to the proposed refuge locations	Due to the flash flood nature of 68 – 80 Beauchamp Road, warning times are limited, especially during rapidly rising events. There is no evidence of sufficient warning time (B&B Flood Study, 2018).	6.3.1
Can the community effectively be informed of the risks associated with the emergency management strategy	Yes	6.3.1,
Detailed assessment of evacuation off-site (the primary emergency management strategy) to determine that evacuation off-site is not achievable	Yes, the surrounding road networks are not free from flooding.	6.3.2
Flash flooding is the only flood risk present at the site	Yes, critical storm durations are up to 6 hours for the site	5.1.1

6.3.5 Emergency management strategy – Residual risks

6.3.5.1 Education

Community awareness of flooding is a significant issue within the floodplain due to the infrequency of severe floods and the anticipated depths of these floods in a PMF event. The Precinct Manager needs to be aware of the flood risk and their obligation to respond and inform all those within the buildings when a rare storm event begins to occur. Residents need to be aware of the flood risk and the response requirements during a PMF flood event. As part of this procedure, evacuation drills should be conducted regularly to ensure residents are aware of the procedures for sheltering within the site.

6.3.5.2 PA System

The building PA system can be used to communicate evacuation directions and safety messages to the population in the lead-up to and during a flood to assist in improving the safety of the community.

6.3.5.3 Medium and high-density residential buildings

Make buildings as safe as possible to occupy during flood events. An area of habitable floor of any residential development should be located above the PMF with the building structurally designed for the likely flood and debris impacts. The buildings should include:

- Alternative power source, with capacity for at least 8h for essential needs
- Automatic fire suppression systems
- Emergency telecommunication system
- Toilet facilities accessible to people with disabilities
- First-aid kit
- Emergency supplies kit
- Shelf-stable food

6.3.6 Emergency Management Considerations

Table 6.3 details key considerations and the advised outcomes related to each flood risk emergency management.

Table 6.3: Emergency Management Considerations

Shelter in Place Consideration	Decision and Evidence	Relevant FIRA Section	Outcome
Is warning time available to onset of flooding?	No - The time to flooding and flood duration are typically very short with minimal warning time. Critical storm durations in the catchment are less than 6 hours with flood warnings limited to severe weather warnings for the area and no specific advice on local impacts of flash flooding	6.3.1	Unable to evacuate in rapid onset event
Can development be modified to allow evacuation?	No	6.3.2	No requirement for stormwater drainage system amendments, outcome should revolve around safe evacuation either to a communal location outside the floodplain or shelter in place.
Is time of isolation short?	The period of worst-case inundation in the area surrounding the site is within 6 hours (not critical duration), surrounding roads could be inundated for up to 10 hours.	6.3.1	Consider development types and apply controls
Are occupants able to be safe and self-sufficient for duration of flooding	Yes - FPLs are designed to keep the buildings free from flooding under the most extreme circumstances Flood-free areas exist within the precinct that could be used as muster points in the event of a flood emergency	6.1	Consider development types and apply controls
Are residual risks associated with SIP tolerable	Yes - High flood hazard predicted within the precinct during the most extreme storms FPLs are designed to keep the buildings and below ground car parks free from flooding under the most extreme circumstances Flood-free areas located within the precinct could be used as a muster point or shelter location Building PA system can be used to relay emergency information to residents	6.1 6.3.5	Consider development types and apply controls

6.4 Compatibility with Design Controls

The Design Recommendations within this FIRA have been proposed to meet the requirements of the Design Controls applicable to the site. A summary of the site compatibility is presented below:

- The NSW Flood Prone Land 2021 package notes a planning proposal must not rezone land within the flood planning area from Recreation, Rural, Special Purpose or Environmental Protection Zones to a Residential, Business, Industrial or Special Purpose Zones. These land use changes represent a change in land use which could potentially increase flood risk
 - The SSD does not propose changes to any land zoned as Recreation, Rural, Special Purpose or Environmental Protection Zones
 - The zoning will remain as Residential under which residential flats are permitted in both the existing and the proposed zones. The main purpose of the SSD is to increase the permissible density of the land for the purpose of affordable housing.
- This FIRA has been undertaken in accordance with the NSW Government's Flood Prone Land Policy and the principles of the Flood Risk Management Manual

The precinct enables the increase in density in line with endorsed NSW Government strategies. While the NSW Flood Prone Land 2021 package notes a planning proposal must not permit a significant increase in development density, the proposed intensification of the proposed site at 68 – 80 Beauchamp Road is required to accommodate the additional residents in Hillsdale over the near future. The proposed development will be in the form of vertical development with

maximum height and Floor Space Ratio (FSR) increases to accommodate the growing population.

It is possible that direct flood risk to any person could be reduced by implementing the design recommendations and that the residual flood risk could be also reduced. To summarise:

- **Intensification within a brownfield site,**
 - This type of development can elevate the higher risk residential use above the PMF level and can make allowance for shelter-in-place refuge and vertical evacuation which is considered an improvement on the current flood exposure
 - intensified development offers more shelter-in-place opportunities as it will likely provide more floor space for refuge above the PMF level compared to the existing residential dwellings
 - the expected number of persons located on ground floors can be limited to current occupation or increased if the raised ground floor level reduces the risk to future occupants
- **FPL requirements and other Development Controls,**
 - the Upper Ground level and all first-floor storeys would be above the PMF level in most instances
 - It is expected that new multi-storey buildings will be stable during flooding up to the PMF and that all non-ground floor residents in multi-storey residential development would be only exposed to an indirect flood risk. 68 – 80 Beauchamp Road shows compliance with FPL and PMF immunity for all floors, with ground level set to PMF and the crest of the basement car park entry being above the PMF level.
- **Implementation of Flood Emergency Response Plan (FERP),**
 - A developed site specific FERP that incorporates shelter in place could address the flood risk faced directly and indirectly by future residents in contrast to the flood risks faced by existing residents in flood affected locations. It is likely most of these properties have no established site-based flood emergency response plan.
 - It is conceivable that a high-rise residential development with an effective flood emergency response plan and vertical evacuation opportunities may have a lower residual flood risk than existing housing limited opportunities for vertical evacuation

6.5 Summary of Flood Emergency Management

Section 6.3 outlines the relative flood risk that the site at 68 – 80 Beauchamp Road is exposed to. The site is affected by flash flooding coupled with overland flow. This is largely due to the short times associated with flash flood events, the speeds and depths associated with these events, and the difficulties associated with evacuation to a safe location. The site has been designed to accommodate sheltering for growing population and maintains the existing flow path to enable the site to appropriately manage.

In flash flood catchments, the time to flooding and flood duration are typically short with minimal warning time. Warnings to the community are often limited to severe weather warnings or flood watches for the general area. There is often no specific advice available on the local impacts of flash flooding and there may be little time between the start of flood-producing rainfall and flooding of roads, property and potentially buildings.

To help minimise the flood risk to future occupants, the first response that should be adopted in a flood emergency event for 68 – 80 Beauchamp Road is shelter in place as the flood warning time and flood duration are both less than six hours for the site. Flooding along Beauchamp Road also limits the horizontal evacuation potential for the area. The lack of pre-determined evacuation locations and the rapid onset of flooding in the catchment leads to sheltering being the most suitable means of emergency management.

7 Conclusions

This FIRA has been prepared to address the Secretary's Environmental Assessment Requirements (SEARs) issued by the Department of Planning, Housing and Infrastructure (DPHI) for the subject SSDA.

The Birds Gully and Bunnerong Road FMRSP was made available for this flood impact and risk assessment. The model was developed using TUFLOW in 2018 by WMA Water and received by Mott MacDonald. It is the current Council adopted model for the catchment.

This FIRA for the site supports the SSDA in accordance with the principles of the Flood Risk Management Manual and Flood Risk Management Guideline LU01.

Flood model scenarios for 68 – 80 Beauchamp Road were based on the following:

- Existing conditions
 - An assessment of the current flooding conditions based on existing survey of the site
- Design conditions with mitigation measures:
 - An amendment to the existing conditions model was built to incorporate the proposed development layout as building block-outs and raised landscaped areas.

The 1% AEP and PMF have been assessed as they relate to the Bayside DCP 2021 Flood Planning Levels and emergency management measures for the development. The PMF is the largest flood that could theoretically occur at a location and defines the maximum extent of flood-prone land. Dry areas above the PMF level are expected to be free from flooding under all scenarios.

There is flooding predicted within the site and surrounding roads of 68 – 80 Beauchamp Road. The stormwater networks have relatively low capacity with excess flows being conveyed overland onto the site, moving Southwest toward Beauchamp Road.

To represent 68 – 80 Beauchamp Road post-development case, a new building block out was included in the model covering the proposed site. This assumes that the site will be immune from flooding in the 1% AEP + 500mm freeboard and PMF storm by adopting the Council Flood Planning Level and Shelter in Place guidelines.

The flood model highlights the following:

- Changes in peak 1% AEP water level:
 - 0.16m increases and decreases in water level outside the boundary. This is deemed acceptable as does not show any clear detriment to the surrounding area and is localised within an existing drainage channel where depths already exceed 3m
 - A 0.45 m increase in peak water level is predicted as a consequence of the development; this is deemed to be acceptable as it is recorded within the new above-ground flow path as part of the architectural and flood design. Flood Planning Levels account for this increase and are set accordingly
- Change in 1% AEP flood hazard
 - there are no changes in flood hazard outside the site boundary and flood hazard is limited to H3 within the site boundary within a defined overland flow path

Aspects of this development are required to meet flood related development controls, and the key risks as addressed through design are noted here:

- Changes in peak PMF water level
 - The changes in peak water level because of the development reach a maximum of - 0.80m and +0.78m. This is because of raising the levels of the site to meet shelter-in-place PMF requirements and maintaining the existing flow path through the site.
 - no cumulative impacts predicted
 - no new areas of flood inundation
- Change in PMF flood velocity
 - flood water velocities are not significantly changed by the proposed development
 - there are no changes in flood water velocity outside the site boundary
- Change in PMF flood hazard
 - there are no changes in flood hazard outside the site boundary

Flood Levels and Appropriate Immunity

The design Flood Levels in Table 6.1 highlight the minimum required floor levels to appease this requirement. According to the development-specific advice and development controls of the Council relating to the habitable rooms, 1% AEP + 500mm freeboard is required to meet the Bayside Council Flood Policy to enable a level of flood resilience for the residences and provide a reasonable level of flood mitigation and evacuation for shelter in place. The proposed minimum entrance levels being 15.91 mAHD for building A (Southern building) and 15.97 mAHD for building B (Northern building) habitable floor levels provide suitable flood clearance at all ingress locations.

The proposed design ensures all habitable floors and basement car park entrances are set above the 1% AEP flood level + 500 mm freeboard and the PMF level, in accordance with Bayside DCP 2021 and Shelter in Place guidelines. These measures guarantee that the building and basement car parking remains flood-free under all scenarios, including the Probable Maximum Flood.

Emergency and potential evacuation during flood events

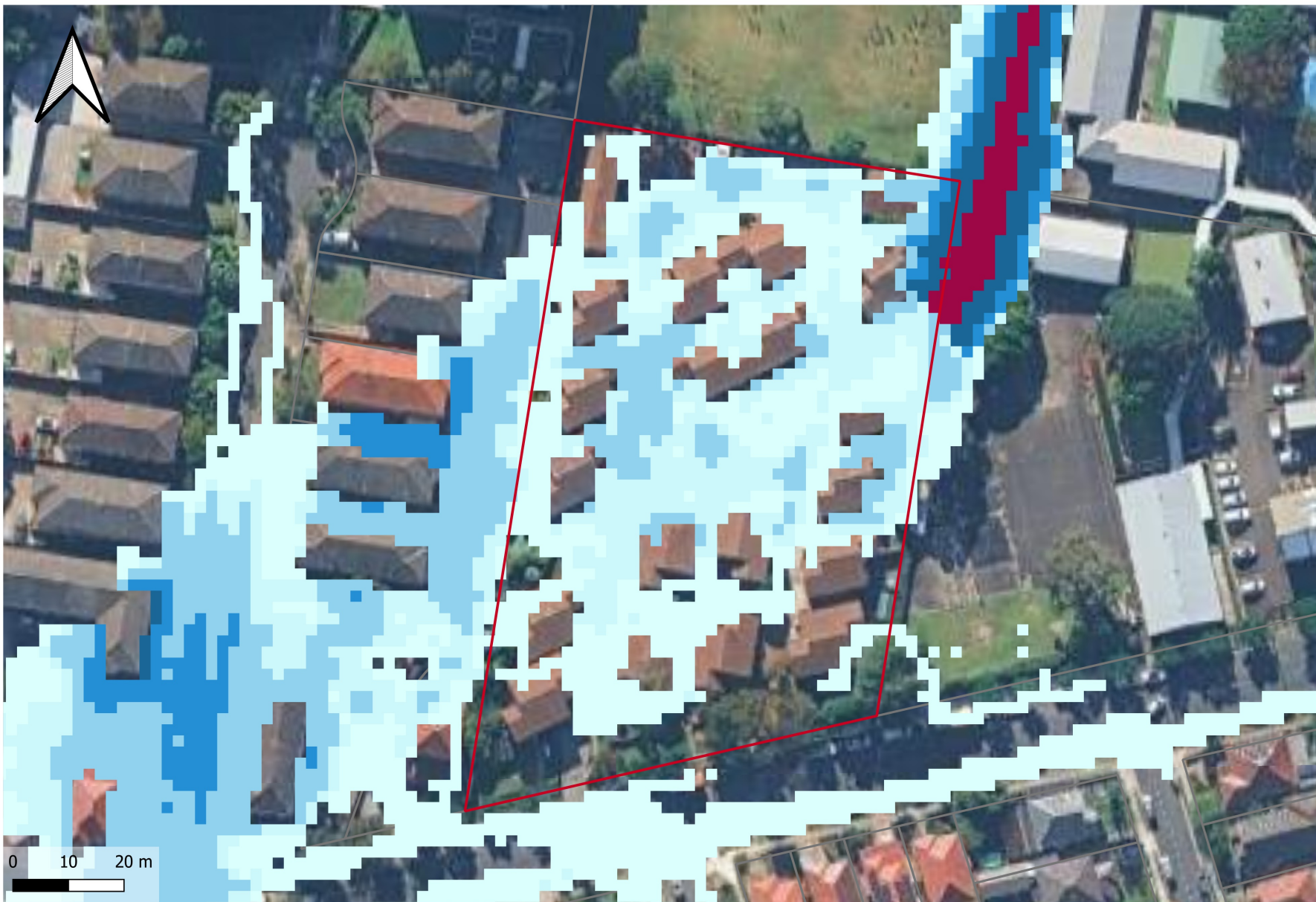
The required emergency and potential evacuation during flooding events for the site have been considered regarding both the severity of flooding and duration of flooding events. The site is affected by flash flooding and there is risk of extended periods of flood risk that could lead to isolation or a need for prior preparations of flooding provisions in the modelled rare PMF event.

Based on this FIRA and the Birds Gully and Bunnerong Road Flood Study, an evacuation strategy and a shelter in place policy during a flood emergency are the most logical EM approaches to protect life and as such the development has been adapted to enable floor levels to facilitate safe movement through the buildings to enable shelter in place requirements are met. Shelter in place is applicable for the development given the following constraints:

- Beauchamp Road is partially at risk from flash flooding; flooding that has a relatively high discharge over a short duration – the interval between the observable causative event and the flood is less than six hours. Given the site does have sufficient warning time to adequately evacuate the population. this should be preferable; however, it should be made clear that:
 - the opportunities for horizontal evacuation during a storm are limited as the only evacuation point is Beauchamp Road, which is subject to high flood hazards that present an unacceptable risk to people. NSW SES advice is not to venture out during a storm or cross any area of flood inundation
 - the rate of rise and extent of flooding in the most extreme events means that emergency evacuation centres may not get set up and evacuees would generally have to take shelter in other private premises that may not have robust flood controls

- the time of isolation is short, based on the duration of flooding around the precinct. A development which is isolated for a few hours by flood water in PMF does not pose a significant risk to life
 - redevelopment affords a means of creating a safe, on-site shelter above the PMF – redevelopment which caters for sheltering in place can be used to reduce existing risk to life for individuals who currently occupy the floodplain, but it is likely to increase the number of individuals at risk
- Additional Development Controls can be imposed which seek to manage the residual secondary risks to life caused by flood isolation to ensure that risks remain tolerable. To manage secondary risks during flooding, Bayside council should consult NSW SES, Ambulance NSW, the relevant Health functional area and the local fire agency to identify appropriate risk mitigation measures. As no area-wide strategy exists, plans must address these risks for the entire flood duration and up to 48 hours afterwards to allow restoration of external services.

A. Flood Mapping



Legend

EXG

10%AEP Flood Event (Base Case)

Depth (m)

<= 0.05

0.05 - 0.15

0.15 - 0.25

0.25 - 0.50

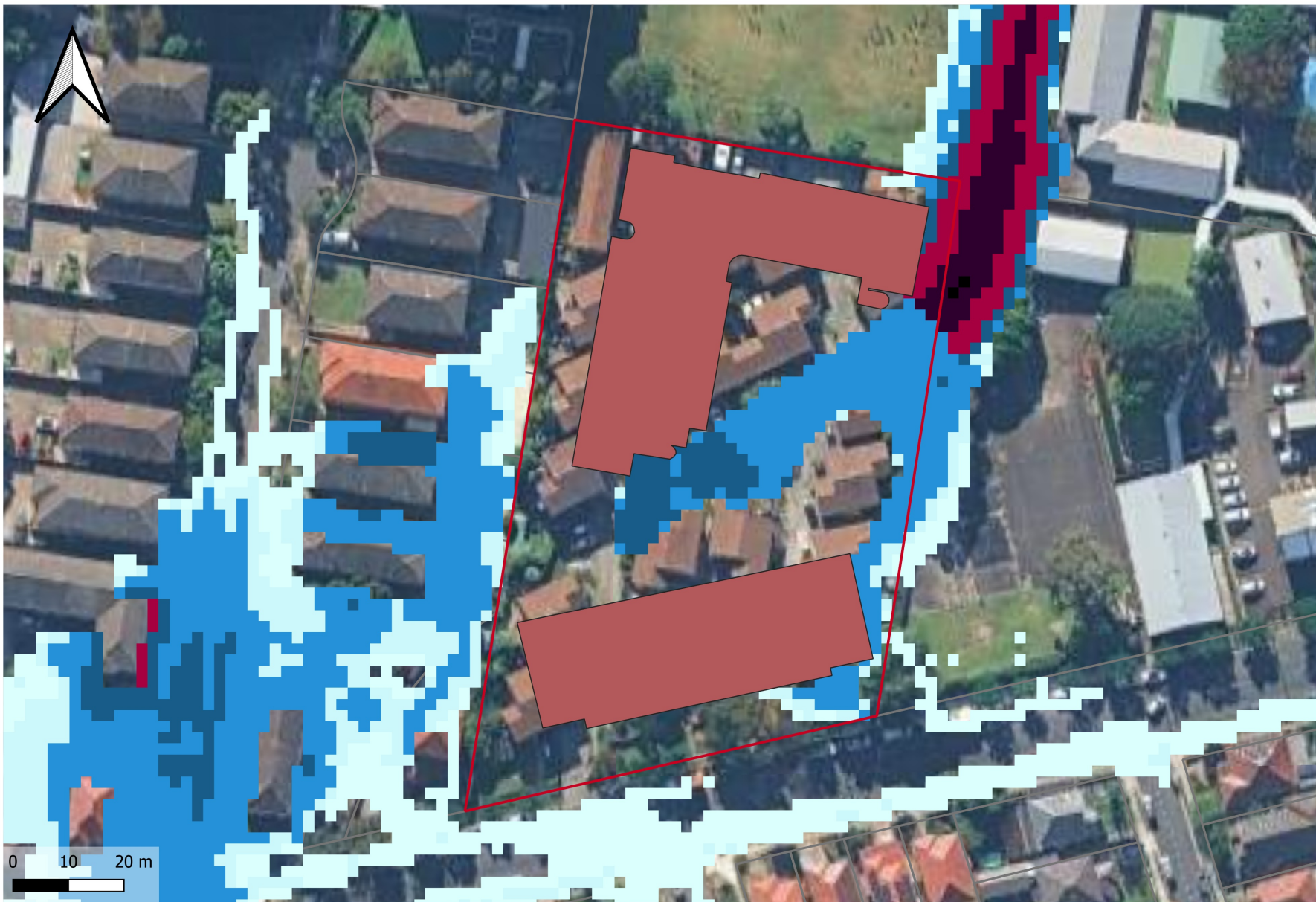
0.50 - 1.00

1.00 - 2.00

2.00 - 3.00

> 3.00

Google Satellite



Legend

DES

10%AEP Flood Event (Design)

Depth (m)

<= 0.05

0.05 - 0.10

0.10 - 0.20

0.20 - 0.50

0.50 - 1.00

1.00 - 2.00

2.00 - 3.00

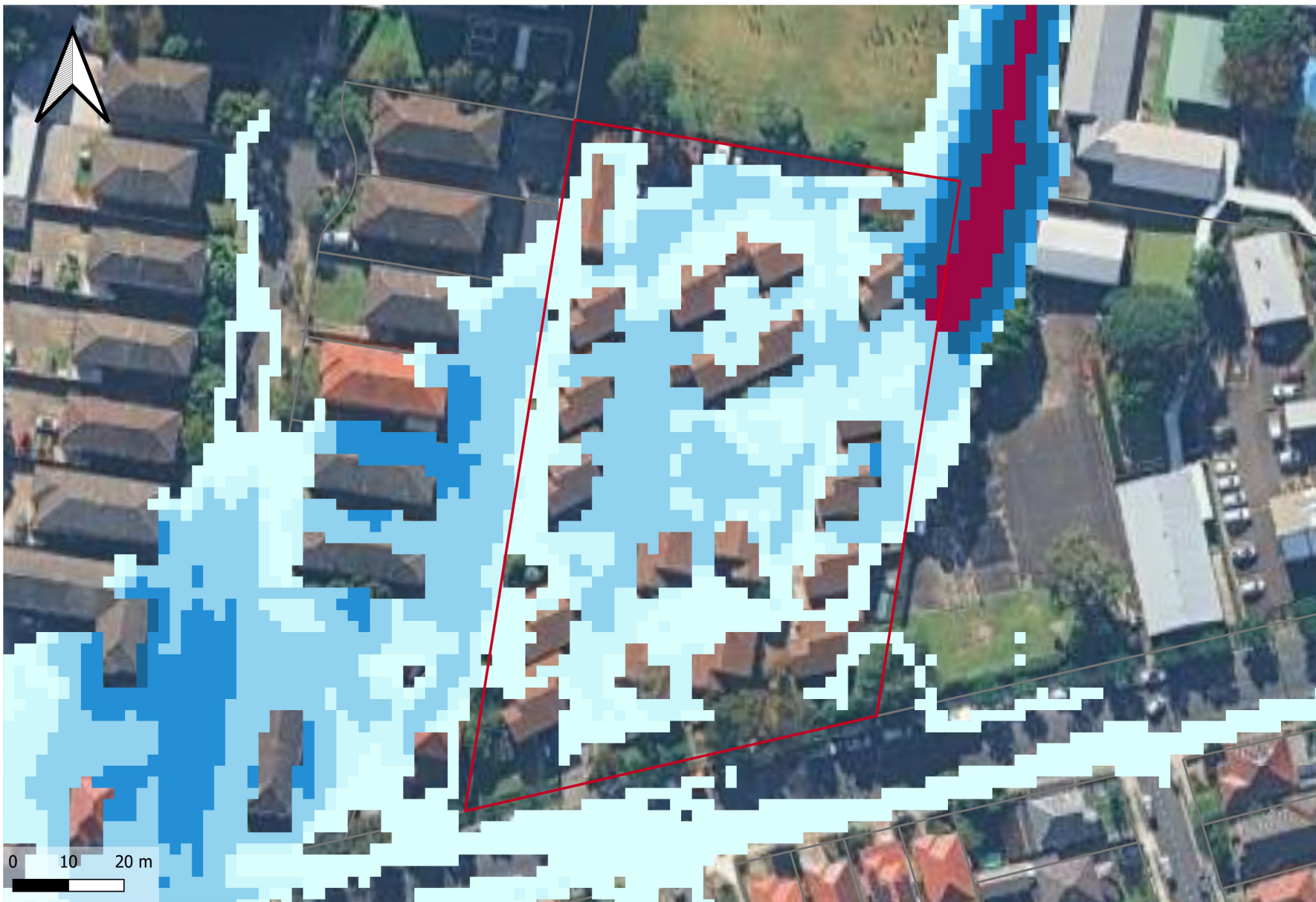
> 3.00

— Site Boundary

■ Site Footprint

□ Lot

Google Satellite

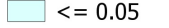
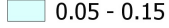
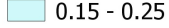
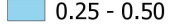
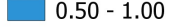
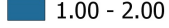
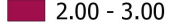
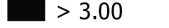


Legend

EXG

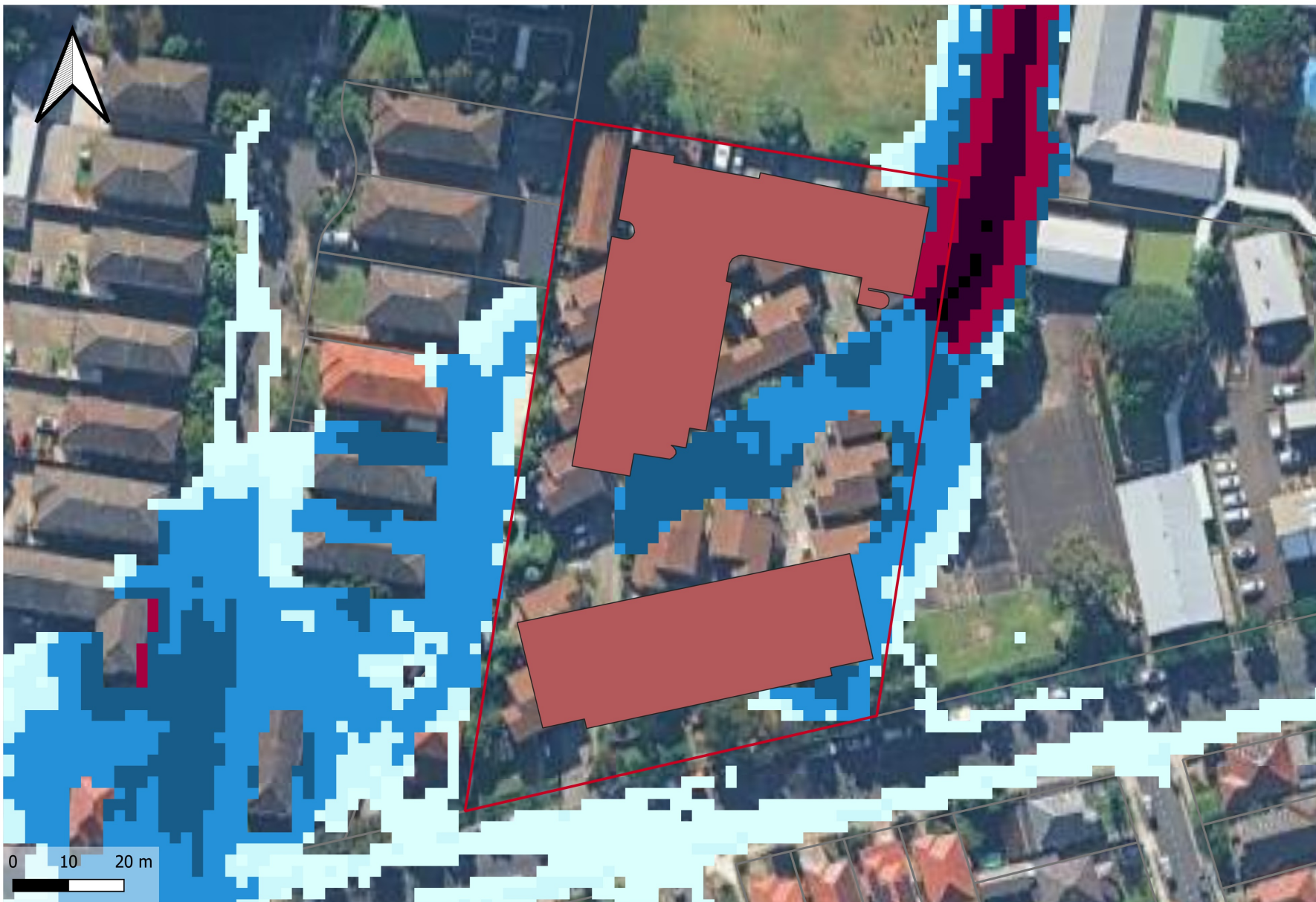
1% AEP Flood Event (Base Case)

Depth (m)

-  <= 0.05
-  0.05 - 0.15
-  0.15 - 0.25
-  0.25 - 0.50
-  0.50 - 1.00
-  1.00 - 2.00
-  2.00 - 3.00
-  > 3.00

Google Satellite

0 10 20 m



Legend

DES

1%AEP Flood Event (Design)

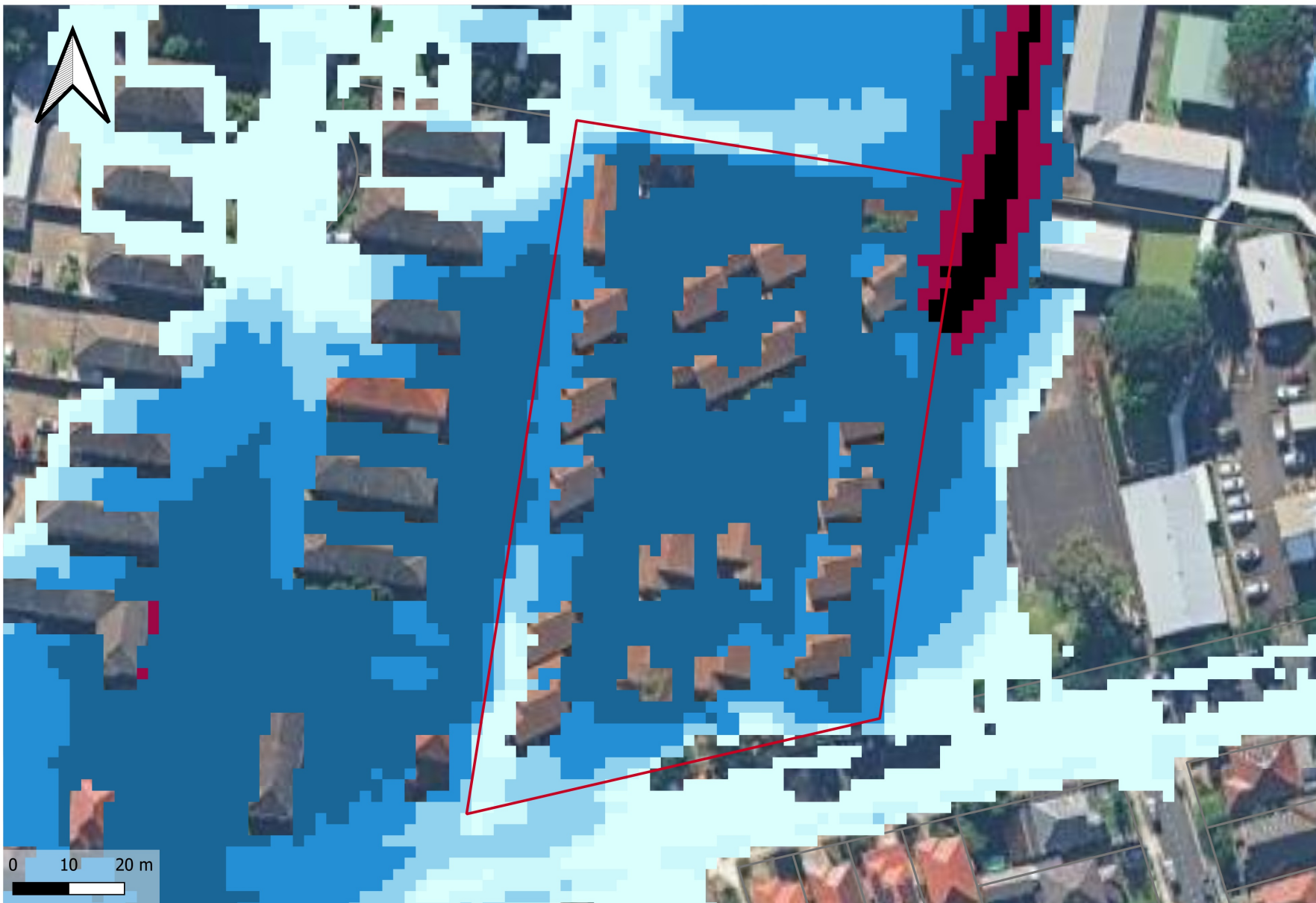
Depth (m)

-  <= 0.05
-  0.05 - 0.10
-  0.10 - 0.20
-  0.20 - 0.50
-  0.50 - 1.00
-  1.00 - 2.00
-  2.00 - 3.00
-  > 3.00

Google Satellite

0 10 20 m





Legend

EXG

PMF Flood Event (Base Case)

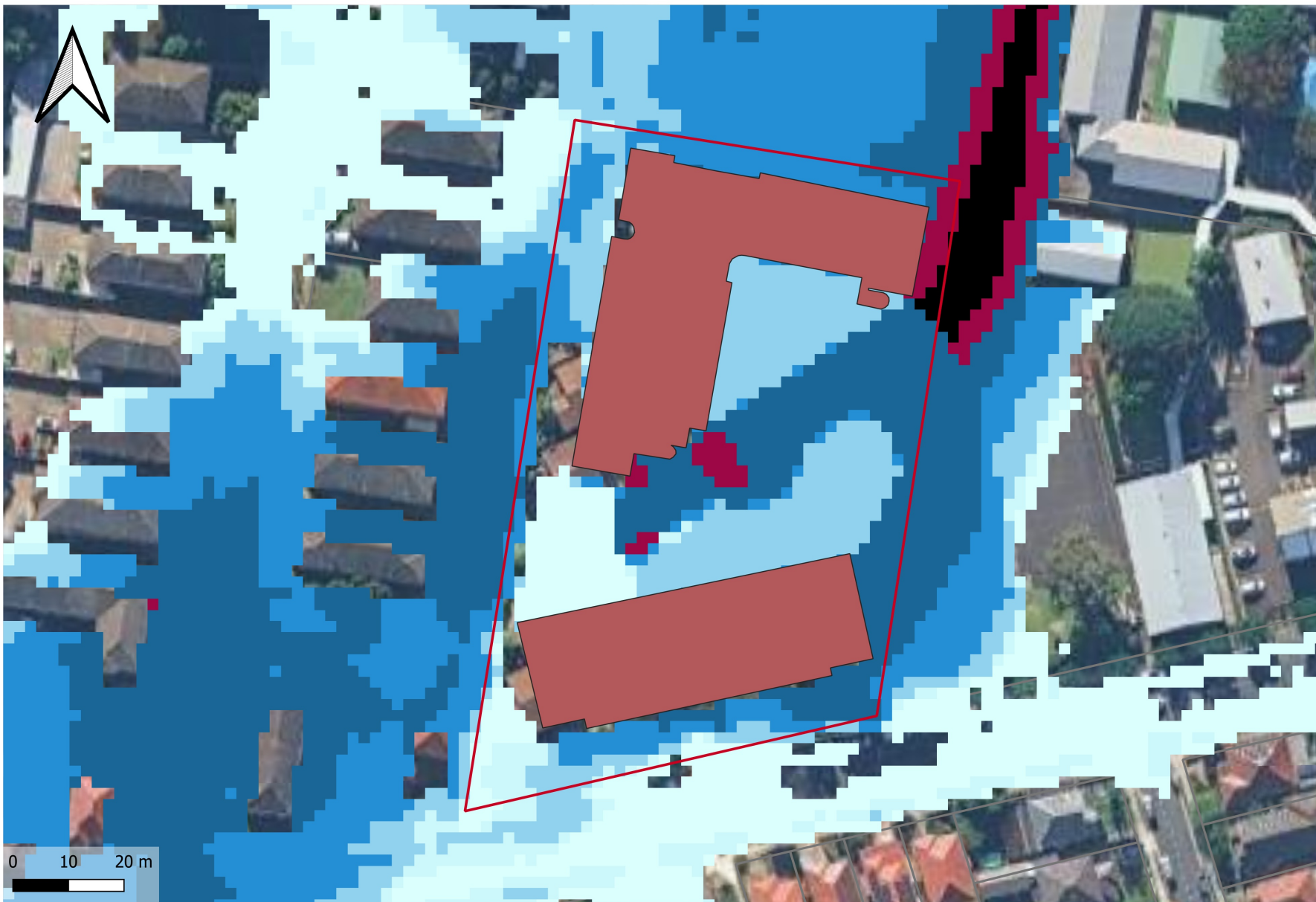
Depth (m)

- <= 0.05
- 0.05 - 0.15
- 0.15 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- > 3.00

Google Satellite

0 10 20 m





Legend

DES

PMF Flood Event (Design)

Depth (m)

<= 0.05

0.05 - 0.15

0.15 - 0.25

0.25 - 0.50

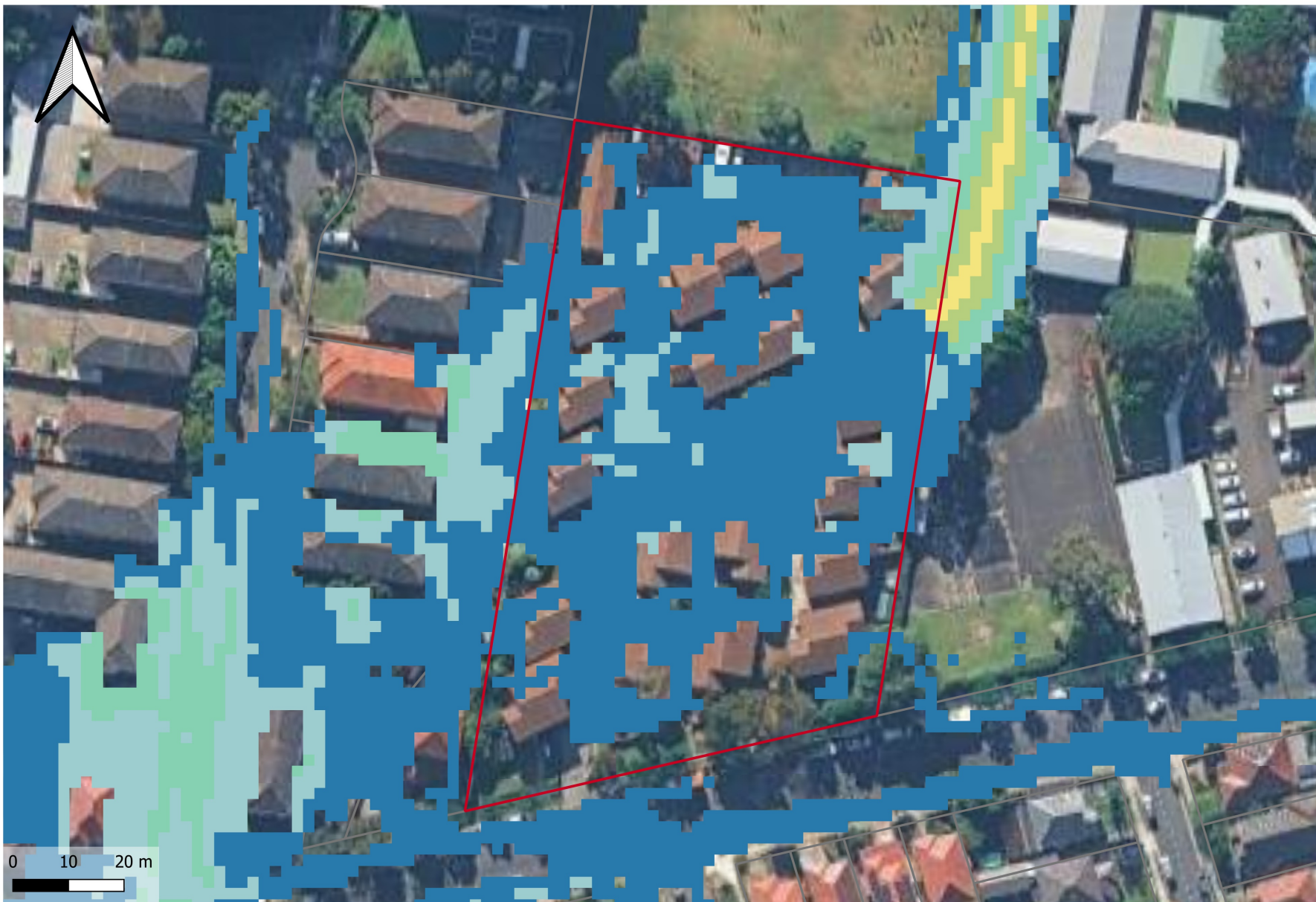
0.50 - 1.00

1.00 - 2.00

2.00 - 3.00

> 3.00

Google Satellite



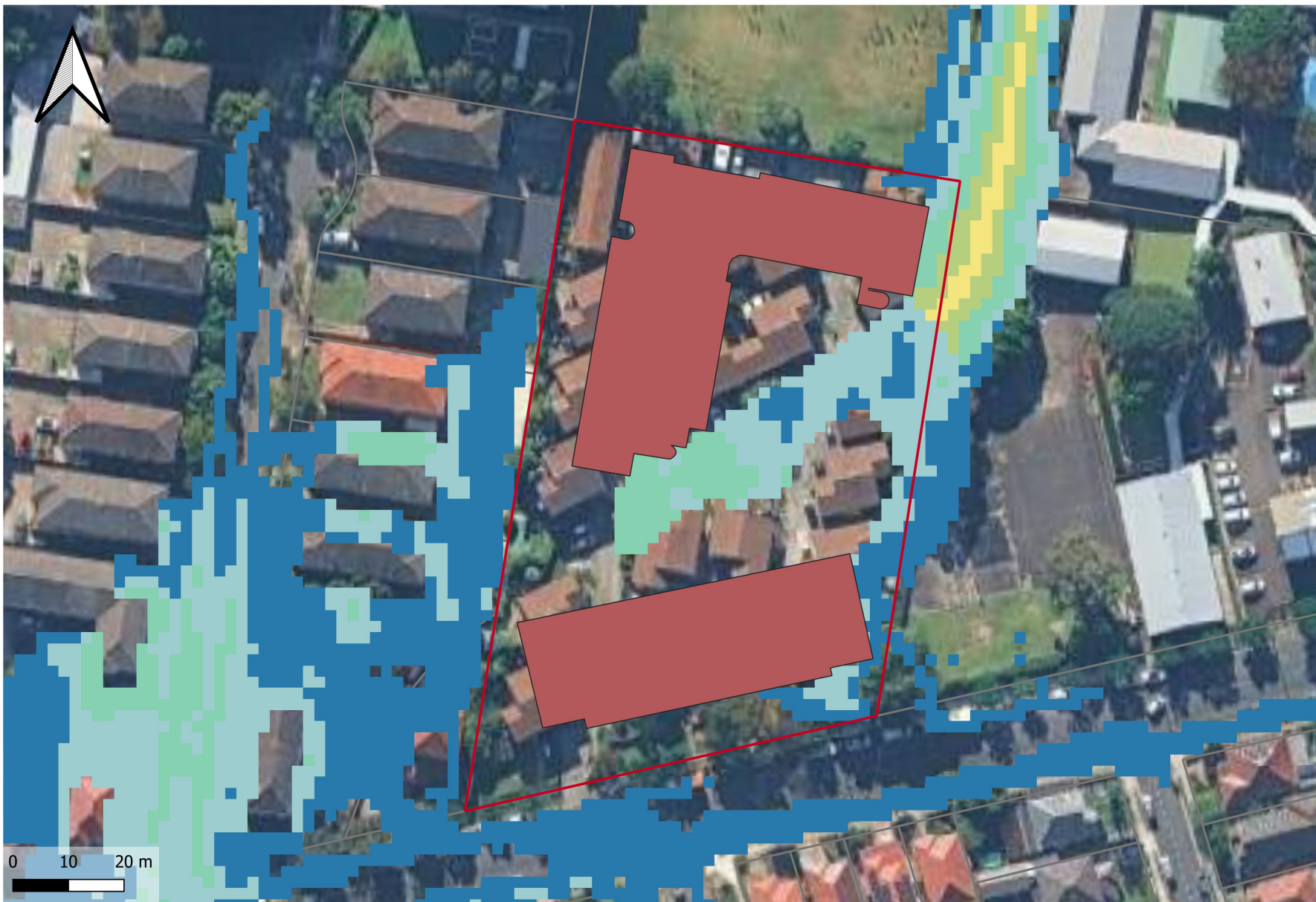
Legend

EXG

10%AEP Flood Hazard (Base Case)

- H1
- H2
- H3
- H4
- H5
- H6

Google Satellite



Legend

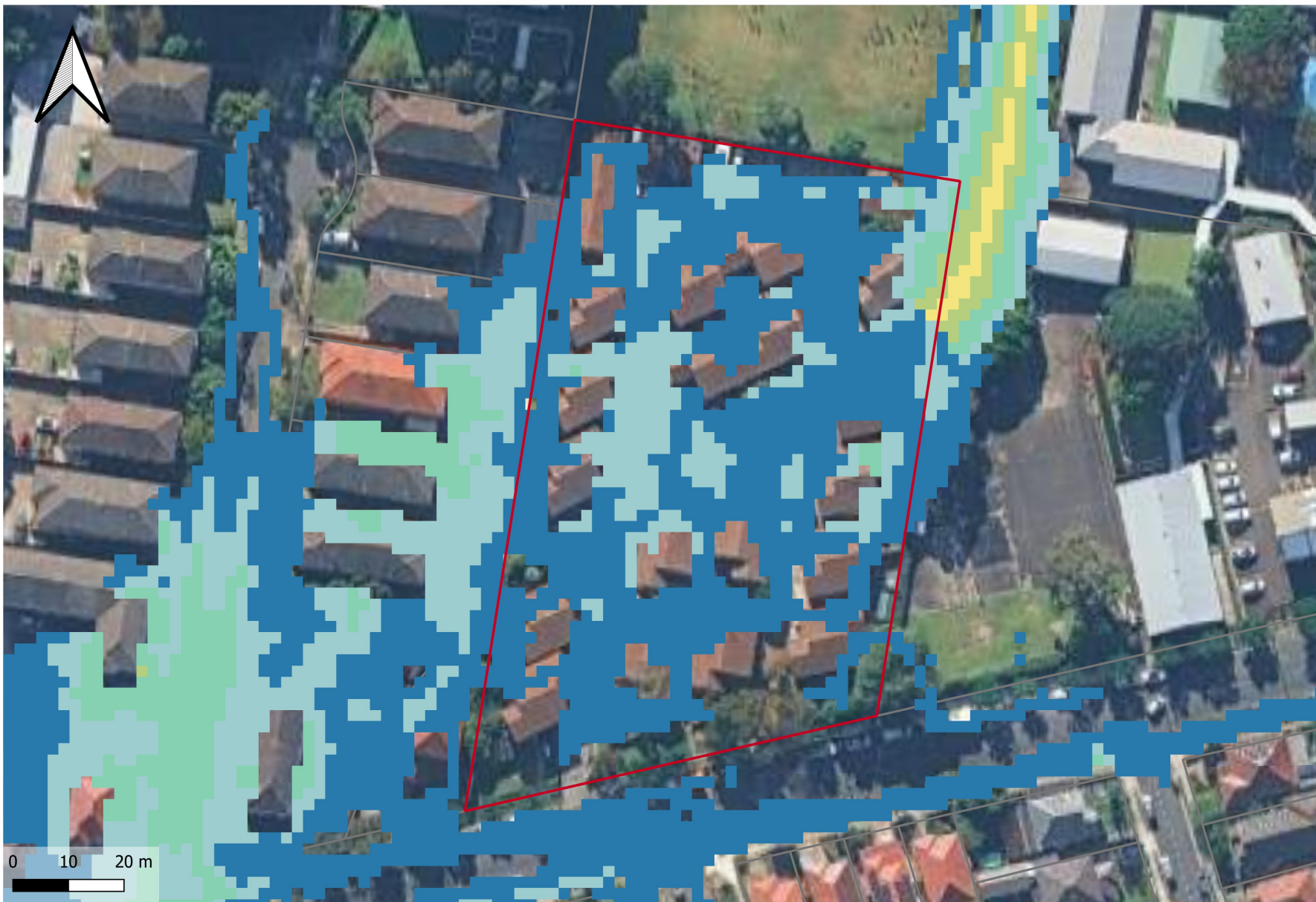
DES

10%AEP Flood Hazard (Design)

Band 1

- H1
- H2
- H3
- H4
- H5
- H6

Google Satellite



Legend

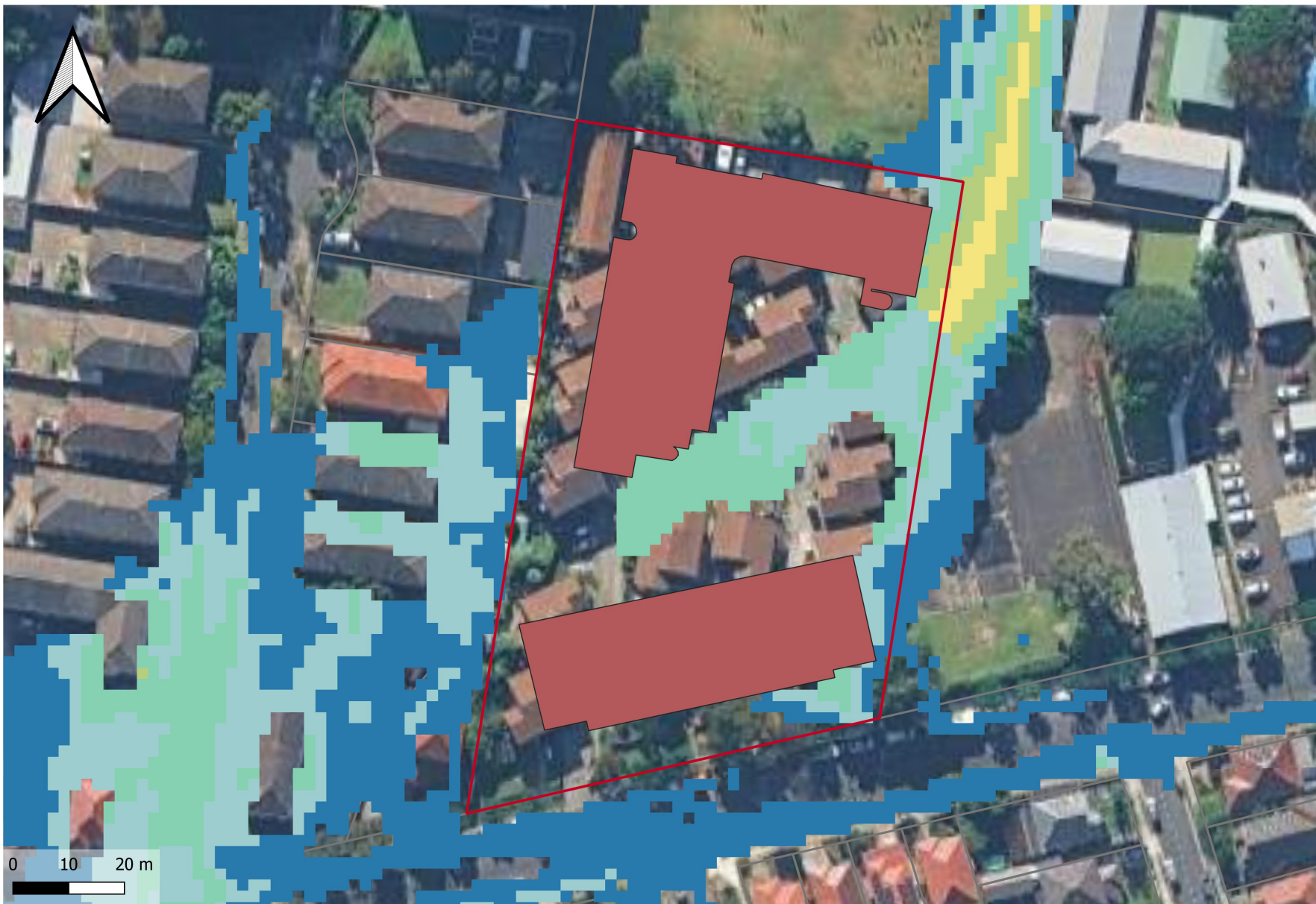
EXG

1% AEP Flood Hazard (Base Case)

Band 1

- H1
- H2
- H3
- H4
- H5
- H6

Google Satellite



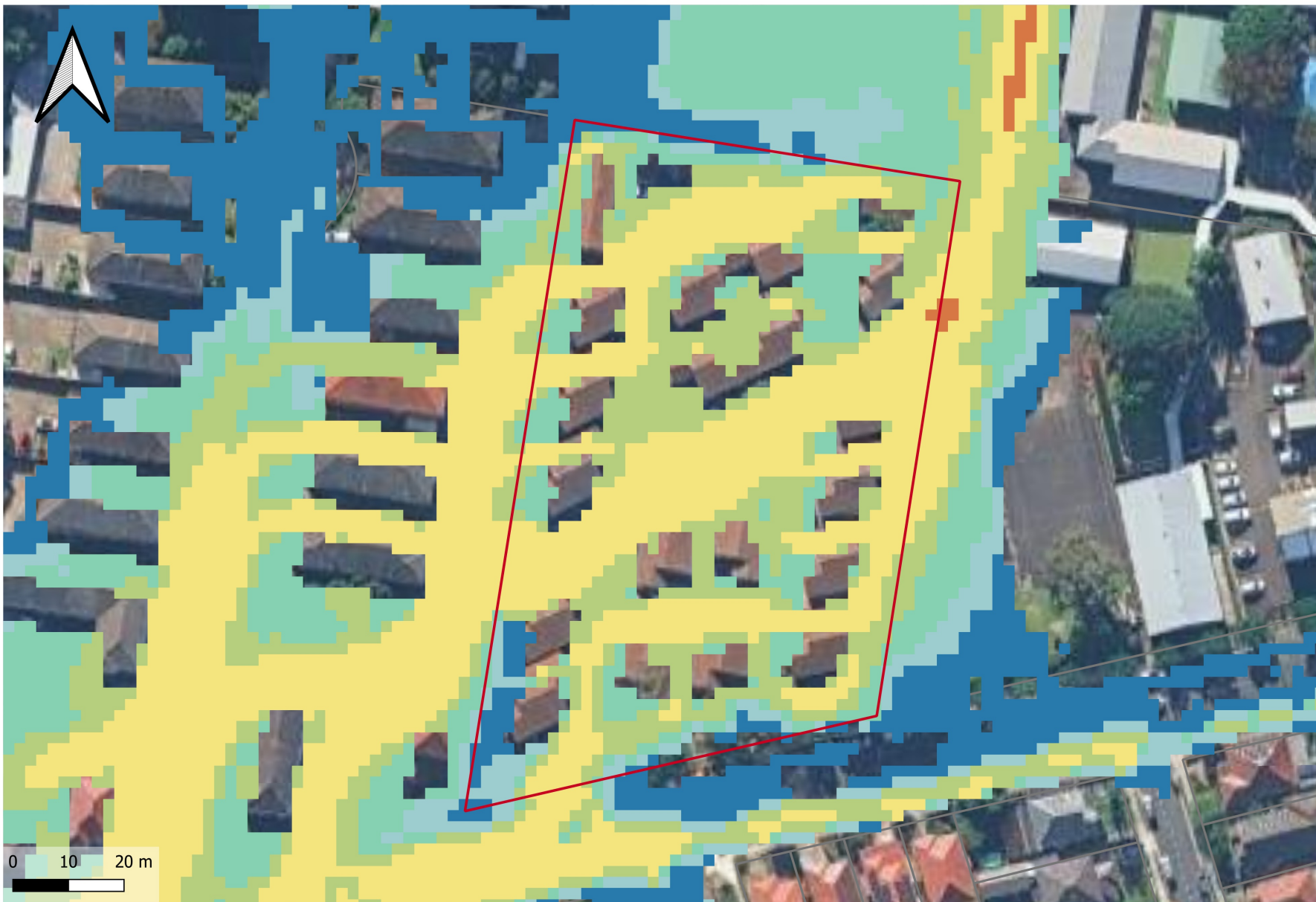
Legend

DES

1% AEP Flood Hazard (Design)

- H1
- H2
- H3
- H4
- H5
- H6

Google Satellite



Legend

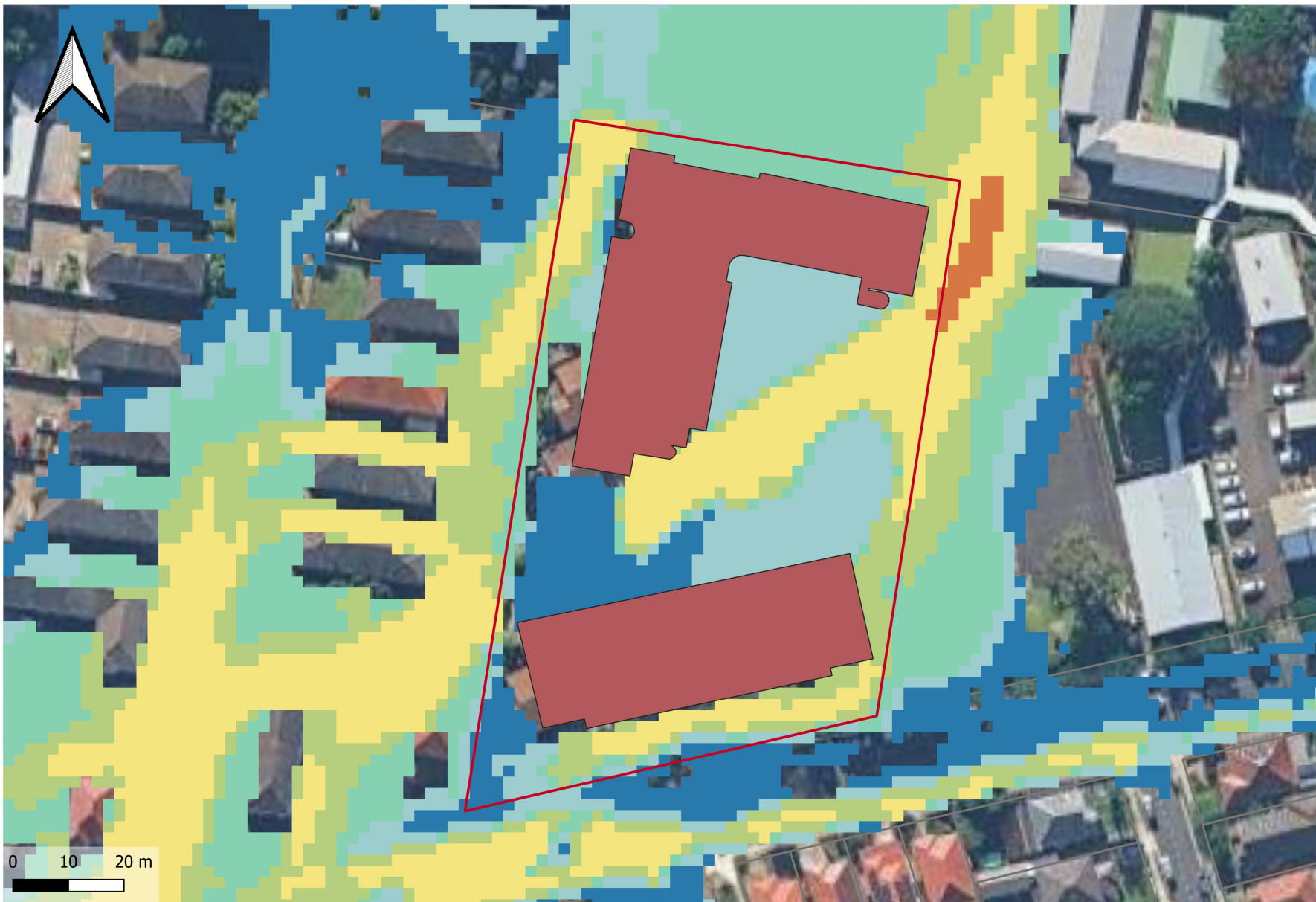
EXG

PMF Flood Hazard (Base Case)

- H1
- H2
- H3
- H4
- H5
- H6

Google Satellite

0 10 20 m



Legend

DES

PMF Flood Hazard (Design)

H1

H2

H3

H4

H5

H6

Google Satellite



Legend

DES

AFFLUXPMF

Band 1 (Gray)

- < -1000
- 1000 to -500
- 500 to -200
- 200 to -100
- 100 to -20
- Minimal Impact
- 20 to 50
- 50 to 100
- 100 to 200
- 200 to 500
- 500 to 1000
- > 1000

AFFLUXPMF_wd

Band 1 (Gray)

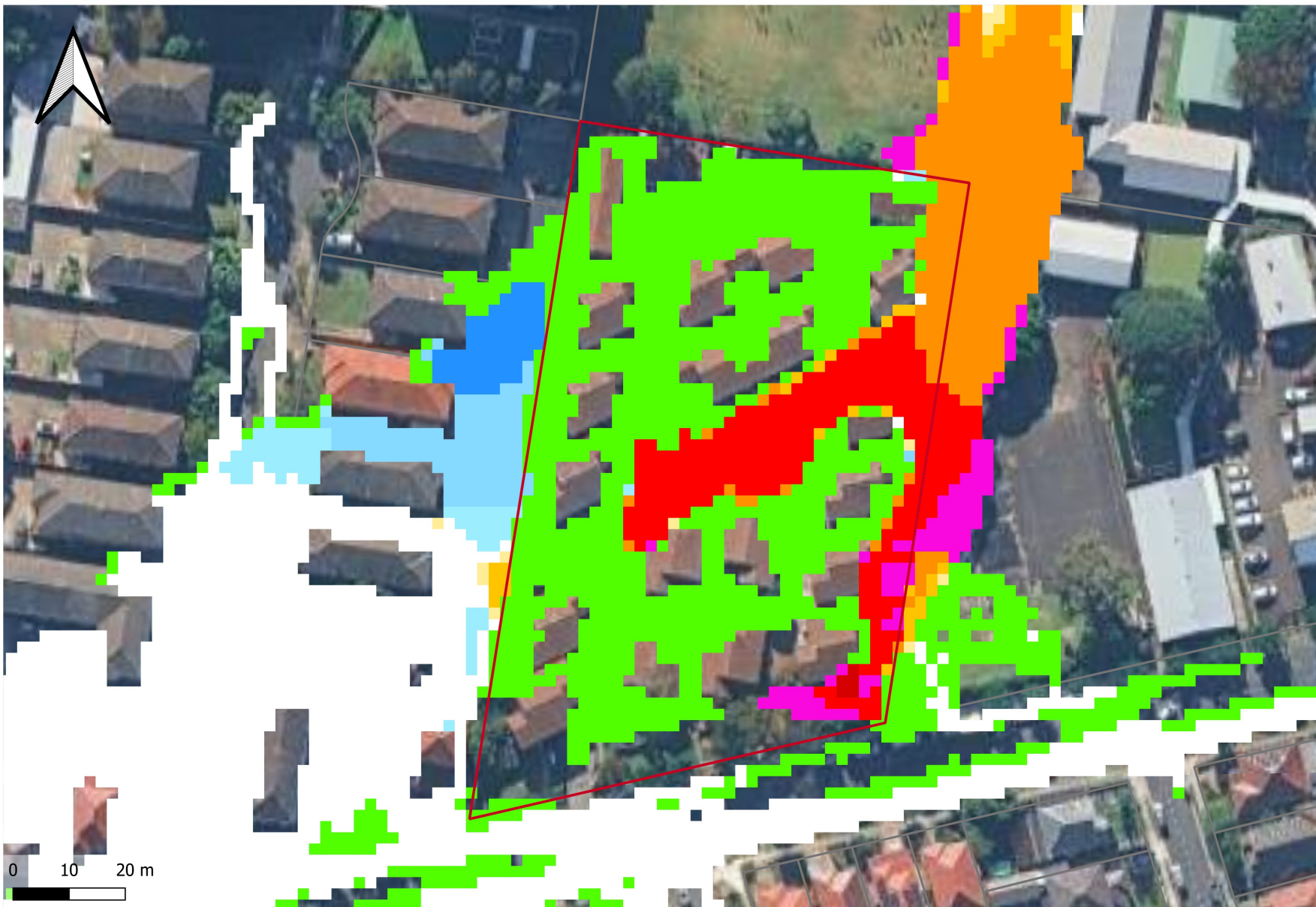
- Was wet, now dry
- Was dry, now wet
- Site Boundary

Cadastre

Lot

Google Satellite

0 10 20 m



Legend

DES

AFFLUX1%

Band 1 (Gray)

- < -1000
- -1000 to -500
- -500 to -200
- -200 to -100
- -100 to -20

Minimal Impact

■ 20 to 50

■ 50 to 100

■ 100 to 200

■ 200 to 500

■ 500 to 1000

■ > 1000

AFFLUX1%_wd

Band 1 (Gray)

■ Was wet, now dry

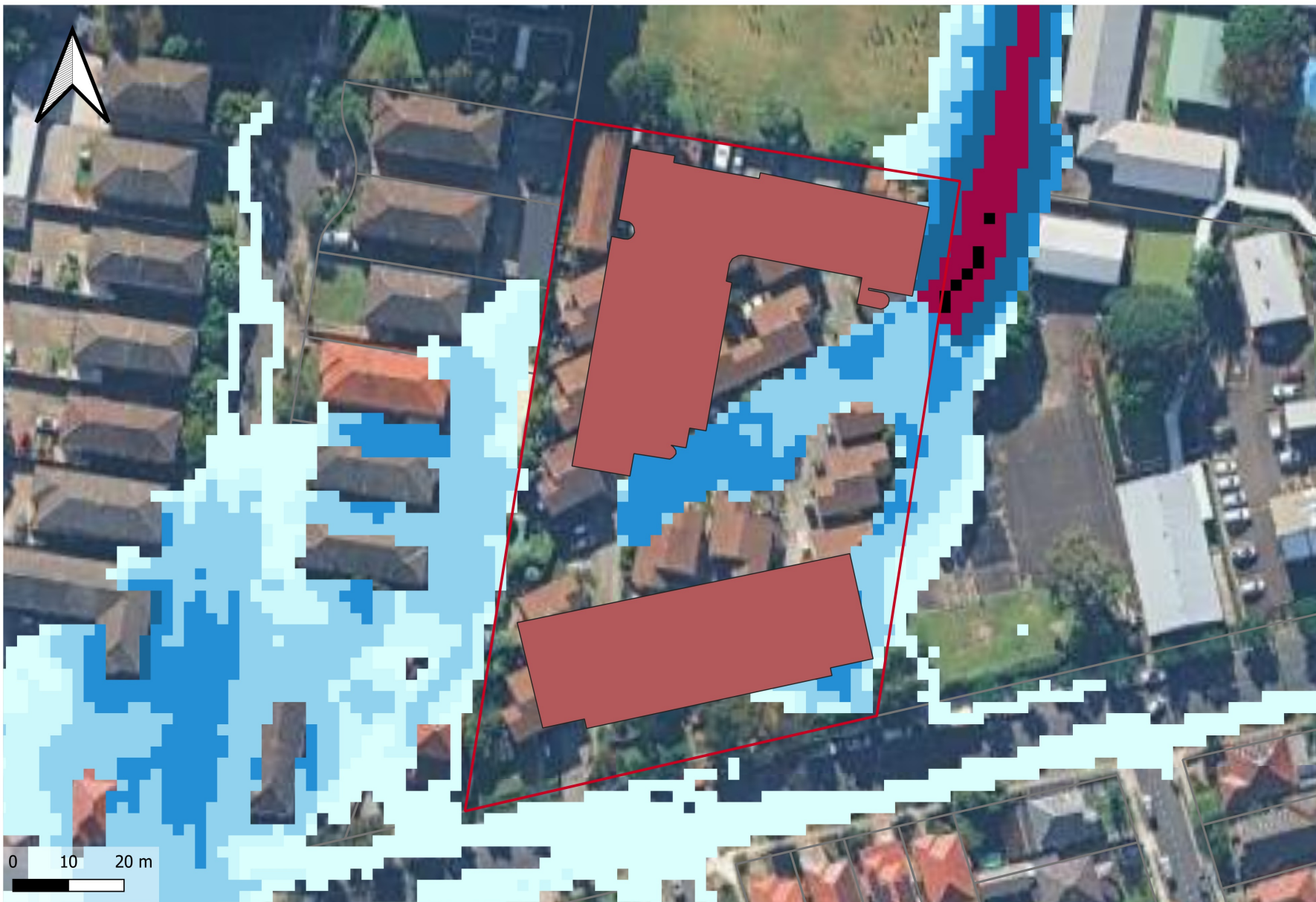
■ Was dry, now wet

— Site Boundary

Cadastre

Lot

Google Satellite



Legend

DES

1%AEP2100 Flood Event (Design)

Depth (m)

<= 0.05

0.05 - 0.15

0.15 - 0.25

0.25 - 0.50

0.50 - 1.00

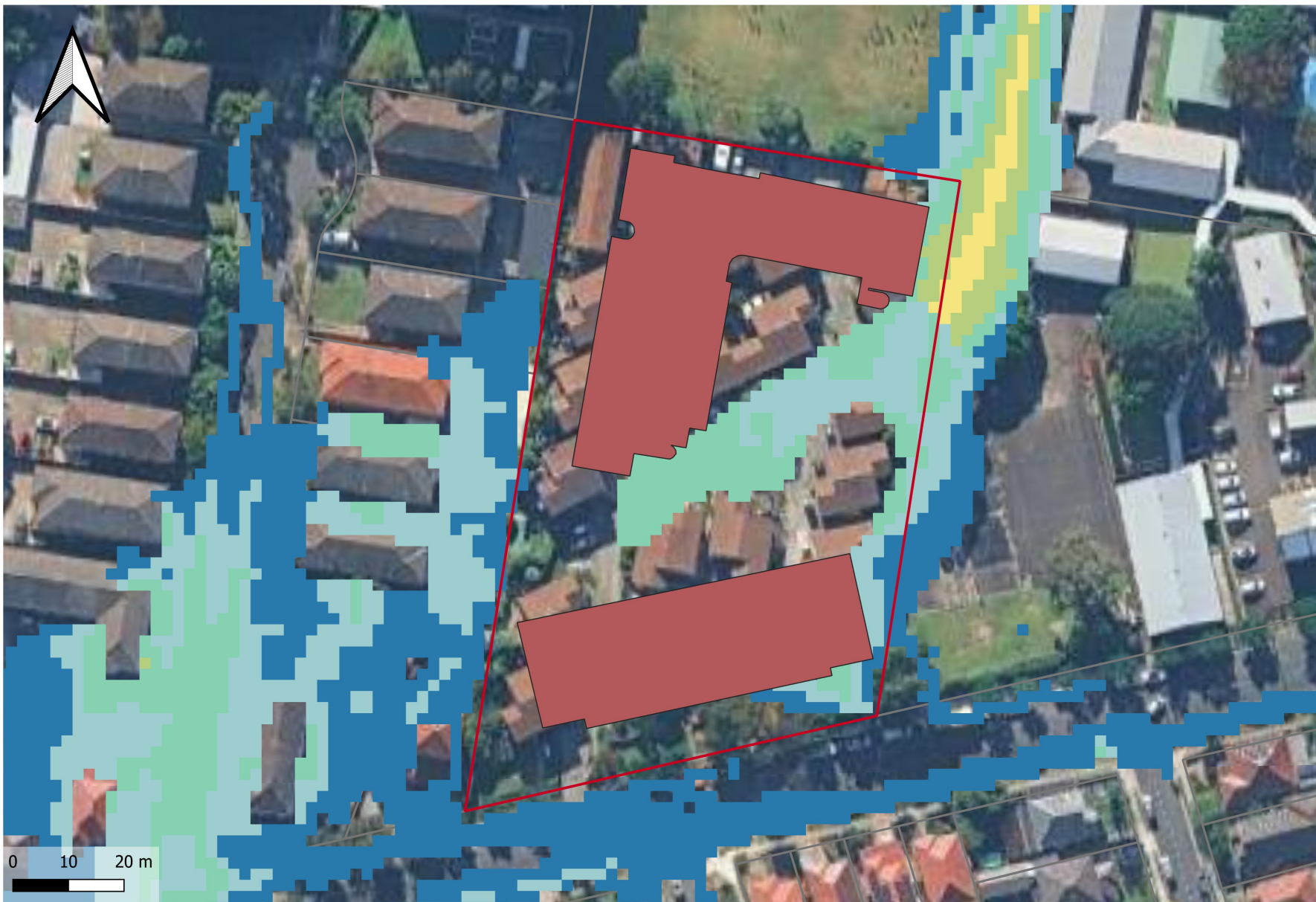
1.00 - 2.00

2.00 - 3.00

> 3.00

Google Satellite

0 10 20 m



Legend

DES

1%AEP2100 Flood Hazard (Design)

H1

H2

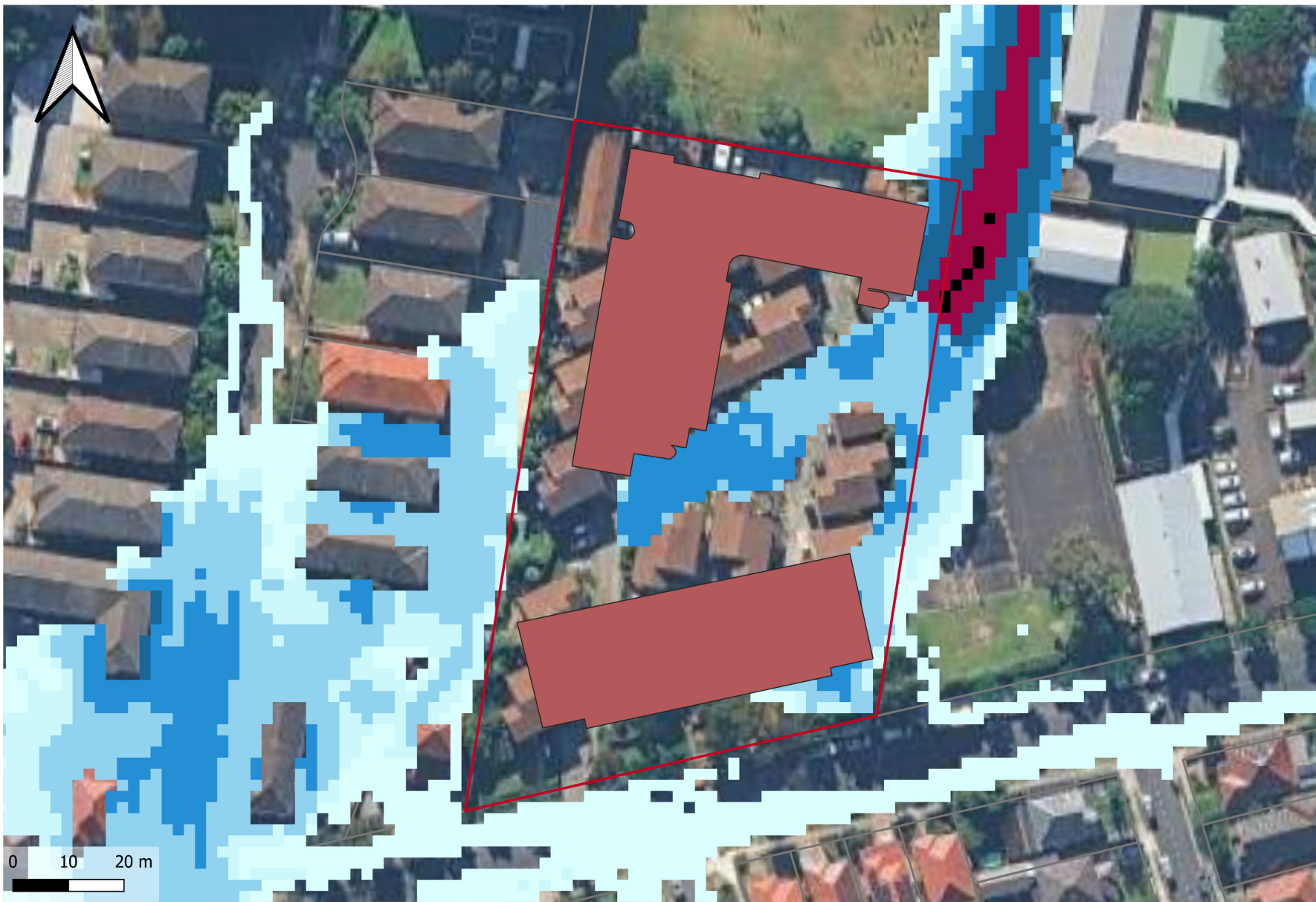
H3

H4

H5

H6

Google Satellite



Legend

DES

1%AEP2100_30 Flood Event (Design)

Depth (m)

<= 0.05

0.05 - 0.15

0.15 - 0.25

0.25 - 0.50

0.50 - 1.00

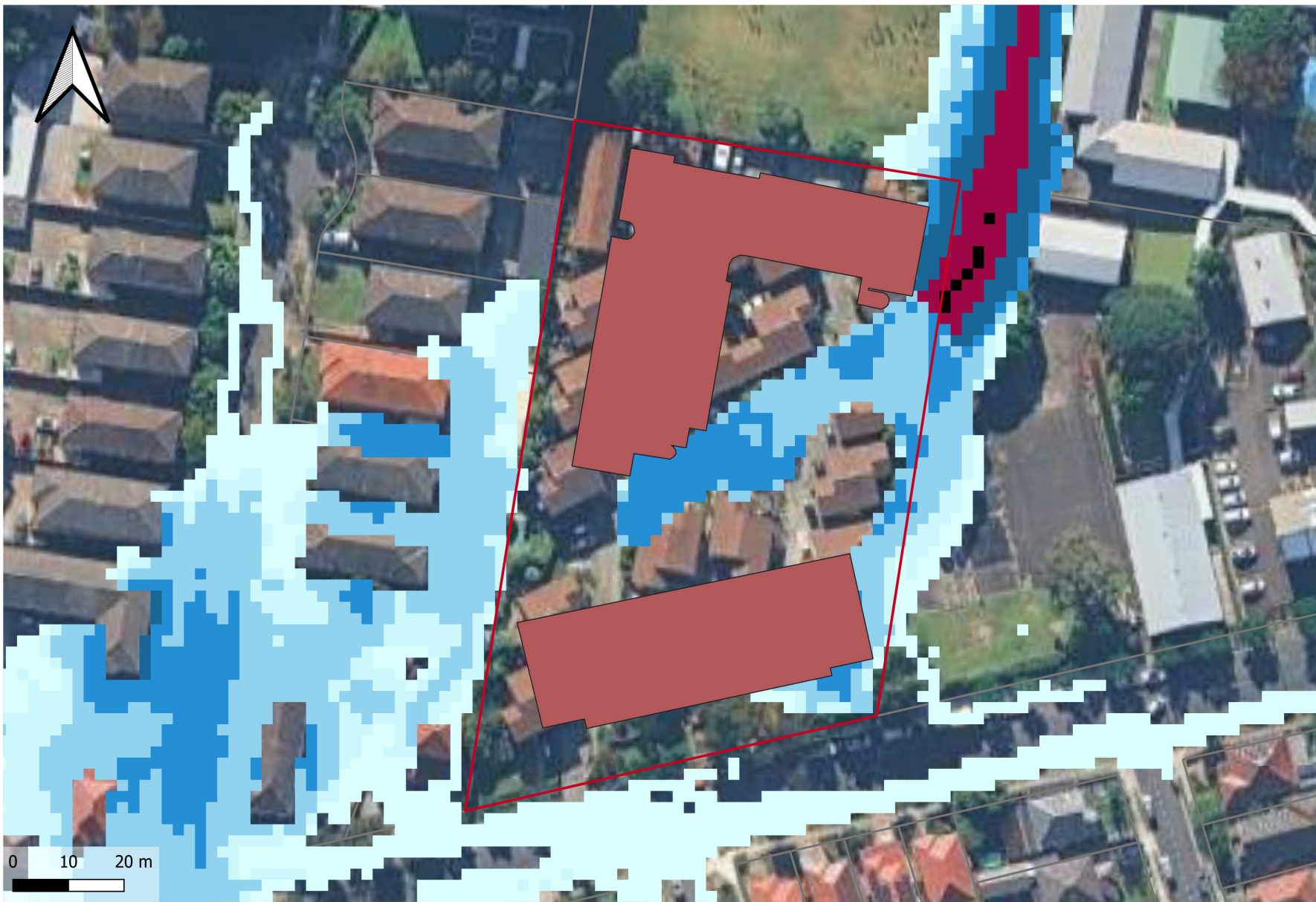
1.00 - 2.00

2.00 - 3.00

> 3.00

Google Satellite

0 10 20 m



Legend

DES

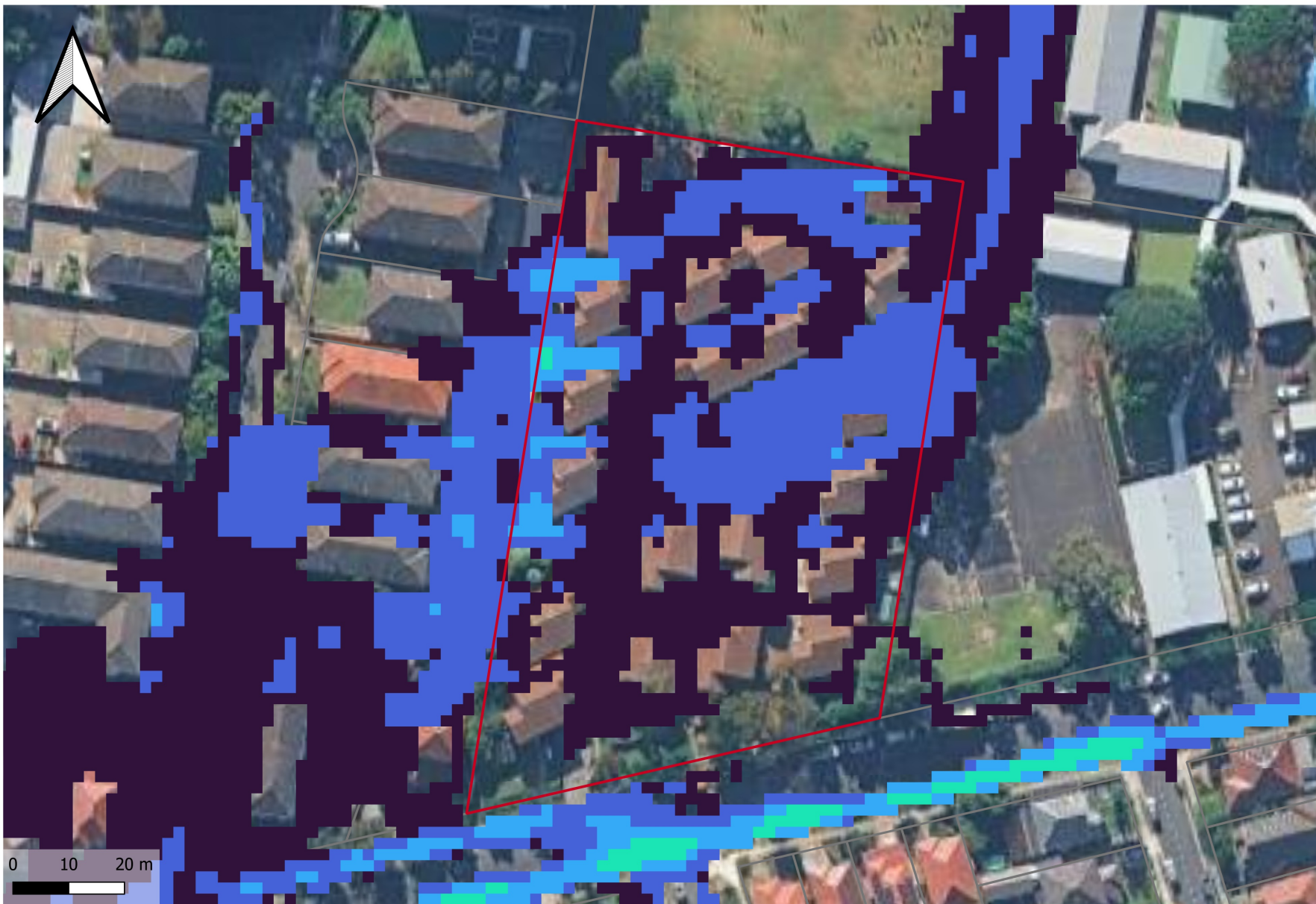
1%AEP2100_30 Flood Event (Design)

Depth (m)

- <= 0.05
- 0.05 - 0.15
- 0.15 - 0.25
- 0.25 - 0.50
- 0.50 - 1.00
- 1.00 - 2.00
- 2.00 - 3.00
- > 3.00

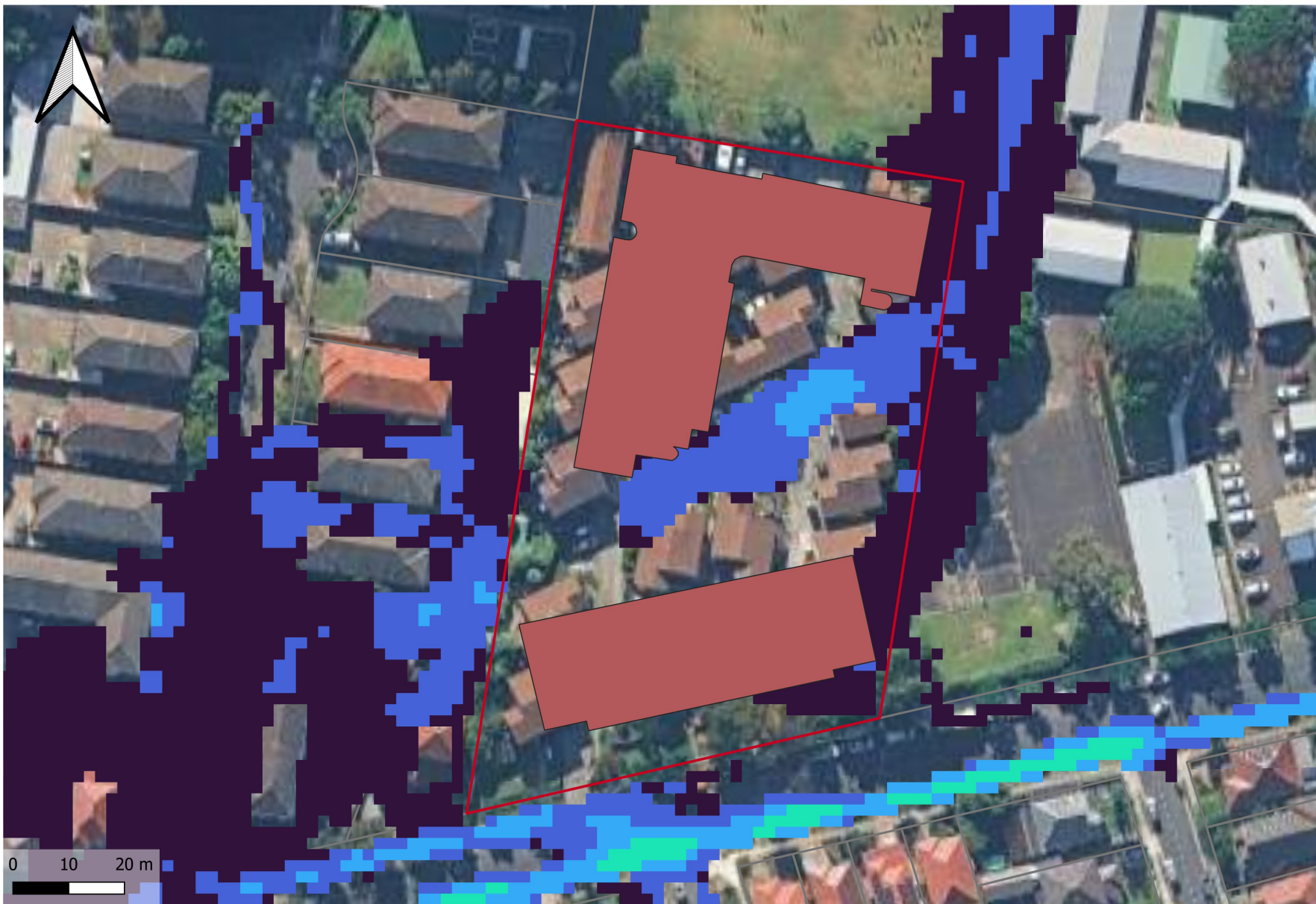
Google Satellite

0 10 20 m



Legend

- Site Boundary
- Existing 1AEP Flood Velocity
 - ≤ 0.5000
 - 0.5000 - 1.0000
 - 1.0000 - 1.5000
 - 1.5000 - 2.0000
 - 2.0000 - 2.5000
 - 2.5000 - 3.0000
 - 3.0000 - 3.5000
 - 3.5000 - 4.0000
 - 4.0000 - 4.5000
 - > 4.5000
- Cadastre
 - Lot
- Google Satellite



Legend

- Site Boundary
- 1AEP Flood Velocity (m/s)
 - ≤ 0.5000
 - 0.5000 - 1.0000
 - 1.0000 - 1.5000
 - 1.5000 - 2.0000
 - 2.0000 - 2.5000
 - 2.5000 - 3.0000
 - 3.0000 - 3.5000
 - 3.5000 - 4.0000
 - 4.0000 - 4.5000
 - > 4.5000
- Site Footprint
- Cadastre
 - Lot
- Google Satellite

B. Simulations Log

1	2025-Aug-18 11:09	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"					
2	2025-Aug-18 11:16	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"					
3	2025-Aug-18 11:16	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"					
4	2025-Aug-18 11:29	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"					
5	2025-Aug-18 11:29	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"					
6	2025-Aug-18 11:31	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y.tlf"					
7	2025-Aug-18 11:42	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"					
8	2025-Aug-18 11:43	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"					
9	2025-Aug-18 11:44	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y.tlf"					
10	2025-Aug-18 11:49	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"					
11	2025-Aug-18 11:50	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"					
12	2025-Aug-18 11:52	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y BirdsBunnerong.tcf "F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y.tlf"					
13	2025-Aug-18 12:09	Don: 01026630275	LOC 01/22	AU005254AA	Build:	
	2023-03-AC-iSP-w64					Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.					

14	Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"				
	2025-Aug-18 12:13	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES	BirdsBunnerong2.tcf	"F:\703103419-Sydney\02 Working\9.		
15	Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"				
	2025-Aug-18 12:28	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES	BirdsBunnerong2.tcf	"F:\703103419-Sydney\02 Working\9.		
16	Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"				
	2025-Aug-18 12:30	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
17	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"				
	2025-Aug-18 12:31	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
18	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y.tlf"				
	2025-Aug-18 13:57	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES	BirdsBunnerong2.tcf	"F:\703103419-Sydney\02 Working\9.		
19	Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"				
	2025-Aug-18 13:58	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
20	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"				
	2025-Aug-18 14:00	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
21	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_010Y+180min+Storm2+DES+TW010Y.tlf"				
	2025-Aug-18 14:11	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_100Y+060min+Storm6+DES+TW020Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
22	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+060min+Storm6+DES+TW020Y.tlf"				
	2025-Aug-18 14:12	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
23	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_100Y+090min+Storm10+DES+TW020Y.tlf"				
	2025-Aug-18 14:14	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong_PMP+060min+DES+TW100Y	BirdsBunnerong.tcf	"F:\703103419-Sydney\02 Working\9.		
24	Hillsdale\Tuflow\Tuflow\Design\runs\temp\BirdsBunnerong_PMP+060min+DES+TW100Y.tlf"				
	2025-Aug-18 14:26	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES	BirdsBunnerong2.tcf	"F:\703103419-Sydney\02 Working\9.		
25	Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"				
	2025-Aug-18 14:28	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:
	BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y	BirdsBunnerong2.tcf	"F:\703103419-Sydney\02 Working\9.		
26	Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y.tlf"				
	2025-Aug-18 14:30	Don: 01026630275	LOC 01/22	AU005254AA	Build:
	2023-03-AC-iSP-w64				Started:

```

BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y.tlf"
27 2025-Aug-18 14:58 Don: 01026630275 LOC 01/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
28 2025-Aug-18 15:00 Don: 01026630275 LOC 01/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y.tlf"
29 2025-Aug-18 15:01 Don: 01026630275 LOC 01/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y.tlf"
30 2025-Aug-18 16:28 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
31 2025-Aug-18 16:44 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
32 2025-Aug-18 17:06 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:16 GPUx1 0:21:47
CT Finished: BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
33 2025-Aug-18 17:06 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y.tlf"
34 2025-Aug-18 17:34 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:42 GPUx1 0:28:29
CT Finished: BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y.tlf"
35 2025-Aug-19 11:37 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
36 2025-Aug-19 12:09 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:57 GPUx1 0:31:32
CT Finished: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
37 2025-Aug-19 12:09 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
38 2025-Aug-19 12:30 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:45 GPUx1 0:21:16
CT Finished: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
39 2025-Aug-19 12:30 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES

```

```

BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
40 2025-Aug-19 13:04 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:07:31 GPUx1 0:34:34
CT Finished: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
41 2025-Aug-19 13:05 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
42 2025-Aug-19 13:26 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:24 GPUx1 0:21:11
CT Finished: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
43 2025-Aug-19 13:26 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
44 2025-Aug-19 13:49 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:20 GPUx1 0:23:43
CT Finished: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
45 2025-Aug-19 13:49 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES.tlf"
46 2025-Aug-19 14:25 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:07:57 GPUx1 0:35:14
CT Finished: BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES.tlf"
47 2025-Aug-19 14:25 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
48 2025-Aug-19 14:47 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:20 GPUx1 0:21:54
CT Finished: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
49 2025-Aug-19 14:47 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
50 2025-Aug-19 15:09 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:07:20 GPUx1 0:22:29
CT Finished: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
51 2025-Aug-19 15:09 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES.tlf"
52 2025-Aug-19 15:41 Don: 10266302LOC 01/22 AU005254AA Build:

```

```

2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
53 2025-Aug-19 16:03 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:29 GPUx1 0:21:59
CT Finished: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
54 2025-Aug-19 16:03 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
55 2025-Aug-19 16:26 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:01 GPUx1 0:22:24
CT Finished: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
56 2025-Aug-19 16:26 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
57 2025-Aug-19 17:22 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
58 2025-Aug-19 17:48 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:26:58 GPUx1 1:22:09
CT Finished: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
59 2025-Aug-19 17:48 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
60 2025-Aug-19 18:25 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:30:02 GPUx1 1:02:50
CT Finished: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
61 2025-Aug-19 18:25 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
62 2025-Aug-19 18:52 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:31:31 GPUx1 1:04:33
CT Finished: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
63 2025-Aug-19 18:53 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
64 2025-Aug-19 19:31 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:30:40 GPUx1 1:06:13
CT Finished: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"

```

```

65 2025-Aug-19 19:31 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
66 2025-Aug-19 20:07 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:34:51 GPUx1 1:14:59
CT Finished: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
67 2025-Aug-19 20:08 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES.tlf"
68 2025-Aug-19 21:33 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:56:52 GPUx1 2:02:34
CT Finished: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
69 2025-Aug-19 21:34 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
70 2025-Aug-19 22:06 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:57:29 GPUx1 1:58:27
CT Finished: BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES.tlf"
71 2025-Aug-19 22:06 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
72 2025-Aug-19 22:36 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:30:46 GPUx1 1:02:58
CT Finished: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
73 2025-Aug-19 22:37 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
74 2025-Aug-19 23:11 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:33:33 GPUx1 1:04:49
CT Finished: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
75 2025-Aug-19 23:11 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
76 2025-Aug-19 23:50 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:36:10 GPUx1 1:13:54
CT Finished: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
77 2025-Aug-19 23:50 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.

```

```

78 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES.tlf"
2025-Aug-20 00:20 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:35:07 GPUx1 1:09:12
CT Finished: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
79 2025-Aug-20 00:20 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES.tlf"
80 2025-Aug-20 01:51 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:59:15 GPUx1 2:00:37
CT Finished: BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm2+DES+TW020Y_DES.tlf"
81 2025-Aug-20 01:51 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
82 2025-Aug-20 02:17 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:58:47 GPUx1 1:56:41
CT Finished: BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES.tlf"
83 2025-Aug-20 02:17 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES.tlf"
84 2025-Aug-20 02:50 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:27:40 GPUx1 0:59:04
CT Finished: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
85 2025-Aug-20 02:50 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
86 2025-Aug-20 03:49 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:27:25 GPUx1 0:58:39
CT Finished: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
87 2025-Aug-20 03:49 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES.tlf"
88 2025-Aug-20 05:23 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:43:26 GPUx1 1:33:58
CT Finished: BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm3+DES+TW020Y_DES.tlf"
89 2025-Aug-20 09:38 Don: 10266302LOC 04/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES.tlf"
90 2025-Aug-20 10:05 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:27:34 GPUx1 7:48:27
CT Finished: BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf

```

```

"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES.tlf"
91 2025-Aug-20 10:13 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm4+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm4+DES+TW020Y_DES.tlf"
92 2025-Aug-20 10:15 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:15:06 GPUx1 0:36:36
CT Finished: BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES.tlf"
93 2025-Aug-20 10:30 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
94 2025-Aug-20 10:52 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:55 GPUx1 0:22:26
CT Finished: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
95 2025-Aug-20 10:52 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
96 2025-Aug-20 11:13 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
97 2025-Aug-20 11:19 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
98 2025-Aug-20 11:41 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:20 GPUx1 0:21:55
CT Finished: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
99 2025-Aug-20 11:41 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
100 2025-Aug-20 12:05 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:38 GPUx1 0:24:12
CT Finished: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
101 2025-Aug-20 12:05 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm1+DES+TW020Y_DES.tlf"
102 2025-Aug-20 12:40 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
103 2025-Aug-20 13:03 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:54 GPUx1 0:22:55

```

```

CT    Finished: BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES    HPC Solver Used.    BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm1+DES+TW020Y_DES.tlf"
104  2025-Aug-20 13:03  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
105  2025-Aug-20 13:25  Don: 10266302LOC 01/22  AU005254AA          Build: 2018-03-AE-iSP-w64          0:05:46 GPUx1          0:22:27
CT    Finished: BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES    HPC Solver Used.    BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm1+DES+TW020Y_DES.tlf"
106  2025-Aug-20 13:25  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
107  2025-Aug-20 13:50  Don: 10266302LOC 01/22  AU005254AA          Build: 2018-03-AE-iSP-w64          0:06:05 GPUx1          0:24:52
CT    Finished: BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES    HPC Solver Used.    BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm2+DES+TW020Y_DES.tlf"
108  2025-Aug-20 13:50  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
109  2025-Aug-20 14:19  Don: 10266302LOC 01/22  AU005254AA          Build: 2018-03-AE-iSP-w64          0:06:01 GPUx1          0:28:58
CT    Finished: BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES    HPC Solver Used.    BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm2+DES+TW020Y_DES.tlf"
110  2025-Aug-20 14:19  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
111  2025-Aug-20 14:46  Don: 10266302LOC 01/22  AU005254AA          Build: 2018-03-AE-iSP-w64          0:05:54 GPUx1          0:26:27
CT    Finished: BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES    HPC Solver Used.    BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm3+DES+TW020Y_DES.tlf"
112  2025-Aug-20 14:46  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
113  2025-Aug-20 15:12  Don: 10266302LOC 01/22  AU005254AA          Build: 2018-03-AE-iSP-w64          0:05:51 GPUx1          0:26:33
CT    Finished: BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES    HPC Solver Used.    BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm3+DES+TW020Y_DES.tlf"
114  2025-Aug-20 15:12  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES.tlf"
115  2025-Aug-20 15:17  Don: 10266302LOC 01/22  AU005254AA          Build:
2018-03-AE-iSP-w64          Started: BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES
BirdsBunnerong2.tcf    "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES.tlf"

```

```

116 2025-Aug-20 15:42 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:05:54 GPUx1 0:25:56
CT Finished: BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm4+DES+TW020Y_DES.tlf"
117 2025-Aug-20 15:43 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES.tlf"
118 2025-Aug-20 16:11 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:02 GPUx1 0:28:27
CT Finished: BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm4+DES+TW020Y_DES.tlf"
119 2025-Aug-20 16:11 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm5+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm5+DES+TW020Y_DES.tlf"
120 2025-Aug-20 16:36 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:07:39 GPUx1 0:24:40
CT Finished: BirdsBunnerong2_100Y+060min+Storm5+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm5+DES+TW020Y_DES.tlf"
121 2025-Aug-20 16:36 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm5+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm5+DES+TW020Y_DES.tlf"
122 2025-Aug-20 17:02 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:39 GPUx1 0:26:49
CT Finished: BirdsBunnerong2_100Y+090min+Storm5+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm5+DES+TW020Y_DES.tlf"
123 2025-Aug-20 17:03 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
124 2025-Aug-20 17:44 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:08:36 GPUx1 0:41:31
CT Finished: BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
125 2025-Aug-20 17:44 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
126 2025-Aug-20 18:36 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:13:01 GPUx1 0:51:40
CT Finished: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
127 2025-Aug-20 18:36 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm7+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm7+DES+TW020Y_DES.tlf"
128 2025-Aug-20 19:21 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:12:30 GPUx1 0:45:18
CT Finished: BirdsBunnerong2_100Y+060min+Storm7+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.

```

```

129 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm7+DES+TW020Y_DES.tlf"
2025-Aug-20 19:21 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm7+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm7+DES+TW020Y_DES.tlf"
130 2025-Aug-20 20:12 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:13:57 GPUx1 0:51:23
CT Finished: BirdsBunnerong2_100Y+090min+Storm7+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm7+DES+TW020Y_DES.tlf"
131 2025-Aug-20 20:12 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm8+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm8+DES+TW020Y_DES.tlf"
132 2025-Aug-20 21:03 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:12:57 GPUx1 0:50:22
CT Finished: BirdsBunnerong2_100Y+060min+Storm8+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm8+DES+TW020Y_DES.tlf"
133 2025-Aug-20 21:03 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm8+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm8+DES+TW020Y_DES.tlf"
134 2025-Aug-20 21:51 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:14:29 GPUx1 0:47:44
CT Finished: BirdsBunnerong2_100Y+090min+Storm8+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm8+DES+TW020Y_DES.tlf"
135 2025-Aug-20 21:51 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm9+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm9+DES+TW020Y_DES.tlf"
136 2025-Aug-20 22:33 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:14:20 GPUx1 0:42:40
CT Finished: BirdsBunnerong2_100Y+060min+Storm9+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm9+DES+TW020Y_DES.tlf"
137 2025-Aug-20 22:33 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm9+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm9+DES+TW020Y_DES.tlf"
138 2025-Aug-20 23:20 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:15:06 GPUx1 0:47:03
CT Finished: BirdsBunnerong2_100Y+090min+Storm9+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm9+DES+TW020Y_DES.tlf"
139 2025-Aug-20 23:20 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm10+DES+TW020Y_DES.tlf"
140 2025-Aug-21 00:03 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:14:42 GPUx1 0:42:35
CT Finished: BirdsBunnerong2_100Y+060min+Storm10+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm10+DES+TW020Y_DES.tlf"
141 2025-Aug-21 00:03 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES

```

```

BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES.tlf"
142 2025-Aug-21 00:58 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:16:30 GPUx1 0:54:53
CT Finished: BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES.tlf"
143 2025-Aug-21 12:56 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y.tlf"
144 2025-Aug-21 14:40 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:33:21 GPUx1 1:44:02
CT Finished: BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_010Y+180min+Storm2+DES+TW010Y.tlf"
145 2025-Aug-21 21:40 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
146 2025-Aug-21 21:47 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
147 2025-Aug-21 22:54 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:24:37 GPUx1 1:06:43
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
148 2025-Aug-21 22:54 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+180min+Storm6+DES+TW020Y_DES.tlf"
149 2025-Aug-22 00:50 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:44:10 GPUx1 1:56:18
CT Finished: BirdsBunnerong4_100Y+180min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+180min+Storm6+DES+TW020Y_DES.tlf"
150 2025-Aug-22 00:50 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES.tlf"
151 2025-Aug-22 02:05 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:27:53 GPUx1 1:14:41
CT Finished: BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm10+DES+TW020Y_DES.tlf"
152 2025-Aug-22 02:05 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+180min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm10+DES+TW020Y_DES.tlf"
153 2025-Aug-22 03:47 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:33:57 GPUx1 1:42:16
CT Finished: BirdsBunnerong2_100Y+180min+Storm10+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+180min+Storm10+DES+TW020Y_DES.tlf"
154 2025-Aug-22 03:47 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES

```

```

BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES.tlf"
155 2025-Aug-22 03:47 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES.tlf"
156 2025-Aug-22 03:47 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES.tlf"
157 2025-Aug-22 03:48 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES.tlf"
158 2025-Aug-22 03:48 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES.tlf"
159 2025-Aug-22 03:48 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES.tlf"
160 2025-Aug-22 08:58 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES.tlf"
161 2025-Aug-22 08:58 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES.tlf"
162 2025-Aug-22 08:59 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES.tlf"
163 2025-Aug-22 08:59 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES.tlf"
164 2025-Aug-22 08:59 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES.tlf"
165 2025-Aug-22 08:59 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES.tlf"
166 2025-Aug-22 08:59 Don: 01026630275 LOC 03/22 AU005254AA Build:
2023-03-AC-iSP-w64 Started:
BirdsBunnerong2_PMP+060min+DES+TW100Y_DES BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_PMP+060min+DES+TW100Y_DES.tlf"
167 2025-Aug-22 09:50 Don: 10266302LOC 03/22 AU005254AA Build:

```

```

2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES.tlf"
168 2025-Aug-22 09:50 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES.tlf"
169 2025-Aug-22 09:50 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES.tlf"
170 2025-Aug-22 09:50 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES.tlf"
171 2025-Aug-22 09:50 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES.tlf"
172 2025-Aug-22 09:51 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES.tlf"
173 2025-Aug-22 09:51 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_PMP+060min+DES+TW100Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_PMP+060min+DES+TW100Y_DES.tlf"
174 2025-Aug-22 10:18 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
175 2025-Aug-22 10:23 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
176 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:25:15 GPUx1 1:07:55
CT Finished: BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
177 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2017-09-AC-iSP-w64 Started: BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+060min+Storm6+DES+TW020Y_DES.tlf"
178 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES.tlf"
179 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES.tlf"

```

```

180 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+060min+Storm10+DES+TW020Y_DES.tlf"
181 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+090min+Storm10+DES+TW020Y_DES.tlf"
182 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_10Y+180min+Storm10+DES+TW020Y_DES.tlf"
183 2025-Aug-22 11:31 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong2_PMP+060min+DES+TW100Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_PMP+060min+DES+TW100Y_DES.tlf"
184 2025-Aug-22 12:24 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
185 2025-Aug-22 12:46 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+060min+Storm6+DES+TW020Y_DES.tlf"
186 2025-Aug-22 12:59 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
187 2025-Aug-22 13:51 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:28:10 GPUx1 0:51:49
CT Finished: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
188 2025-Aug-22 13:51 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
189 2025-Aug-22 14:48 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:21:17 GPUx1 0:56:27
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
190 2025-Aug-22 15:29 Don: 10266302LOC 01/22 AU006870AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
191 2025-Aug-22 15:32 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
192 2025-Aug-22 15:39 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.

```

193 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
2025-Aug-22 16:35 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:15:47 GPUx1 0:56:47
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
194 2025-Aug-25 10:12 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y.tlf"
195 2025-Aug-25 11:22 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:18:30 GPUx1 1:10:12
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y.tlf"
196 2025-Aug-25 12:08 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
197 2025-Aug-25 13:22 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:20:41 GPUx1 1:13:30
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
198 2025-Aug-25 14:00 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
199 2025-Aug-25 14:01 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
200 2025-Aug-25 17:02 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:50:27 GPUx1 3:00:45
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
201 2025-Aug-25 17:25 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
202 2025-Aug-25 19:53 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AC-iSP-w64 1:01:11 GPUx1 2:28:05
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
203 2025-Aug-26 09:58 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
204 2025-Aug-26 10:01 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
205 2025-Aug-26 10:57 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:32:04 GPUx1 0:56:33
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
206 2025-Sep-10 16:29 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.

207 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
2025-Sep-10 20:05 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AC-iSP-w64 1:15:51 GPUx1 3:36:53
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

208 2025-Sep-12 15:52 Don: 10266302LOC 02/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

209 2025-Sep-12 16:44 Don: 10266302LOC 02/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:34:11 GPUx1 0:52:12
CT Finished: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

210 2025-Sep-15 14:06 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

211 2025-Sep-15 15:16 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:25:45 GPUx1 1:09:45
CT UNSTABLE: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

212 2025-Sep-15 16:07 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

213 2025-Sep-15 18:52 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:55:45 GPUx1 2:44:31
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

214 2025-Sep-16 10:32 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

215 2025-Sep-16 10:53 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

216 2025-Sep-16 11:55 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:10:10 GPUx1 1:02:20
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

217 2025-Sep-16 12:54 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

218 2025-Sep-16 14:00 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:10:24 GPUx1 1:06:11
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

219 2025-Sep-16 15:12 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

220 2025-Sep-16 15:14 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.

221 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
2025-Sep-16 16:21 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:11:22 GPUx1 1:07:23
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

222 2025-Sep-17 09:19 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

223 2025-Sep-17 09:23 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

224 2025-Sep-17 09:47 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:03:48 GPUx1 0:23:57
CT Finished: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

225 2025-Sep-17 09:47 Don: 10266302LOC 01/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

226 2025-Sep-17 10:54 Don: 10266302LOC 01/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:10:36 GPUx1 1:07:18
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

227 2025-Sep-17 12:02 Don: 10266302LOC 02/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong2.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

228 2025-Sep-17 12:32 Don: 10266302LOC 02/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:06:37 GPUx1 0:30:03
CT Finished: BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong2.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong2_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

229 2025-Sep-23 11:37 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

230 2025-Sep-23 11:43 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

231 2025-Sep-23 12:52 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:19:51 GPUx1 1:08:59
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

232 2025-Sep-23 12:52 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm10+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm10+DES+TW020Y_DES.tlf"

233 2025-Sep-23 15:12 Don: 10266302LOC 03/22 AU005254AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

234 2025-Sep-23 16:22 Don: 10266302LOC 03/22 AU005254AA Build: 2018-03-AE-iSP-w64 0:27:18 GPUx1 1:10:03
 CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
 "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"

235 2025-Sep-23 16:22 Don: 10266302LOC 04/22 AU005254AA Build:
 2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES
 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm6+DES+TW020Y_DES.tlf"

236 2025-Sep-23 16:22 Don: 10266302LOC 04/22 AU005254AA Build:
 2018-03-AC-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

237 2025-Sep-23 20:43 Don: 10266302LOC 04/22 AU005254AA Build: 2018-03-AC-iSP-w64 1:56:56 GPUx1 4:20:45
 CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
 Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"

238 2025-Oct-21 14:32 Don: 10266302LOC 06/22 AU005254AA Build:
 2018-03-AC-iSP-w64 Started:
 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc.tlf"

239 2025-Oct-21 15:08 Don: 10266302LOC 06/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:08:21 GPUx1 0:36:12
 CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
 "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc.tlf"

240 2025-Oct-21 15:08 Don: 10266302LOC 05/22 AU005254AA Build:
 2018-03-AC-iSP-w64 Started:
 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"

241 2025-Oct-21 15:39 Don: 10266302LOC 05/22 AU005254AA Build: 2018-03-AC-iSP-w64 0:04:54 GPUx1 0:30:33
 CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
 "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"

242 2026-Feb-03 06:31 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
 2018-03-AC-iSP-w64 Started:
 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc.tlf"

243 2026-Feb-03 07:57 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build: 2018-03-AC-iSP-w64 1:20:28 GPUx1 1:26:01
 CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
 "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc.tlf"

244 2026-Feb-03 07:57 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
 2018-03-AC-iSP-w64 Started:
 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc.tlf"

245 2026-Feb-03 09:27 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build: 2018-03-AC-iSP-w64 1:23:00 GPUx1 1:30:00
 CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
 "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES+100Y_30pc.tlf"

246 2026-Feb-03 09:27 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
 2018-03-AC-iSP-w64 Started:
 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc.tlf"

247 2026-Feb-03 11:14 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build: 2018-03-AC-iSP-w64 1:36:21 GPUx1 1:47:00
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y_30pc.tlf"

248 2026-Feb-03 11:15 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"

249 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build: 2018-03-AC-iSP-w64 1:40:53 GPUx1 1:52:11
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"

250 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+180min+Storm6+DES+TW020Y_DES.tlf"

251 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+060min+Storm10+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+060min+Storm10+DES+TW020Y_DES.tlf"

252 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm10+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm10+DES+TW020Y_DES.tlf"

253 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+180min+Storm6+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+180min+Storm6+TW020Y_EXG.tlf"

254 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+060min+Storm10+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+060min+Storm10+TW020Y_EXG.tlf"

255 2026-Feb-03 13:07 Don: 10266302LOC 02/22 AZAUEPRDHPC01 Build:
2018-03-AC-iSP-w64 Started: BirdsBunnerong4_10Y+090min+Storm10+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_10Y+090min+Storm10+TW020Y_EXG.tlf"

256 2026-Feb-06 09:14 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+180min+Storm6+DES+TW020Y_DES.tlf"

257 2026-Feb-06 09:16 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm10+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm10+DES+TW020Y_DES.tlf"

258 2026-Feb-06 09:20 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+180min+Storm6+DES+TW020Y_DES.tlf"

259 2026-Feb-06 09:24 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+180min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.

```

260 Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+180min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-06 09:27 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+60min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+60min+Storm6+DES+TW020Y_DES.tlf"
261 2026-Feb-06 09:27 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+60min+Storm6+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+60min+Storm6+TW020Y_EXG.tlf"
262 2026-Feb-06 09:27 Don: 10266302LOC 09/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
263 2026-Feb-06 16:31 Don: 10266302LOC 11/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+60min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+60min+Storm6+DES+TW020Y_DES.tlf"
264 2026-Feb-06 16:32 Don: 10266302LOC 12/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+60min+Storm6+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+60min+Storm6+TW020Y_EXG.tlf"
265 2026-Feb-06 16:32 Don: 10266302LOC 12/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
266 2026-Feb-13 09:52 Don: 10266302LOC 10/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+60min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+60min+Storm6+DES+TW020Y_DES.tlf"
267 2026-Feb-13 09:52 Don: 10266302LOC 10/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+60min+Storm6+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+60min+Storm6+TW020Y_EXG.tlf"
268 2026-Feb-13 09:52 Don: 10266302LOC 10/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
269 2026-Feb-13 11:22 Don: 10266302LOC 10/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:16:20 GPUx1 1:29:51
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
270 2026-Feb-16 10:08 Don: 10266302LOC 04/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
271 2026-Feb-16 10:42 Don: 10266302LOC 04/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:04:19 GPUx1 0:34:19
CT Finished: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
272 2026-Feb-16 10:42 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES

```

```

BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
273 2026-Feb-16 11:14 Don: 10266302LOC 05/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:06:27 GPUx1 0:32:14
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
274 2026-Feb-16 11:15 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
275 2026-Feb-16 11:52 Don: 10266302LOC 05/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:10:02 GPUx1 0:37:17
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
276 2026-Feb-16 11:52 Don: 10266302LOC 03/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
277 2026-Feb-16 12:31 Don: 10266302LOC 03/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:07:20 GPUx1 0:38:48
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
278 2026-Feb-16 15:29 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
279 2026-Feb-16 16:30 Don: 10266302LOC 06/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:09:42 GPUx1 1:00:29
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
280 2026-Feb-16 16:30 Don: 10266302LOC 04/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y_30pc+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y_30pc+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"
281 2026-Feb-17 09:12 Don: 10266302LOC 04/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y_30pc+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y_30pc+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
282 2026-Feb-17 09:14 Don: 10266302LOC 04/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"
283 2026-Feb-17 09:40 Don: 10266302LOC 04/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:03:23 GPUx1 0:25:48
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"
284 2026-Feb-17 14:25 Don: 10266302LOC 04/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
285 2026-Feb-17 15:43 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

```

286 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 15:43 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES

287 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
2026-Feb-17 15:44 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES

288 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 15:44 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:

289 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
2026-Feb-17 15:44 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:

290 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
2026-Feb-17 15:45 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:

291 BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"
2026-Feb-17 16:05 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

292 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:07 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

293 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:07 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

294 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:09 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

295 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:10 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

296 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:14 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

297 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:15 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES

298 BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
2026-Feb-17 16:21 Don: 10266302LOC 05/22 AU005854AA Build:

2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
299 2026-Feb-17 16:22 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
300 2026-Feb-17 16:23 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
301 2026-Feb-17 16:25 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
302 2026-Feb-17 16:27 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
303 2026-Feb-17 16:29 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
304 2026-Feb-17 16:34 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
305 2026-Feb-17 16:41 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
306 2026-Feb-17 16:43 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
307 2026-Feb-17 17:03 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
308 2026-Feb-17 17:09 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
309 2026-Feb-17 17:27 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
310 2026-Feb-17 17:29 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"

```

311 2026-Feb-17 17:32 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
312 2026-Feb-17 18:48 Don: 10266302LOC 06/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:16:27 GPUx1 1:16:36
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_DES HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_DES.tlf"
313 2026-Feb-17 18:48 Don: 10266302LOC 07/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
314 2026-Feb-17 19:21 Don: 10266302LOC 07/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:07:42 GPUx1 0:32:31
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_DES.tlf"
315 2026-Feb-17 19:21 Don: 10266302LOC 06/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
316 2026-Feb-17 19:57 Don: 10266302LOC 06/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:08:21 GPUx1 0:36:51
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2050_DES+100Y.tlf"
317 2026-Feb-17 19:58 Don: 10266302LOC 05/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
318 2026-Feb-24 11:29 Don: 10266302LOC 14/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
319 2026-Feb-24 12:09 Don: 10266302LOC 14/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:14:43 GPUx1 0:40:05
CT Finished: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_DES.tlf"
320 2026-Feb-24 12:09 Don: 10266302LOC 13/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
321 2026-Feb-24 13:19 Don: 10266302LOC 13/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:23:43 GPUx1 1:09:48
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y.tlf"
322 2026-Feb-24 13:19 Don: 10266302LOC 15/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started:
BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"
323 2026-Feb-24 14:32 Don: 10266302LOC 15/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:23:15 GPUx1 1:13:29
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_2100_DES+100Y_30pc.tlf"

```

```

324 2026-Feb-24 17:08 Don: 10266302LOC 17/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+TW020Y_EXG.tlf"
325 2026-Feb-24 17:24 Don: 10266302LOC 17/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+TW020Y_EXG.tlf"
326 2026-Feb-24 17:27 Don: 10266302LOC 17/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_EXG.tlf"
327 2026-Feb-24 18:16 Don: 10266302LOC 17/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:13:09 GPUx1 0:49:17
CT Finished: BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_EXG HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_010Y+060min+Storm6+DES+TW020Y_EXG.tlf"
328 2026-Feb-24 18:17 Don: 10266302LOC 19/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_EXG.tlf"
329 2026-Feb-26 11:02 Don: 10266302LOC 14/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_EXG.tlf"
330 2026-Feb-26 12:06 Don: 10266302LOC 14/22 AU005854AA Build: 2018-03-AE-iSP-w64 0:44:11 GPUx1 1:04:17
CT Finished: BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_EXG HPC Solver Used. BirdsBunnerong4.tcf
"F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_100Y+090min+Storm6+DES+TW020Y_EXG.tlf"
331 2026-Feb-26 12:06 Don: 10266302LOC 18/22 AU005854AA Build:
2018-03-AE-iSP-w64 Started: BirdsBunnerong4_PMP+060min+DES+TW100Y_EXG
BirdsBunnerong4.tcf "F:\703103419-Sydney\02 Working\9.
Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_EXG.tlf"
332 2026-Feb-26 15:49 Don: 10266302LOC 18/22 AU005854AA Build: 2018-03-AE-iSP-w64 2:50:12 GPUx1 3:42:46
CT Finished: BirdsBunnerong4_PMP+060min+DES+TW100Y_EXG HPC Solver Used. BirdsBunnerong4.tcf "F:\703103419-Sydney\02
Working\9. Hillsdale\Tuflow\Tuflow\Design\runs\log\BirdsBunnerong4_PMP+060min+DES+TW100Y_EXG.tlf"
333

```

C. Submission Comment Responses

Hillsdale SSD

Submissions summary

1 Submissions summary

1.1 Response to Department of Planning, Housing and Infrastructure

Table 1: Response to DPHI

No.	Issue raised	Response
Table subheading		
1.1		

1.2 Response to Agency advice

Table 2: Response to agency advice

No.	Issue raised	Response
1. Department of Climate Change, Energy, the Environment and Water, Conservation Programs, Heritage and Regulation (CPHR)		
1.1	<p>Flood impact assessment:</p> <ul style="list-style-type: none"> The consultant is to ensure that sufficient investigations are undertaken and the reports provided support the determination of the project. Reports are updated to include adequate assessment and remove inappropriate disclaimers. Update the FIRA to address the requirements of LU01. Modelling to include smaller and larger floods and the impact of climate change. Management of the risk to occupants and visitors posed by the increased population on site and the changes in the flow path must form part of the FIRA. 	<ul style="list-style-type: none"> The disclaimer on Mott Macdonald reports notes the issue of these reports is for the party who commissioned – but also for specific purposes connected with the project. Section 1.1 has been amended to state the specific purpose for which the report is issued includes the provision of information and demonstration of outcomes to relevant agencies and approval authorities. FIRA has been updated with index/references list providing cross-reference to how and where the LU01 requirements are addressed within the FIRA, Section 4.5. Refer discussion for 1.2 below
1.2	<p>Flood risk:</p> <ul style="list-style-type: none"> The proposal increases hazard on site due to the proposed concentration of the onsite floodway and significantly increases risk due to the increased numbers of residents who will be exposed to the hazard. The proposed intensification of development on this site should be reconsidered unless it can be redesigned to manage risk to life. 	<ul style="list-style-type: none"> Under existing condition there are multiple H1, H2, H3 flow paths between discrete dwelling blocks in the 1% AEP rising to H3, H4, H5 under PMF conditions. There is a concentration of flood hazard in the design case. This is deliberate and assists in the identification of hazardous areas when compared with the multiple parallel flow paths of hazardous area under existing conditions. The hazard classes remain unchanged in the 1% AEP (H1-H3) and PMF events (H1-H5) so severity of hazard is not increased as commented.

No.	Issue raised	Response
		<ul style="list-style-type: none"> The intensification of development does increase dwelling numbers and potential population during flood event. Section 6.1.1 (FIRA) notes floor levels above the PMF and 1% + 0.5m freeboard. Standard structural design includes ensuring building structures in this location will be designed to withstand the lateral flood water pressure in the PMF flood event. This effort at detailed design will be supplemented by a detailed vulnerability assessment to establish and mitigate the risk of disproportionate collapse via robustness assessment as outlined within Part B1 of Volume One of the NCC (Structural provisions). The FERP has been developed to provide a safe refuge for all occupants via shelter-in-place.
	<p>Bridge access:</p> <ul style="list-style-type: none"> Confirmation from Sydney Water is required to verify whether the bridge location and design are acceptable. Confirmation is required on how the bridge was incorporated in the flood modelling including the approach used to model potential blockage of the bridge opening. Reconsider the bridge levels to reduce the risk of inundation. Additional safety measures are required to ensure cars are not washed off the bridge during a flood event. Provide pedestrian access above the PMF level to the rear building. 	<ul style="list-style-type: none"> Sydney Water confirmation to maintain bridge design as part of development and flood modelling. Location represented as part of the updated design. FIRA includes further detail, 10x1.3m open. Blockage from catchment debris is unlikely - channel walls/fencing is high. Parapet/railings to the bridge can be investigated relative to flood depth in the PMF to reduce vehicle floatation potential as part of detailed design. Pedestrian movements are not encouraged due to the potential for off-site risks that cannot be managed by this project. Pedestrians are directed to shelter-in-place.
1.3	<p>Flood impacts:</p> <ul style="list-style-type: none"> Update afflux mapping to correctly reflect impacts. Additional mitigation is required to ensure that adverse impacts do not extend beyond the site boundary. Redesign the proposed high hazard floodway between the buildings to reduce flood depths and hazards in this location. 	<ul style="list-style-type: none"> The impact mapping has been revised to ensure the correct reflection using new colour scheme. Off-site mitigation updated in FIRA, after confirming 1% AEP afflux. The high hazard floodway is an intentional consolidation of high hazard flow paths; this is the path dedicated for flows that cannot enter the SWC culvert upstream of the site.
1.4	<p>Recreation areas:</p> <ul style="list-style-type: none"> Fencing will be required around the floodway to prevent entry and active recreation areas will need to be located outside of the floodway. 	<p>The area of lower elevation along the flow path where flows exceed the SWC should not be considered a recreational area, it is simply an area of lower elevation, accessible when a storm event is not present.</p>
1.5	<p>Flood evacuation:</p> <ul style="list-style-type: none"> The location is not considered suitable for shelter in place due to the high hazard floodway through the site. The FIRA has not demonstrated that risk can adequately mitigated. Presence of a 	<ul style="list-style-type: none"> There is high hazard exposure to today's residents of the site, the design seeks to provide solution for safe refuge, with engineered design of safe structure. Basement is designed with entries above PMF levels to prevent ingress/inundation.

No.	Issue raised	Response
	<p>basement on this site increases the potential for the development to be damaged during a flood and still require evacuation after a flood.</p> <ul style="list-style-type: none"> DPHI to assess the implications of permitting increased population in an area where shelter in place is the only viable evacuation strategy. Demonstrate compliance with all of the recommendations in DPHI Shelter-in-Place guideline for flash flooding Provide to the PMF level alternative access to the rear building. 	<ul style="list-style-type: none"> Agree DPHI to make assessment informed by FIRA Table 6.3 makes reference to where the FIRA responds to recommended considerations in assessment of shelter-in-place strategies. Shelter in place is the strategy for emergency response to flooding. Alternative access above the PMF has not been designed to: <ul style="list-style-type: none"> reduce the perception that evacuation is possible reduce potential for attempted evacuation if it is too late to do so (flash flooding)
<p>2. State Emergency Services (SES)</p>		
<p>2.1</p>	<p>The FIRA should be updated to:</p> <ul style="list-style-type: none"> Demonstrate how the proposal intends to achieve compliance with the Flood Planning Level (FPL) and the proposed buildings to achieve PMF flood immunity for all habitable floors (FIRA, p34), noting the need to evacuate the ground floor levels when inundation begins to occur including residential Include modelling for more frequent events such as the 10% AEP which was undertaken but not provided, as well events between the 1% AEP and the PMF event to understand the full extent of flood risks at the site Include time to flood peak and overtopping of access/egress roads and the duration of inundation. Remove the statement relating to Low flood hazard predicted within the precinct during the most extreme storms. The hazard level within the site peaks at H5 in a PMF – this includes the overland flow path crossing through the centre of the site, between the two proposed buildings, and at H6 in the northeastern corner of the site. 	<ul style="list-style-type: none"> The minimum floor level is above 1%AEP + 0.5m or PMF (whichever is greater) and evacuation of ground floor is not needed. FIRA has been amended to provide additional event outputs. FIRA provides notes on time to peak and duration of inundation. FIRA Table 6.3 amended to remove low flood hazard reference.
<p>2.2</p>	<p>SES emphasises that the strategy of isolation or sheltering in buildings surrounded by flood water are not equivalent, in risk management terms, to evacuation and it should not be used to justify future development. The consent authority should request the proponent to demonstrate consistency with the Shelter in Place Guideline prior to granting consent, to ensure the risk to life is adequately managed and/or mitigated.</p>	<p>Table 6.3 of the FIRA itemises the considerations to be made in the assessment of risk to occupants. Of particular significance:</p> <ul style="list-style-type: none"> existing development inherently has much greater risk from the high hazard exposure amongst distributed low-rise buildings. Shelter-in-place is the strategy that provides the (proposed) replacement development with an improved level of safety for future occupants of the site Risk to life is managed through design for robust structures, cognisant of extreme flood events and conditions that result

No.	Issue raised	Response
2. Department of Climate Change, Energy, the Environment and Water – Water Group		
2.1	Prior to determination, the DPHI should request the proponent to quantify the maximum annual volume of water take due to aquifer interference activities and demonstrate the ability to acquire sufficient water entitlement unless an exemption applies.	Groundwater assessment to be prepared.
2.2	Prior to determination, DPHI should request the proponent to provide an impact assessment of water supply work construction for dewatering, if proposed.	Groundwater assessment to be prepared.
2.3	Post approval DPHI should require the proponent to obtain a water access licence (WAL) to account for the maximum predicted water take for construction and operation activities unless an exemption applies under the Water Management (General) Regulation 2025.	This can be addressed as a condition of consent.
2.4	If the take of groundwater is found to be greater than 3 ML per year, prior to determination DPHI should request the proponent to assess impacts due to aquifer interference activities in accordance with the NSW Aquifer Interference Policy and framework (2012).	Groundwater assessment to be prepared.
3. Sydney Water		
3.1	<ul style="list-style-type: none"> • Sydney Water cannot support the proposal in its current form due to the noncompliance with Sydney Water’s current Specialist Engineering Assessment Procedure. • No buildings or permanent structures are to be proposed over the stormwater channel or over the easement or within 1.5m from the outside wall of the channel, whichever is greater. • Permanent structures include (but are not limited to) basement car park, hanging balconies, roof eaves, hanging stairs, stormwater pits, stormwater pipes, elevated driveways, basement access or similar structures. This clearance requirement would apply for unlimited depth and height. • The applicant is required to submit elevation drawings with the stormwater channel, to ensure that the proposed buildings and permanent structures are 1.5m away from the outside face of the stormwater channel and away from the Sydney Water easement. • Additional clearance requirements may apply under the Specialist Engineering Assessment Procedure, depending on the size of Sydney Water’s asset. These are to be confirmed by a Water Servicing Coordinator. 	<p>Following our recent meeting with you and Homes NSW please see below our comments on the SWC letter dated 12/1/2026 with reference 226021. It must be noted that the below comments do not cover the Flood impact assessment comments:</p> <ol style="list-style-type: none"> 1. This letter relates to SWC Feasibility Letter issued under case number CN226021 which was received by SWC and was issued to you and Homes NSW. 2. The Sydney Water’s position is that no buildings or permanent structures (basements, balconies, roof eaves, stair, pits, stormwater pipes, driveways basement access, etc) are to be constructed over the stormwater channel or over the easement or withing 1.5m from the outside wall of the channel, whichever is greater. 3. Sydney Water will not permit alteration of existing ground level over the stormwater channel, easement or the 1.5m zone from outside face the stormwater channel. 4. Sydney Water will not permit installation of elevated slab cover once the existing driveway is removed. 5. Sydney Water will not permit any kind of landscape work over the easement and the 1.5m clearance zone from the face of the channel.

No.	Issue raised	Response
5. Flooding		
5.1	<p>Flood impact assessment / flood modelling:</p> <ul style="list-style-type: none"> The flood impact report has not fully demonstrated compliance with Bayside DCP Section 3.10 and 9.5. A table must be included in the report demonstrating compliance with the requirements of Section 3.10 and Section 9.5 of the DCP. The flood impact assessment is to be revised to demonstrate that it was prepared in compliance with Section 9.5.4 of Council's DCP. Confirmation of whether the pre and post modelling has used the Birds Gully and Bunnerong Road Catchment flood study. If so, confirmation of updates to the model (e.g. base case updates) is required. If not, the report will need to include significantly more detail regarding the model build. Depth and velocity mapping should be included. Cadastre needs to be included in all mapping so any impacts within properties is easily identified. Confirmation of how existing buildings within the site have been incorporated into the modelling. Full page annexures of flood results shall be provided in the flood report to enable a detailed assessment by Council. Provide 2D copy of the TUFLOW model raster results files and simulation log to Council for assessment. The existing base scenario shall be revised to incorporate the existing survey levels into the flood model to ensure the existing case accurately reflects existing conditions. The post development is to be revised to model and include the survey data and the changes to the existing levels as part of the development (include the buildings which shall be shown on the post development flood modelling outputs). The report does not sufficiently detail as to how the building footprint and changes to ground levels were implemented into the post development flood modelling. The report needs to be revised to detail how the design of the proposed development was inputted into the 2D Flood model (particularly the overland flow path, bridges, and buildings/elevated courtyard design). The 1% AEP water level difference (flood afflux) mapping shows flood afflux on surrounding properties significantly exceeding the requirements of Section 3.10 and Section 9.5.4 of the Bayside DCP which is not supported. No Flood afflux mapping was provided for the PMF event. The design of the development is to be revised along with revised 2D flood modelling to ensure that flood afflux on all neighbouring land 	<ul style="list-style-type: none"> The FIRA was revised to demonstrate compliance with Bayside DCP 3.10 and 9.5 via table 5.2. The modelling basis confirmed (including whether the Birds Gully/Bunnerong Road Catchment Flood Study model was used) and any base case updates documented, and full model build details were provided. Flood depth mapping included. Flood velocity mapping included. Cadastre included on all mapping. The representation of existing buildings in the existing case model documented. Full-page annexures of flood results provided A 2D copy of the TUFLOW raster results and the simulation log provided The existing base scenario was updated to incorporate updated surveyed ground levels. The post-development scenario was updated to include survey data, proposed level changes, and building representation on outputs. The report has been expanded to describe how building footprints and ground level changes were implemented in the 2D model, including overland flow paths, structures, and elevated courtyard design. The design and 2D modelling were revised to achieve compliant afflux on neighboring land for all required events. PMF afflux mapping provided. 1% AEP climate change mapping provided for pre- and

No.	Issue raised	Response
	<p>complies with maximum allowable for all flood events.</p> <ul style="list-style-type: none"> 1% AEP climate change flood modelling maps are to be provided showing flood extent, flood contour, flood depth, flood hazard (H1 to H6) and velocity of pre-development and post-development. 1% AEP climate change afflux flood modelling maps need to be provided demonstrating that the works will have less than or equal to 10mm on surrounding properties in the 1% AEP climate change event. The following scenarios shall be modelled: <ul style="list-style-type: none"> Scenario 1: Impacts of sea level rise in Year 2050 and 2100. Scenario 2: Impacts of sea level rise combined with increased rainfall intensity in Year 2050 and 2100. Figure 6.1 of the flood report is to be revised to improve the legibility of the ID locations and be supplemented by a full-page output of the post development 1% AEP and PMF spot flood levels closest to the points to enable council to make an informed assessment of the flood planning levels. All entries top the basement (including fire escapes any openings) and the floor levels of the buildings shall be set at or above the 1% AEP + 500mm freeboard level. Table 6.1 shall be revised to include an additional column detailing the proposed building levels. 	<p>post-development, including extent, depth, hazard (H1–H6), velocity, and afflux.</p> <ul style="list-style-type: none"> Figure 6.1 has been revised for legibility and supplemented with full-page post-development 1% AEP and PMF spot flood level outputs near the referenced points. All basement entries/openings and building floor levels set at or above the higher of 1% AEP plus 500 mm freeboard level or PMF and documented. Table 6.1 updated to include proposed building levels.
5.2	<p>Plans:</p> <ul style="list-style-type: none"> The architectural, civil and landscape plans are to be amended to include design levels throughout the entire overland flow path (including the levels of the overland flow path at the property boundaries including the interface of those levels with the existing levels of the neighbouring properties), gradients, dimensions of the width of the overland flow path at regular intervals along the site, the height/soffit of the bridge structures over the flow path and the location of all retaining walls, columns etc. Also changes (cut/fill) to existing levels on the overland flow path is to be detailed. The existing east to west crossfall should be maintained in the design of the overland flow path. 	<ul style="list-style-type: none"> The hydraulic model was updated to represent the live architectural, civil and landscape design levels along the full overland flow path (including property boundary tie-ins to neighbouring levels), gradients, flow path widths at regular intervals, bridge soffit levels, and the locations of retaining walls/columns/obstructions. Cut/fill changes affecting the overland flow path have been modelled The existing east–west crossfall has been maintained in the overland flow path design.
5.3	<p>Flood risk management plan:</p> <ul style="list-style-type: none"> A flood risk management plan is to be prepared for implementation in the development once complete to incorporate the flood emergency response requirements. 	Noted.

