WATER TECHNOLOGY
WATER, COASTAL & ENVIRONMENTAL CONSULTANTS

Data Review Report

Lexton Flood Management Plan

Pyrenees Shire Council

19 April 2024

Document Status

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GLOSSARY

Annual Exceedance Probability (AEP)	Refers to the probability or risk of a flood of a given size occurring or being exceeded in any given year. A 90% AEP flood has a high probability of occurring or being exceeded; it would occur quite often and would be relatively small. A 1% AEP flood has a low probability of occurrence or being exceeded; it would be fairly rare but it would be of extreme magnitude.
Australian Height Datum (AHD)	A common national surface level datum approximately corresponding to mean sea level. Introduced in 1971 to eventually supersede all earlier datums.
Average Recurrence Interval (ARI)	Refers to the average time interval between a given flood magnitude occurring or being exceeded. A 10 year ARI flood is expected to be exceeded on average once every 10 years. A 100 year ARI flood is expected to be exceeded on average once every 100 years. The AEP is the ARI expressed as a percentage.
Cadastre, cadastral base	Information in map or digital form showing the extent and usage of land, including streets, lot boundaries, water courses etc.
Catchment	The area draining to a site. It always relates to a particular location and may include the catchments of tributary streams as well as the main stream.
Design flood	A design flood is a probabilistic or statistical estimate, being generally based on some form of probability analysis of flood or rainfall data. An average recurrence interval or exceedance probability is attributed to the estimate.
Discharge	The rate of flow of water measured in terms of volume over time. It is to be distinguished from the speed or velocity of flow, which is a measure of how fast the water is moving rather than how much is moving.
Flood	Relatively high stream flow which overtops the natural or artificial banks in any part of a stream, river, estuary, lake or dam, and/or overland runoff before entering a watercourse and/or coastal inundation resulting from elevated sea levels and/or waves overtopping coastline defences.
Flood frequency analysis	A statistical analysis of observed flood magnitudes to determine the probability of a given flood magnitude.
Flood hazard	Potential risk to life and limb caused by flooding. Flood hazard combines the flood depth and velocity.

Floodplain	Area of land which is subject to inundation by floods up to the probable maximum flood event, i.e. flood prone land.
Flood storages	Those parts of the floodplain that are important for the temporary storage, of floodwaters during the passage of a flood.
Geographical information systems (GIS)	A system of software and procedures designed to support the management, manipulation, analysis and display of spatially referenced data.
Hydraulics	The term given to the study of water flow in a river, channel or pipe, in particular, the evaluation of flow parameters such as stage and velocity.
Hydrograph	A graph that shows how the discharge changes with time at any particular location.
Hydrology	The term given to the study of the rainfall and runoff process as it relates to the derivation of hydrographs for given floods.
Intensity frequency duration (IFD) analysis	Statistical analysis of rainfall, describing the rainfall intensity (mm/hr), frequency (probability measured by the AEP), duration (hrs). This analysis is used to generate design rainfall estimates.
LiDAR	Spot land surface heights collected via aerial light detection and ranging (LiDAR) survey. The spot heights are converted to a gridded digital elevation model dataset for use in modelling and mapping.
Peak flow	The maximum discharge occurring during a flood event.
Probability	A statistical measure of the expected frequency or occurrence of flooding. For a fuller explanation see Average Recurrence Interval.
Probable Maximum Flood	The flood that may be expected from the most severe combination of critical meteorological and hydrologic conditions that are reasonably possible in a particular drainage area.
RORB	A hydrological modelling tool used in this study to calculate the runoff generated from historic and design rainfall events.
Runoff	The amount of rainfall that actually ends up as stream or pipe flow, also known as rainfall excess.
Stage	Equivalent to 'water level'. Both are measured with reference to a specified datum.
Stage hydrograph	A graph that shows how the water level changes with time. It must be referenced to a particular location and datum.
Topography	A surface which defines the ground level of a chosen area.

1 INTRODUCTION

1.1 Overview

Water Technology was commissioned by the Pyrenees Shire Council (PSC) to undertake the Lexton Flood Management Plan. The investigation covers the study area presented in Figure 1-1.

The study will produce reliable flood intelligence for use in emergency management, an assessment of the current flood impact/exposure in terms of annual average damages caused by flooding in Lexton, investigation of structural and non-structural mitigation options and make the provision of recommendations for establishing a flood warning system for the town.

This report is one of a series documenting the outcomes of the Lexton Flood Management Plan. Each reporting stage is shown below:

- **R01 – Data Review and Validation – This report**
- R02 – Model Calibration Report
- R03 – Flood Damages and Mitigation Assessment Report
- R04 – Flood Intelligence, Flood Warning and Municipal Flood Emergency Plan (MFEP) Documentation
- R05 – Final Summary Report

The data available for this study has been collated and reviewed. This report documents a summary of the currently available streamflow, rainfall, topographic and structure data (bridges/culverts) as well as previous relevant projects and other information relevant to the study, highlighting any data gaps. The report also details verification of the available topographic datasets and the proposed hydrologic and hydraulic modelling approach.

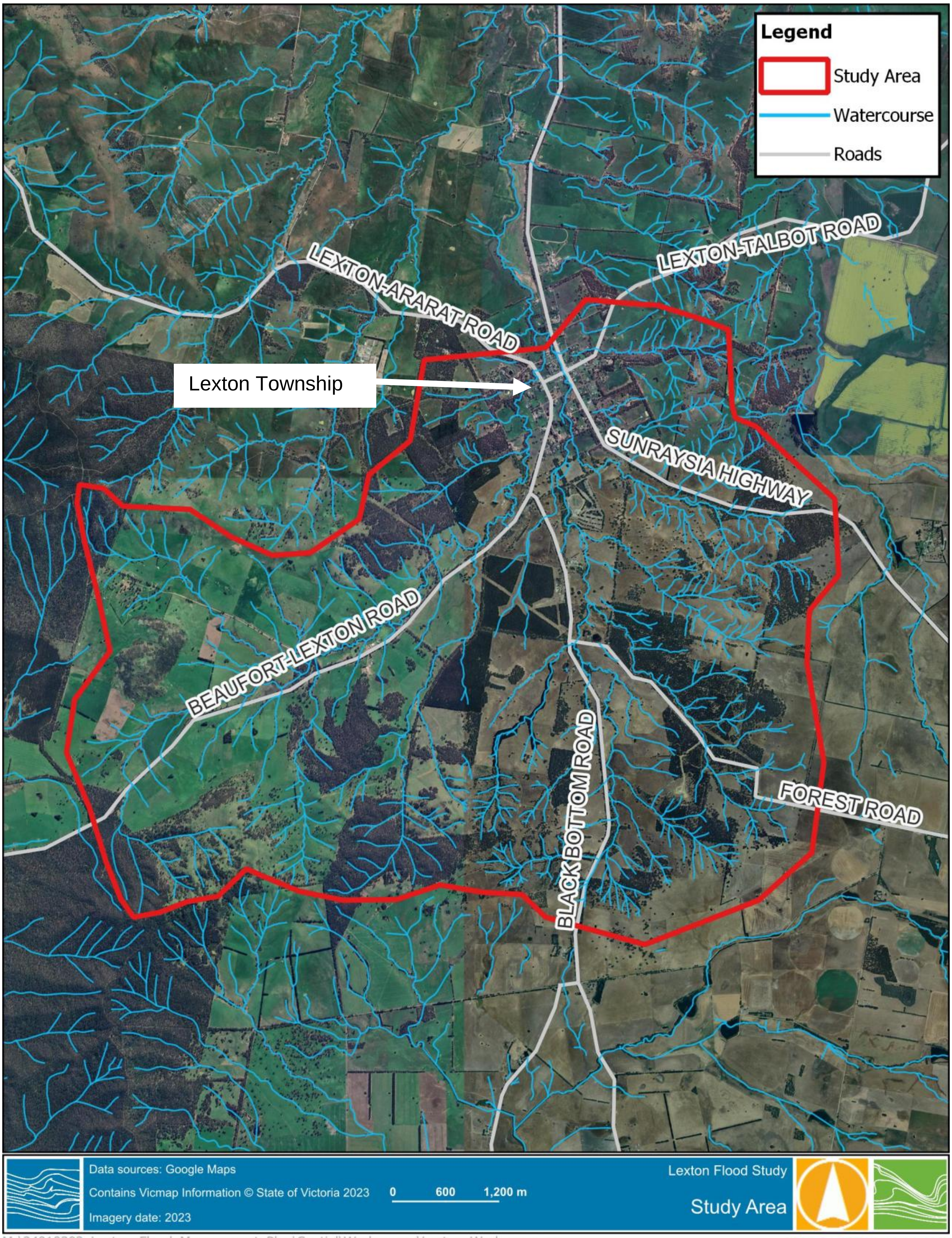


FIGURE 1-1 LEXTON STUDY AREA

1.2 Objectives and Outputs

The objectives of the study as outlined in the tender document are listed below.

- Review the available data, identify gaps in the available data and obtain data necessary to address gaps and complete the investigation.
- Community consultation to gain an understanding of past flood events for calibration and to communicate study updates and outcomes.
- Undertake a suitable hydrologic investigation in accordance with ARR2019 which may include assembling a hydrologic model or adapting the existing hydrologic model, calibration and validating the results against other estimation methods with due regard for tributary and other inflows and/or outflows that extend beyond the study boundaries. The assessment shall explicitly account for all inflows to the study area, including any minor tributaries and drainage flows.
- Specify, assemble, calibrate, and validate hydrologic and hydraulic models in accordance with ARR2019.
- Determination and documentation of flood levels, extents, depths, velocities, product of depth and velocity, and ARR2019 hazard categories for the 20%, 10%, 5%, 2%, 1%, 0.5%, 0.2%, 0.1%, 0.05% AEP and PMF events in addition to any historical events modelled.
- Investigate climate change impacts resulting in Increased Rainfall Intensity (IRI), based on best practice modelling of climate change scenarios as outlined in ARR2019.
- Flood mapping linked to regular gauge height intervals/ rainfall totals.
- Recommendation of flood class levels.
- Develop draft flood intelligence and response tables and maps, for inclusion in the Pyrenees Shire Municipal Flood Emergency Plan (MFEP).
- Assessment of flood damages.
- Identification and preliminary feasibility assessment of a suite of structural and non-structural measures for reducing flood damages and/or reducing/treating flood risk within Lexton.
- Detailed costing and assessment of preferred structural mitigation measures.
- Documenting results in a report that clearly and transparently summarises the work undertaken, the process followed and the findings.
- Floor level survey of properties in town. Analyse the feasibility of establishing effective flood warning, accounting for time available between rainfall and the township flooding, in the context of a total flood warning system.
- Deliver draft mapping (potentially UFZ, FO and LSIO) for amendment of the planning scheme to reflect the investigation results.
- Undertake consultation with impacted landowners regarding introducing new flood controls on their land and cross examine their feedback.
- Deliver time step video animations of flood progression through the township to cover a minimum of four (4) modelled design floods.

1.3 Study Area

Lexton is a small township located in Victoria, Australia, with a population of approximately 285 (based on the 2021 census data). Lexton is located approximately 45 km northwest of Ballarat and 90 km southwest of Bendigo. The European history of Lexton began prior to the gold rush era of the mid-19th century, during which significant gold deposits were discovered in the region, however minimal mining took place at Lexton.

During this period, Lexton served as an administrative hub for the area with pastoral runs and agricultural associated industries. Today, agriculture remains an important aspect of Lexton's economy, with the surrounding countryside supporting livestock grazing, crop cultivation, and vineyards.

The main waterway that flows through the township of Lexton is Burnbank Creek. The Burnbank Creek catchment is approximately 45 km^2 and consists of native bushland and agricultural area, as shown in Figure 1-2. Burnbank Creek flows in a northerly direction towards Bet Bet Creek and then into the Loddon River north of Eddington.

Lexton has most recently experienced flooding in October and November 2022, which caused widespread damage and disruption. The flooding resulted in blocked roads, isolating the town and preventing access in and out of the area (Figure 1-2). These flood events caused millions of dollars in damage and greatly affected the prosperity of the community, including impacting major events and deterring visitors from the area.

FIGURE 1-2 ROAD FLOODING FROM THE PYRENEES SHIRE COUNCIL – NOVEMBER 2022

2 HISTORIC DATA

2.1 Previous Studies

The most comprehensive previous flood related study within the study area was the *Lexton Preliminary Flood Study Summary Report*, completed by Utilis in June 2018. The study completed preliminary flood investigations for Lexton, Raglan and Waubra. A hydrological model was developed using RORB, covering the Lexton study area, developing 1% Annual Exceedance Probability (AEP) design flows. The RORB model was not calibrated to any gauged data. A synopsis of the study is given below.

Following the widespread flooding across Victoria in 2010, 2011 and 2016, the Pyrenees Shire Council developed a Flood Planning Scoping document that set out a strategic action plan for the Shire to review flood risk. Utilis Consulting (supported by HydroSpatial) was engaged to undertake preliminary flood investigations for Lexton, Raglan and Waubra. The study utilised RORB hydrologic modelling and HEC-RAS two-dimensional hydraulic modelling.

RORB hydrologic modelling was undertaken to determine 1% AEP design flood hydrographs. The Burnbank Creek catchment (approximately 44.4 km^2) was split into 8 sub catchments, as shown in Figure 2-1. Design rainfall estimation was adopted from the AR&R Data Hub and losses were based on the AR&R Data Hub and the Beaufort Flood Study[1] model parameters. Catchment parameters (k_c and m) were applied using the recommended RORB values, which were comparable to the Beaufort Flood Study. No gauged streamflow data was available for the Burnbank Creek catchment.

Hydraulic modelling was undertaken using HEC-RAS v5.03. Roughness (Manning's n) was adopted based on land use and aerial photography. Model structures such as roads, levees, bridges, culverts were included; however, limited information was available for these structures. No initial conditions or initial water levels were adopted. Model results were verified using four photos for the 2016 flood event, at the following locations:

1. *Goldsmith Street*
2. *Goldsmith Street from Williamson Street*
3. *Sunraysia Highway upstream of Williamson Street*
4. *Burnbank Ck from the Pyrenees Hotel*

[1] Accessed from https://www.pyrenees.vic.gov.au/Emergencies/Flood-Studies

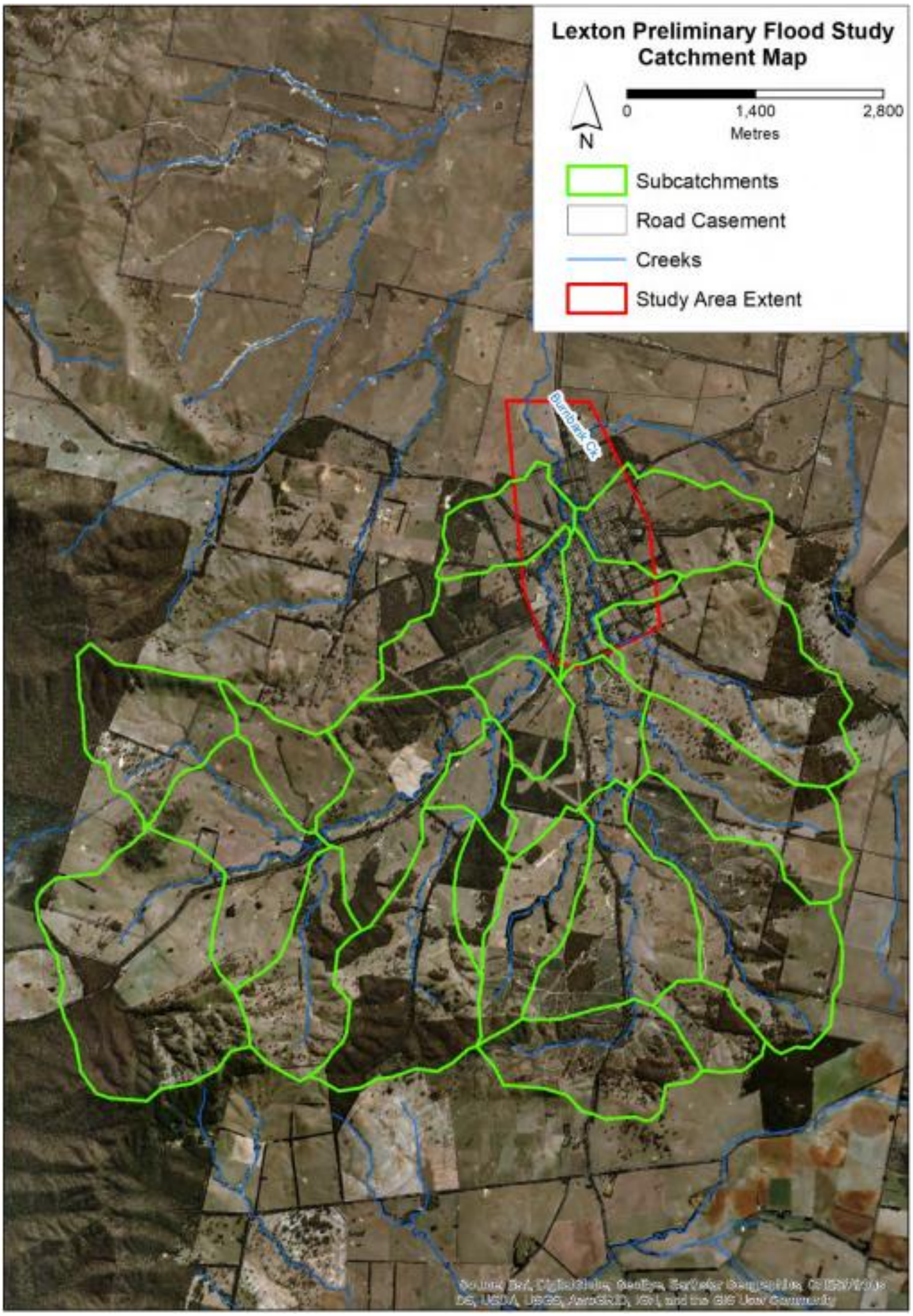


FIGURE 2-1 RORB STUDY AREA AND SUBCATCHMENTS

2.2 Streamflow Data

There are no streamflow gauges within the Burnbank Creek catchment. There is one active streamflow gauge downstream of the study area located at Lillicur (Bet Bet Creek at Lillicur 407288) with water level, stream flow and rainfall data available from September 1990 to present. The Burnbank Creek catchment, Bet Bet Creek catchment and the Bet Bet Creek at Lillicur gauge is presented in Figure 2-2 The available streamflow data is displayed in Figure 2-3. The following flood events were identified in the available data:

- Sep 4, 2010 (~ 13,200 ML/day)
- Jan 14, 2011 (~ 24,300 ML/day)
- Sep 14, 2016 (~ 15,600 ML/day)
- Oct 6, 2022 (~ 19,600 ML/day)
- Oct 13, 2022 (~ 26,300 ML/day)

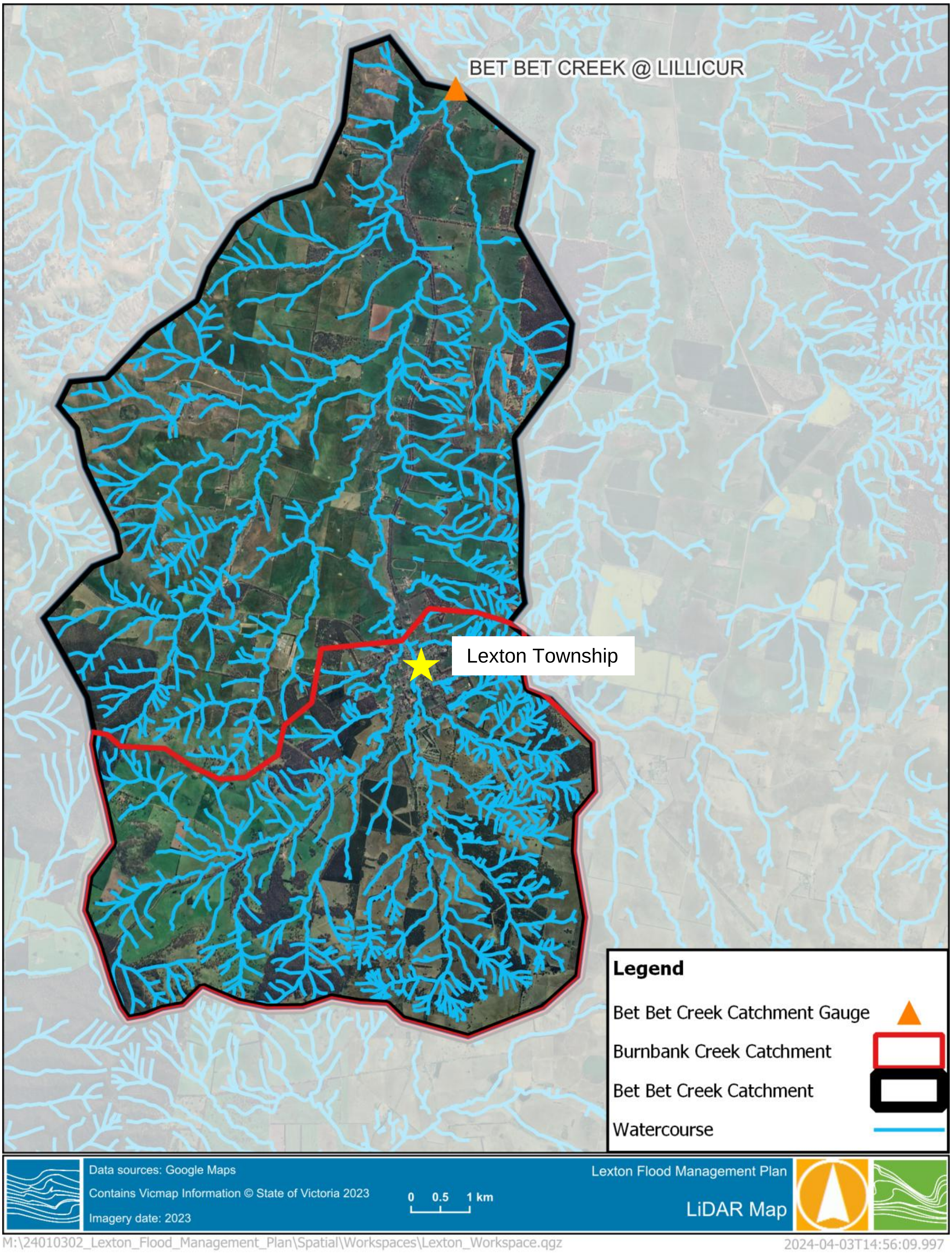


FIGURE 2-2 BURNBANK CREEK AND BET BET CREEK CATCHMENTS

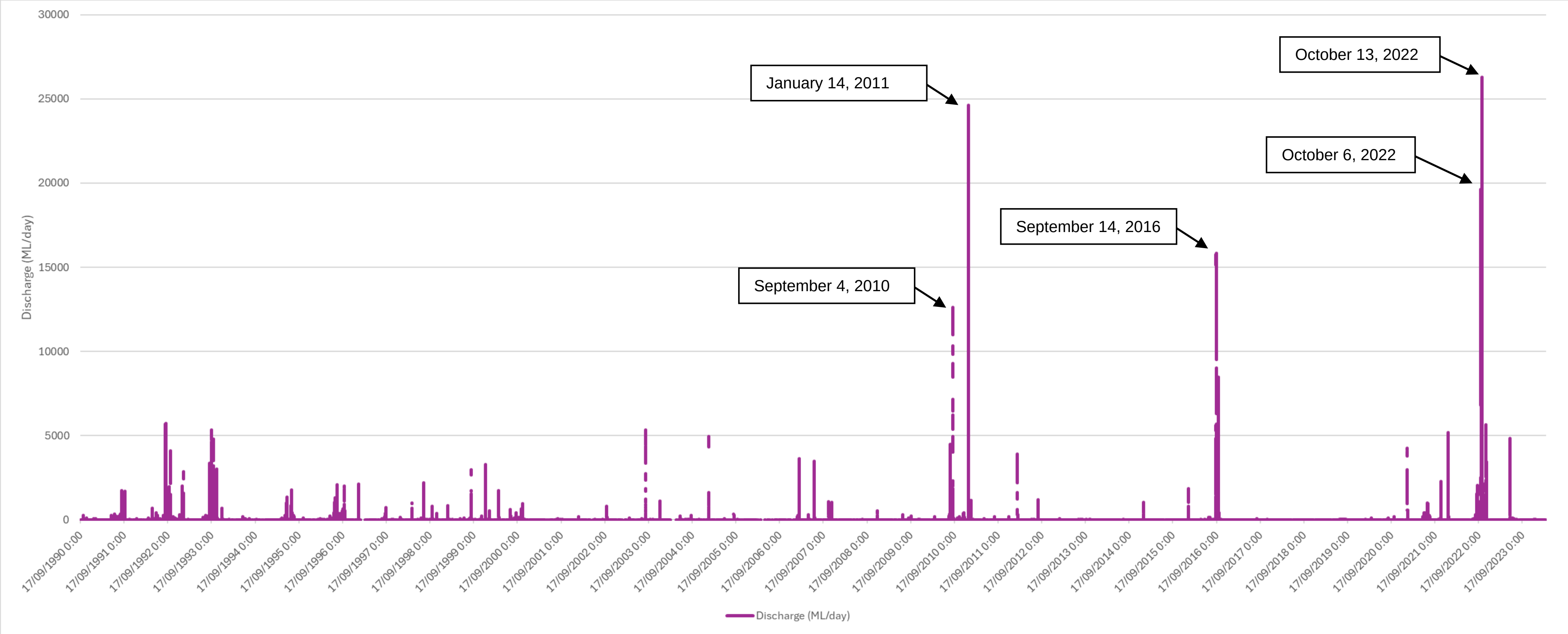


FIGURE 2-3 STREAMFLOW DATA BET BET CREEK @ LILLICUR 407288

2.3 Rainfall Data

2.3.1 Overview

Historic daily and sub daily rainfall data is required for the hydrologic and hydraulic model calibration. Daily rainfall gauges are used to provide a representation of spatial rainfall variation while sub daily gauges provide a representation of temporal rainfall distribution.

2.3.2 Daily Rainfall

Table 2-1 summarises the daily rainfall information available within or near the Lexton catchment using a 30km radius from Lexton. The closest active rainfall gauge is in the Lexton township, located 0.5km east of the Lexton Public Hall. The rainfall gauge locations are shown in Figure 2-4.

TABLE 2-1 DAILY RAINFALL STATION INFORMATION

Station Name	Dist. From Lexton	Station No.	Start	End
Lexton	*0.5 km E*	*088038*	*1903*	*Current*
Lillicur	*12.8 km N*	*088137*	*2002*	
Talbot (Post Office)	*19.5 km NE*	*088056*	*1898*	
Raglan	*20.6 km SW*	*089107*	*1993*	
Avoca (Post Office)	*20.8 km N*	*081000*	*1884*	
Addington	*21.1 km SW*	*089106*	*1991*	
Avoca	*21.3 km N*	*081063*	*1883*	
Trawalla	*22.3 km S*	*089030*	*1888*	
Beaufort	*23.0 km SW*	*089005*	*1922*	
Clunes	*23.8 km E*	*088015*	*1878*	
Avoca (Homebush)	*26.3 km N*	*081122*	*1988*	
Pyrenees (Ben Nevis)	*27.7 km W*	*079101*	*2007*	
Buangor (Craigie)	*29.2 km SW*	*089109*	*1996*	

2.3.3 Sub-Daily Rainfall

Sub daily rainfall is typically recorded every 6 minutes. There are four (4) available sub-daily gauges; Ben Nevis, Lookout Hill, Creswick and Ballarat, as presented in Figure 2-4.

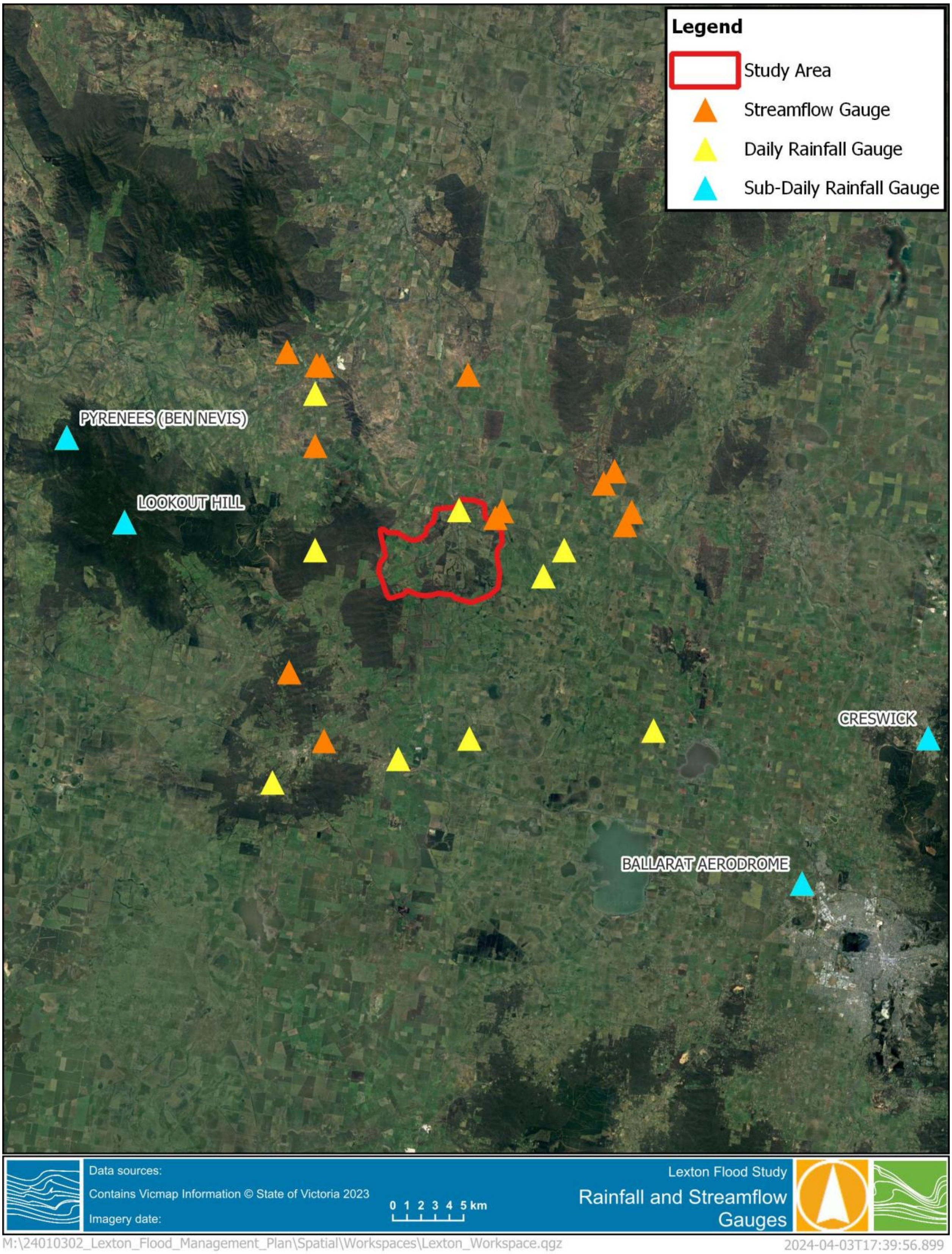


FIGURE 2-4 STREAMFLOW AND RAINFALL STATIONS NEAR THE STUDY AREA

2.4 Flood Records

There are limited historic flood observations within the study area. The 2016 flood event was used to calibrate the *Lexton Preliminary Flood Study;* however, the available observed data was limited to four (4) photographs in the main township from the 2016 flood event.

Additional historic flood information includes:

- Historic data related to Lexton flooding collated via Trove (a free online database of historical newspapers etc.)
- Newspaper articles and photos from the 2016 and 2022 flood events

It is anticipated further historic flood information and anecdotal evidence can be gathered from the initial community consultation meeting in May 2024. Surveyors will be able to accurately capture this information as part of the survey planned following community consultation.

At the time of writing, there were numerous individual pieces of historical flood record becoming available from a range of sources. Continuously collected data will be part of the model calibration and included in the Calibration Report.

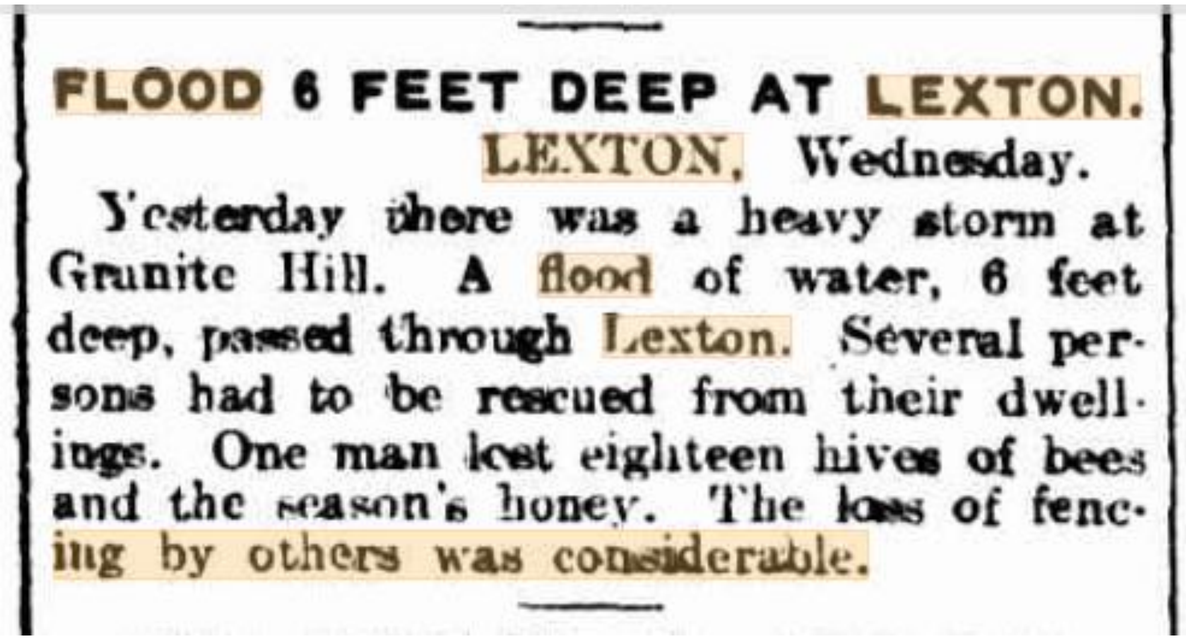
2.5 Major Events

The October 2022 flood event is the largest on record for Bet Bet Creek @ Lillicur. Other significant events include September 2010, January 2011 and September 2016. The following information is available for those and other flood events in Lexton:

- Photographs collected by Council staff during and after the following events:
  - September 2016; and
  - October 2022.
- Photographs and videos from news outlets published post October 2022 (see below).
- In addition to the above information, investigations of historic news articles identified significant flood events in Lexton in October 1906 and January 1911 (see below).

It is anticipated at the initial community consultation session photos and anecdotal records from several flood events will be collected.

FIGURE 2-5 IMAGE OF FLOODING FROM THE COURIER – OCTOBER 2022



FLOOD 6 FEET DEEP AT LEXTON.

LEXTON, Wednesday.

Yesterday there was a heavy storm at Granite Hill. A flood of water, 6 feet deep, passed through Lexton. Several persons had to be rescued from their dwellings. One man lost eighteen hives of bees and the season's honey. The loss of fencing by others was considerable.

FIGURE 2-6 NEWS ARTICLE IN THE AGE ABOUT FLOODING AT LEXTON – THURSDAY JANUARY 19, 1911

3 INFRASTRUCTURE

3.1 Storages

There are no major storages (e.g. lakes, lagoons, basins, wetlands) located in the study area. There are several large farm dams within the study area; however, these are not expected to impact the hydrology assessment.

3.2 Hydraulic Structures

Water Technology has identified numerous hydraulic structures, including bridges and stormwater network (culverts), as shown in Figure 3-1 and Figure 3-2.

3.2.1 Bridges

Two bridges have been identified in the study area in the Lexton township, these include:

- Williamson Street over Burnbank Creek
- Lexton-Ararat Road over Lexton Creek

PSC have provided bridge dimensions for the bridge at Lexton-Ararat Road over Lexton Creek.

Data has been requested from VicRoads for the bridge at Williamson Street over Burnbank Creek. If no information is available, this bridge can be surveyed.

3.2.2 Road and Drainage Infrastructure

Stormwater network data was obtained from the PSC Asset Database and will be used to improve modelling accuracy and is summarised in Table 3-1.

For any additional stormwater network data required (including culverts, pits and pipes) it is proposed photographs and measurements be captured on the day of the initial community consultation. This level of accuracy will be sufficient for the hydraulic modelling stage of the project.

TABLE 3-1 STORMWATER NETWORK DATA

Type	ID	Pit Type	Material	Size (mm)
Pit	869-KGT	Grated Pit	Plastic	300x300x400
Pit	336-DEH	Grated Pit	Plastic	300x300x300
Pit	645-RDS	Side Entry Pit	Concrete	900x900x900
Pit	668-LPB	Side Entry Pit	Brick	800x500x300
Pit	759-CLY	Pipe Outlet	--	NA

Type	ID	Pit Type	Material	Size (mm)
Pit	889-GRS	Junction Pit	Concrete	700x550x600
Pit	466-UZO	Junction Pit	Concrete	600x450x700
Pit	669-FUE	Sid Entry Pit	Concrete	650x500x700
Pit	978-DSV	Pipe Inlet	--	NA
Pit	332-GKU	Grated Pit	Concrete	900x900x600
Pit	666-HOB	Pipe Outlet	--	NA
Pipe	XGX-712	NA	Plastic	100Ø
Pipe	MFT-168	NA	Concrete	300Ø
Pipe	UAT-032	NA	Concrete	300Ø
Pipe	ABH-922	NA	Concrete	250Ø
Pipe	WXA-577	NA	Concrete	300Ø
Pipe	NAW-334	NA	Concrete	300Ø
Pipe	RPO-095	NA	Concrete	300Ø

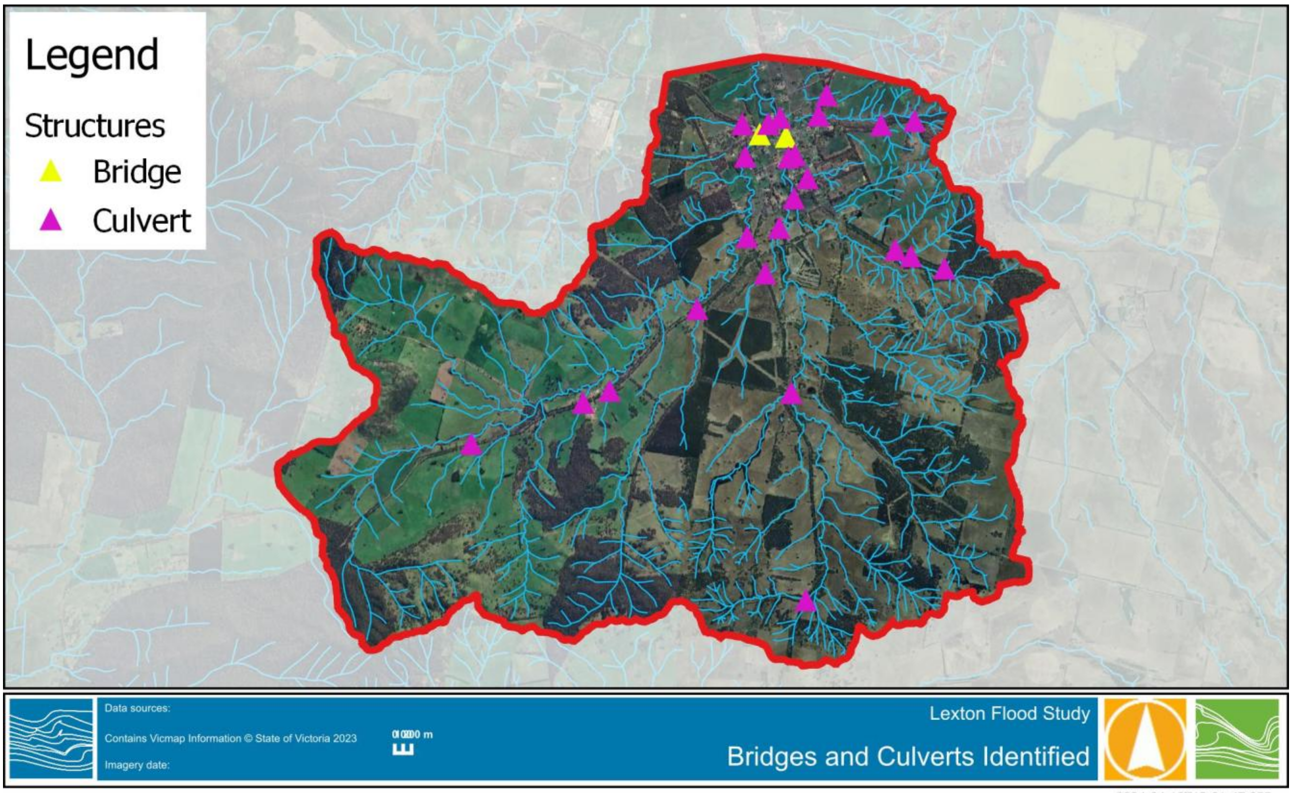


FIGURE 3-1 STRUCTURES IN THE LEXTON CATCHMENT

FIGURE 3-2 STRUCTURES IN LEXTON

3.3 Topography and Survey Data

3.3.1 Survey Data

The following survey data is currently planned for capture post the May 2024 community meeting. This scope will be confirmed post the site visit and community meeting.

- Asset and structure data.
- Light Detection and Ranging (LiDAR) review and verification survey.
- Floor level survey.
- Observed flood heights.

Based on the Lexton Preliminary Flood Study, twelve (12) properties have been identified as having a moderate or high chance of above floor flooding (AFF). These properties will have floor level survey undertaken. A list of addresses and a map of these properties is shown below and in Figure 3-3:

- 3554 Sunraysia Highway Lexton 3352
- 3550 Sunraysia Highway Lexton 3352
- 3558 Sunraysia Highway Lexton 3352
- 11 Goldsmith Street Lexton 3352
- 13 Goldsmith Street Lexton 3352
- 15 Goldsmith Street Lexton 3352
- 5 Goldsmith Street Lexton 3352
- 19 Goldsmith Street Lexton 3352
- 32 Thomson Street Lexton 3352
- 128 Skene Street Lexton 3352
- 3521 Sunraysia Highway Lexton 3352
- 7 Nicholls Street Lexton 3352

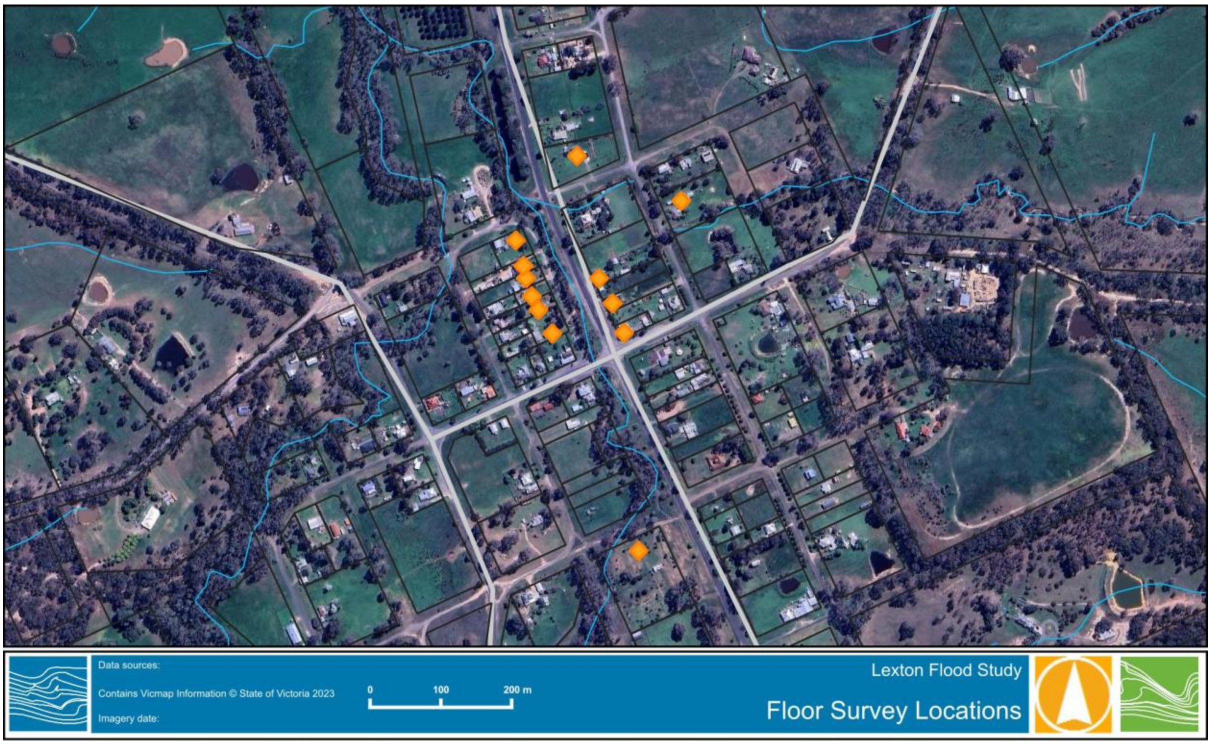


FIGURE 3-3 FLOOD LEVEL SURVEY REQUIRED

3.3.2 Topography

High quality 1 m LiDAR data was captured for the study area on March 19, 2022. This LiDAR data was collected as part of the Digital Twin Victoria LiDAR 2021 – 2024 project[2]. This project was the largest LiDAR survey project undertaken in Victoria's history and captured over 60,000 km^2 of high-quality LiDAR data. This data has a vertical accuracy of ±0.10 m.

- This LiDAR data for the project study area is presented in Figure 3-4 Study Area Topography

[2] Digital Twin Victoria LiDAR 2021-24 (land.vic.gov.au)

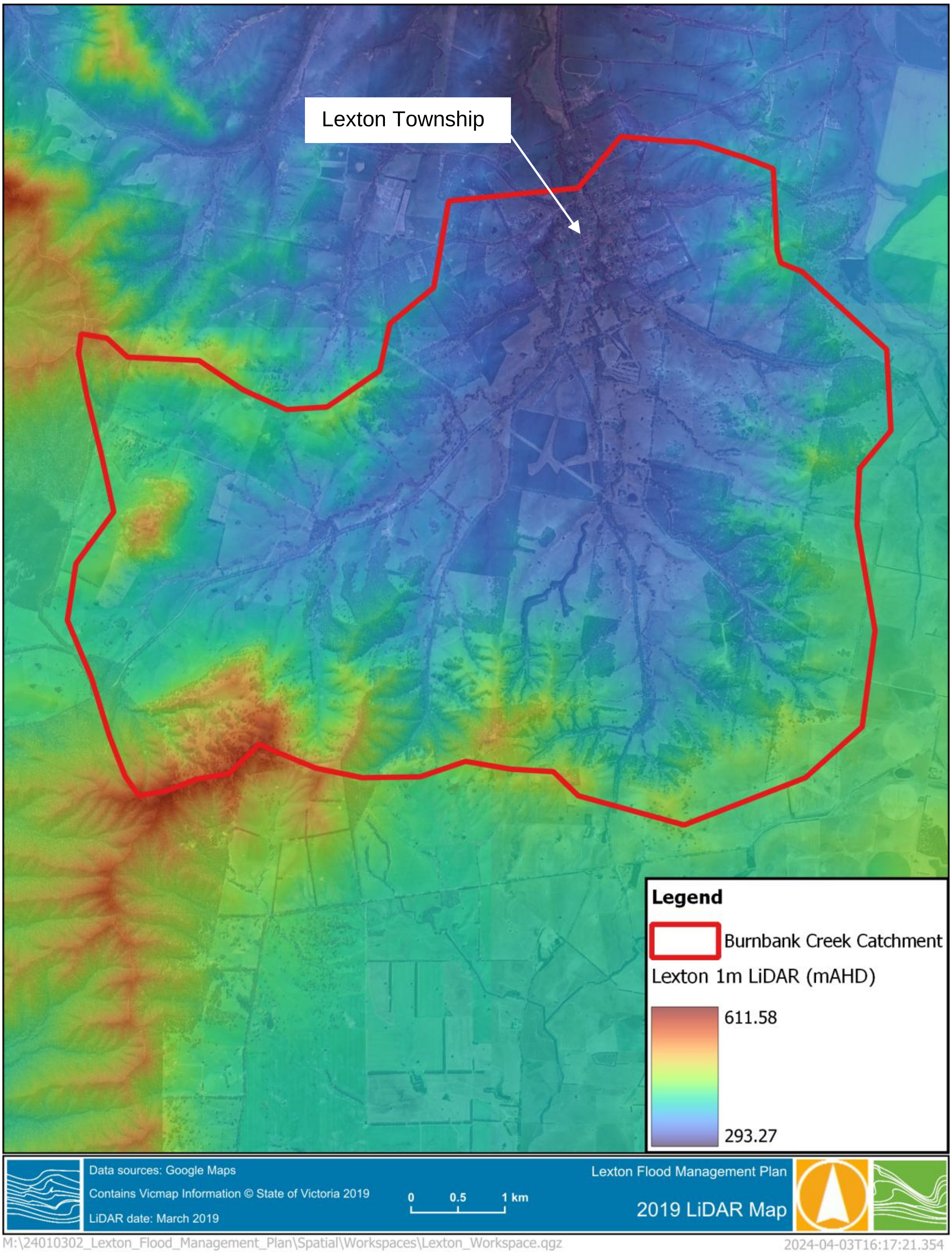


FIGURE 3-4 STUDY AREA TOPOGRAPHY

4 MODELLING METHODOLOGY

4.1 Overview

The *Lexton Preliminary Flood Study* produced preliminary flood investigations for Lexton, Raglan and Waubra. The study utilised RORB hydrologic modelling and HEC-RAS two-dimensional hydraulic modelling.

The RORB hydrologic modelling included the Burnbank Creek catchment (approximately 44.4 km^2) and was split into 8 sub catchments. Design rainfall was adopted from the AR&R Data Hub and losses were based on the AR&R Data Hub and the Beaufort Flood Study model parameters. No calibration was undertaken for the RORB model as no gauged streamflow data was available for the Burnbank Creek catchment.

Hydraulic modelling was undertaken using HEC-RAS v5.03. Roughness (Manning's 'n') was adopted based on land use and aerial photography. Model structures such as roads, levees, bridges, culverts were included; however, limited information was available for these structures. No initial conditions or initial water levels were adopted. The model was verified using four photos from the 2016 flood event.

Water Technology proposes to develop a new RORB model for the Bet Bet Creek catchment (which includes the Burnbank Creek catchment). The RORB model will be calibrated to the Bet Bet Creek at Lillicur (407288) streamflow gauge. Hydrographs from the RORB model will be used in the hydraulic model at suitable inflow locations. The hydraulic modelling will be completed in TUFLOW HPC.

The following sections contain further detailed discussion of the hydrologic and hydraulic model builds, calibration and design modelling.

4.2 Hydrological Modelling

4.2.1 RORB Model Development

A RORB model will be built in line with the recommendations of the latest Australian Rainfall and Runoff (ARR2019) guidelines. A particular focus will be on the adopted kc and loss approach. In general, the recommended loss values in ARR2019 have been found to be on the high side (when comparing to calibrated RORB model losses), this will be considered as will the Victorian Specification Information commissioned by Melbourne Water and DELWP regarding application of pre-burst rainfall (http://data.arr-software.org/vic_specific). Parameters from the existing models will be used as a starting point for calibration.

4.2.2 Hydrological Modelling Calibration

A RORB model will be developed for the Bet Bet Creek catchment and calibrated to the Bet Bet Creek at Lillicur streamflow gauge. All RORB flood modelling parameters (including k_c and loss values) will be adopted for design model runs based on suitable calibration values.

RORB will be run for the design events using the ensemble approach for a range of durations and AEPs. The RORB hydrograph selector tool will be used to extract the model hydrographs. The tool has been built into RORB and completes a similar process to that which Water Technology has been applying to recent flood studies manually. This allows the user to select the most appropriate hydrograph from the ensemble series to apply for design purposes. It will select the critical duration and temporal pattern which produces the median peak flow of the 10 temporal patterns for each AEP.

The above approach will be undertaken for all key locations in the model, including hydraulic model inflow boundary locations, key at risk sites and streamflow gauge locations. The critical durations and temporal pattern combinations will then be selected for modelling in the hydraulic model.

A Monte Carlo simulation will also be used to verify that the design flow estimates from the ensemble approach. This is considered a necessary check because in some cases the peak flows for the events around the median peak flow may vary considerably, so the selection of temporal pattern above or below the median peak flow can have a large influence on peak flow in these situations. In many situations though, the ensemble peak flows are reasonably close without a huge spread, and the peak flow adopted from the median is not significantly sensitive to this assumption.

4.3 Hydraulic Modelling

4.3.1 Hydraulic Model Development

A hydraulic model will be built covering the Lexton township and upstream catchment required for flood mapping. The modelling will utilise the TUFLOW (HPC) hydraulic modelling package. All key bridges, culverts, pipes and pits will be included in the TUFLOW hydraulic model as detailed 1D structures or layered 2D flow constrictions.

A series of industry standard roughness values will be applied to the various roughness types identified by analysis of aerial imagery and VicMap planning layers and modified to match observed flood heights.

Downstream boundaries will be located suitably downstream of Lexton at Burnbank Creek to ensure flood mapping is captured through the township. The downstream boundary will utilise a TUFLOW 2D HQ boundary which will allow the water to leave the model without having to set a boundary level. Additional outflow boundaries will be located where overland flow paths exit the study areas.

4.3.2 Hydraulic Model Calibration

As identified, there is minimal historic survey or flood marks to calibrate to. At this stage, it is likely that the hydraulic model will be calibrated to the 2016 and 2022 flood events. This will be confirmed following the initial community consultation session. The draft 1% AEP flood mapping will be presented at a later community meeting and also discussed with the PSC and NCCMA.

4.4 Design Event Modelling

Design flood hydrographs for the 20%, 10%, 5%, 2%, 1%, 0.5%, 0.2%, 0.1%, 0.05% AEP and the Probable Maximum Flood (PMF) at key inflow locations to the hydraulic model will be derived using the calibrated TUFLOW model and appropriate design modelling parameters.

5 COMMUNITY CONSULTATION PLAN

The following community consultation sessions are planned for the project:

- During the project data review – This meeting will be held at the start of the project to collect historical flood extent and level data from community members.
- At the completion of the calibration modelling and initial design modelling – This meeting will be used to provide further validation of the calibration modelling and mapping to the community and allow community input into what is next for the progress of the project and what it means for them (i.e., planning scheme amendment). It will also be used to seek community feedback regarding mitigation options and flood control changes.
- At the completion of study – defining what is next now the technical part of the work is done and what the results mean for the Lexton community, as well as answering questions.

6 SUMMARY AND NEXT STEPS

This report details the data captured as part of the initial data collation and review process, including rainfall, topographic and hydraulic structure data, to be used in the Lexton Flood Management Plan.

The following data gaps were identified:

- Survey data - to be collected by PSC
- Survey of flood marks described by community members - to be collected by PSC
- Structure data for Council assets – recently completed by PSC and have requested from VicRoads
  - GIS format to be provided by PSC, where available

The collated data will be used in the next project stage which includes hydrologic and hydraulic modelling. If required, attempts will be made to close any further data gaps observed during this stage.

Next steps in the project include:

- Community Consultation
- Survey Data Collection
- Hydrological Modelling

7 REFERENCES

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