Logan Flood Portal

Help Guide

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Purpose

This document will help you use the **Logan Flood Portal**. It will explain the information presented in the tool and the features of the tool.

The Logan Flood Portal ('the Portal') is a free online service to make the latest flood risk information for the City of Logan available:

- to our **community**, to help raise awareness and understanding about flood risk and how it applies to a property or area of interest
- to **industry**, to ensure planning, development and other important decisions can be made using current, relevant and accurate information.

Flood risk maps **do not represent actual flood events**. Flood risk is based on:

- the **likelihood** of floods of different sizes and
- the **impact** or behaviour of flood water in those different events (how deep, how fast, what hazard it creates).

Learn more about risk based flood mapping in our fact sheet.

Logan is a local government area in South-East Queensland, home to more than 377,000 people of diverse cultures and backgrounds. We're a green city with 2 major rivers (the Logan and the Albert) and almost 90 creeks. Flooding has been part of our story for generations, and it will be part of our future too. Learn more.

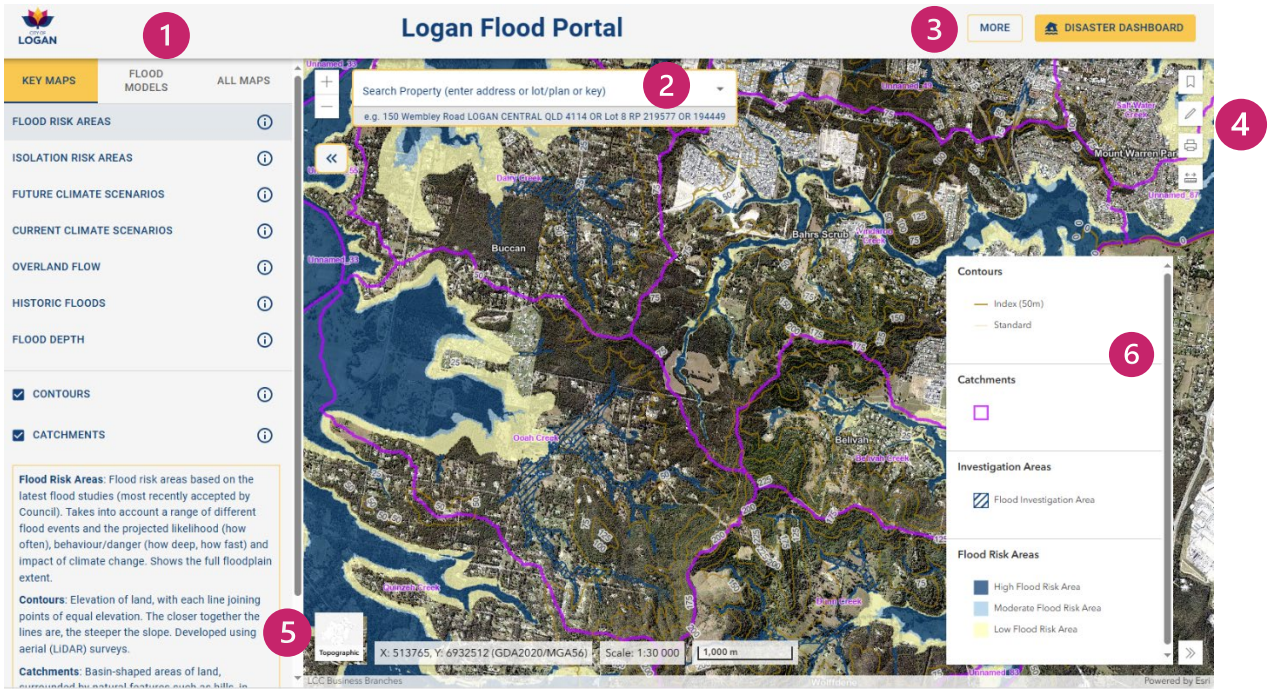
The Logan Flood Portal is limited to users in Australia.

In a flood event or emergency please refer to our Disaster Dashboard

To contact Council please phone 07 3412 3412 or email Council@logan.qld.gov.au

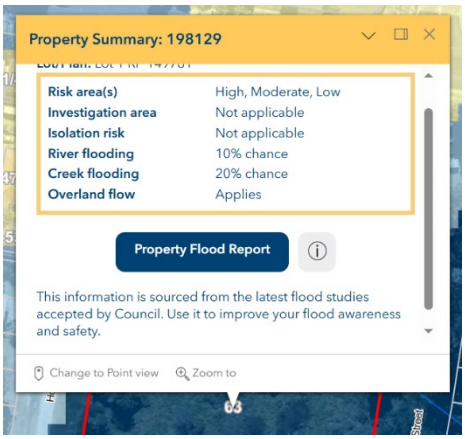
Key features

Key features of the Logan Flood Portal are illustrated on the screenshot below and explained beneath. All features are explained in more detail in later sections of the document. At any time you can click on Council's logo in the top left of the header bar to go to Council's website.



1. The **3 map tabs** which provide access to different information:
    a. **Key Maps** – the latest flood risk maps and information you will most commonly need. These maps can be selected one at a time. Information icons are available for each map. A description of the map you currently have selected is displayed.
    b. **Flood Models** – click this tab to access maps from the flood studies delivered to Council by qualified hydraulic engineers. These include information about how deep or fast flowing flood water could be in floods of different sizes.
    c. **All Maps** – a full list of all of the maps available so that you can turn on/off different combinations and adjust the transparency of different layers where required (e.g. make one map layer lighter so that you can see what's underneath it).
2. The **property search**, where you can start typing the address of your property, then **pause** to see potential matches and select the relevant one. You can search by street address, lot number and plan number or property key.

When you select the matching property it will be located on the map with a pop-up summary of flood risk and a button to access a more detailed report.

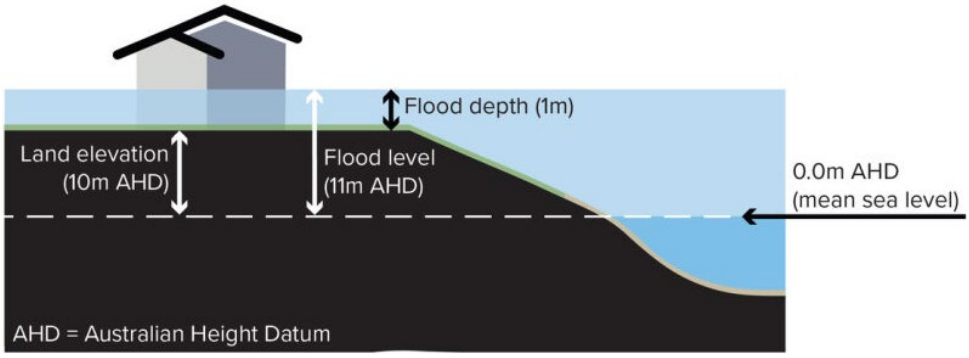


3. The **'More' menu** which provides access to other information and tools, along with the **Disaster Dashboard**, which should be your first point of call in the event of a flood or other severe weather emergency.
4. The **map tools** which include the ability to:
    a. bookmark a location so can you return to it easily
    b. draw on or mark-up the map
    c. print the map
    d. measure distances or areas on the map.
5. The **basemap toggle**, which by default presents aerial imagery. You can click this button to turn off the aerial imagery and display a more basic topographic map, which may help the flood information on top to stand out more clearly. The current cursor position (coordinates) and map scale are also displayed next to the basemap toggle.
6. The **map legend** which shows you what the colours and fill patterns on the map (Layer symbology) mean. This will be adjusted to show what layers are currently visible on the map (i.e .if you turn something off, it will disappear from the legend). The legend can be collapsed and expanded as required to manage space on the map.

Other important info

- The Flood page on Council's website includes helpful videos, fact sheets and other information about our flood study program. The accepted flood study reports are also available here.
- Our Glossary of Terms will help you learn more about what different concepts mean, including for example the difference between flood depth and flood level,

as shown below. This document is also available on the More menu in the tool.



The remaining sections of this document provide further detail about each area of the tool to help you learn more.

Quick start

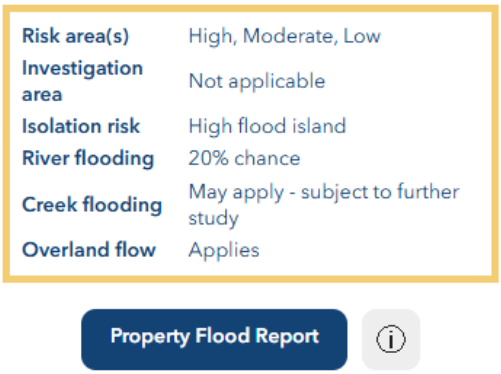
FAQs

The table below provides a quick start guide based on common questions.

What's the flood risk on my property?

1. Search for your property using either the text bar at the top of the map, or by navigating around on the map.
2. Click anywhere on your property to see a pop-up summary of flood risk.
3. Click on the 'Property Flood Report' button for a more detailed report.

Note: To learn more about the risk areas please see Latest Flood Risk.

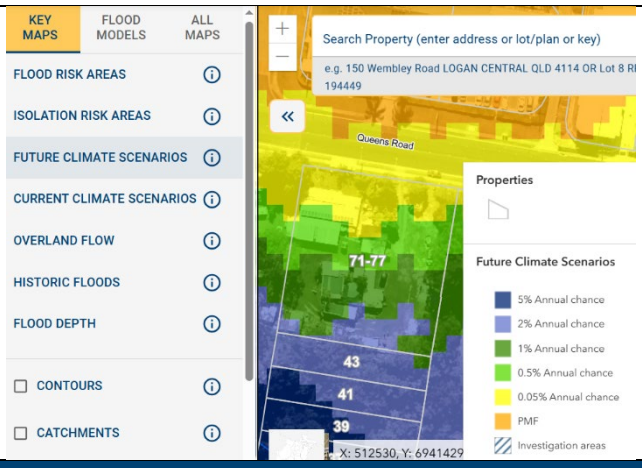


Which parts of my property may be affected in a future flood?

On the Key Maps tab, use the Future Climate Scenarios map to see the modelled extent of flooding (flood affected areas) in different sized floods under future climate conditions. This modelling takes into account the impacts of climate change, which is a requirement from the Queensland Government for natural hazard management. Council decided in early 2022 to use the Representative Concentration Pathway (RCP) 4.5 in our flood modelling. This is on the lower end of the range recommended by industry technical guidelines.

The Future Climate Scenarios map is also available for your property on the Property Flood Report.

The Current Climate Scenarios map provides the same information for modelled flood events under present day (current) climate conditions (i.e. no climate change). This map can be used for insurance purposes.



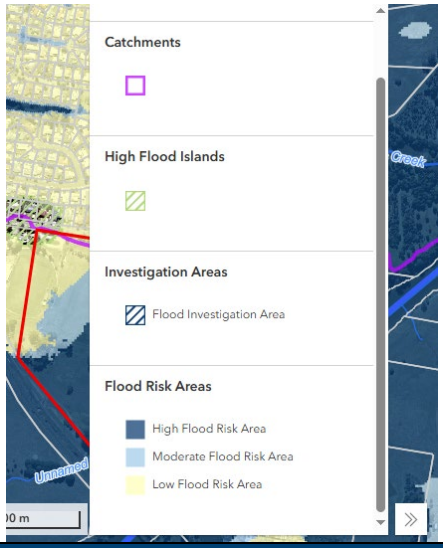
What do the colours on the map mean?

Use the dynamic legend on the right hand side of the map. It will be updated to show the map layers you are looking at.

You can collapse and expand the legend using the double-arrow button at the bottom, to create more space on the map.

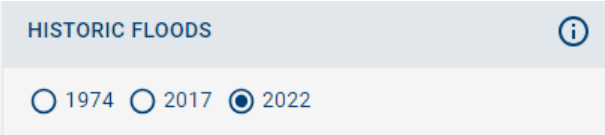
You can also view a full PDF of the map legend (for all layers) from the More menu or the Print function on the map.

Our Glossary of terms and key concepts may also be helpful.



What did previous actual floods in Logan look like?

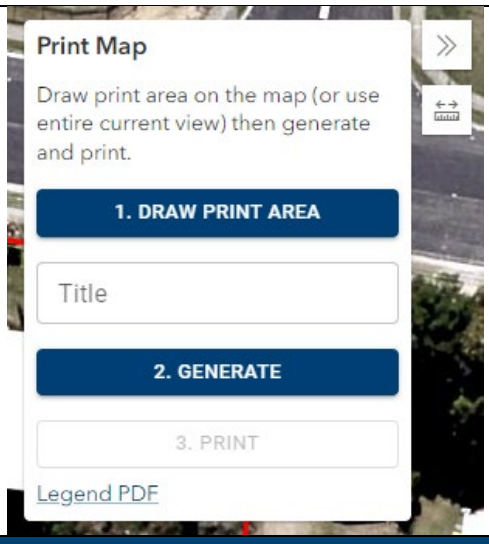
On the Key Maps tab, select the Historic Floods layer and then choose the event you want to look at on the map. The shaded areas show the flood-affected areas based on the best information Council has available (which may not exactly match physical records or observations on a property). The maps of these historic flood events will also be included on the Property Flood Report where applicable.



How do I print the map?

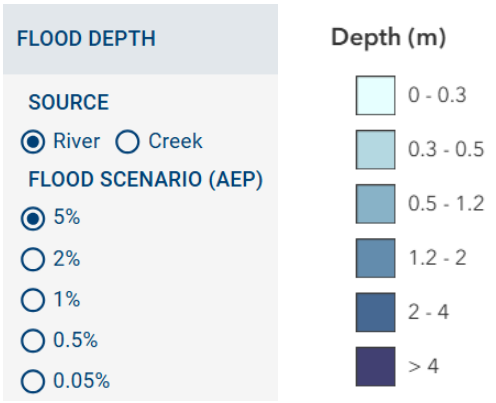
1. Select the print icon from the toolbar on the top right of the map.
2. Click on the 'Draw print area' button and use your mouse (click and drag) to draw the area you want to print.
3. Enter a title if you want one.

4. Click the ‘Generate’ button (this generates the ‘image’ – you’ll need to do this again if you re-draw the print area or change the map layers you’re looking at)
5. Click the ‘Print’ button. The image will be downloaded in your browser. You can collapse the Print function when you have finished, using the double-arrow button.
6. You can also print the map legend as a PDF, using the link at the bottom of the Print Map pop-up box.



How deep could the floodwater be in a future flood?

On the Key Maps tab, select the **Flood Depth** option. Choose River or Creek flooding and the future flood scenario you want to look at.



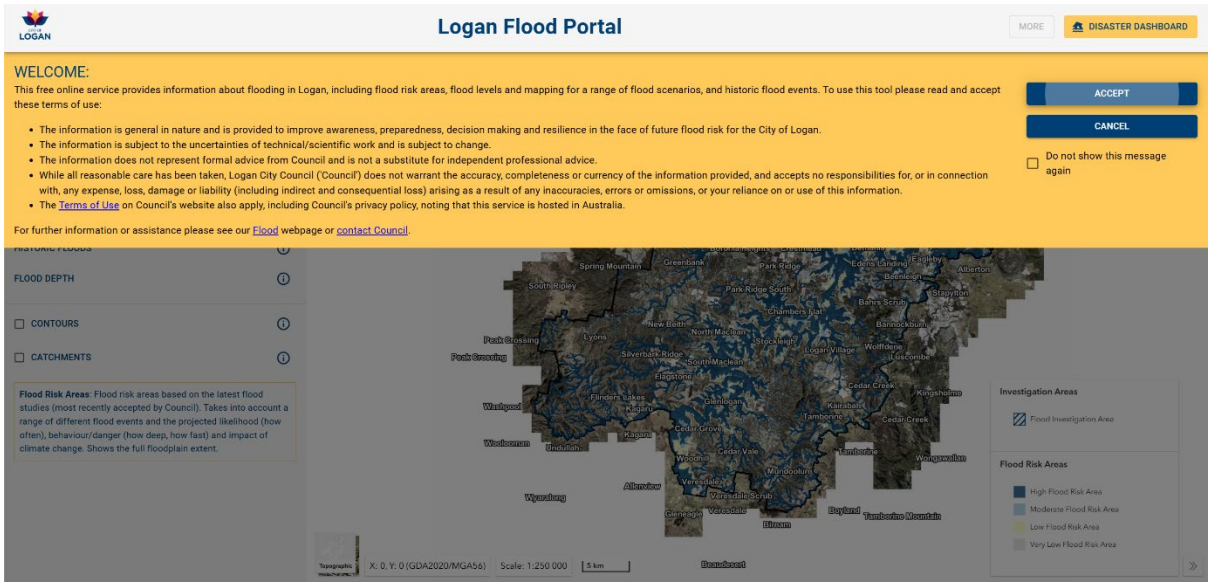
A higher chance flood (e.g. 5% chance in any given year) will be a less severe flood than once with a lower chance. The map legend will indicate the depth (in metres above the ground) for each coloured area. This map is based on the latest flood models Council has for this area, which take into account the impacts of climate change.

You can also view the flood depth for individual flood studies using the All Maps tab.

Welcome

The Logan Flood Portal is limited to users in Australia.

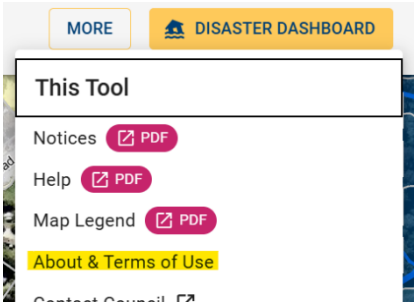
When the Logan Flood Portal is loaded in your browser for the first time, you will see a welcome message which explains the terms of use. You will need to accept these terms, using the Accept button, to see the underlying map and use the Portal.



If you choose the Cancel button, the Portal will be closed and you will be redirected to the Flood page on Council's website.

You can tick the box 'Do not show this message again' to avoid needing to accept the terms of use each time you load the Portal. If you use a different browser, or clear your browsing history, the Welcome message may return.

You can read the terms again by selecting the More button in the header bar and choosing the About and Terms of Use option, as shown below. This will display the message on a page along with other information. You can close or revisit the page at any time.



Property Search

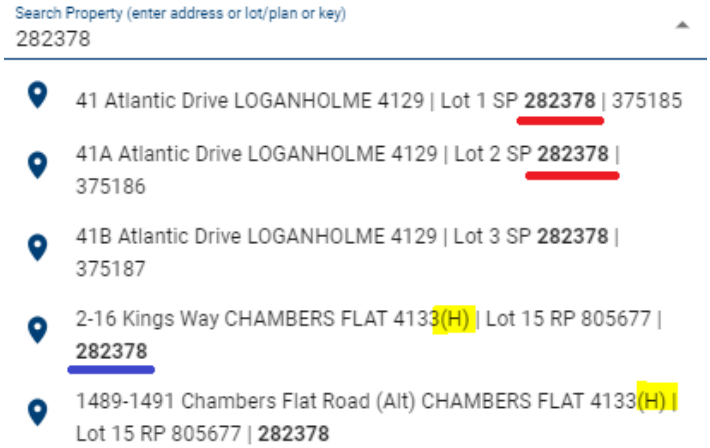
You can use the map to find a location of interest, or you can use the Property Search box at the top of the map. To use the property search:

1. **start typing the address** of the property (at least the first 5 characters)
2. **pause** to see potential matches
3. **select** the desired property from the list.

The more characters you type, the closer the matches will be.

If you see the characters "(Alt)" near a property address, as highlighted in the screenshot, that indicates an alternate address. Many corner lots have 2 possible street addresses. You can search for either the primary or the alternate address. The primary address will appear on the property report.

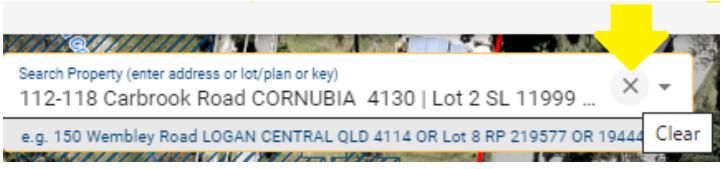
You can also search by lot and plan (e.g. Lot 2 SP 282378) or by property key. In the example illustrated, the numbers entered match both a plan number (SP 282378, underlined with red) and a property key (underlined with blue).



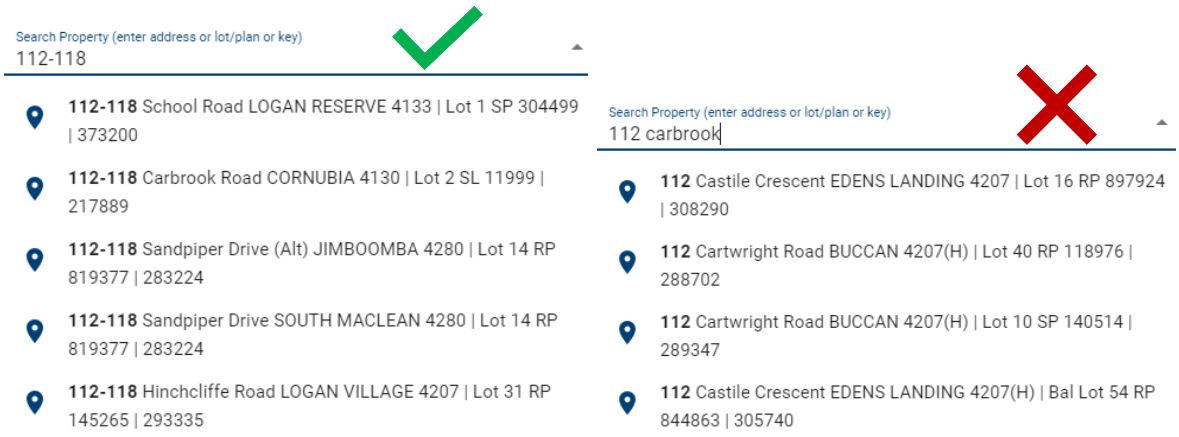
This example also indicates some of the matching properties are historic (the yellow highlighted '(H)'), meaning there has been a subdivision of that lot and new properties created under a different plan.

New properties will be discoverable in the Portal as this search links to Council's property system.

When you have selected a property, the address string, including the street address, lot and plan (real property description) and property key will be displayed in the Search bar. You can clear the address to search for another property using the 'X' button in the search bar.



Sometimes properties that are commonly known by a single street number (e.g. Number 112) may legally have a combined street number (such as 112-118, illustrated in the example below). In these cases if you search, for example, using "112 Carbrook", you will not find the right match, as the search looks for the text you enter.

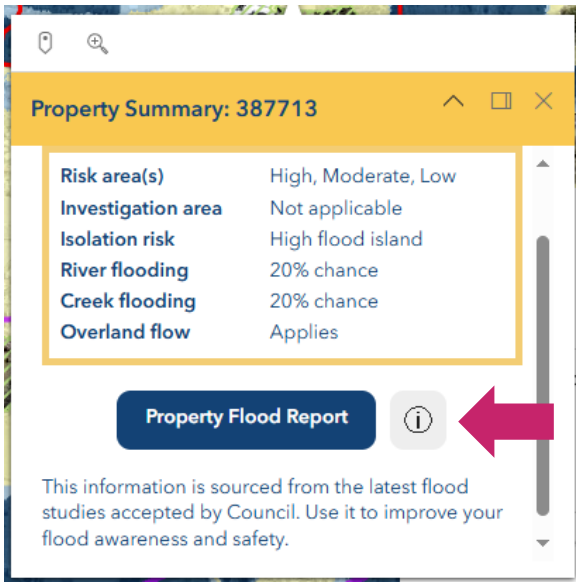


Having trouble? If you are unsure about the property address, you can either:

- use the map to navigate to the area to find the property
- type the address of a nearby property and then use the map to navigate to the desired property
- search using the road name only, select any property on that road and then use the map to locate the correct property.

Property/Point Pop-up

When you select a property using the property search, or click on a property on the map, a pop-up summary of flood risk will be displayed. Property address information will be displayed at the top, with the table of flood risk and an option to go to the comprehensive Property Flood Report.



You can use the info tool on the pop-up to understand more about what each type of risk means. This information is based on the latest flood studies completed and accepted by Council. **Note**: if there are other creeks on or near the property that Council has not recently completed flood studies for, it is possible that further flood risk may apply to the property.

Risk areas: All flood risk areas which apply to the property will be listed. Use the Property Flood Report or see the Latest Flood Risk section below to understand more about the categories of risk.

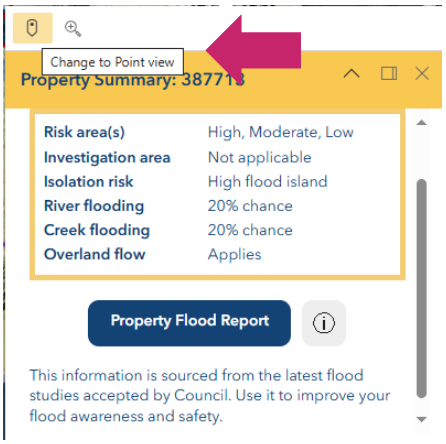
Investigation areas are those which are predicted to be impacted by flooding, but the flood studies in those areas have not yet been completed to provide information to determine the level of flood risk. If development is proposed in these areas, further investigation will be required so you will need to contact Council.

Isolation risk areas are areas at risk of being cut off by flooding. Low flood islands may be isolated and then inundated as floodwater rises and high flood islands may be surrounded by floodwater and lose access to safe evacuation routes, services and suppliers.

River and creek flooding: Most properties which are at risk of flooding are affected by either river or creek flooding, but some may be impacted by both. The flood risk summary will identify the most frequent flood event that may impact the property. Rarer but more severe flood events may also occur. For properties identified as being at risk of flooding, the Property Flood Report will provide flood levels for floods of different sizes and likelihoods.

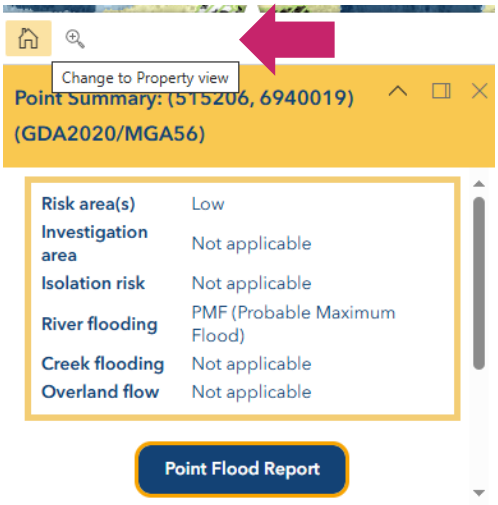
If **Overland flow** applies, that indicates the property may be impacted by flooding from surface water or rainfall runoff that exceeds the capacity of the stormwater pipes or drains, or where there is no stormwater network.

You can also change to a ‘Point’ view which allows you to see the risk summary and access a report for a specific point on the map. If the point is at risk of flooding, there will only be one risk area applicable, or it may be in an area where further investigation is required.

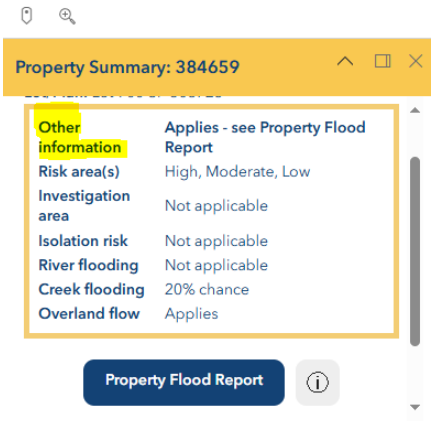


The button to switch between Property and Point view may appear at the top or the bottom of the pop-up box, depending on where the selected property is on the map window. The pop-up box will be resized dynamically.

From the ‘Point’ view you can access the Point Flood Report and easily switch back to the property view at any time. The pop-up may take a few seconds to refresh and re-appear as it recalculates the risk each time.



For properties in the **Priority Development Areas** (PDAs) declared in Logan by the Queensland Government, there may be other flood information that is relevant. Sometimes developers or the Queensland Government, who are the planning authority for PDAs, may do extra flood studies which deliver more recent information than what Council has. Where that additional information is shared with Council, we will make it available, with the permission of the relevant organisation who owns the information, through the Flood Portal. If there is other information relevant for a selected property it will be shown in the pop-up summary, with a direction to refer to the Property Flood Report.



Property Flood Report

The table below explains the sections of the flood report and what the information in each means. There is also lots of helpful information on the Flood page on Council's website. The report will open in a new browser tab so that you easily switch back to the mapping window. You can have multiple property reports open at the same time.

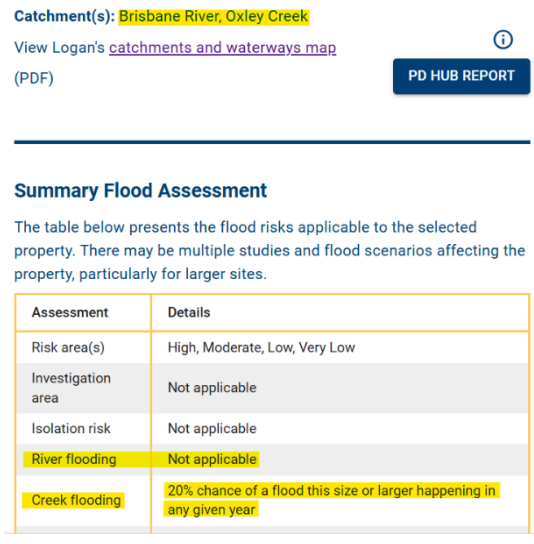
Summary Flood Assessment

Similar to the property pop-up on the map, the Summary Flood Assessment table in the report shows what future risks apply to the property:

- **risk areas**, based on the latest flood risk (will be consistent with what is shown on the Latest Flood Risk map above)
- **investigation areas**, which are identified as potentially being flood-affected, but where Council does not have updated flood studies to allow the level of risk to be determined
- **isolation risk**, which are areas that are at the risk of being cut off during flooding as either low or high flood islands. A property may contain both
- **river flooding**, with the most frequent flood event identified, noting the likelihood indicated is an annual chance (how likely it is that a flood of that size will happen in any given year)
- **creek flooding**, with the most frequent flood event identified (annual chance)
- **overland flow**, which is stormwater runoff that travels over land.

Note:

- Some properties may be impacted by both river and creek flooding. You can view a PDF map of Logan's catchments and waterways.
- Where a property falls within a river catchment that is managed by another local government authority (e.g. Brisbane or Redlands) please contact that authority for information about flood studies, mapping or risk relating to those river catchments.


Catchment(s): Brisbane River, Oxley Creek

View Logan's catchments and waterways map (PDF)

PD HUB REPORT

Summary Flood Assessment

The table below presents the flood risks applicable to the selected property. There may be multiple studies and flood scenarios affecting the property, particularly for larger sites.

Assessment	Details
Risk area(s)	High, Moderate, Low, Very Low
Investigation area	Not applicable
Isolation risk	Not applicable
River flooding	Not applicable
Creek flooding	20% chance of a flood this size or larger happening in any given year

- More frequent flood event is one with a higher likelihood (e.g. 20% chance each year rather than 2%).
- If there is other information that is relevant for the property, this will be included in the Summary Flood Assessment table. This could be from more recent flood studies undertaken by developers or other authorities. Where that information is shared with Council, we will include it on the Property Report. This most commonly applies to properties in Priority Development Areas (PDA). An example is illustrated below relating to a property in the Yarrabilba PDA.

Summary Flood Assessment

The table below presents the flood risks applicable to the selected property. There may be multiple studies and flood scenarios affecting the property, particularly for larger sites.

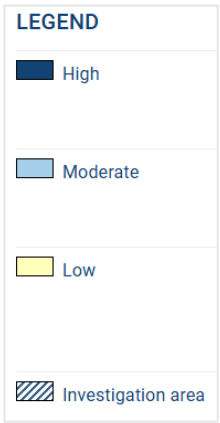
Assessment	Details
Other information	YARRABILBA - IMPORTANT: Flood management works being delivered for development in Yarrabilba may have changed the flood risk information for this property. Please refer to the information linked below and contact Economic Development Queensland for help if needed. Yarrabilba Flood Information
Risk area(s)	High, Moderate, Low, Very Low
Investigation area	Not applicable
Isolation risk	Low flood island Low flood islands may be isolated and then inundated as floodwater rises and high flood islands may be surrounded by floodwater and lose access to safe evacuation routes, services and supplies. Please refer to the Isolated Islands map in the Planning Scheme Maps section of the Property Flood Report.
River flooding	Not applicable
Creek flooding	20% chance of a flood this size or larger happening in any given year
Overland flow	Applies. It is possible that flooding from a local waterway which has not yet been studied may also impact the property. Please contact Council for further advice. Overland flow is water (stormwater run-off) that travels over land during heavy rainfall events. It generally occurs quickly and for short durations.

Latest Flood Risk

The first map on the report shows the selected property with the latest flood risk. This shows what could happen in a future flood based on the latest flood studies, which take into account the potential impact of climate change. The map does not show any actual flood event that has occurred on the property.

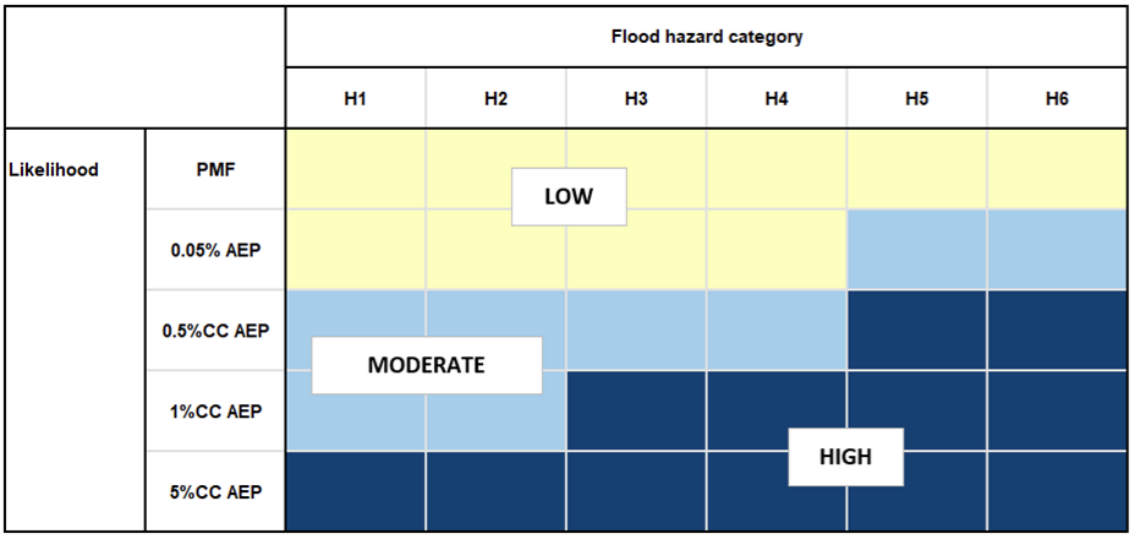
This latest flood risk may be based on more recent flood studies than those used in the mapping in the local planning scheme or other instrument in effect. Updated flood studies will be included in the planning scheme, but this statutory process takes many months. To ensure our community can access the 'latest' flood information in a timely way, Council will publish the flood study reports as soon as they are accepted, and these will be reflected in the latest flood risk map.

Underneath the map there is a legend to explain what the different categories of risk mean. Some properties, particularly if they are larger or on a slope, may be impacted by more than one risk category (e.g. high and moderate). Areas of very low risk are representing the full extent of the floodplain in the largest flood that could conceivably occur. These areas are very unlikely to experience flooding (less than 1 in 2,000 chance each year).



The risk areas are determined using both the chance of flooding each year for a particular location and the resulting

flood behaviour for different sized floods. This is represented in the diagram below. PMF is the probable maximum flood, the least likely but largest conceivable flood event. To learn more about the flood hazard categories please see the Characteristics section.



Flood Levels

Shows the flood levels associated with river and/or creek flooding applicable to the property, based on accepted flood studies. These are the **maximum levels** on the property, noting levels may vary significantly on large properties and/or those on a slope. You can use the Point report to see the levels at a particular point on the property.

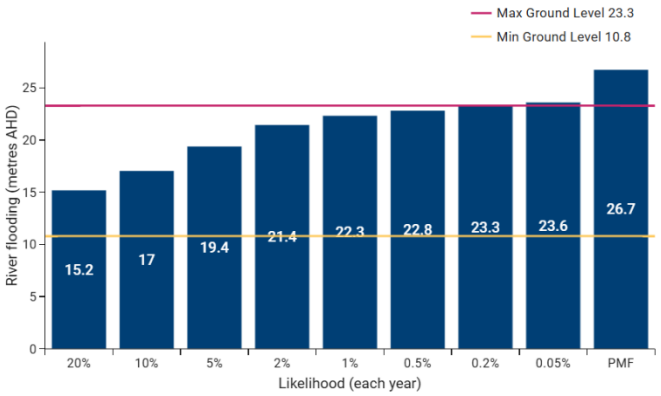
It is possible that any local watercourses on the property which have not been studied may cause additional flood impacts, including increased flood levels.

Flood levels are measured in metres Australian Height Datum (AHD), where sea level is approximately zero (0) metres.

The graph under the table shows the same information but also shows the maximum and minimum ground levels so you can determine the potential depth of flood waters. For example if your minimum ground level is 10.8 metres, and the flood levels on the report illustrated here indicate a level of 15.2 metres in the most frequent flood (20% chance each year) then you may have up to 4.4 metres of floodwater at the lowest point in your property.

Likelihood (each year)	River flooding
20% chance	15.2 metres AHD
10% chance	17.0 metres AHD
5% chance	19.4 metres AHD
2% chance	21.4 metres AHD
1% chance	22.3 metres AHD
0.5% chance	22.8 metres AHD
0.2% chance	23.3 metres AHD
0.05% chance	23.6 metres AHD
PMF	26.7 metres AHD

Flood and Ground Levels in metres AHD



The Likelihood is the chance of a flood event of a given size occurring in any one year. For example a 1% chance means there is a 1 in 100 likelihood of this flood event occurring **in any given year** (not only once every 100 years). It is possible that a larger flood may occur.

Flood levels may be unavailable online for some flood affected properties; in this case please contact Council for further information.

If a property is not identified as being at risk of flooding, or where flood studies are not available, the Flood Levels section will not appear on the report.

Ground levels

Minimum and maximum ground levels for the property are displayed on the report, based on an aerial LiDAR (Light Detection and Ranging) survey. The survey uses millions of laser point measurements to build a model of the ground surface. The source of the survey will be displayed on the report, so that you know when the survey was conducted.

Ground level	Details
Minimum ground level	9.9 metres AHD
Maximum ground level	76.8 metres AHD

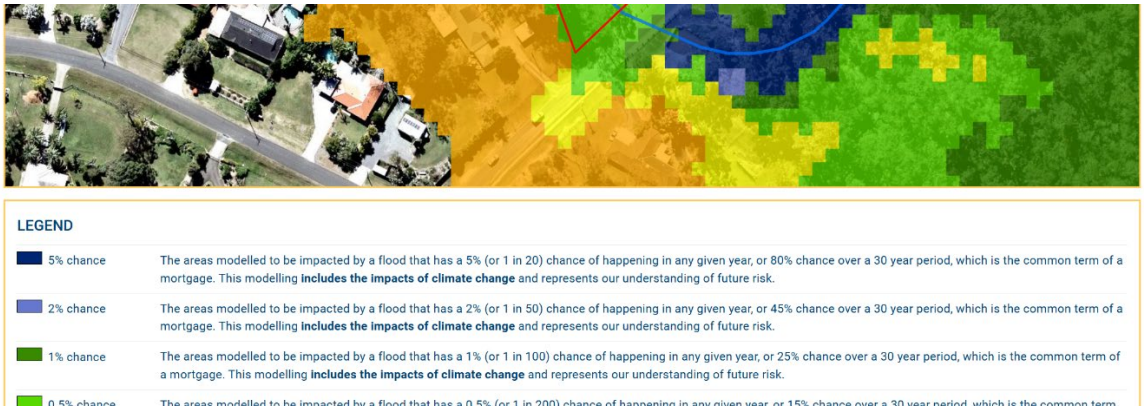
Source: 2021 Digital elevation model (1 metre grid)

Overland Flow Map

The Overland Flow map shows the path that surface water/runoff takes across the ground from higher areas of the catchments to a watercourse, channel or gully. This usually happens when the capacity of stormwater pipes and channels is exceeded, or where there is no stormwater network. There is limited warning for this type of flooding.

Future Climate Scenarios Map

The Future Climate Scenarios map shows the projected extent of flooding (the affected area) for multiple flood events. This modelling considers the impact of climate change. It is based on accepted flood studies and provided for the 5%, 2%, 1%, 0.5% and 0.05 events, and the Probable Maximum Flood (PMF), which represents the full extent of the floodplain in the largest flood that could conceivably occur. An extract showing how the map appears and a section of the legend is provided below.



Current Climate Scenarios Map

This map is similar to the Flood Scenarios section in showing the estimated flood affected areas for multiple flood events/sizes. This map does not consider the projected effect of climate change; it is based on present day (current) conditions and can be used for insurance purposes.

You can also find more information about flood insurance on the Insurance Council of Australia website: Flood insurance explained - Insurance Council of Australia

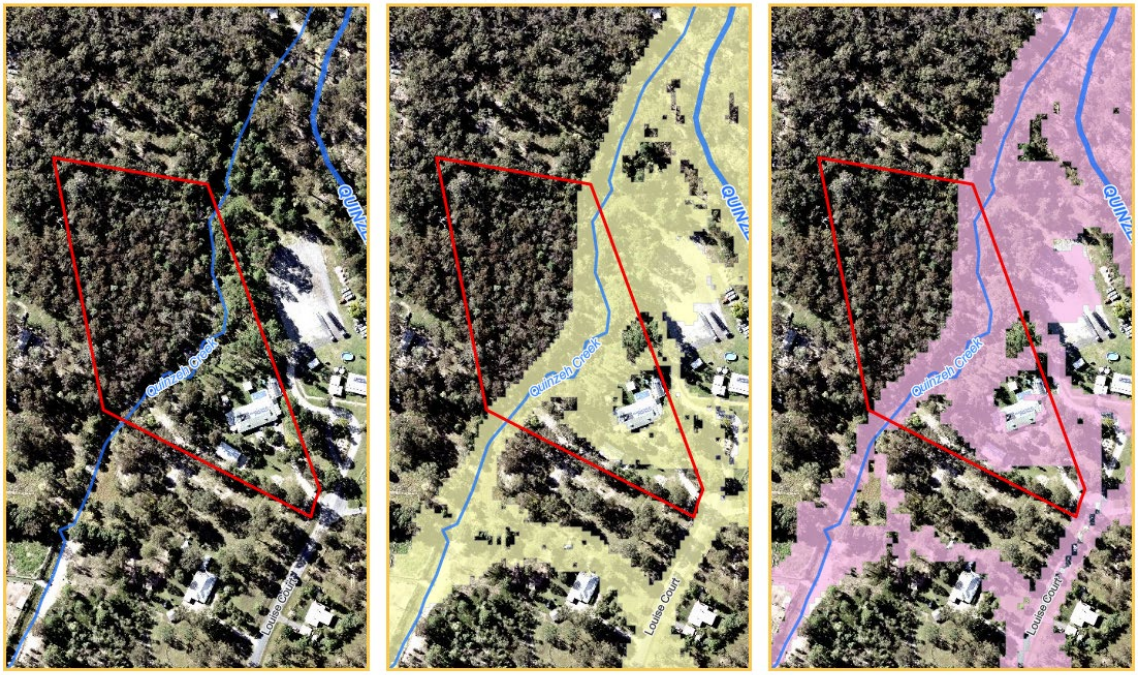
Historic Flood Events

The best information Council has about the extent (flood affected areas) of flooding in recent events (for 1974, 2017, 2022) can be viewed on the interactive

map in the Logan Flood Portal. The property report will indicate whether or not the selected property may have been impacted. If there is an impact for any of the historic flood events, a static map showing all of the events will be included on the report.

Some creek studies may not be included if data was not available for them at the time. The historic flood maps are an estimation and are provided as context only.

1974	No
2017 (after ex Tropical Cyclone Debbie)	Yes
2022 (late February / early March)	Yes



1974 2017 2022

Planning Scheme Maps

For flood affected properties the maps from the Logan Planning Scheme 2015 and TLPI No. 1/202 will be presented. If the property is in Meadowbrook, the Meadowbrook assessment area map will also be shown. This section provides the maps which have statutory (legal) effect and are used for planning and development assessment purposes. The flood risk shown on these maps may differ from the latest flood risk shown at the top of the report if additional flood studies have been accepted.

OM-05.01 Isolated islands

OM-05.02 High flow area

OM-05.03 Meadowbrook flood assessment area

OM-05.04 Flood risk areas

1. Flood study

Commissioned, completed (by external experts), validated and accepted.

2. Latest Flood Risk

For awareness: Flood study reports are published and risk maps updated to provide transparency and raise awareness of flood risk.

3. Planning scheme

In effect: Updated risk mapping and policy is given legal effect by being incorporated into the planning scheme or TLPI through the statutory amendment process.

Further information

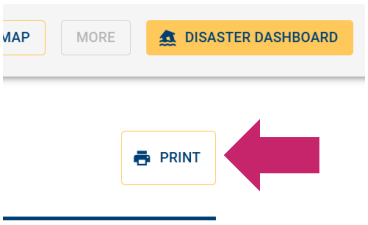
Lists important information about the flood report and its limitations, such as currency and how the information should be used.

The report presents the best information Council has available however things can change quickly. Every flood is different, and every person's circumstances are unique.

The report provides valuable input for decision making but is not the only relevant source of information or consideration.

Contact information

Shows the contact details for areas who can provide help or further information, depending on the type of information you need.



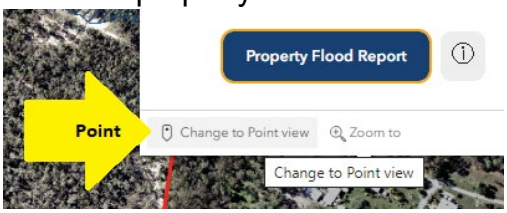
You will find the **Print** button at the top of the report, on the right hand side. Please make sure your browser print settings or options are set to **include background graphics**. The report is designed to be printed in portrait rather than landscape orientation and is best printed in colour so that the maps and map legends can be read properly.

Under the Print button, in the Property Details section of the report, is a button which will take you to Council's **PD Hub**, where a Planning Scheme Property Report will be presented for the selected property. The PD Hub report shows the zone and applicable overlays/constraints for the property, based on the mapping from local planning schemes and/or instruments currently in effect.

Point Report

In the Logan Flood Portal you can also get a report for a particular point (selected location) on a map. This is helpful if your property or area of interest is large or on sloping land, so that you can understand the different flood risk at different points.

The pop-up on the map window allows you to change from the property view to a 'point' view, and then get a Point Flood Report.
The report will open in a new tab in your browser so that you can easily switch between the map window and the report. You can have multiple reports open at any time.

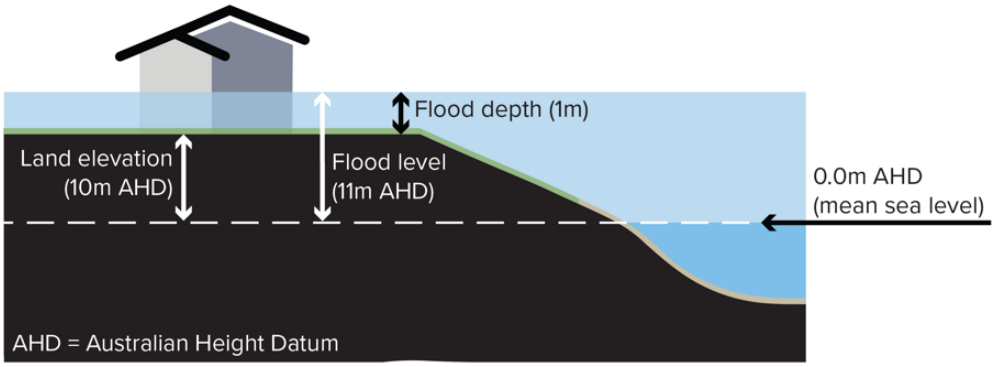


The Point Flood Report will provide the hazard, depth, level and velocity values from the applicable flood studies at the selected point. An example is illustrated below.

Study: Logan and Albert Rivers Flood Study 2023

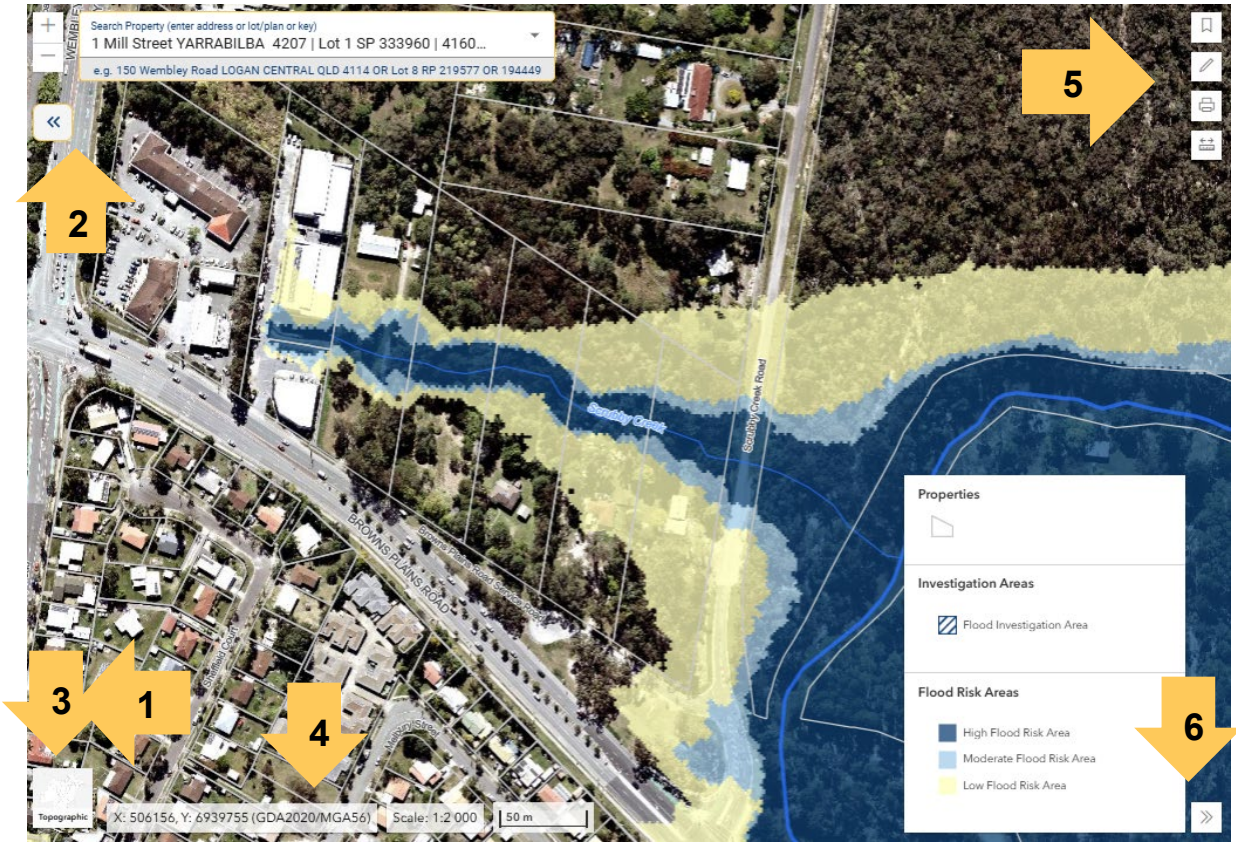
Likelihood (each year)	Hazard	Depth	Level	Velocity
20% AEP	Not applicable	Not applicable	Not applicable	Not applicable
10% AEP	Not applicable	Not applicable	Not applicable	Not applicable
5% AEP	Hazard Category 3	0.6 metres	9.1 metres AHD	0.1 metres per second
2% AEP	Hazard Category 3	1.1 metres	9.6 metres AHD	0.1 metres per second
1% AEP	Hazard Category 4	1.8 metres	10.2 metres AHD	0.1 metres per second
0.5% AEP	Hazard Category 5	2.2 metres	10.7 metres AHD	0.3 metres per second
0.2% AEP	Hazard Category 5	2.8 metres	11.2 metres AHD	0.5 metres per second
0.05% AEP	Hazard Category 5	3.2 metres	11.6 metres AHD	0.6 metres per second
PMF	Hazard Category 6	5.5 metres	14.0 metres AHD	0.9 metres per second

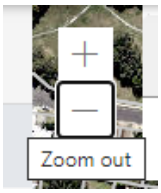
The latest flood risk map and the ground level for the selected point are also presented on the map. The report also includes information to help you understand what the parameters from the flood studies mean, including for example the difference between flood level (measured from mean sea level) and flood depth (measured from ground level) which is shown on the diagram below.

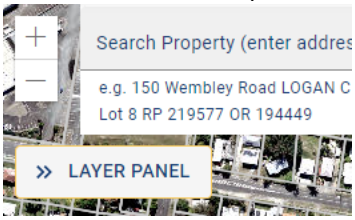


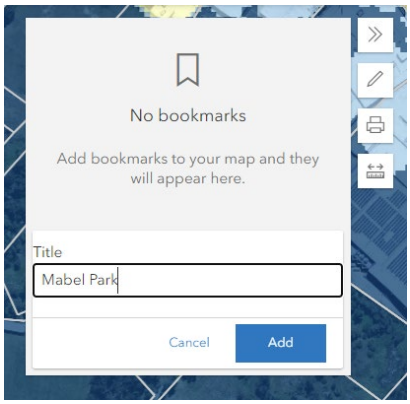
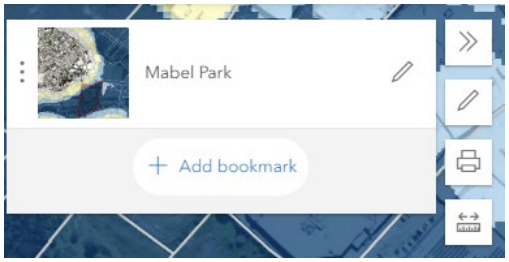
Map window

This section explains the key features of the map window, including the tools and navigation.

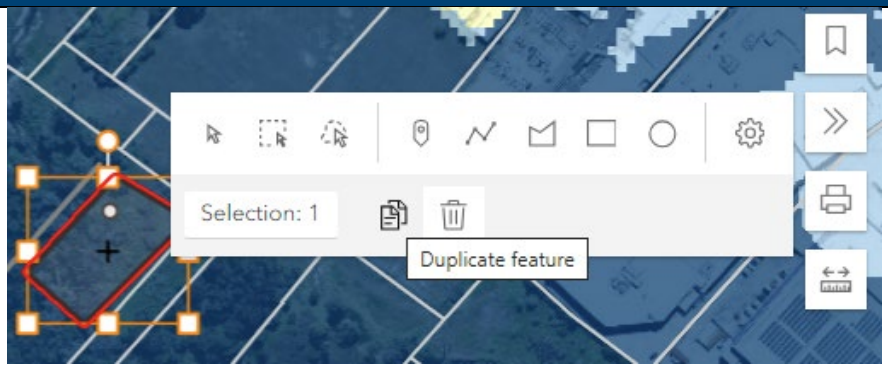


#	Description of feature
1	**Zoom**: The plus and minus buttons at the top left of the map will zoom in or out respectively. You can click them with the mouse or use the tab key to access them and press the space bar. When they are 'active' with the keyboard there is a black outline around the button, as shown on the screenshot.  You can also zoom the map in and out using the wheel on your mouse. You can pan around on the map (change where it is centred) by holding down the primary mouse button (the one you usually click to select something) and dragging the map. On a tablet or similar touch-screen device you can 'pinch' to zoom or drag the map with your finger to pan.

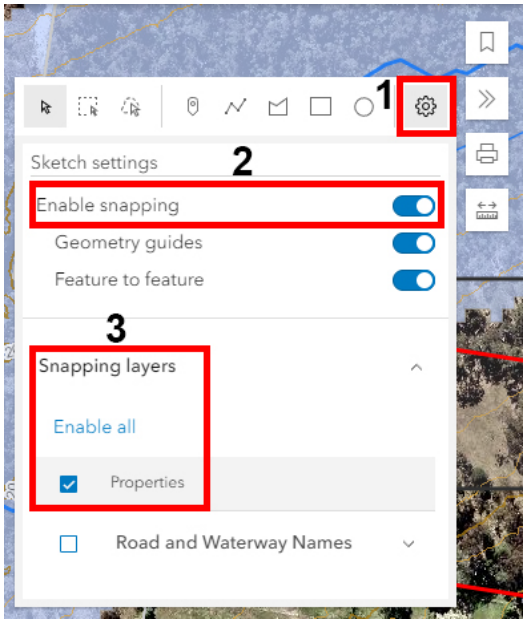
#	Description of feature
2	**Collapse layer panel**: Use the double left-arrow button below the zoom controls to collapse the side panel (with the layer tabs and lists on it) so that you have more room on the map. When you collapse the layer panel you will see a double right-arrow button labelled as 'Layer panel' that you can use to restore (expand) the layer panel again. 
3	**Basemap toggle**: By default the aerial imagery basemap will be displayed on the map. You can use the toggle button at the bottom left of the map to switch to a topographic basemap view. The 'topo' map presents a simple view that can make it faster to load the maps and easier to see the symbology (colours/shading of features on the map and labels). When viewing the topo basemap the toggle button will change to the Aerial. Clicking the button will turn off the topo map and turn the aerial imagery back on. 
4	**Map position and scale**: As you move your cursor around on the map, you will notice the position indicators (X and Y coordinates at the bottom of the map) change. The coordinates will also be updated if you pan (drag the map around to change its centre). The coordinate projection (GDA2020) and map grid (MGA56) are also displayed.  If you zoom in or out on the map, the Scale display will change accordingly. The closest scale is 1:500 and the city-wide scale (to see the entire extent of the Logan local government area) is approximately 1:250,000. Some maps are scale dependent, meaning they will only be visible on the map at scales that make sense. For example, it is not practical to view property boundaries at a city-wide scale; you need to zoom in to around 1:8,000 or closer.

#	Description of feature
	Map scale is the ratio between distance on the map and distance on the ground. For example, at a scale of 1:10,000 a distance of 1cm on the map relates to a distance of 100m (10,000cm) on the ground.
5	**Map Tools**: On the right-hand side of the map you will find a toolbar with the following functions: • Bookmark • Draw • Print • Measure  Click or tap on the tool to 'expand' its menu. Use the double right-arrow buttons to collapse the tool again. You won't be able to access a property pop-up or report while using a map tool; close (collapse) the tool to return the map to 'property pop-up' (selection) mode. **Bookmark** Add a bookmark to a place of reference which could be your home, workplace, school or other location of significance. You can then quickly return to that location at any time by clicking on that bookmark. You can also edit the bookmark or add more as needed. The bookmark 'remembers' the location and the map scale, but not what layers you may have been viewing at the time.   If you change devices, browsers or clear all browsing history, your bookmark will no longer be available. **Draw** When you open (click/tap on) the 'draw' tool it will display the toolbar with features to draw a point, a line (multi-part), polygon, rectangle or circle. Once you have drawn items on the map, there are extra tools available to allow you to select what you've drawn and duplicate or delete it.

#	Description of feature



There is also the option to activate the snapping functionality so you can snap to the boundary of features within the map window.

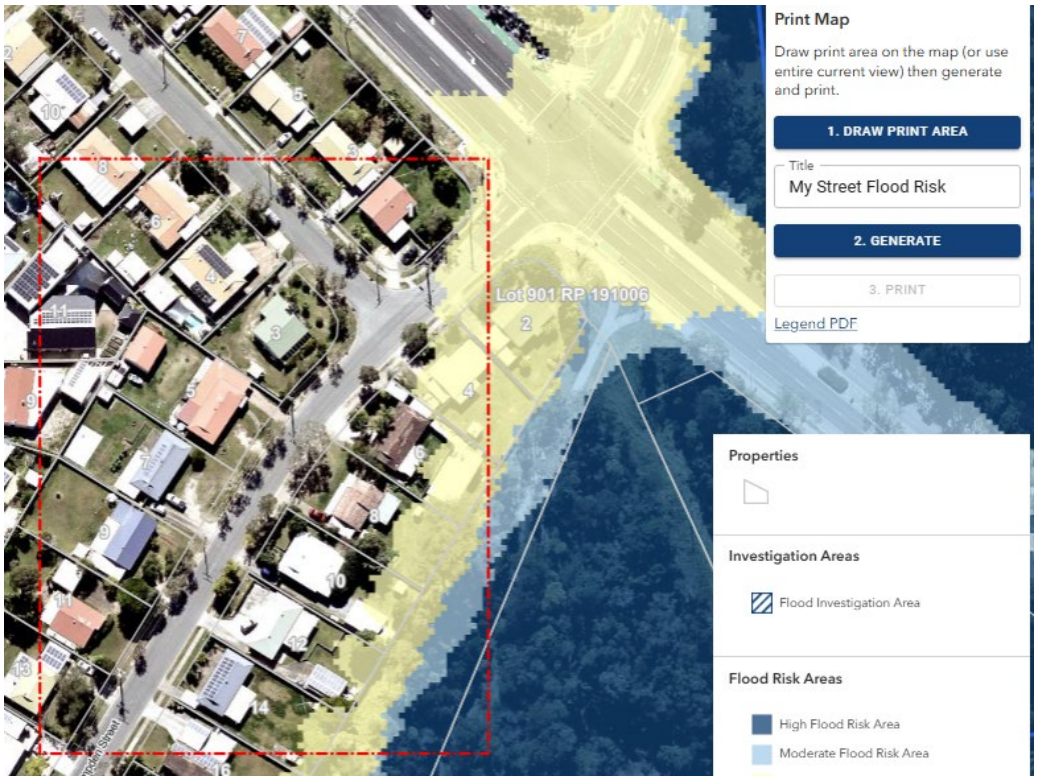


Drawn items will remain on your map for this session (i.e. if you close the browser tab they will disappear). They will stay in place as you move between the Key Maps, Flood Models and All Maps tabs, but if you view a property report and then return to the map, the drawn items will be gone.

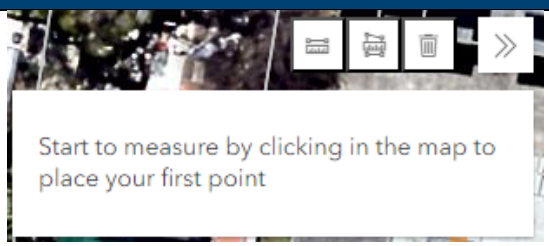
Drawn items visible on the map will appear on the output from the print function if you draw the print area to include them.

Print

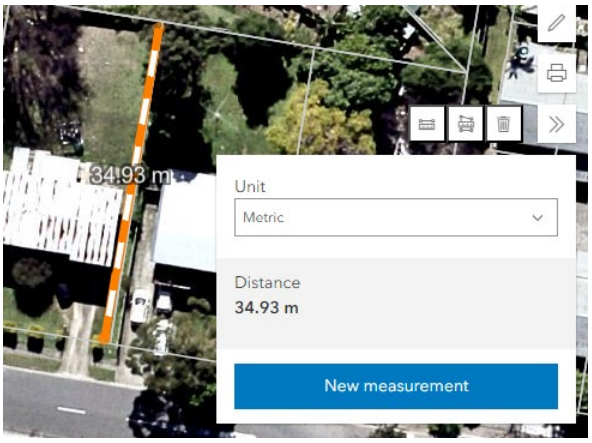
The Print Map function allows you to draw an area on the map window that you want to print: click the 'Draw Print Area' button and then click and drag your mouse on the map to select the area. Release the mouse button when you have finished. If you want to print the entire map area you are currently viewing, skip the 'draw' step (i.e. do not draw an area).

#	Description of feature
	The title is optional – you can type something in if you like. What you type will appear on the bottom of the printed area.  Click the Generate button to create the output from the map. If you re-draw a different area or if you change the layers you are looking at, you will need to 'Generate' again. The Print button will then be available. Click the Print button to download the image output. It will appear in your Downloads folder. The reports are designed to be printed in the portrait (not landscape) orientation and are best printed in colour to help identify the map symbology correctly. The map legend PDF can also be printed. It is a multi-paged document that lists all of the symbology for all maps available in the Portal. **Measure** The Measuring tool allows you to measure lines (distances) or areas (shapes). There is an option to select other units of measure (for example to change your line length to inches or kilometres or change your area to acres or hectares). You can delete your measurement or simply close/collapse the tool when you have finished. The measurement will disappear from the map when you close the tool. If you want to capture your measurement please use a screenshot or snipping tool on your device. Selecting the Print tool will close the measurement tool.

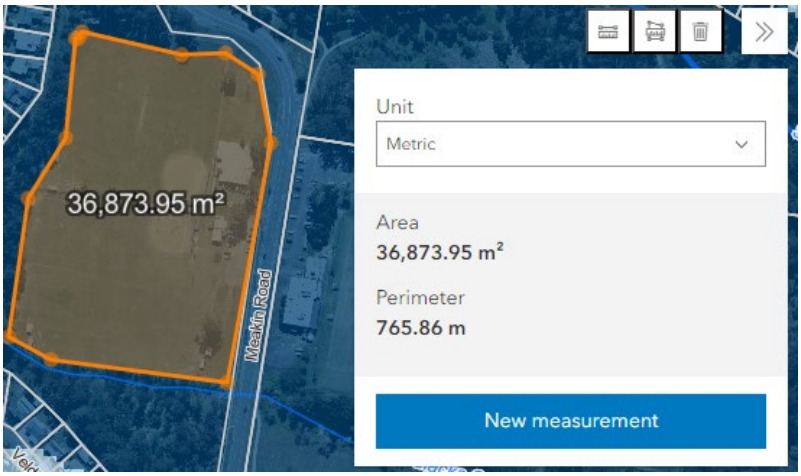
#	Description of feature

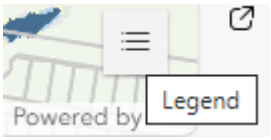
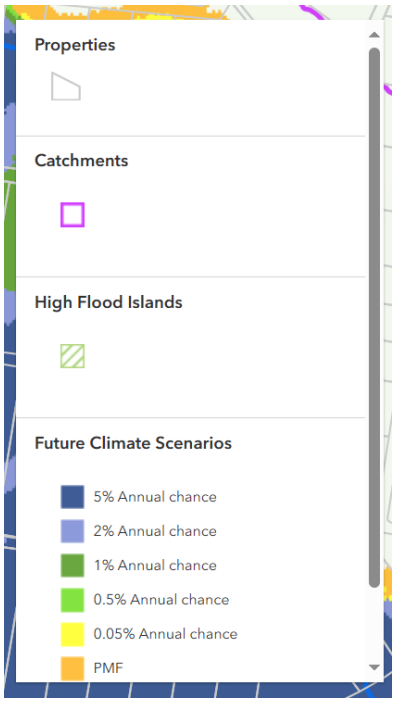


To measure distances, click the 'ruler' tool and then click on the map and drag your mouse to create the line, double-clicking to finish. If you want to create a polyline, click at each vertex (point at which the line changes direction) and then double-click to finish. The distance of the line you have drawn will be displayed in the unit of measure you select.

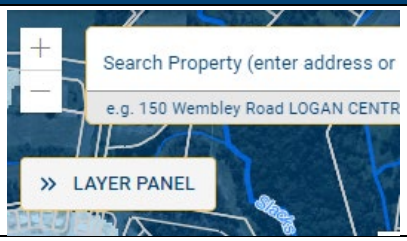


To measure shapes, select the shape tool and click and drag your cursor on the map to create the shape, clicking in each corner (vertex) and double-clicking to finish. The area in square metres will be displayed, as well as the perimeter distance (around the edge/boundary of the shape you have drawn).

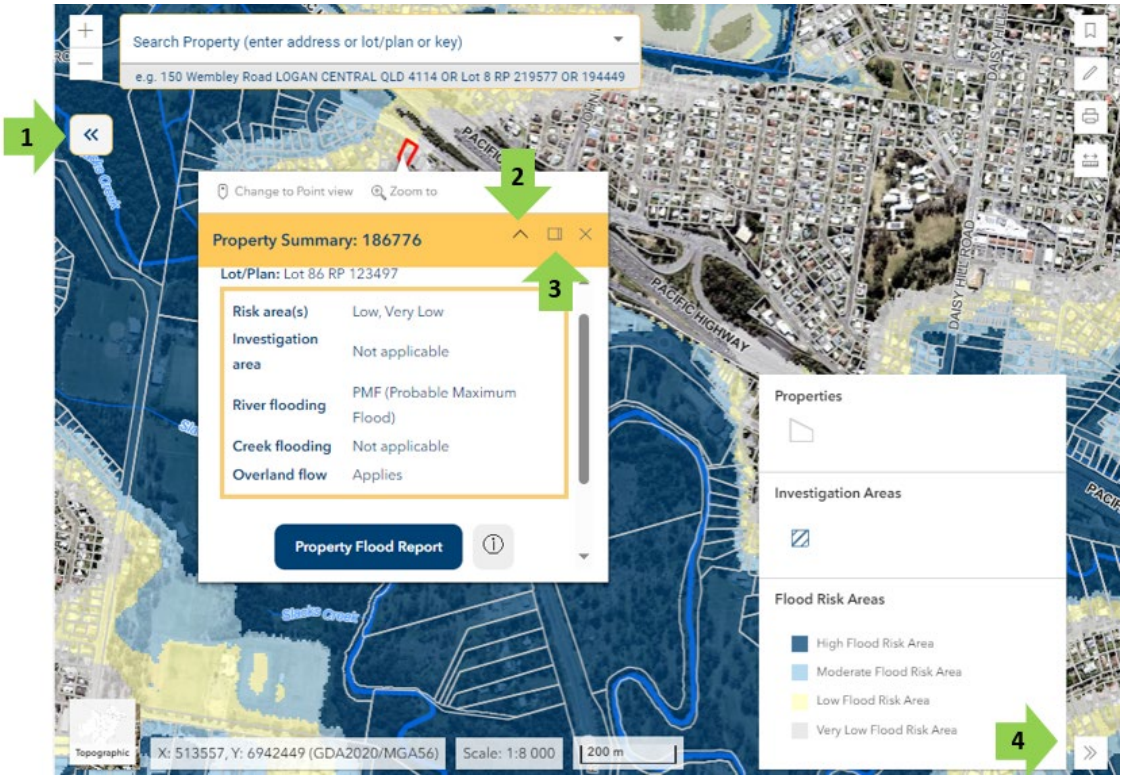


#	Description of feature
6	**Map Legend:** The map legend shows the symbology (colours, shading) for the layers currently visible on the map. It will be dynamically updated as turn layers on or off. You can collapse the legend display using the double right-arrow button at the bottom. When the legend is collapsed the button will change to a 'list view'.  Click the button to display the legend. If you have a lot of layers turned on, the legend may be quite long and will include a vertical scroll bar to help you navigate up and down the list.  You can print the map legend from the Print function. The printed output (PDF) will include the symbology for all layers available in the Portal, not just those currently visible on the map.

The map window can get busy but there are easy things you can do to get more room, outlined in the table below and illustrated on the screenshot below the table.

#	Description of action
1	Collapse the layer panel (the tab on the left with the list of layers in it). You can easily restore the panel at any time. 
2	Collapse the Property pop-up box
3	Dock the Property pop-up box, which will place it in the bottom left corner of the map (you can dock and collapse then expand and un-dock any time you need). You can also close the Property pop-up box using the 'X' button.

#	Description of action
4	Collapse the map legend and expand it again any time you need it.

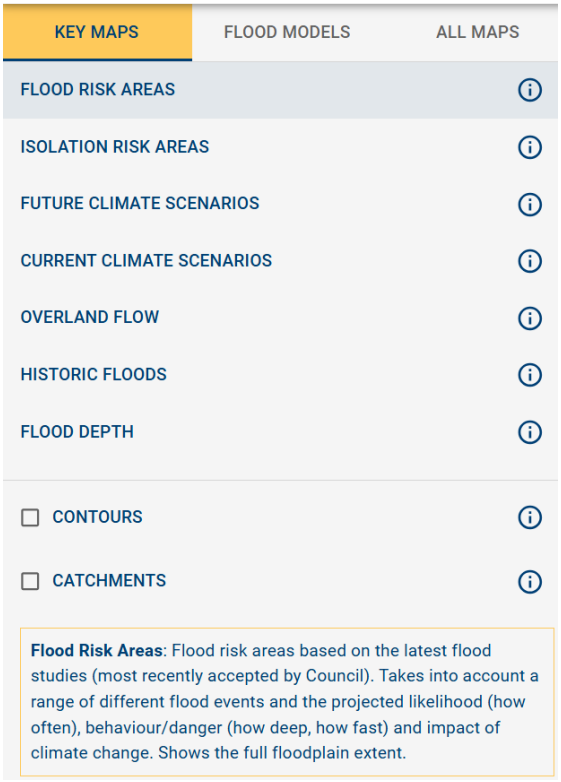


Some information on the map may only be visible at certain scales. For example you will need to zoom in to see the street numbers, or zoom out to see the suburb boundaries.

As you turn information on in the Key Maps or Flood Models tabs, the Portal will remember your selection when you switch between tabs. This allows you to go back to a tab and see what you were looking at before you jumped to the other tab. This 'memory' only works in the current session (i.e. if you close the Flood Portal and/or your browser and reload it, the maps will return to their default state).

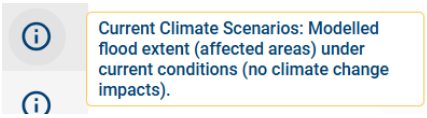
Key Maps

This section explains the information on the Key Maps tab. This tab loads by default when you launch the Portal. It is designed to be easy to use and present the information that people most commonly need to understand future flood risk.



The Flood Risk Areas map will be displayed when the Key Maps tab loads. To learn more about flood risk categories please see the Latest flood risk section.

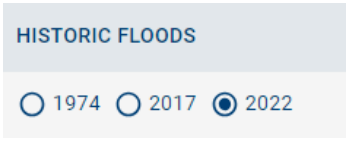
On the Key Maps tab you can click on any of the maps **one at a time**. At the bottom of the tab you will see a description for the map you have currently selected. To learn more about any of the maps, use the info icon next to them.



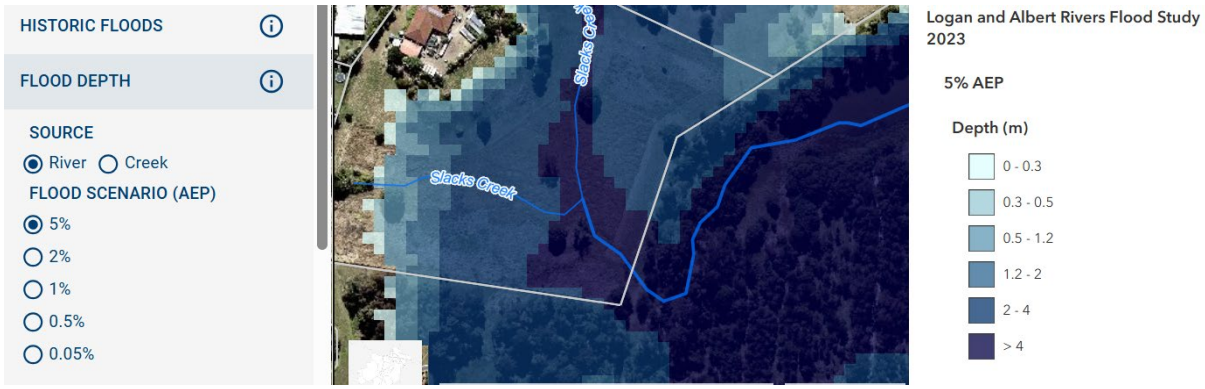
The Contours layer can be turned on in addition with any map you have selected. It is a very large dataset and takes a few seconds to load after you have ticked the box to turn it on.

Catchment boundaries can also be turned on. These natural drainage areas are the extents covered by flood studies. It is possible that a property may fall within more than one catchment.

The Historic Floods option provides maps, based on the best information Council has, for the most significant actual flood events Logan has experienced in recent history. By default the most recent flood will be displayed. The map shows the extent of the flood (i.e. the affected areas) but may not be complete. There may be other sources of flooding that have impacted properties which are not represented on the map.



The Flood Depth option allows you to find out how deep future floods may be, based on the flood studies completed. You can view the flood depth information from river or creek studies, depending on what is relevant in the location you're currently looking at. You can also look at different flood scenarios. A flood with a higher chance of happening in any year (e.g. 5% or 1 in 20) is likely to be a less severe flood than one which happens less likely (e.g. the 0.05% or 1 in 2,000 chance flood, while rarer, is more severe).

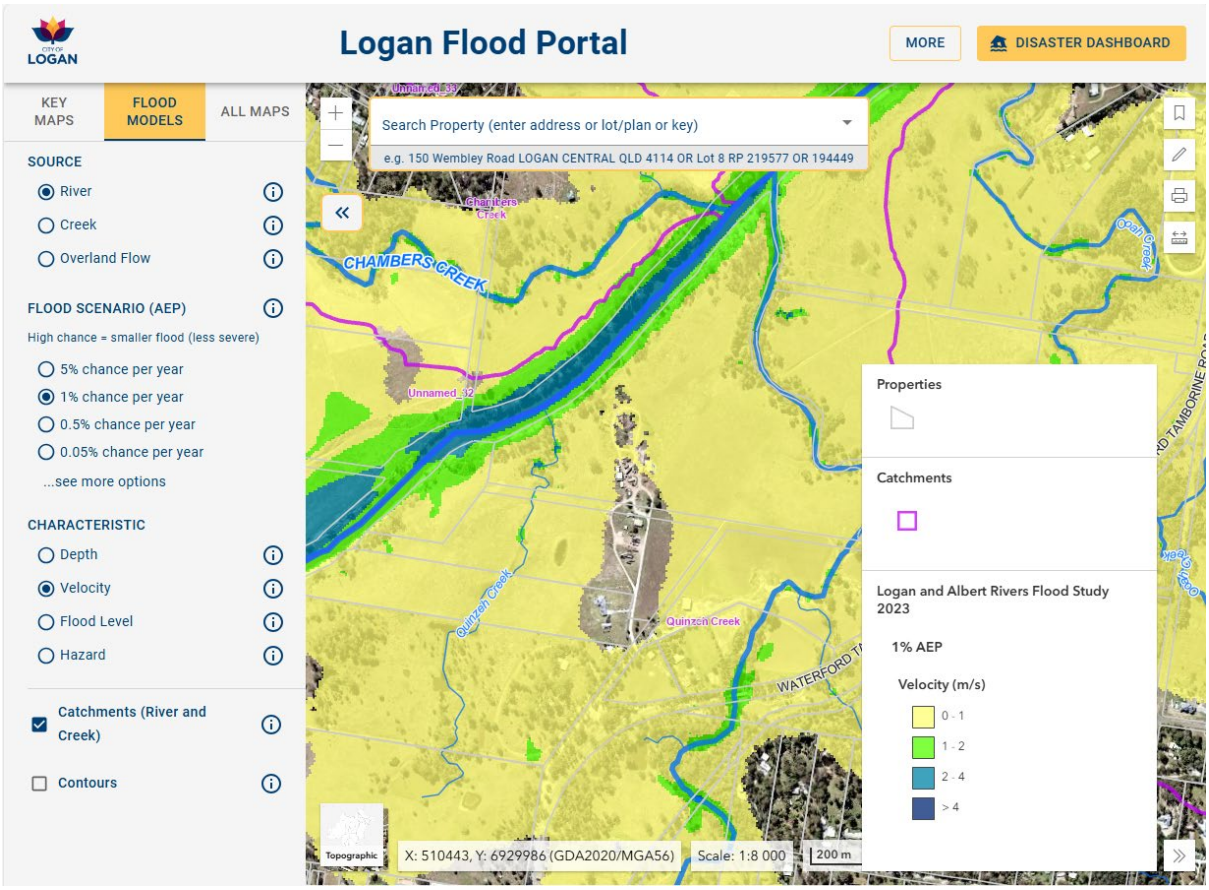


The predicted depth of the floodwater is measured in metres above the ground and is represented on the map by different shades of blue. Use the legend to identify how deep the water could get based on the flood studies.

The flood depth map does not represent any actual flood event. It is a prediction of what could happen, based on the flood studies undertaken by industry professional in accordance with all of the required standards, policies and legal frameworks.

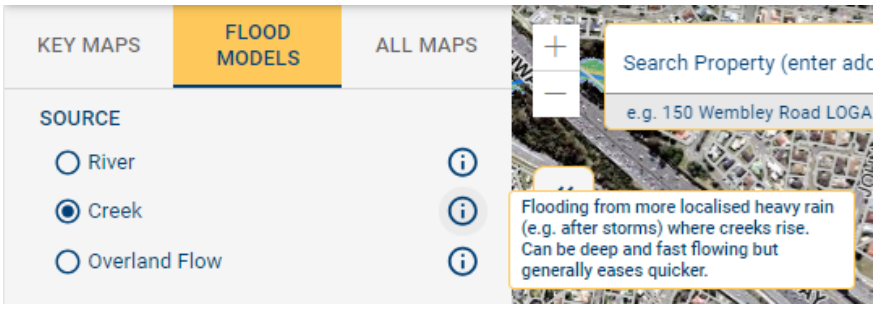
Flood Models

The Flood Models tab presents a simple way to look at the maps from the completed flood studies that have been accepted by Council. The flood study documents, in PDF form, are available on Council's website (see Flood).



Flood source

You can choose to view maps from the river flood study or the combined maps from the multiple creek flood studies. The map legend will list the name of the flood studies and the year in which they were completed. Depending on where you are in the city, river or creek may be applicable. Some areas of Logan are impacted by both sources of flooding.



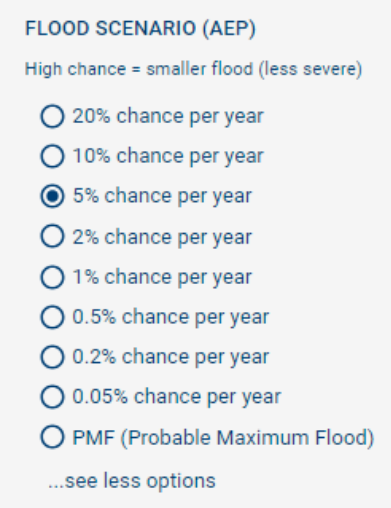
River flooding normally happens after a significant rainfall event lasting 1-3 days. There is normally a reasonable warning time, and then flooding takes longer to recede. Creek flooding generally happens after a more localised event such as a thunderstorm, where creeks rise and

water flows over the banks. There is a shorter warning time but generally the flooding eases faster.

You can also choose to view the overland flow maps. Overland flow, sometimes called stormwater flooding, happens when the capacity of stormwater pipes and channels is exceeded, or where there is no stormwater network. The overland flow map shows the path that surface water or runoff takes across the ground from higher areas of the catchments to a watercourse, channel or gully. The flood scenarios and characteristics are not relevant for overland flow; those sections of the Flood Models tab will be disabled when you are viewing the overland flow map.

Flood scenario

The flood studies consider potential future floods of many different sizes. They are expressed in terms of the likelihood of a flood of that size or larger happening in any given year. Technically this is called the Annual Exceedance Probability (AEP). For example, a 5% chance flood has a 1 in 20 chance of happening or being exceeded each year. This will generally be a smaller, less severe, flood than one with a 0.5% chance (or 1 in 200) of happening or being exceeded each year.



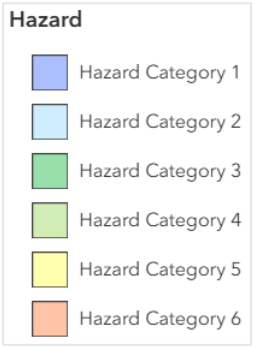
Viewing maps for the PMF, or probable maximum flood, will show you the full extent of the floodplain for the river or creek catchments you are viewing. This is based on modelling for the largest flood that could conceivably occur.

Characteristic

Each of the flood studies considers flood behaviour and impact in terms of:

- **Depth**, being how deep the floodwater may get, measured in metres above the ground
- **Velocity**, being how fast the floodwater will flow, measured in metres per second
- **Flood level**, being the water surface level, measured in metres Australian Height Datum (AHD), where zero is sea level

- **Hazard**, being derived from depth and velocity (i.e. deep water flowing fast presents a higher hazard). Hazard is classified from H1 to H6 as set out in the table below.



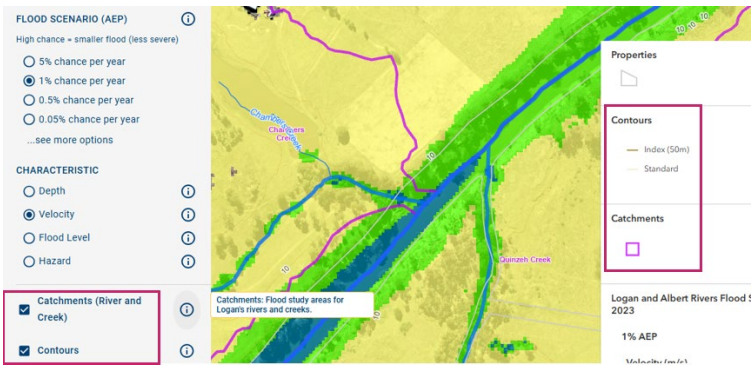
#	Description of flood hazard category
H1	Generally safe for vehicles, people and buildings.
H2	Unsafe for small vehicles.
H3	Unsafe for vehicles, children and the elderly.
H4	Unsafe for vehicles and people.
H5	Unsafe for vehicles and people. All building types vulnerable to structural damage. Some less robust building types vulnerable to failure.
H6	Unsafe for vehicles and people. All building types considered vulnerable to failure.

The map legend will provide helpful information for interpreting the information on each of the characteristic maps.

There is also further information about the terms and concepts used on the Flood Models tab in our Glossary. You can also use the info icons next to each map to learn more about what each map will show you.

The Flood Models tab is designed to make it easy to see a single view at a time. It also presents the creek studies as a combined view. If you want to see multiple maps at the same time, or look at the creek studies individually, please refer to the All Maps tab.

You can also turn on the **catchments** layer and/or the **contours** while viewing information on the Flood Models tab. This may help you understand where water flows based on the natural drainage areas and points of equal elevation.



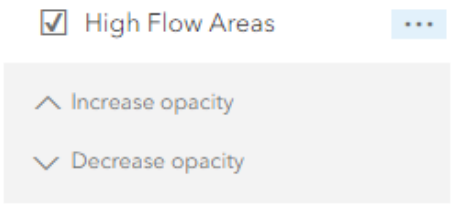
All Maps

The All Maps tab provides full control over the visibility of all of the maps available in the Logan Flood Portal. You can turn maps on and off in any combination and adjust the transparency (increase or decrease opacity) so that you can more easily see layers that may be underneath.

All of the maps available on the other tabs (Key Maps and Flood Models) are also available on the All Maps tab. It does not work the other way around (i.e. some of the maps are only available on the All Maps tab).

The map legend will be dynamically adjusted to include or exclude different layers as you turn them on or off. If needed a vertical scroll bar will be available so that you can access the full list of symbology for visible layers. You can collapse the legend at any time to get more room on the map window.

To adjust the transparency of a map layer, click on the ellipses (3 dots) on the right hand side of the layer name. This will 'drop down' the option to increase (make darker/stronger) the opacity or decrease it (make the layer lighter on the map so that you can see what's underneath it). Click on the ellipses button again to collapse the increase/decrease opacity options for the selected layer.



For each of the flood studies, you can expand each flood scenario and see:

- Hazard (based on a combination of floodwater depth and velocity)
- Depth (in metres above the ground)
- Flood level (in metres AHD, where sea level is zero)
- Velocity (in metres per second)

The example shown below is for the Logan and Albert Rivers flood study from 2023, showing the 1% flood (one that has a 1 in 100 chance of happening in any given year) and the hazard mapping. To learn more about flood hazard categories please see the Characteristic section.

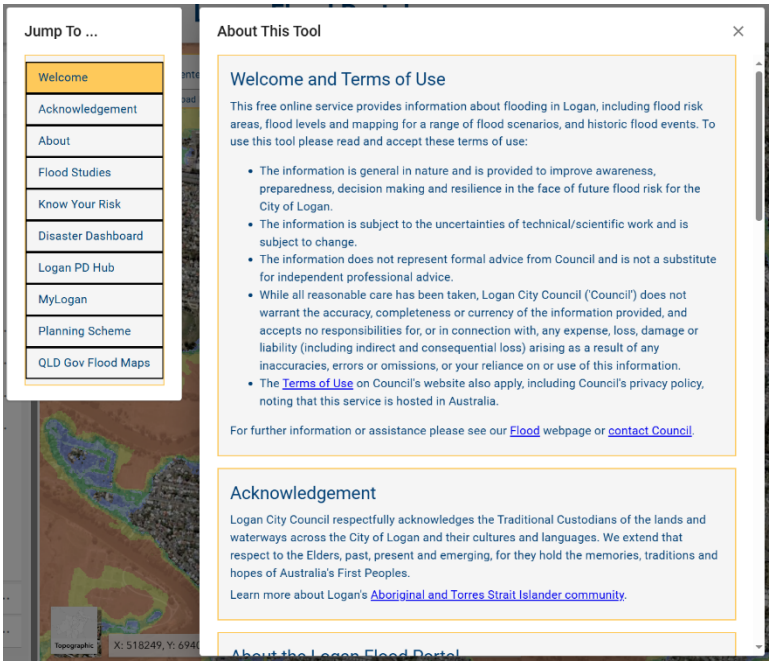
More

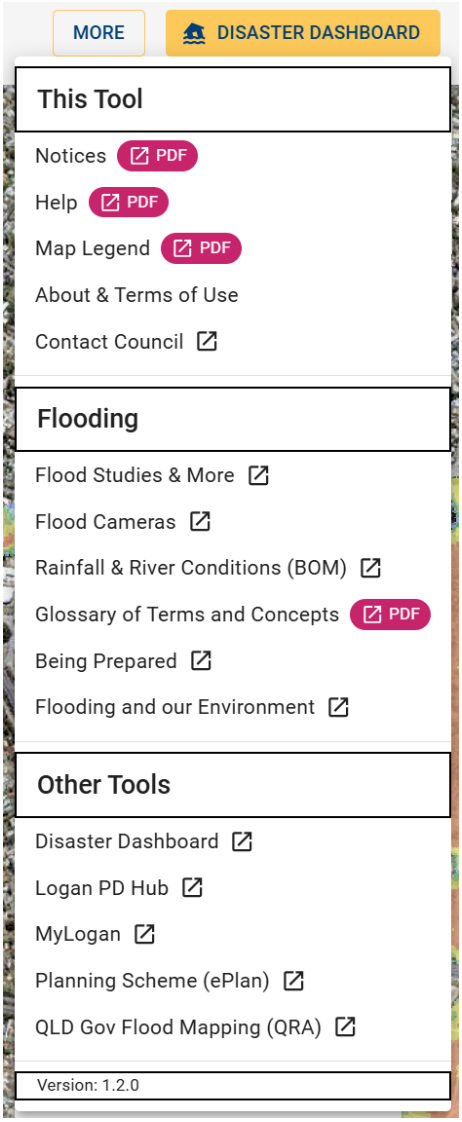
The More menu provides access to a range of further information and tools that may be useful to help you learn more about flooding in Logan. The Disaster Dashboard button, next to the More menu, remains available at all times.

During a flood event or emergency, please go to the Disaster Dashboard.

The icons next to each menu option indicate whether the option will:

- PDF open a PDF document, which will happen in another tab on your browser
- launch another tool, website or page, which will happen in another tab on your browser
- present further information in the Logan Flood Portal (such as the About & Terms of use option, illustrated below).





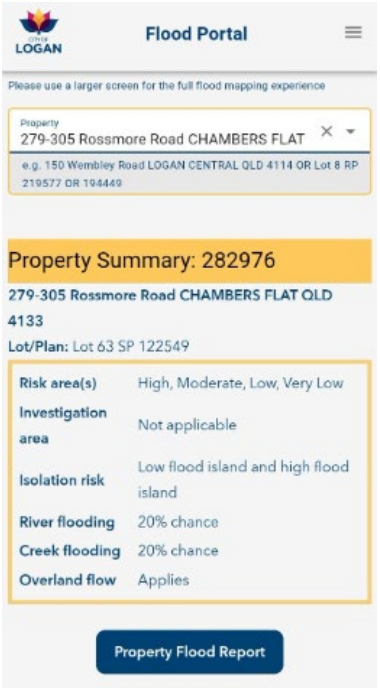
There is a range of other information available to help you learn more about managing flood risk. This includes:

- Council's Flood web page, which includes videos and information about our Flood Studies Review Program
- our risk-based flood mapping fact sheet
- our glossary of terms and key concepts or the flood terms and definitions on the Queensland Reconstruction Authority website.

Troubleshooting

The table below lists some common things people observe which may cause frustration.

Frustration	Suggestion
The map is wrong – the area shown has never flooded.	Most of the maps show possible future flood risk. Only the Historic Floods maps show an estimation of an actual flood event that has happened in Logan. The flood studies are undertaken using a rigorous framework of standards, policies and legislation, and use industry best practice. They are published in this tool to provide information about what could happen, and how likely different sized floods are. If you want to discuss any of the mapping in more detail, please contact Council.
The Flood Models and All Maps tabs are disabled – I can't click on them.	To help the Flood Portal load quickly, the Key Maps tab is prioritised and the other tabs load in the background. The background loading of the other 2 tabs (Flood Models and All Maps) may take a few seconds due to the large amount of information being loaded. If you have waited for an extended period and the tabs are still not enabled please try: • a deep refresh of your browser cache (usually Ctrl+F5 in Microsoft Edge or Google Chrome browsers) • clearing your all time browsing history.
I can't see the Property Pop-up properly because it's behind other things on the map.	The map window can get busy. If the property pop-up is partly obscured by another feature such as the property search or map legend, you can pan the map (drag it around with your cursor) so that the selected property is in a different position and the pop-up is clear of other obstructions. To get more map room you can also collapse the map legend and the layer control tab.
Where are the actual flood study documents?	You will find the reports for flood studies Council has accepted on our Flood webpage. There is also information there about our program and the estimated delivery dates of additional flood studies or updates.

Frustration	Suggestion
The Flood Portal doesn't work on my mobile phone.	The large volume and complexity of mapping information available in the Flood Portal means it is best used on a device with a larger screen (tablet, laptop or desktop computer). The property search, summary and report is available on a mobile phone, however the interactive mapping is not. The report may take a while to load on a phone.   Depending on the size of your phone you may be able to turn it sideways (into landscape mode) and the Flood Portal will display, but the map window will be very small.

Revision history

Version	Date	Description	Author
1	27-Nov-2023	Original version published for launch	Cheryl Lawie
2	30-Nov-2023	Minor changes to include further information about risk categories	Megan Gould
3	17-Feb-2025	Updated to reflect functionality enhancements in version 1.2.0	Paul van-Cuylenburg
4	5-Mar-2025	Updated screenshots to reflect updated mapping introduced in TLPI No. 1/2024	Cheryl Lawie