

Flood Information Portal (FIP) A Case Study

Spatial Innovation and Lockyer Valley Regional Council

"The Lockyer Valley is well known for flooding events, and we were manually generating flood reports for each property upon request.

We chose Spatial Innovation to automate this process for us due to their clear understanding of our needs, and experience delivering similar projects.

We couldn't be happier with the result!

The team over delivered and did it on budget with minimum fuss in the process. Flood data is available, accessible, and easy to interpret. And reporting is down from over 20 days to minutes."
(Anjana Ranatunge, Coordinator ICT Projects & Business Operations)

The Challenge

The Lockyer Valley experienced a major flood event in 2011 that resulted in tragic loss of life and many millions of dollars in property and infrastructure damage. This resulted in a perception that the entire area was flood impacted and produced a downturn in investment as well as a significant resource drain on Council to supply relevant flood information.

The Lockyer Valley Regional Council (LVRC) currently has a Temporary Local Planning Instrument (TLPI) in effect for the entire region with respect to flooding, and whilst publicly available does not provide the detailed flooding extents and impacts at a Lot level.

Council receives many requests each year for information on flood impacts and behaviours. Flood information forms a critical part of Council's planning and assessment processes.

The Temporary Solution

Since 2011, Council has developed a sophisticated manual system that has reached a point of industry recognition for reliability but is resource intensive and time consuming.

Council receives an average of 20-60 applications a month for flood reports and each of these take approximately 3-3.5 hours to complete. The average turnaround time to complete each enquiry is 20 -25 days. This approach was not sustainable.



The Lockyer Valley region is ideally situated being less than a one hour's drive from inner city Brisbane. It straddles the Warrego Highway and covers an area of approximately 2,200 sqkms.

The population is growing quickly and there are currently over 41,731 residents, according to the ABS. Projections by the Department of Infrastructure and Planning show that the Lockyer Valley region's population is expected to grow to 57,443 by 2013 or by an average of 2.4% per annum.





Why take the risk and develop a solution?

Whilst existing systems in use at other Councils provide this information on a Lot-by-Lot basis, the Flood Information Portal (FIP) has been developed with innovation in mind to provide data at user selected locations within a Lot.

The FIP approach is ideal for larger rural and rural-residential properties where flood impacts can vary widely within a Lot.

Easy and efficient access to up-to-date, detailed and targeted flood information will improve flood risk and development outcomes, both for the community and for Council.



The Overview

This project has developed an automated on-line system to provide up-to-date and detailed flood information on most properties in the Lockyer Valley Regional Council area. The project has been selected because currently LVRC has a resource intensive and time-consuming manual process to provide this information to the public.

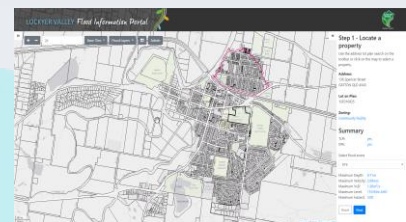


Results

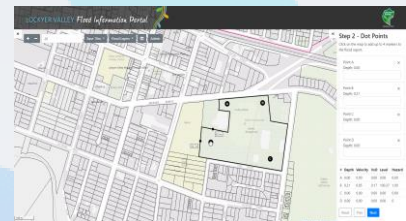
- ✓ A public facing map interface that is scalable in terms of user numbers and technical function allowing users to access flood reports simply in a three-step process or deep dive into more detailed information.
- ✓ The ability to manage exception areas where more detailed investigation is required by a council officer, prior to issuing a report, automatically triggered through the map interface.
- ✓ An internal council interface to streamline the delivery of the internal reports that have to be assessed by Council Officers.
- ✓ The ability to select points on a Lot, and deliver information on those specific points, giving the flood information context to the activity taking place. Resolving the issue of the limited value of general flood information at a Lot level.
- ✓ The majority of flood reports in the requester's inbox in a matter of minutes, replacing the 20-to-25-day average turnaround time and significantly reducing the drain on Council resources.
- ✓ investigative tools to better understand flood constraints and improve the quality and appropriateness of development proposals. This pre-qualification will provide higher quality applications.
- ✓ No cost to the public for Flood Reports.
- ✓ Ongoing cost and support are sustainable.

Simple 3 step process

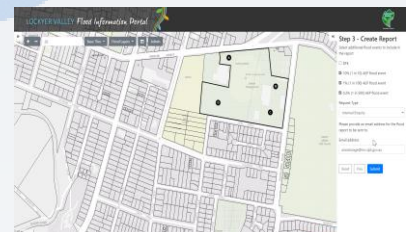
Step 1 – Select a Lot



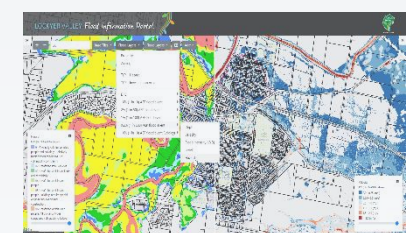
Step 2 – Select points on the Lot



Step 3 – Enter email address to send report.



Or carry out an analysis



- ✓ Enable officers to efficiently carryout assessment/reviews to identify shortcomings or omissions in the data sets, thereby identifying areas for improvements to support the development of operation and policies.
- ✓ Align with the state land use planning system. Allow streamlined of the development assessment process by the applicant's ability to obtain flood data immediately, thereby providing information to help prepare an application.
- ✓ Additionally, Council staff will have access to the system to check compliance with flood overlay codes, where applicable.



The Future

The LVRC Flood Information Portal has taken the delivery of flood information to a whole new level in terms of efficiency, data availability and context, given the ability to select points within a Lot. The team believes this platform will become the benchmark for delivery of flood information in a Local Government environment.

Following user feedback, a number of additional functions have been identified along with other areas that the Flood Information Portal may be adapted for use within, such as Civil and Vegetation Management. This continuous improvement will be maintained over the lifecycle of the software.

Spatial Innovation is in the process of commercialising the Flood Information Portal and making it available to other Councils across the State and country, leveraging the significant development investment in the solution.