A point of reference for Tasmanian land information

THIS ISSUE
Historic street maps
Emergency management
Locational intelligence
CLAC on track
Client Services
Service Tasmania
locationmatters is produced by the Information and Land Services Division of the Tasmanian Department of Primary Industries, Parks, Water and Environment (DPIPWE).

This newsletter aims to provide professionals and the general public with interesting articles and news about land information in Tasmania.

We encourage you to provide feedback or ideas for future issues and hope you take advantage of this opportunity to keep in touch. Comments can be emailed to geodata.clientservices@dpipwe.tas.gov.au

An electronic version of this publication can be found at: www.dpipwe.tas.gov.au/locationmatters

© Copyright State of Tasmania, 2011

CONTENTS

Historic street maps 3
Emergency management 4
Locational intelligence 5
CLAC on track 6
Client Services 7
Service Tasmania 7
News in Brief 8

Cover image
Historic map index for James Sprent’s book of survey plans from the 1840s (see article on page 3).

Message from Kate Kent...

In the past year
we’ve seen many extreme weather events and a devastating range of natural disasters in communities around Australia and in New Zealand. Floods, cyclones and severe storms caused great personal and financial hardship in many parts of Queensland, New South Wales, Victoria and, to a lesser extent, in northern Tasmania.

The emergency management experience associated with many of these natural disasters graphically illustrates the critical importance of spatial information in response, rescue, recovery and restoration activities. There is increasing recognition of the need to automate, integrate, manage and display relevant information about emergency events in a spatial context – where it can be rapidly combined, analysed and accessed through a ‘map’ view.

The use of spatial information allows important new analyses and views of historical and current data to determine the likely and actual extent of the event and reliably predict who and what is at risk. Displaying data spatially communicates concepts and scenarios quickly and efficiently in an environment where speed and accuracy are crucial.

In this edition, we take a closer look at some of the connections between this Division and Tasmania’s emergency service organisations to illustrate how spatial information is being used for the benefit of the Tasmanian community.

Kate Kent
General Manager
Information and Land Services Division
Department of Primary Industries, Parks, Water and Environment

Have your say...

This newsletter is designed, written, edited and produced in-house by the Information and Land Services Division of the Department of Primary Industries, Parks, Water and Environment.

Our aim is to keep clients and members of the community informed about new developments and progress with existing projects, as well as introduce you to staff and the work they do.

Please take a few minutes to tell us what you think by completing the short questionnaire at www.dpipwe.tas.gov.au/locationmatters or email your comments to geodata.clientservices@dpipwe.tas.gov.au

Your feedback will help to ensure that we can continue to provide you with timely, relevant information in the most cost-effective format.
In February 1841, surveyor James Sprent undertook an extensive and large scale survey of the greater part of Hobart Town, producing an impressive set of over seventy plans in minute detail, right down to individual buildings. These plans were later bound into a large volume, commonly referred to as Sprent’s Book.

More than a century and a half later, Sprent’s Book has been scanned, georeferenced and integrated into one seamless, digital mosaic, which can be displayed as a layer within a GIS or desktop mapping environment. Many of the buildings depicted in the 1840s are still in existence today and Sprent’s work was so accurate that no distortion was needed to fit his plans to today’s property boundary data.

The son of a Scottish publisher, James Sprent arrived in the colony of Van Diemen’s Land in 1830, a time of increasing disputes between landholders, mainly due to the piecemeal way in which land had been measured. He was appointed Surveyor-General of Tasmania in 1857 after labouring under two predecessors of somewhat dubious ability.

No one could have foretold that, 170 years on, Sprent’s work would still be in use and published in digital format.

As recently as 2009, James Sprent’s historic plans were used in the Coroner’s inquiry into Hobart’s Myer store fire.

The digitisation of Sprent’s Book was undertaken as part of a comprehensive archiving project. Plan scanning commenced in 2004. Later this year, Sprent’s original works and other historic survey records will be formally handed over to the Tasmanian Archive and Heritage Office.

Sprent’s digital mosaic can be viewed on LISTmap by selecting Other Imagery in the Imagery layer category.

Robert Higgins
Manager - Archiving Project
In a world increasingly beset by natural and man-made disasters, geographic information systems (GIS) are proving to be valuable tools for decision-makers.

No other technology allows for the visualisation of an emergency or disaster situation as effectively as GIS.

By capturing the accurate physical location of an event in a GIS environment — and aligning other relevant features, events, conditions or threats with that geography — emergency managers are armed with ‘real time’ information about the situation at hand.

Tasmania’s emergency management organisations coordinate responses to incidents through collaboration with multiple government departments at Federal, State and local levels. The use of GIS helps to reveal a more complete picture for decision-making across many audiences and at different management levels.

At the heart of this work is the Emergency Services GIS Unit (ES-GIS) in the Department of Primary Industries, Parks, Water and Environment (DPIPWE). The unit was established in 2004 as part of a joint initiative between Tasmania Police and DPIPWE. The major objectives of the initiative were – and still are – the capture, integration, maintenance and delivery of critical emergency management data layers, and the provision of 24/7 on-call GIS and desktop mapping support to emergency management organisations during major incidents. The unit also provides GIS and desktop mapping support for internal departmental requirements, including Parks and Wildlife Service fire management and emergency response activities for biosecurity and oil spill incidents.

GIS is highly effective in all four phases of the emergency management cycle: planning, preparedness, response and recovery. While the first two phases revolve around tasks prior to an incident and the latter two focus on post-incident efforts, this is a cyclic process, where what happens after an incident influences and informs future planning and preparation.

Planning

Emergency management planning involves mapping and analysing both natural and technological hazards, modelling potential impacts and developing mitigation strategies. To understand the vulnerability of a community in specific situations, emergency managers need access to a wide range of spatial information based on key datasets such as critical infrastructure, roads and property information.

Preparedness

This phase generally involves activities undertaken to prepare for an imminent disaster. Through the effective use of GIS, emergency managers are better able to understand and anticipate an impending event.

Before the flood events in Tasmania earlier this year, the north of the State was experiencing consistent rainfall and the Bureau of Meteorology forecast that higher than normal rainfall events would continue across northern Tasmania for some time. In preparation, ES-GIS developed a number of maps for high-level briefings. These showed the extent of potential inundation in Inveresk and Invermay based on forecast rainfall and a failure of the existing levee system. The maps provided decision-makers with an understanding of what could occur and allowed them to prepare for possible scenarios. GIS was also used to list and analyse community facilities and infrastructure at risk.

Training is an integral part of preparing for an emergency incident. Activities such as national counter-terrorism exercises provide opportunities to identify spatial information gaps and test the system’s operational effectiveness.

Response

Of all the stages of the emergency management cycle, GIS excels in the response phase. The capabilities of GIS allow it to convey large amounts of information to a large number of people in
a short period of time. Through a concept known as a Common Operating Picture, different groups of emergency managers can have access to accurate, point of truth, geographically linked information.

Relevant incident information is depicted through digital or hard copy maps and other electronic means, appropriate to the tactical, operational or strategic needs of decision-makers. For example, on-ground fire-fighters may receive a different map view to that used in the State Crisis Centre.

Recovery

The recovery phase begins immediately after an incident and can take place in parallel with response. If the question commonly asked during the response phase is ‘what has happened’, then questions asked during the recovery phase are often ‘where is help needed’ and ‘what can I do to help’.

By capturing the location of loss, damage or disruption and viewing this information with other relevant spatial data, it becomes clear where recovery efforts should be concentrated. Assessments can be undertaken in a number of ways, including the use of aerial or satellite imagery and on-ground GPS-enabled Personal Digital Assistant (PDA) devices.

As a tool for all phases of the emergency management cycle, GIS technology is unmatched.

In a crisis, timely access to accurate information about the affected area – illustrating who and what is at risk – is vitally important. This information can be wildly diverse in nature, but GIS provides a common platform on which all data can be quickly placed, measured and analysed.

Aaron Cashion
Manager - Emergency Services GIS

Tasmania Police’s first major foray into location-based intelligence for everyday policing came about with the commencement of the Automated Vehicle Location Project in 2008.

The primary aim of the project was to enhance the safety of police officers by ‘GPS-enabling’ police vehicles.

At the time, Tasmania Police already had access to high quality spatial data – most of it sourced from the Department of Primary Industries, Parks, Water and Environment — including property information, roads, aerial imagery and critical infrastructure data, such as power transmission and distribution networks. This information was generally used for incident management but not widely used on a daily basis.

With the subsequent installation of ‘Mobile Data Terminals’ into police vehicles, this spatial data is now able to be combined with the location of the police vehicles to provide officers in the field, radio dispatch room or command centre with a more complete picture of any situation and the ability to make timely decisions that will deliver efficient and effective policing services to the community.

As pointed out by Commander Richard Cowling, “there is no doubt that the introduction of this technology, coupled with access to accurate spatial information, will continue to provide Tasmania Police with the opportunities and tools required for effective policing in our communities”.

Northern District Police Commander Richard Cowling using spatial information for effective policing.
Photo courtesy of The Examiner Newspaper.
Nearly 16,000 hectares of previously unallocated Crown land in northern and western Tasmania were reserved during April 2011 in the proclamation of ten new conservation areas, two new regional reserves and extension of an existing regional reserve.

The new reserves are situated along Tasmania’s north and west coasts and on the Bass Strait islands (see map below). These are the first in a total of around 78,000 hectares in 1,357 parcels of Crown land assessed during the Crown Land Assessment and Classification (CLAC) project as suitable for reservation under the Nature Conservation Act 2002.

Completed in 2008, the CLAC project assessed all unallocated Crown land and public reserves in Tasmania to enable informed decisions on the most appropriate future ownership, management and use of that land. The project included a comprehensive public consultation process that considered the views, comments and ideas of interested parties.

More than half the land assessed was recommended to become conservation areas. A number of large tracts of land were approved as regional reserves, while others were approved as nature reserves, game reserves or historic sites.

While many of the proposals were completed prior to 2008, the majority of recommendations to reserve land under the Nature Conservation Act 2002 were not progressed due to resourcing concerns from the Parks and Wildlife Service, who would be responsible for managing the extra reserved land. State Cabinet agreed to defer proclamation of the reserves until agreement on resources could be reached.

Additional funding was provided in the 2010-11 State Budget, and a new project was initiated in late 2010 to coordinate proclamation of the proposed reserves.

This work involves a complex array of steps and the involvement of a large number of individuals. What intially looked like a relatively straightforward process has, in fact, more than forty specific steps and involves the services of staff across nine branches within five separate divisions of the Department of Primary Industries, Parks, Water & Environment. The Office of Parliamentary Counsel, the Minister’s Office, the Tasmanian Parliament and Executive Council also have roles in the process.

A quality assurance check is undertaken for each reserve. Similar reserves are then batched into groups of up to ten and forwarded to the Office of Parliamentary Counsel for proclamation drafting.

Now that the project is up and running, a steady stream of new reserves will be coming on line over the coming year and beyond. Draft proclamations have also been completed for eight new or extended regional reserves and ten new or extended State reserves, which are due to be proclaimed in late May/early June.

Penny Wells
Manager - Conservation Projects
Policy and Projects Group
Service Tasmania continues to look ahead to the delivery of more efficient, convenient and cost-effective services to meet the future demands of local communities.

Service Tasmania was established in 1998 to improve access to government services for Tasmanians and to provide customers with convenient options for accessing those services. There are currently 27 Service Tasmania shops, located throughout metropolitan and regional areas of Tasmania.

A key focus for Service Tasmania's shop management team is to develop and continuously improve services and facilities to support the changing needs of customers. You will almost inevitably find a Service Tasmania shop that is undergoing some form of customer-focused upgrade. The most recent location to receive such treatment is Longford.

The Longford shop has experienced significant growth in business, increasing from 12,000 to over 30,000 transactions a year. To accommodate that growth and meet the projected needs of the local community, the shop was moved from its old site in Marlborough Street to a shopfront in the newly developed Longford Village Plaza.

By moving to a more convenient location with improved facilities, staff at the Longford shop are able to provide better customer service and a more pleasurable experience overall.

Service Tasmania is also working with other Government organisations on delivery of a range of combined government services, accessible through a local community 'Hub'.

The State Government’s Queenstown Hub initiative will see the creation of a combined service centre for the West Coast community by June 2011. This Hub will combine a Learning and Information Network Centre (LINC) with a Child and Family Centre, as well as provide access to Service Tasmania, Skills Institute and Library services.

This initiative is expected to increase community participation in early years health and family support services, community learning, education, literacy and information services, at the same time minimising the cost of providing these services.

Establishment of the Queenstown Hub will be followed by the creation of similar centres in George Town and Bridgewater in 2012.
Land Tenure dataset now available

A new Land Tenure spatial dataset has just been released. This contains a representation of the commonly accepted tenure classifications including Reserved Land, State Forest, Crown Land, Private Land and Private Reserves. This dataset has been generated from information extracted from a number of other spatial datasets including Cadastral Parcels, Public Land Classification, Leases & Licences, Private Reserves and Local Government Area Reserves. The data is presented in a non-overlapping manner, similar to the hard copy TASMAP Land Tenure maps that were produced some years ago. The data is now available through LISTmap layer management under the Administrative category. For more details, email Client Services geodata.clientservices@dpipwe.tas.gov.au.

LIST documents available as PDFs

Did you know that most title and valuation documents are now available through LIST in PDF format? This means that documents can be easily printed and saved, with the added bonus of images provided at full resolution. Scanned dealings will also be available as PDFs in coming months.

TASMAP user survey

Thanks to everyone who participated in the recent TASMAP user survey. Over 1400 responses were received from map users in every state of Australia as well as the USA, Canada, England, Scotland, Germany, Switzerland, France, Japan, Singapore, China and New Zealand. The iPad offered as an incentive to participate was won by Greg Toman from Queensland. Feedback from the survey will be used to assist with future planning.

Climate Futures Data

The Climate Futures for Tasmania project is the Tasmanian Government’s most important source of climate change projections at a local scale. The project, managed by the Antarctic Climate and Ecosystems Cooperative Research Centre, is an essential part of Tasmania’s climate change strategy. It provides the first fine-scale climate information for Tasmania by downscaling six global climate models with two emission scenarios to generate climate information from 1961 to 2100.

As part of the project, 24 new data layers illustrating future climate projections are now available through LISTmap. These include pan evaporation, relative humidity, mean temperature and annual rainfall for both high and low emission scenarios. Over the next few months, additional variables will be added, including seasonal rainfall, frost risk days, growing degree days and standard precipitation index.

These layers can be found in the Climate Change category through the Manage Layers tab. Once a layer is selected and displayed, related information is shown under the Information tab by highlighting the name of the active layer and using the i tool.

TASMAP forward program

The forward program for map revision in the TASMAP 1:25 000 and 1:100 000 topographic series is now available on the TASMAP website. The program shows maps scheduled for revision over the next 12 months, as well as estimated completion dates. More information can be found at www.tasmap.tas.gov.au.

New TASMAP products

Recently released map products are now available for purchase online at www.tasmap.tas.gov.au or from Service Tasmania shops, TASMAP resellers and agents.

I:25 000 Topographic/Cadastral Maps
- Wylds
- Tea Tree
- Hastings
- Montacute
- Adamsfield
- St Helens
- Hardwicke
- Liena
- Sorell

I:100 000 Topographic Maps
- Mersey
- Sophia

National Park and Day Walk Maps
- Maria Island NP
- Cradle Mountain - Lake St Clair NP ( waterproof)
- Cradle Mountain - Lake St Clair NP
- Cradle Mountain Day Walk
- Wellington Park Recreation
- Bruny Island Walks

Other Maps
- Visitors Map of Tasmania

More details about recent releases can be found at www.tasmap.tas.gov.au.

Now available online at www.tasmap.tas.gov.au