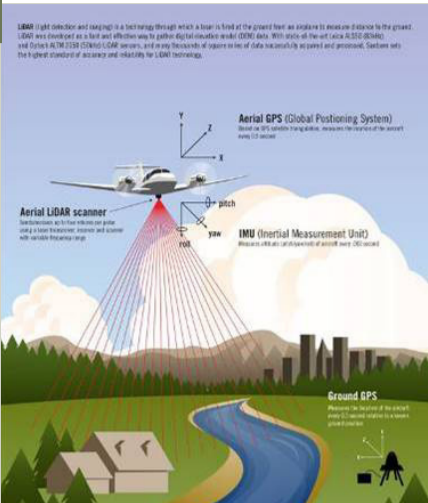
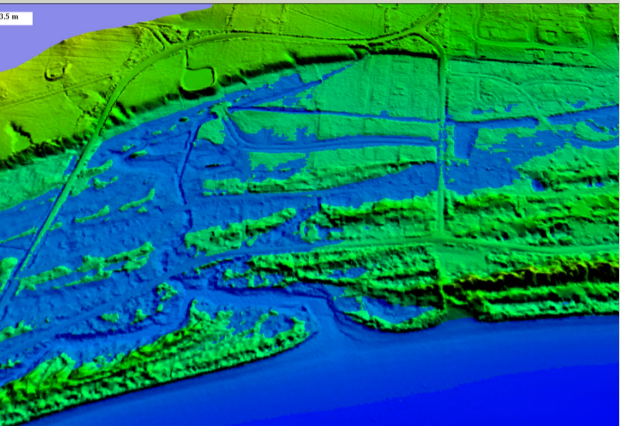


Climate Change and Bass Coast

Key climate change impacts for Bass Coast

- Hotter days and more heatwaves
- Drier days and more frequent and severe droughts
- Increased bushfire risk
- More frequent and severe catchment flooding in rivers and floodplains
- Coastal storm surges and foreshore erosion/recession
- Rising sea levels



Council has used the Future Coasts LiDAR data to model the topology to enabled a better understanding of:

- Natural Surface
- Groundwater flows
- Possible Sea level incursion
- Overland flow paths
- Vegetation
- Rural /Urban Interface WSUD

Why is considering Climate Change in Asset Management important?

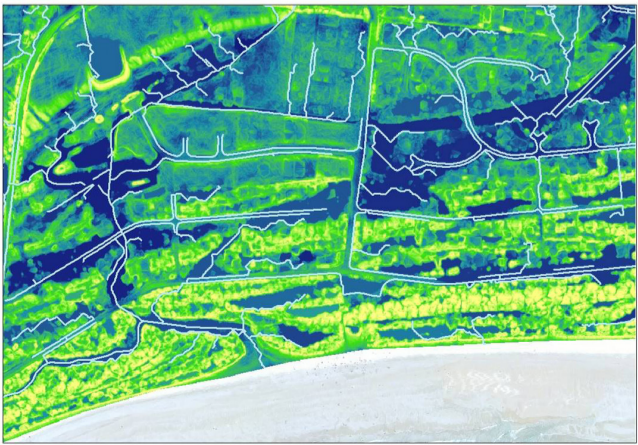
Local governments build, manage and maintain many financial assets. These assets often have a long life expectancy and are therefore likely to be exposed to significant climate change risks. Planning for Climate Change is required to ensure the impacts of climate change are minimized as much as possible. This is essential for building assets which can be impacted by climate change in the following ways:

- Coastal flooding and extreme weather events
- Increased frequency and extremes of flooding and droughts
- Increased risk of heatwaves and bushfires



Where next for Bass Coast?

Bass Coast Shire Council has begun development of an Integrated Water Management Plan (IWMP) to set the direction for the sustainable management of water resources for Council operations and the community. Bass Coast’s Natural Environment Strategy (NES) 2016 – 2026 highlighted the importance of creating sustainable places in tackling climate change. Therefore, Council recently developed an Environmentally Sustainable Design (ESD) Policy for Council Building projects which will provide direction in identifying, planning and implementing best practice sustainable development solutions in its future building projects and assets. ESD will have a positive impact on ongoing asset management through reduced carbon footprint, promoting energy efficiency, water conservation and planning.



Wet Area Mapping in Inverloch

Asset Management (#4) evaluation

Council’s Asset Management Policy, Strategy and/or Plan were reviewed for words associated with managing climate change (eg ‘climate change’, ‘sea level rise’, ‘adaptation’ and ‘resilience’). If any of these words were identified closer analysis of the context was undertaken to assess the extent of how they were considered in the document(s).

No data	No asset management documents found or publicly available.
None	No consideration of Climate Change in asset management documents.
Basic	General statements about Climate Change (eg in the introduction) OR considered in some assert Projects (albeit ad hoc).
Intermediate	Prescribed response/guidance for one Climate Change issue (eg Sea Level Rise) AND/OR one Council function (eg land use planning) only.
High	Detailed inclusion of Climate Change, but is limited to two Climate Change issues (eg sea level rise) AND/OR two Council function (eg land use planning).
Advanced	Climate Change is well considered and includes responses to direct and indirect impacts.

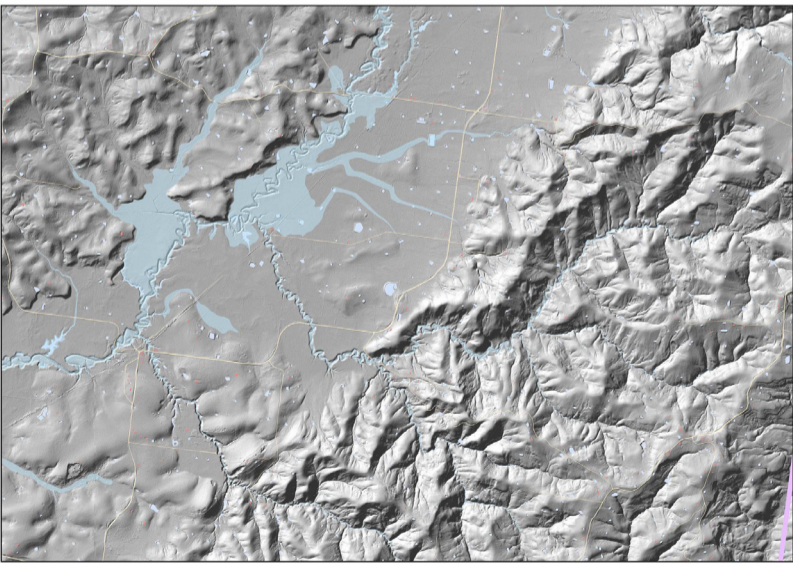
How Bass Coast integrated Climate Change into Asset Management

Bass Coast was an early innovator in the use of the Future Coasts Lidar data providing vital information that informed both Council and the Community. That lead to the Victorian Coastal Inundation data (2012), together with Bathymetric Survey data (2008) being used to hydrodynamically model the water surface of Westernport Bay for 1% AEP inundation Water Surface Elevation at 1:25,000 mapping scale, incorporating 20cm, 40cm and 80cm sea level rise scenarios. (Modelling undertaken by Water Technology Pty Ltd).

This modelling was then used to inform our Planning Scheme and future development in our Land Subject to Inundation Planning Overlay (LSIO), which informs all Asset development whether public or private, eg new dwellings, long term road management, Open Space Planning, Foreshore Management, Drainage design and upgrades.

Council also currently incorporates Climate Change Adaptation into Asset Management, with:

- The inclusion of WSUD Water Sensitive Urban Design features to control water runoff quality
- Drainage Detention to catch high rainwater (quantity) as a sustainable resource
- Building Asset Management Plan 2016 identifies Climate Change as a Risk, and recommends the use of Environmentally Sensitive Design (ESD) principles in Councils operational and capital works planning and design.
- The existing 80-watt mercury vapour street lights were replaced with energy efficient T5 fluorescent bulbs across the Shire between 2012 and 2015. T5 lighting is 60 per cent more energy efficient. Council is further reducing carbon emissions by changing street light bulbs as they reach the end of their life and any new lights with LED’s.



Bass Valley River Floodplain at Kernot

Collaboration

As Climate Change is not defined by Administrative boundaries, Bass Coast understands the need to work in collaboration with Regional and State bodies and works actively to encourage collaborative research into better understanding Climate Change.

- Tertiary Education facilities encouraging PhD Research Internships within our region, and in partnership with the Australian Mathematics Sciences Institute (AMSI) at University Melbourne
- Participation with NCCARF research projects such as “Spatially Enabling Coastal Asset Information 20111, and the use of CoastAdapt, to support effective decision making,
- Victorian Coastal Council (VCC), Gippsland Coastal Board (GCB), South East Council’s Climate Change Alliance (SECCCA), and Regional Water Management Authorities such as Melbourne Water and South Gippsland Water Board.