



WA Coastal Zone Strategy



“Western Australia’s unique natural environment encompasses pristine and diverse natural areas both onshore and offshore, with world-renowned biodiversity, scenic landscapes, heritage sites, marine and coastal areas and places of cultural significance. The clean and beautiful natural environment is a major contributor to the State’s liveability and attractiveness.”

State Planning Strategy 2050

Lights Beach, Denmark. Photo by Tourism WA
Front cover:
Sunrise at Esperancé. Photo by Margaret Pittuck



Busselton jetty. Photo by Department of Transport

foreword

Western Australia has a vast natural coast spanning more than 20,000 kilometres. It is rich in biodiversity, landscape, aboriginal and heritage values.

The natural coastline is invaluable to our State. It offers diverse opportunities for recreation, tourism, commercial, industrial and residential development.

It is also dynamic, continually shifting position and form. It is a fragile and sometimes unpredictable asset.

Approximately 80 per cent of our population lives within 10 kilometres of the coast. Around 80 per cent of the State's tourism activity also occurs in the coastal zone. It is one of our most contested spaces and needs careful management.

The coast is exposed to threats and pressures including erosion and rising sea levels, population growth, recreational activities and coastal development. These are significant planning and management challenges both now and into the future.

This Coastal Zone Strategy outlines the State Government's approach to these coastal planning and management challenges. It provides a framework for collective action to ensure the future of our coast.

The Coastal Zone Strategy provides an overarching view of planning and management covering conservation, tourism, maritime transport, mariculture, resource extraction and recreation.

The Strategy complements the State Planning Policy No. 2.6 State Coastal Planning Policy which guides development and land-use in the coastal zone.

Managing the coast requires shared vision and responsibility. I encourage all West Australians to work together in managing the coast.

Hon Mark McGowan MLA
Premier of Western Australia

*A sustainable coast for
the long-term benefit of the
community and visitors to
the State*



Seagrass mapping, Emu Point, Albany. Photo Andrew Halsall Photography

content

Introduction	1
Intent	2
Vision	3
Goals and objectives	4
Key issues	9
Managing coastal erosion and inundation	13
Roles and responsibilities	16
Further information	20



Meelup Beach, Dunsborough. Photo by Spool Photography

introduction

The coastal zone – or coast – is defined as ‘areas of water and land that may be influenced by coastal processes, which can be any action of natural forces on the coastal environment’. This includes tidal reaches of inland waters such as river mouths and estuaries.

Western Australia’s coastal zone is one of the State’s most valuable natural assets. It is used and enjoyed by much of the local community and is one of the main drawcards for tourists to the State.

The Western Australian coastline is one of the longest in the world - spanning more than 20,000 kilometres (including islands). It includes environments and landforms rich in biodiversity and cultural significance.

The majority of the State’s coast is sparsely populated but the Perth metropolitan area and the South West is densely settled. The coast is an attractive place to live and provides a variety of recreational activities including swimming, boating and fishing. It is an invaluable asset for the health and wellbeing of the community. The coast is vital for the State’s economy in providing locations for ports and other coast-dependant facilities.

There are many competing pressures on the coast. It presents unique planning and management challenges due to its many uses and issues such as coastal hazards and climate change. Coastal erosion and inundation risks associated with rising sea levels are significant challenges.

Further development will occur along the coast to meet current and future needs of the community and industry. A strong land-use planning framework is required to ensure

long-term sustainability. This includes consideration of the physical capability of the coastal land as well as protection, conservation and enhancement of coastal values including covering landscape, biodiversity, aboriginal and cultural issues.

This strategy provides for social and economic needs while ensuring the coast and its values are maintained and enhanced through sound planning and management.

Stewardship of the coast is a shared responsibility with State and local government, public and private organisations, community groups and individuals all playing an important role. The State’s most populated coastal lands are often vested with and managed by local government as coastal foreshore reserves.



South Beach, South Fremantle. Photo by Cockburn Sound Coastal Alliance

intent

This strategy provides an integrated framework for coastal planning and management within Western Australia.

It focuses on ensuring sound planning, management, and use of the coast for the benefit of current and future communities.

- It establishes the vision, goals and objectives for coastal zone management.
- The goals are supported by detailed objectives that are set in the context of key issues.
- It outlines the State government's position on the use of protection to mitigate the impacts of coastal erosion and inundation.
- It identifies the broad roles and responsibilities of government, private organisations, natural resource management groups and the community.

The Strategy complements State legislation, existing government and stakeholder strategies, policies and other relevant documents.

New strategies or policies that deal with specific coastal planning and management issues should be consistent with this strategy.





Footprints on the beach at Goombaragin. Photo by Tourism WA

vision

A sustainable coast for the long-term benefit of the community and visitors to the State



Smiths Beach, Yallingup. Photo by Spool Photography

goals and objectives

Environment

Conserve the State's natural coastal values and assets through sustainable use

Objectives:

- Protect, conserve, enhance and maintain natural coastal values.
- Protect and restore foreshores along the coast, estuaries, and their wetlands.
- Maintain, restore and manage natural coastal processes where necessary such as sediment transport patterns, erosion/accretion cycles, environmental flows and hydrological cycles.
- Integrate coastal zone management with catchment, estuarine and offshore planning and management programs.
- Maintain and improve water quality in marine, estuarine, surface and groundwater environments.
- Manage and minimise waste disposal in coastal areas.



Esperance Waterfront. Photo by Shire of Esperance

goals and objectives

Community

Ensure safe public access to the coast and involve the community in coastal planning and management activities

Objectives:

- Facilitate and promote public usage and enjoyment of the coast.
 - Ensure public ownership of coastal and estuarine foreshore reserves for management, safe public access, recreation and conservation.
 - Protect, conserve, enhance and maintain registered heritage sites and places of cultural significance in the coastal zone.
 - Recognise the native title rights of Aboriginal people in the coastal zone.
 - Retain the widest possible range of management options for future users of the coast.
- Enhance community awareness of coastal issues and provide opportunities for involvement in coastal planning and management activities.
 - Facilitate and promote strong partnerships between coastal managers, natural resource management organisations and community groups.
 - Ensure coastal planning and management activities conserve or enhance coastal values and assets (natural and built) to benefit the community and minimise interference with natural coastal processes.



Koombana Bay, Bunbury. Photo by Department of Transport

goals and objectives

Economy

Provide for the sustainable use of natural coastal resources

Objectives:

- Ensure natural coastal resources are used in an equitable and sustainable manner.
- Recognise the economic and commercial benefits of ports for the State.
- Provide for multiple use of the coastal zone including trade, investment, innovation, employment and community activities.
- Facilitate and promote sustainable tourism opportunities within the coastal zone.
- Protect high productivity marine ecosystems and nursery sites for aquatic species.
- Manage the economic impacts of climate change such as sea level rise.



Fremantle coastline. Photo by Tourism WA

goals and objectives

Infrastructure

Ensure the location of facilities and infrastructure in the coastal zone is sustainable and suitable

Objectives:

- Concentrate urban development in and around existing settlements with established infrastructure and services.
 - Encourage multi-user ports and associated infrastructure to limit duplication of facilities and potential impacts on coastal values.
 - Locate and design coastal development, infrastructure and facilities taking into account coastal processes, landform stability, water quality, environmental flows, hydrological cycles, coastal hazards and climate change.
 - Minimise and avoid adverse impacts on social and ecological values and visual amenity from new infrastructure.
- Locate greenfield development landward of an appropriate foreshore reserve and provide a clear demarcation between public and private land.
 - Ensure coastal hazard risk management and adaptation planning for brownfield development (including infill). Locate any development at risk from coastal hazards within a 100 year timeframe on the least vulnerable portion of the site.
 - Undertake protection works only as a last resort when justified in the public interest to protect high value property and infrastructure – and ensure funding arrangements are based on cost-benefit and user pays principles.



Lucky Bay, Cape Le Grand National Park. Photo by Tourism WA

goals and objectives

Governance

Build community confidence in coastal planning and management

Objectives:

- Support the role of local governments as coastal managers except for the Conservation Estate, Aboriginal heritage and ports.
- Provide technical and policy advice and assistance to local coastal managers.
- Provide management strategies and plans for the WA coast.
- Provide data and research to assist coastal planning and management.
- Align policy, planning and development in the coastal zone with the public interest.



Aerial view of Osprey Campground, Cape Range National Park. Photo by Tourism WA

key issues

The coast is our most contested space. It is where most of the population lives, works and recreates. It provides for diverse but sometimes competing uses.

The coast is subject to various pressures including rising sea levels, population growth, recreational activities and coastal development. These pressures can impact coastal values including biodiversity, heritage sites, places of cultural significance and scenic landscape.

Population growth

Population growth is increasing demand for future residential development and infrastructure along the coast. Increasing tourist and visitor numbers place pressure on key coastal destinations.

Location of coastal development and infrastructure

Communities and industries have often developed in coastal areas where the waters are favourable for commercial or recreational use. The adjoining land in these areas may not have been able to sustain a high level of development and are now threatened by coastal hazards. Some parts of the coast are unsuitable for development and infrastructure. The location of new coastal development and facilities should take into account coastal processes, landform stability, coastal hazards and climate change.

Uncontrolled access to the coast for recreation

Maintaining and enhancing public access to the coast is a high priority for the community. Uncontrolled or informal access to the coast for recreational activities can cause damage to coastal vegetation and result in dune destabilisation. Public access needs to be sustainable, controlled and managed to reduce the impact on coastal environments.

Estuary condition

Many of the State's estuaries are under threat from a combination of factors including climate change (reduced rainfall and water flow), population growth, historical land use, intensified agriculture and urbanisation. Estuaries are unique environments with diverse ecosystems including seagrass meadows and surrounding vegetation which many fish and bird species. Water quality is reduced by excess nutrients (eg. nitrogen and phosphorus) entering waterways from effluent and fertilisers. This is compounded by poor drainage and can result in algal blooms, lower oxygen levels in the water and adverse impacts to fish and other species.



Lowendal Islands. Photo by City of Karratha

key issues

Impacts of industrial use

The coast is vital for industrial, mining and petroleum activities. Many of the State's major resource-processing industries are located on the coast to access resources, port facilities, industrial estates, and water for cooling. Industrial activities can cause pollution, public access restrictions, increased traffic and impacts on coastal scenic and recreational values.

Impacts of fisheries

Fisheries are a major industry and source of employment in Western Australia. Commercial and recreational fishing and aquaculture are regulated and managed to minimise impacts on coastal and marine environments such as mangroves and seagrass beds which support key fish species. Other impacts may include overfishing and habitat destruction.

Climate change

Sea level rise

Climate change, including rising sea levels, is predicted to increase erosion of sandy coastlines and inundation of low-lying areas. The WA Government has adopted 0.9 metres for sea level rise over a 100 year planning timeframe for future coastal development. Human influences on the climate system are likely to increase the intensity and frequency of climatic events such as storms and cyclones.



Conservation signs are a common sight along the Swan coast. Photo by Perth NRM

key issues

Coastal processes and hazards

Erosion

Inundation

The coast is constantly moving with the tides, wind, waves and weather systems. The daily action of wind and waves result in erosion (removal) and accretion (depositing) of sand which changes the shape of dunes. These processes become hazards when they have a negative impact on life, property, infrastructure or other assets. Erosion can undermine and damage infrastructure and houses. Storm surge and powerful winds can inundate low lying land and threaten lives and properties.

Engineering interventions to control or minimise the impacts of natural processes only offer limited and temporary protection in specific locations. These protection works are expensive, require ongoing maintenance, and may cause unintended negative impacts to the adjacent coastline.

Coastal hazard risk and liability

Managing the risk and liability associated with coastal hazards is an ongoing challenge. There is often limited information surrounding unpredictable coastal hazard risks as well as unforeseen adverse impacts associated with coastal protection works. State and local governments are not legally obliged to protect private property or State land against the impact of erosion and inundation. There is an ongoing responsibility to maintain protective structures following construction.

Bushfires

Natural or induced bushfires within coastal areas can cause destruction of vegetation and habitats. This may increase vulnerability to erosion, dune blowouts, informal access, invasive weed species and dieback.



Marmion coast, Perth. Photo by Mike Norman

key issues

Invasive pest species

Weed species, including non-indigenous plants, can damage native vegetation communities. Non-indigenous plants have previously been used to stabilise naturally unstable foredunes and dunes. Revegetation and rehabilitation activities should use appropriate native plant species to minimise the risk of invasion from weed species.

Aquatic invasive pest species can establish and take over entire aquatic areas, out competing and displacing native species. They also have the potential to carry and transmit diseases which impact wild populations of aquatic animals, as well as affecting aquaculture and farmed aquatic species. These impacts can have significant, detrimental effects on marine ecosystems. Aquatic biosecurity requirements should be considered and managed for all coastal activities and developments.

Grazing on pastoral leases

Livestock grazing on coastal pastoral leases can place pressure on coastal vegetation and adversely affect the stability of coastal dunes and foreshore areas.

Limited financial and human resources

Coastal land managers are often limited by financial and human resource constraints. Public funding for coastal planning and management should be directed to the highest priority areas.



Greys Beach, Geraldton. Photo by Department of Transport

managing coastal erosion and inundation

Roles and responsibilities for managing coastal erosion and inundation

Governments at all levels and private parties (individuals, businesses and the community) each have important, complementary and differentiated roles in adapting to the impacts of climate change, in particular coastal erosion and inundation¹. The overarching principles for managing coastal hazard risk are:

¹ 2012 Council of Australian Governments' (COAG) position statement on the *Roles and Responsibilities for Climate Change Adaptation in Australia*

- i. private parties are responsible for managing risks to their private assets and incomes. In order to manage these risks private parties need to:
 - be aware of the risks and their responsibility for managing them;
 - take steps to understand the magnitude and nature of the specific risks to their assets and activities; and
 - develop and implement strategies and actions to manage the risks.
- ii. governments, on behalf of the community, are primarily responsible for managing risks and impacts to public goods and public assets which they own and manage. Governments also seek to:
 - develop local policies and regulations consistent with State adaptation approaches;
 - facilitate building resilience and adaptive capacity within the local community, including providing information about relevant known risks including coastal erosion and inundation; and
 - work in partnership with the community to identify and manage risks and impacts.



Port Geographe Marina, Busselton. Photo by Department of Transport

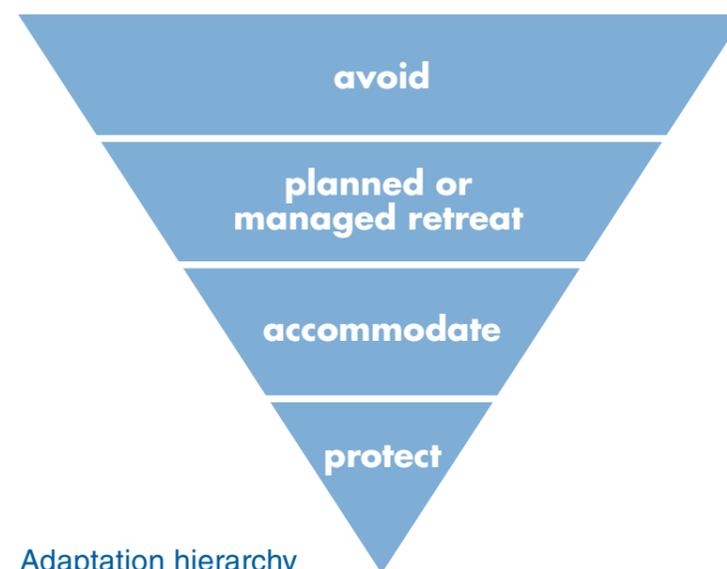
managing coastal erosion and inundation

State coastal planning policy

The State Planning Policy No. 2.6 State Coastal Planning Policy (SPP2.6) aims to avoid future development within areas identified to be at risk from coastal hazards during a 100 year planning timeframe.

Coastal hazard risk management and adaptation planning should be undertaken for areas at risk. A retreat approach should be used for existing development where possible. Design approaches to accommodate the risk may be considered where it can be demonstrated that retreat is not possible.

Protection is a last resort option based on the beneficiary-pays principle to ensure a sustainable approach that minimises the risk to public funds.



Adaptation hierarchy

Coastal protection

Coastal protection works should only be considered after all options for avoiding and adapting to coastal hazards have been fully explored and once the following issues have been addressed:

- it is consistent with an appropriate coastal hazard risk management and adaptation plan;
- the primary purpose of the protection works is for a public benefit;
- any significant adverse impacts of coastal protection works on the adjacent environment within the sediment cell, or equivalent, can be limited and/or sustainably managed;



Sand nourishment, CY O'Connor Beach. Photo by Department of Transport

managing coastal erosion and inundation

- the coastal foreshore is within a vested reserve under local management;
- the local coastal manager accepts ownership and ongoing responsibility for any new coastal protection structures;
- coastal protection measures are designed to minimise ongoing management costs including sand renourishment;
- a financial plan is in place to cover construction costs and ongoing maintenance;
- funding arrangements should be based on a user pays principle whereby those who benefit the most provide the greatest financial contribution. Consideration

should be given to establishment of a fund by the developer and the use of Special Area Rating;

- a cost-benefit analysis demonstrates public benefit and a positive return to the State;
- the quantity, source and availability for any ongoing sand nourishment should be identified;
- coastal protection measures should be adequately designed by qualified engineers to provide sufficient protection over an appropriate time frame and with careful consideration of site specific conditions; and
- Ongoing review of the adequacy of the protection measure.

Temporary works

Temporary coastal management measures should be considered when there is an imminent threat to life, coastal values and assets. Temporary works allow time for long term sustainable management approaches to be developed and implemented.

The cost of temporary works should be less than the value of the public assets (economic, social and/or environmental values) being protected. Local coastal managers are responsible for initiating and managing the temporary works.

Temporary works should not inhibit the range of future management options.



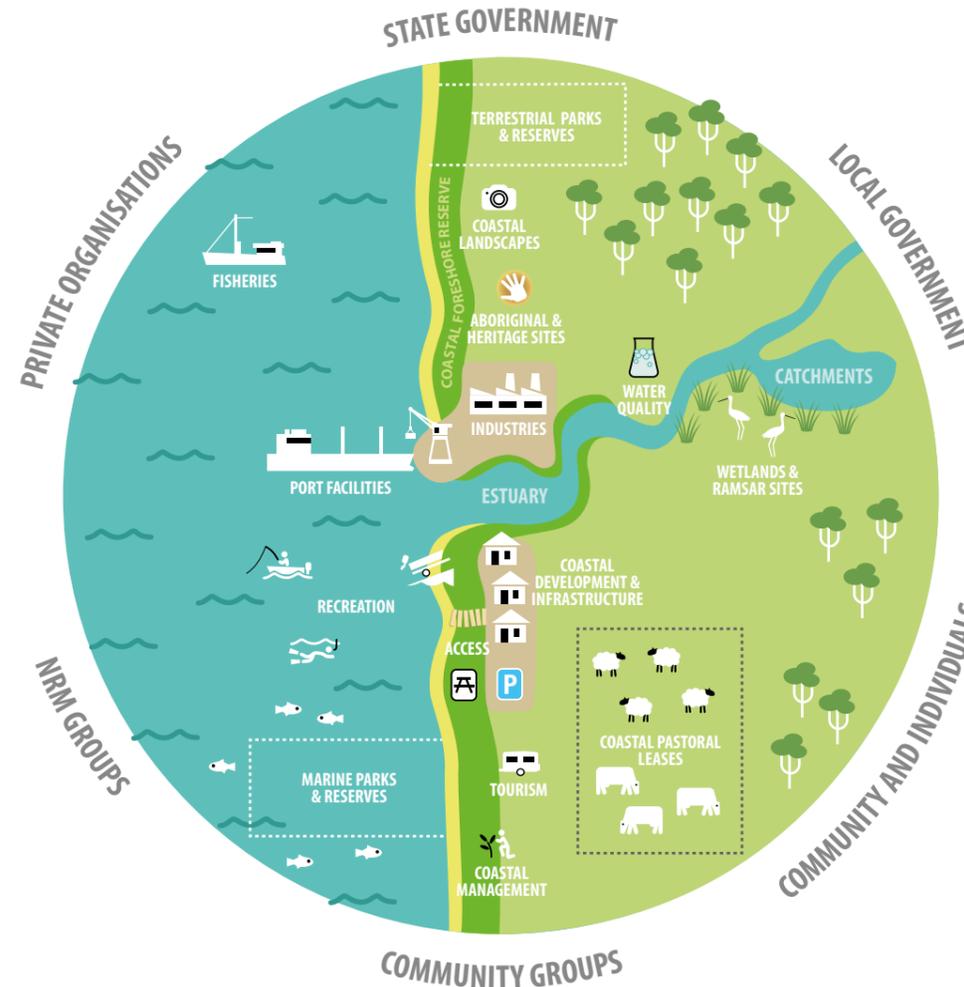
Jetty at Hopetoun. Photo by Tourism WA

roles and responsibilities

Stewardship of the coastal zone is a shared responsibility between all levels of government, public and private organisations, community groups and individuals.

Western Australia does not have special purpose coastal planning legislation. A number of legislative instruments apply to the State's coastal zone. State Government agencies and local government have their own policies and strategies that implement this legislation and enable the proper management of the coast and coastal waters.

The majority of Western Australia's coast, beyond its most populated areas, is unallocated Crown land. There are generally few pressures in those areas and they are not actively managed. Large areas of coastal Crown land within conservation reserves and waters



within State marine reserves are vested in the State. The most populated and/or contested coastal lands are typically vested with, and managed by, local government.

Governments at all levels, private organisations, natural resource management groups, the community and individuals each have important, complementary and differentiated roles in coastal planning and management. The broad roles and responsibilities of these key stakeholders are summarised below.



Looking out to Green Island, Torndirrup National Park, Albany. Photo by Sam Bishopp

roles and responsibilities

Commonwealth Government

The Commonwealth government provides essential scientific data, technical information and guidance for making coastal planning and management decisions. The Commonwealth government has helped integrate climate change into coastal planning through a number of initiatives including: investments in datasets, methodologies and visualisation tools; projects to develop new approaches to decision making that can cope with uncertainty, manage asset risk cost-effectively, and build adaptive capacity.

State Government

State Government agencies deliver a broad range of services, administer legislation and manage a significant number of assets (natural and built) and public infrastructure. They provide regulatory and market frameworks; provide accurate and regionally appropriate information; and deliver policies and regulations that are within their jurisdiction. They also provide support to local governments to ensure sound coastal planning and management.

Local Government

Local Governments are on the frontline of coastal planning and management. They can inform State and Commonwealth Governments about the needs of local and regional communities, communicate directly with communities, and respond quickly to local circumstances.

Coastal foreshore reserves are generally vested in local governments which are responsible for their care, control and maintenance. A coastal management plan or foreshore management plan is needed for high use areas or would be required through planning processes including rezoning, structure planning, subdivision and development. These plans are prepared and implemented by the local government and/or proponent depending on conditions of approval. Local government planning schemes are approved by the Minister for Planning.



Fremantle Fishing Boat Harbour. Photo by Spool Photography

roles and responsibilities

Private organisations

Many private organisations including businesses and industries are dependent on coastal location and resources. They provide important employment and economic development opportunities and should operate in a sustainable manner to minimise the impact on the coast.

Ports and commercial fisheries provide a significant contribution to the State's economy. Tourism operators raise awareness of coastal values and provide a sustainable coastal experience for visitors.

Developers can ensure planning and construction of new coastal residential development and infrastructure is sympathetic to the coastal landscape. This includes provision of appropriate public coastal foreshore reserves that facilitate safe public access to the coast, recreation and conservation for the enjoyment of current and future communities.

Natural resource management groups

Regional natural resource management (NRM) groups work in partnership with all tiers of government, regional organisations, industry, landowners and environmental groups. They provide a community leadership role in their region, mobilise regional effort and ensure priority needs are addressed. There are six Regional NRM groups that operate within the State's coastal zone.



Cape Le Grand National Park. Photo by Tourism WA

roles and responsibilities

Community and individuals

The community plays an important role in coastal planning and management in Western Australia. Many people take an active role in management, monitoring and rehabilitation activities, through their involvement in community groups. Many of these groups have been assisted by grants from government initiatives such as the Coastwest Grants Program. As major landowners and managers, Aboriginal peoples have an important stake in the planning and management of coastal lands through independent Aboriginal corporations and other organisations, native title rights and processes and relevant government agencies.

The coast provides a diverse array of recreational activities and opportunities for the community. Ensuring that enjoyment of the coast does not negatively impact on the coastal environment is everyone's responsibility. Participating in recreational user groups helps ensure recreational activities occur in a sustainable and controlled manner.



Conspicuous Beach, near Walpole. Photo by Greg Snell

further information

Please visit www.dplh.wa.gov.au

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Sugarloaf Rock, Leeuwin Naturalists National Park. Photo by Greg Snell