Media Release

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March of the Little Penguins into a More Certain Future

16 November 2011, Melbourne: Victoria's estimated 100,000 Little Penguins are under the spotlight as researchers conduct the first state-wide survey of the seabirds in more than 30 years.

In a bid to learn more about how to protect the world's smallest penguins, Phillip Island Nature Parks has joined forces with the nation's leading location intelligence specialists Esri Australia to map the species, their habitats and their predators using world-leading Geographic Information System (GIS) technology.

The scientists will spend the next three years collecting data from around 40 Victorian seabird colonies in the region, to gauge species numbers and answer questions about why Little Penguins choose certain locations to burrow, breed and rear their chicks.

The data is captured by Esri Australia's cutting-edge mapping technology, which generates interactive maps, and enables researchers to see relationships and patterns in the data that might otherwise have gone unnoticed.

Esri Australia Victorian Business Manager Jean-Noel Jarnet said GIS has become an essential tool for environmental analysis and decision-making, and will enable researchers to understand better the penguin habitats on Phillip Island.

"GIS technology presents large volumes of data in an easy-to-interpret visual format, providing an accurate and comprehensive view of a situation – which is enormously important when conducting scientific research," Mr Jarnet said.

"By mapping penguins and their habitats, the technology will deliver compelling insights into the threats facing their populations – and a clearer understanding of the action required to ensure they continue to thrive."

Phillip Island Nature Parks Research Biologist Dr Duncan Sutherland said GIS technology was the key to gaining a greater insight into the connections between the Little Penguin's burrowing activities and their surrounding environment.

"GIS stores all of our data about the characteristics of penguin burrows, such as their relation to predators, vegetation and classes of soil, and displays it as layers over a map," Dr Sutherland said.

"Having the information visually represented in this manner highlights important issues – for example, we can quickly see that burrows are more likely to be close to the coastline or in areas where there are higher densities of certain types of plants.

"We can then surmise why that might be and use our conclusions to develop management strategies that benefit the penguins."

The Little Penguins on Phillip Island provide Victoria with one of its most popular tourist attractions, with the creatures attracting almost 500,000 tourists and adding more than $100 million to the state's economy annually.

Much has been done to protect the animals already, including a large scale residential property buy-back of land within the colony on Phillip Island, as well as intensive research, education and conservation programs.

"Penguins are a valuable indicator of the health of the local marine ecosystem and provide us with an accurate understanding of the state of fish stocks and water quality," Dr Sutherland said.

"They are also a group of marine species that people find easy to identify with.

"In that sense they are a flagship for environmental causes in general and crucial to delivering other environmental messages."

Dr Sutherland said the survey results from Esri Australia's GIS would be compared to those of the last study, undertaken between 1978 and 1980, and are expected to inform Victorian penguin management policy for decades.

Although past estimates show Victoria's Little Penguin colony populations have likely steadied or increased over the past decade, Dr Sutherland said the animals still faced serious threats.

"On land, the penguins main threats are from introduced predators, such as foxes and dogs, vehicle traffic and human development," Dr Sutherland said.

"In the sea they are vulnerable to attacks from predators and fluctuating food supplies, as well as threats posed by pollution – most significantly oil spills – and the onset of climate change.

“Monitoring the population is critical to understanding these threats and ensuring generations to come can continue to enjoy these remarkable creatures.”

Mr Jarnet said Esri Australia has a long history in environmental science research.

“While our GIS technology is largely used by government departments and large commercial enterprises – it has also forged a reputation as a valuable tool for 21st century conservationists.

“The Phillip Island Nature Parks’ choice to deploy GIS positions them at the forefront of conservation practices in the country and we are proud to partner with them on this enormously rewarding project.”

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About Esri Australia
Esri Australia has a 33 year history of providing location intelligence and data mapping solutions that help organisations make smart business decisions. The combination of local expertise and world-leading Esri GIS technology has helped thousands of government departments and commercial organisations to turn their data, information and knowledge into collective insight to reveal opportunity.

About GIS
A Geographic Information System is a key piece of technology used in thousands of organisations Australia-wide from the military and government, to the insurance and mining sector. Australia’s GIS industry currently stands at over $2.1 billion and more than 300,000 organisations across the world use Esri GIS.