

## **Surveillance for introduced invertebrates on Barrow Island, Western Australia**

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Entomologists at Curtin University have been coordinating the Barrow Island Invertebrate Baseline Survey for Chevron Australia Pty Ltd since 2005. This has resulted in a comprehensive reference collection of over 2,000 terrestrial invertebrate species for Barrow Island. Barrow Island is a Class A Nature Reserve and is protected under Federal and State Environmental Legislation; it represents a unique blend of conservation and industry. Chevron Australia has been operating Australia's largest onshore oilfield on Barrow Island for more than fifty years. As a result of Chevron's operational control and a lack of public access, Barrow Island has retained its mammalian fauna and has, to date, not introduced any vertebrate pests on the island. As a result of a targeted invertebrate survey only 20 synanthropic invertebrate species have been collected from the island. In 2009, Chevron Australia and the Gorgon Joint Venture Participants received Ministerial approval to build a gas processing plant on the island. One of the main conditions of Ministerial approval was that no invasive species is to be introduced to the island as a result of the gas plant and pipeline construction process. This resulted in the Gorgon Project funding an extensive quarantine and monitoring programme for all of its contractors and an on-island surveillance programme for non-indigenous vertebrates, invertebrates and plants. A group of statisticians and biologists at Queensland University of Technology were commissioned to design an Integrated Surveillance System (ISS) for plant, vertebrates and invertebrates. This was based on risk maps of areas of vulnerability of introductions coupled with the footprint of efficacy of the various sampling methods for catching any of five chosen exemplar invasive species. This presentation will outline progress as Chevron uses this ISS to monitor invertebrates on the island. The Gorgon Project is operated by an Australian subsidiary of Chevron and is a joint venture of the Australian subsidiaries of Chevron (approximately 47%), ExxonMobil (25%) and Shell (25%), Osaka Gas (1.25%), Tokyo Gas (1%) and Chubu Electric Power (0.417%)

