



# Collie Urea Project

Perdaman Chemicals and Fertilisers is developing a A\$3.5 billion urea manufacturing plant that will be located at the new Shotts Industrial Park, around 7km's east of Collie. Using lower emissions coal gasification technology, our plant will transform sub-bituminous coal into urea.

Manufactured urea is a harmless, non-toxic white crystalline solid made by combining synthetic ammonia and carbon dioxide (CO<sub>2</sub>). Its high nitrogen content (46.7 per cent) makes it an effective and popular fertiliser. Urea has the highest nitrogen content of all solid nitrogenous fertilisers in common use, and is used widely in agricultural food production. In fact, 90 per cent of the world's urea production is used for fertiliser.

The plant has a two million tonnes per annum capacity, and most of the urea produced at the plant will be exported. The Shotts Industrial Park provides us with an ideal location for the plant due to its close proximity to coal reserves as well as key road, rail, power and port infrastructure, with adequate water available in the region.

Permitting and environmental approvals are expected to be complete by the end of 2009 with field construction due to start in August 2010. We expect full production to start in 2013, and we look forward to communicating employment opportunities to the local community, starting in 2010.

As promised at the launch of the project in March 2009, Perdaman is committed to ensuring the community is aware of our management plans in relation to community, health and safety, economic factors, the environment and land.

To this end, we have now commenced the formal Public Environmental Review (PER) process. Perdaman has enlisted the services of environmental consultants GHD to assist us with the PER and the associated community consultation activities.

The PER is only one of the permitting and approval processes that Perdaman must complete before construction and operation of the plant can begin. These permitting and approval processes involve the Shire and several state agencies and departments. Perdaman will comply with all required regulations, permitting requirements and approval processes, and will listen to, and keep the community informed as we proceed.

These community consultation activities will be facilitated in a number of ways including community information sessions, newsletters and website information, and we also encourage the community to come to us with any questions they may have about the project. It's important to us that everyone involved in the process is appropriately informed of project developments.

Interested members of the community are encouraged to register on our website at [www.perdaman.com](http://www.perdaman.com) to receive regular updates via email.





# Frequently asked questions

## Why is the plant being built in Collie?

The Shotts Industrial Park just outside of Collie is ideally located adjacent to coal reserves and within close proximity to key road, rail, power, water and port infrastructure. We believe that Collie is an excellent choice for the project.

## How many jobs will be on offer and where will employees be sourced from?

We anticipate that around 1,500 jobs will be generated during the construction period (between 2010 and 2013), and around 200 permanent jobs once operations begin in 2013.

Perdaman will support the local Collie community wherever possible and aims to give local residents the first opportunity for employment and training before looking elsewhere for suitable employees. We will also be offering training and jobs to the indigenous community, during the construction phase and in our ongoing operations.

The project will also create indirect employment opportunities because it will require substantial third party services from a wide range of industries including transport, mining, engineering and human services. An estimated 400 permanent positions will be created in these industries.

## Where will the plant's water be sourced from and how will it be used?

Perdaman has been assigned sufficient quantities of water for the project by the Western Australian Department of Water. Water is available from mine de-watering and from Wellington Dam. Water will be used mainly for cooling and some steam generation. The design of the plant, which will be highly integrated, will minimise water use while maximising the plant's overall efficiency, reducing emissions.

## How will waste water be managed?

Construction and operation of the Collie Urea plant will result in waste water being generated, including saline waste water. We are currently investigating the best ways to dispose of waste water at the plant so that it does not adversely impact the environment, people or adjacent land uses. This includes investigating all the options for re-using waste water. For example, the water generated by washing down equipment at Bunbury Port could be used for irrigation.

## Will the Collie Urea Plant have an effect on the air quality in the Collie region?

The Collie urea plant is expected to have a minimal impact on air quality in the Collie region as the plant uses gasification technology to convert the coal into gas in a closed system. In addition, gasification results in the capture of trace heavy metals in slag (molten ash) and no fly ash is produced from the process.

The CO<sub>2</sub> emissions of the plant are approximately 40% lower than a comparable sized coal fired power station and are better than a comparable sized natural gas fired open cycle gas turbine. This is because one third of the total CO<sub>2</sub> is sequestered in the urea product.

Short and long term opportunities to reduce the carbon footprint of the plant are being identified and evaluated as part of the PER process.

## What control measures will be put in place to eliminate or control harmful emissions?

Process technology such as filters, scrubbers and guard beds will ensure that emissions are effectively controlled. The production process includes a flare which combusts gas before it is released to the atmosphere. This converts any odorous compounds and hydrocarbons in the flare gas to mainly CO<sub>2</sub> and water vapor.

A high percentage of the CO<sub>2</sub> emitted by the plant is 99.5% pure and ready for sequestration. Perdaman is supporting the investigation of potential sequestration sites in the region and is ready for commercial scale applications of CO<sub>2</sub> when they become available.

## How much clearing of native vegetation will be required and how will potential impacts on habitat and flora and fauna be managed?

The footprint for the proposed urea production plant is approximately 120 hectares and it is anticipated that approximately 90 per cent of this area will involve clearing. Overall, the vegetation surrounding the proposed plant site is well represented within the Collie State Forest, Wellington National Park and Harris River State Forest. The site is also within a Country Area Water Supply Catchment (CAW) and will be subject to strict clearing guidelines.

A history of prior use and clearing has resulted in a significant area of the site being completely degraded, although other areas remain in good condition, as identified in a recent flora assessment. The clearing plan for the site will manage the areas of higher vegetation value.

## Will there be any road or rail transport issues?

The urea produced at the plant will be transported to the Port of Bunbury along the existing rail line. The urea will not be moved by road. There will be use of local roads during the construction phase. We will coordinate and work closely with other local industries and the Shire on traffic management issues during construction to keep any local impacts to a minimum. The management of additional rail traffic through Bunbury will be addressed with the Bunbury Port Authority, the rail operator and other stakeholders.

## When will the permitting and environmental approvals process be complete?

The Public Environmental Review (PER) and other permitting and approvals processes are scheduled for completion by the end of 2009. These involve the Shire and a range of State Government agencies and departments. The community will be consulted and informed as we proceed. The PER is expected to be released later this year for a public comment period.

**Please visit our website [www.perdaman.com](http://www.perdaman.com) where you can also register for regular e-mail updates on the Collie Urea Project.**