

# Billabong Creek Green Offsets Project

## Frequently asked questions

### What is a 'green offset' and how does it work?

Development is essential for the economic and social prosperity of communities. However, all development impacts on the environment in one way or another. A green offset is where a developer offsets or compensates for the environmental impacts of the development by undertaking activities that protect or improve the environment in other areas. For example, a developer might need to clear 10 trees from a site to construct a building. To offset this environmental impact the developer might establish a conservation area nearby and plant 20 trees.

### What is the Billabong Creek Green Offsets Project?

Norske Skog owns and operates a paper mill at Albury on the Murray River in southern NSW near the Victorian border. The company injects over \$100 million into the Albury district each year by employing 240 full-time staff, purchasing local products and using local contractors.

The mill produces some moderately saline wastewater as a by-product of paper production. Currently this water is discharged onto a nearby forestry plantation. However, the soil has become saturated and unless some of this water can be discharged elsewhere, the mill cannot proceed with a planned expansion and may need to scale down its operations.

Together with Norske Skog, the NSW Office of Water has developed a solution that will keep the mill in business and benefit the local environment at the same time.

The mill will be allowed to discharge three megalitres of moderately saline wastewater into the Murray River each day when flows exceed 1800 megalitres/day. It must meet strict water licence conditions and offset the environmental impacts by funding the continuous operation of the nearby Billabong Creek Salt Interception Scheme.

The Billabong Creek Salt Interception Scheme will remove twice as much salt from the Billabong Creek as the paper mill would put into the Murray River each year. Removing the salt from Billabong Creek will result in a reduction in the salinity level in the Murray River by an estimated 0.2 EC units, measured at Morgan in South Australia.

The nett gain is that 1,500 tonnes of salt will be removed from the Murray River each year at minimal cost to taxpayers.

The NSW Office of Water will continue to own and operate the Billabong Creek Salt Interception Scheme and will ensure that Norske Skog complies with its water licence conditions.

Norske Skog, in collaboration with Murray Catchment Management Authority, will also establish a corridor of native bush that stretches from Gum Swamp to the Billabong Creek at Morgan's Lookout, connecting two sites that have high environmental and cultural heritage values.

The Billabong Creek Green Offsets Project will be tested under a 'proof of concept' stage for five years to allow for further trials, technical analysis and community input. If successful, the project will be refined and implemented for the long-term.

## How does the project work?

Water is supplied to the Albury paper mill from the Murray River at Hawkes View via a 10 kilometre pipeline. After the water has been used to cool machinery at the mill, it will be mixed with potable water, treated to remove any harmful chemicals and discharged onto a nearby forestry plantation or into the Murray River via a 14 kilometre pipeline adjacent to the Hume Highway.

The maximum amount of water that Norske Skog can discharge into the Murray River each day is three megalitres and only when flows in the Murray River exceed 1800 megalitres/day. This water has low salt levels that will result in about five tonnes of salt entering the Murray River each day. However, the nearby Billabong Creek Salt Interception Scheme will remove twice as much salt from the River – up to 10 tonnes per day.

## Is this really a positive project for the environment?

Yes. Norske Skog will add 1,500 tonnes of salt to the Murray River each year. However, by funding the operation of the Billabong Creek Salt Interception Scheme, 3,000 tonnes of salt will be removed each year from the Billabong Creek that flows into the Murray River.

The nett gain is that 1,500 tonnes of salt will be removed from the Murray River each year at minimal cost to taxpayers. This will benefit the Murray River system as a whole as it will help NSW meet its salt removal targets.

Extensive studies undertaken by the Murray-Darling Freshwater Research Centre indicated that the Billabong Creek Green Offsets Project is unlikely to negatively impact the environment.

**Below** – Gum Swamp at Morgan’s Lookout – Norske Skog, in collaboration with the Murray Catchment Management Authority, will also establish a corridor of native bush that stretches from Gum Swamp to Billabong Creek, connecting two sites that have high environmental and cultural heritage values.



## How will the project be monitored?

The NSW Office of Water will ensure that Norske Skog meets strict water licence conditions, while the Department of Environment, Climate Change and Water will ensure that Norske Skog meets strict water quality conditions. The company will be required to monitor the quantity, frequency and quality of water releases into the Murray River and submit regular reports to the regulatory authorities

These agencies have the authority to monitor and enforce water management and quality requirements under the *Water Management Act 2000* and the *Protection of the Environment Operations Act 1997*.

A key condition of Norske Skog's water licence will be that the paper mill can only discharge water into the Murray River when river flows are sufficient to ensure a ratio of river water to discharge volume of 600:1. This will ensure that there is enough water in the river to adequately dilute the salty waste water to safe levels.

## How will this impact on water users directly downstream of the paper mill?

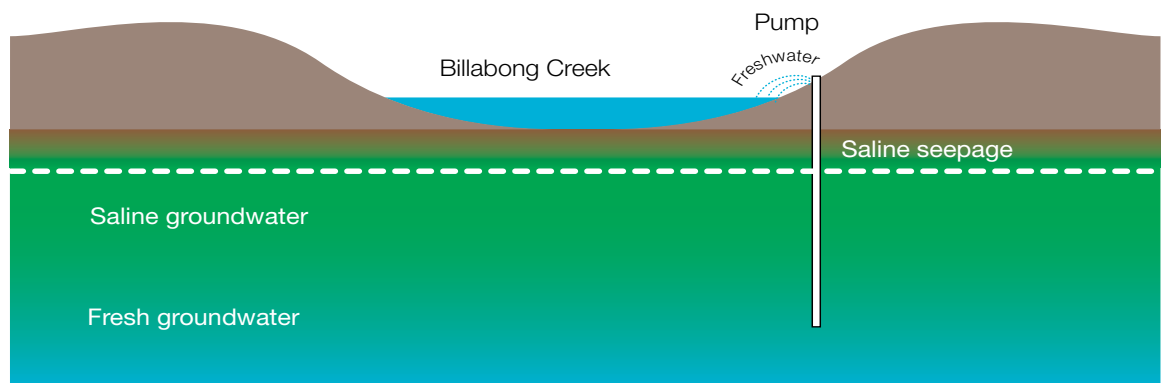
The river water will be slightly more saline than usual for about 100 metres downstream of the paper mill. This is not expected to impact on commercial water users, stock and domestic users or the environment in that stretch of the river.

A key condition of Norske Skog's environment protection licence will be that the paper mill can only discharge a licensed limit of salt into the Murray River when river flows are sufficient to ensure a ratio of river water to discharge volume of at least 600:1.

This would only equate to approximately a three milligrams per litre increase in total dissolved salt levels just downstream of the mixing zone. Murray River levels upstream of Norske Skog are currently approximately 32 milligrams per litre. This is within the safe range for aquatic ecosystems according to the Australian and New Zealand Environment and Conservation Council guidelines.

## How does a salt interception scheme work?

A salt interception scheme works by preventing saline water from getting into a river by 'intercepting' or catching it before it can get to the river.



The Billabong Creek Salt Interception Scheme works by pumping water from deep within an aquifer that sits below the creek bed into the creek itself. The groundwater deep within the aquifer is good quality; however the groundwater just below the creek bed near the surface of the aquifer is poor quality and very salty. Pumping out the good quality groundwater from deep within the aquifer prevents the groundwater level rising high enough to push the poor quality groundwater near the top of the aquifer up into the creek bed. This prevents the salty groundwater from entering the Billabong Creek and eventually the Murray River.

The Scheme also has a standpipe that enables local water users to fill up their water tanks with the good quality groundwater, provided that they only use this water for stock and domestic use. The Scheme was established by the NSW Government in the late 1990s. However, there is currently no funding available to operate the Scheme continually and it has been operating intermittently for some years. The Billabong Creek Green Offsets Project will ensure its operation for the long-term, delivering significant environmental benefits at minimal cost to NSW taxpayers.

**Below left** – pumping water into Billabong Creek

**right** – the standpipe provides the community with water from the deep aquifer



## Why is Norske Skog funding the Billabong Creek Salt Interception Scheme and not the NSW Government?

The NSW Office of Water established the Scheme but cannot afford to operate it on a continuous basis. Like any business, the Office has limited resources and must make tough decisions as to which services, programs and projects it can afford to provide on a sustainable, long-term basis.

The Billabong Creek Green Offsets Project is a win for the environment and the local Albury community as it will enable the Billabong Creek Salt Interception Scheme to operate on a continual long-term basis, while enabling the Albury paper mill to maintain and expand its business.

Salt interception schemes deliver significant benefits to local communities by improving river water quality, biodiversity and habitats. It makes sense to invite the local industries that benefit from these improvements to help fund the ongoing operation of these schemes.

It is estimated to cost between \$100,000 and \$140,000 per year to operate the Scheme.