Sunshine Coast
Airport Expansion Project

Project Update

Water release program

Sunshine Coast Council is committed to sustainable environmental practices and adheres to all state and federal environmental management legislation, policies, processes and guidelines.

Sunshine Coast Council has worked closely with the Queensland Government Department of Environment and Science (DES) in relation to the release of water from the Sunshine Coast Airport Expansion Project site.

Answers to Frequently Asked Questions regarding the Water Release Program are outlined below.

Important information to know

- The ocean release proposed is completely safe for the environment.
- It is safe for fish and other sea life. It is safe for humans.
- The decision is supported by DES.
- Council would not be undertaking the release of water from the Airport Project site to the ocean if it was not safe.
- The pipeline will be temporary and will be removed after use. There will not be discharge of water into the ocean from the Airport site after the new runway's drainage system is in place and the bunds are removed. It is not an ongoing release program.
- The PFAS levels on the Sunshine Coast Airport Expansion Project site are significantly lower than the levels permitted for release to the ocean under the PFAS National Environmental Management Plan (NEMP).
- This is the equivalent of half a gram of PFAS in 50 full sized Olympic swimming pools or about what you could pick up in your fingernail.

Water release process

Why is water accumulated on the Airport site?

In accordance with the environmental management conditions in place as part of the project approval conditions, bunding was put in place around the project site to contain ocean water that came onto the site when sand was pumped in for the new runway.

Between March and June this year, above average rainfall was largely trapped by the bunding.

If the bunding were not in place, that rainfall would have run off the site to drains that flow into the Maroochy River and out to the ocean – just as it always has done.

Who made the decision to release the water on the Airport site to the ocean?

As a result of the cautious and responsible approach to this matter to date, the extensive research, modelling and testing to date and the support of DES, Council was asked to approve the release of the water on the Airport site to the ocean.

What are the benefits of choosing this release option?

The key benefits from this process include:

- The fastest way to remove ponded water, which will ultimately have to be removed
- Reduces the chance of uncontrolled releases of fresh water into the Maroochy River system
- The project timeline is secured.

Why is water being released to the ocean?

The water that has ponded on the site must be removed to allow the project to proceed and to prevent uncontrolled releases into other environments.

The release of this water to the ocean lowers the risk of PFAS accumulating in plants or animals over time and minimises the impact of the alternative release of a significant volume of fresh water into an estuarine environment.

Releasing water to the ocean is the safest and most efficient method of removing the water from the site. The water is currently contained, however needs to be managed in a timely manner to allow the Contractor to be able to continue to deliver the new runway within the agreed timeframe.

How will the water be released to the ocean?

Water that has been tested and is safe to release will be pumped off site via a purpose-built temporary pipeline. This pipeline will be less than 150 mm in diameter.

Where will the ocean release happen?

Approximately 400 metres out to sea, from Beach Access 111 at a depth of approximately 10 metres.

When will releases occur?

Construction of the pipeline is expected to be completed in October 2019, weather and construction conditions permitting. Staged water releases will follow. The pipeline will remain in place for the duration of the construction phase of the Airport Expansion project.

How much water will be released?

As at mid-August 2019, there was approximately 125 megalitres of water ponded on the site. This ponded water will be released gradually. Depending on the amount of future rainfall, further releases may be required.

The pipeline will be removed when the new runway's drainage system is in place and the bunds are removed next year (2020).

How much PFAS can be released?

The NEMP allows for up to 87.5 grams of PFAS in 125 megalitres of water to be discharged to the ocean.

Once final testing and measurement has been undertaken, it is estimated the total would not exceed half a gram of PFAS in the 125 megalitres of water expected to be released from the Airport site.

Environment

Will the water released be safe for the marine environment?

Yes. The contaminant levels in the sea water at the point of release will be almost 200 times below the level considered safe for humans, fish, animals and the environment, as specified in the NEMP.

What environmental investigations have been completed?

Detailed environmental investigations have involved:

- groundwater modelling
- targeted sampling and testing of local groundwater and ponded water
- monitoring, sampling and testing surface water and sediment
- sampling and testing of biota in the aquatic environment adjacent to and downstream of the project site.
- ongoing liaison with relevant Federal and State authorities.

Water treatment plant

What is the water treatment process?

If treatment of any water on site is found to be necessary, the water will pass through a four stage treatment process involving a sand filter, a zeolite filter, a granulated activated carbon filter and finally an ionized resin filter. This process will ensure that the water released will be better than any other treated water released from construction sites in

south east Queensland, including the Gold Coast Airport.

Is there a treatment plant onsite?

The treatment plant site has been completed and the equipment will arrive in coming weeks.

Have you treated any of the water so far?

No water has been treated yet. Groundwater extracted has been contained in storage tanks. Water that has been released to the Marcoola Drain which flows into the Maroochy River system has met the stringent criteria required for release into that environment.

How can council be sure the water is safe to release to the ocean?

The PFAS levels on the Sunshine Coast Airport Expansion Project site are tested regularly and are significantly lower than the levels permitted for release under the NEMP. DES – which is the environmental regulator – supports the release of the water from the Airport site to the ocean and considers it the most environmentally responsible approach.

Is the water to be released contaminated?

The ponded water on site has resulted from rainfall runoff. However, there are low levels of contaminants present in the water as a result of the length of time that the water has ponded on the site.

The contaminants consist of very low concentrations of suspended solids, metals and PFAS.

As a result of council's ongoing investigations and multi-faceted approach to managing this matter, DES supports the ocean release solution, and considers it the most environmentally responsible approach.

How much will you release per day? Is 8 megalitres (ML) correct?

The amount will be depend on the efficiency of the pumps, but 8 ML per day is the maximum theoretically possible. It is likely to be significantly less.

Who will release the water?

The water will be released by the Contractor, who has engaged a PFAS expert with experience at other sites. The project team will undertake the testing and monitoring and control the release after reference to DES. DES retains the overall regulatory role.

Once the ponded and stored water is gone, what happens to any future contaminated water on the site?

In the absence of rain in recent months, the site is quickly progressing to the stage whereby rainfall will drain off the site and will not pond. The rainwater will not come into contact with groundwater or bare earth in so doing.

The pipeline

How will the pipeline be constructed?

The pipeline will originate onsite and wind around the northern end of the existing runway before exiting the airport site. The process will then involve horizontal drilling of a small diameter release pipeline under David Low Way, under the sand dunes and beach area and continue under the sea floor for a distance of approximately 400 metres. The pipeline outlet will protrude about 50 centimetres above the sea floor. It will not be visible from the beach.

There will be no impact to any aspect of the beach or dunal systems during its installation.

What will happen to the pipeline after the water is released?

At the completion of the project, the pipeline and pumping infrastructure will be removed and any disturbed areas to the west of David Low Way will be rehabilitated.

The project includes provision for permanent infrastructure and drainage channels to manage stormwater runoff from the site into

local drainage systems for ongoing airport operations.

Why not leave the pipeline in place for future use?

The pipeline will not be required for future drainage. Once the ponded water has been removed from the site the extensive drainage works being constructed for the new runway will be completed and immediately accessible for future natural runoff of all surface water entering the site.

Is it safe to swim in the ocean near the pipeline?

Yes. The contaminant concentrations where the water is released will be almost 200 times below the allowable level in the NEMP.

That level will be further diluted as mixing occurs in the ocean. Council is advised that the release of ponded water to the ocean will not have any adverse health effects on humans swimming in the ocean at that location.

Will I see the water being released?

The water will be released about 400 metres off the coastline at a depth of around 10 metres. When freshwater is mixed with sea water, a foam can form in the mixing zone, particularly if there is significant wave action. Depending on weather conditions, the foam may be visible and may appear brown in colour. The foam does not pose a health risk.

How much will the ocean release cost?

The cost to establish the pipeline is estimated to be in the vicinity of $2.5 million, although final costings are being determined. The project budget includes allowance for latent conditions such as those encountered in this instance.

Council will fund the cost of the pipeline within the Airport Expansion project budget allocation.

The Airport Expansion project is funded from borrowings which will be repaid in full when council receives the final project payment from Palisade Investment Partners in July 2022. There will be no enduring cost to the ratepayer from the delivery of the new runway or the installation of this pipe.

About PFAS

What is PFAS?

PFAS stands for per- and poly-fluoroalkyl substances and are manufactured chemicals used in products that resist heat, oil, stains and water. PFAS is present at most airport sites in Australia due to its inclusion in firefighting foam. The level of PFAS present on the Sunshine Coast Airport site is significantly lower than the majority of other airports, in particular RAAF bases. For example, the level of PFAS contamination at the Williamtown RAAF base near Newcastle is on average, 10,000 times more than what exists on the Sunshine Coast Airport site.

PFAS is also used in a wide range of household items, including cosmetics, stain and water-resistant products, sunscreen, fast food wrappers and non-stick cookware.

How is PFAS detected?

It is detected through the use of very sophisticated testing techniques able to detect down to ultra-trace levels. These techniques are applied to the testing of soil, water and biota. Biota analysis is the determination of the levels of accumulation of toxic substances in plant and animal tissues.

How can council be sure the water is safe to release to the ocean?

Independent testing and detailed modelling have been carried out by qualified and experienced consultants to confirm the water is safe for release.

Contaminant concentrations at the point of release will be almost 200 times below the levels specified in the NEMP.

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What is the current level of PFAS in the ponded water?

The level varies from a low of 0.0021 micro grams per litre to a maximum of 0.029 micro grams per litre. This is like a quarter to a third of a gram in 125 megalitres, or 50 full sized Olympic swimming pools.

What if PFAS levels are found to exceed safe levels for ocean release?

Water will be tested before release and any water that is found to contain contaminants that exceed the specified safe levels will be treated in an onsite water treatment plant to ensure it complies with the Water Quality Guidelines and is below the PFAS National Environmental Management Plan (NEMP) levels, prior to being released.

What is the allowed level of PFAS prior to pumping it into the ocean?

DES has advised that a level of 0.7 micro grams per litre would be allowed. The water released to the ocean from the Airport site will be significantly below this at an average level of 0.004 micrograms per litre.

Is the level for a release to the ocean different to the level required to be released into the Maroochy River?

The NEMP allows a slightly higher limit in the ocean, although any release should be considered on a risk-based approached. The main issue with release to the Maroochy River is the fact that such a large volume of fresh water being released in an upper estuarine environment also has other impacts.

Next steps

What is the plan for future PFAS management?

It is likely that the Contractor will need to extract groundwater to extend runway 13/31 into 18/36. The same approach will be adopted in relation to this groundwater in that it will first be stored in tanks and tested before a decision is taken as to the reuse, treat or release the water.

Once the project has been completed, interaction with the groundwater will be minimal.

Is there a contingency plan for an unauthorised release or accidental release of PFAS into the ocean?

Because of the process to be adopted, there is an extremely low possibility of an unplanned release to the ocean. The water will have to be pumped over long distances to be released. It will only be approved for release after the test results indicate that it is safe. There will be a system in place to ensure that the pumps are not turned on until all approvals are in place.

Will the Airport Expansion project timeline be affected?

The project schedule is unchanged and is expected to be completed by Christmas 2020.

More information on PFAS

Fact sheets and further information on PFAS are available on the Australian Government's Department of Health Website at www.health.gov.au by clicking on the 'For Consumers' tab.

Further information

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