

CLEANING UP HICKSON ROAD INDUSTRIAL LEGACY

- **Two remediation approaches for the old Millers Point Gasworks site**
- **Pilot trial of in situ technique to keep Hickson Road open during work**

Two remediation projects are to be undertaken in Sydney to clean up contamination from the former Millers Point Gasworks, which closed almost a century ago.

The projects are being managed by the Barangaroo Delivery Authority on behalf of the NSW Government, and will be delivered by contractor Lendlease, together with a team of national and international experts. They will be continuously monitored by the Authority and the NSW Environment Protection Authority (EPA).

The Millers Point Gasworks enabled the first gas street light network outside Europe, with the first gas light turned on in Sydney on 24 May 1841.

The gasworks was decommissioned in 1921 and its above-ground structures were removed by 1925. At that time, certain underground gasworks structures were left behind: gas holders and tanks cut in the sandstone containing coal tar; and contaminated fill material.

In 2009, the EPA directed that the site be remediated. Extensive planning since then has included soil sampling, preparation of remediation plans and obtaining development approvals.

The two remediation projects will take more than three years and be carried out in two locations. (For details, see map in the attached background notes):

- The first is underneath Hickson Road, between the addresses of 30-34 and 38 Hickson Road.
- The second is in the northern section of Barangaroo South and adjacent to that area on site at Central Barangaroo (known as Blocks Four and Five respectively).

The remediation projects will not affect the amenity of or access to the recently completed Barangaroo Reserve, which is unaffected by the contamination. Work will also continue as planned at Barangaroo South.

The remediation processes have been designed to minimise the impact on nearby residents and businesses, while enabling this important and significant work to be carried out.

“The gasworks lit the way for Sydney to become a modern city. It now falls to us to manage its legacy safely and efficiently,” said Craig van der Laan, Barangaroo Delivery Authority CEO.

“We are bringing together national and international expertise to safely remediate the two sites as efficiently as possible, given the location and significant size of the projects.”

Project 1: Remediation under Hickson Road

When: September 2015 – late 2016

Approach: Pilot Trial of In-Situ Chemical Oxidation (ISCO) technology

A new technology will be piloted to remediate a tank containing contaminated material in its existing location, underneath Hickson Road. This in-situ approach is being taken in an effort to minimise impacts on local residents, businesses and the environment.

The ISCO pilot trial will take place beneath a tent on Hickson Road, which will be 35 metres long and 15 metres wide. Beneath the tent, up to 25 wells will be drilled into the tank, which is located between two and 12 metres below ground, allowing for:

- extracting coal tar for treatment at an EPA-licensed facility;
- injecting a citrus-based substance to break the remaining tar's surface tension;
- then injecting an oxidant to destroy the tar, breaking it down to just carbon dioxide and water; and
- continuous monitoring to ensure the process is safe and effective.

While two-way pedestrian and vehicular traffic will be maintained, up to 70 car spaces along Hickson Road will be temporarily removed at various times to enable the work to be carried out. Due to increased work on and around Hickson Road, pedestrians have been advised to use Kent Street when approaching Barangaroo Reserve from Wynyard Station.

If the pilot is successful, the technology will be used on other former gasworks structures beneath Hickson Road. If not, the site would need to be excavated, and every effort would be made to minimise disruption.

"The ISCO pilot on Hickson Road is part of our effort to minimise inconvenience for nearby residents and businesses, and two-way traffic flow and access to driveways will be maintained," said Mr van der Laan.

Project 2: Remediation on Barangaroo Block Four (South) and Block Five (Central)

When: Late 2015 – early 2018

Approach: Full-scale, conventional dig, treat and fill project

A conventional 'dig, treat and fill' approach will be used to excavate and remove around 150,000 cubic metres of contaminated fill material from Barangaroo Block Four and Block Five.

From late 2015, a large underground wall will be constructed from the surface down to bedrock, in order to prevent water from entering this area during excavation.

Subject to a tender process, in mid-2016, one or two large, negatively-pressurised tents will be secured to the wall, creating a covered site of up to 30,000 square metres. The tent will contain odours or dust from the excavated material.

The old gasworks waste will then be dug up and placed in a truck, sealed to prevent exposure to dust and odours, and transported to an EPA-licensed facility for treatment. Groundwater will be extracted and treated onsite to meet Australian and New Zealand Guidelines for Fresh and Marine Water, and then discharged into the Harbour, in accordance with EPA requirements.

"Our focus on the Barangaroo site itself is to safely, and as efficiently as possible, excavate and treat around 150,000 tonnes of contaminated fill material, which will then be disposed of at a licensed waste facility," said Mr van der Laan.