

## Project Profile

# Adelaide Festival Centre Drive Upgrade Works



<b>Client</b>	Lendlease
<b>Location</b>	Adelaide, South Australia
<b>Duration</b>	November 2016 to May 2018
<b>Contract</b>	Lump Sum Construct Only
<b>Cost</b>	\$4.9 million

## Project Overview

In March 2015, Renewal SA embraced an opportunity to leverage other developments happening in and around the Adelaide Riverbank by developing a proposal with Walker Group Holdings for the integrated redevelopment of the Adelaide Festival Plaza site.

The plaza redevelopment envisioned would provide 16,500m<sup>2</sup> of public space established in the areas surrounding the Adelaide Festival Centre, Adelaide Railway Station, Adelaide Casino, Parliament House and Old Parliament House and Station Road.

Per the early works agreement signed by the state government and SKYCITY who operate Adelaide Casino, construction began in November 2016 and involved the lowering of Festival Drive, separating vehicle and pedestrian movements and enabling direct on-foot access between the Riverbank Footbridge and Adelaide Railway Station. The scope included the early foundation work required to support the Adelaide Casino expansion and to drop the existing access road to allow new overhead building works.

### McMahon Services

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Lendlease was awarded the contract and engaged McMahon Services to deliver the early works package. Based on the success of the delivery for the first package, Lendlease then awarded McMahon Services the hydraulic package through Hindmarsh Plumbing who was also working for Lendlease, and main civil package of works for the overarching project.

### Scope of Work

McMahon Services delivered the project in three stages. The first stage was the early works to alter traffic lights on Festival Drive connecting traffic to King William Road, installing bollards and preparing the site for the main construction works.

The second stage required locating water mains, sewers, electrical cable and stormwater, then relocating all services within 7m below the ground level as they would otherwise risk being damaged during latter construction stages. Over 150m of sewer lines and 150m of water mains were relocated.

The third stage comprised of the bulk of the works. Ground conditions proved challenging with former building structures including a retaining wall dating back to the 1920s requiring demolition and remediation. Over 15,000m<sup>3</sup> or 30,000t of bulk earth were transported offsite for treatment and recycling that ultimately ended up as fill material for the Northern Connector project concurrently underway in Adelaide's northern suburbs. An addition 1800t of asbestos containing and low level contaminated soils were removed and disposed of offsite at EPA licenced receiving stations.

Civil and road construction works included the construction of a piling platform for approximately 400 continuous flight auger piles (CFA) installed by another contractor, lowering construction works for 120m of the Festival Drive road including base course and 1000m<sup>2</sup> of bitumen asphalt, 200m<sup>3</sup> of concrete shotcreting, the construction of 400m of new stormwater lines, kerbing, signage and line marking. The road was constructed inside two pile derived retaining walls leading into a tunnel under the Festival Centre area. Portions of the road works were undertaken beneath a suspended concrete slab.

Plant and equipment included 30t, 20t, 7t and 5t excavators, 140M graders, 12t padfoot and smooth drum rollers, wheel loaders, tandem trucks, skid steers and water trucks. Workforce peaked at 10 personnel who completed 20,000 work hours with nil safety or environmental incidents.

### Project Challenges

The work site was extremely congested with operational and occupied buildings adjacent to the works on all sides including the casino, hotel, festival centre and train station. Environmental considerations were at the forefront of project planning and execution, and included noise and dust mitigation strategies to minimise impacts on adjacent buildings.

Sewer and other water lines required continual pumping to ensure flooding did not occur on site. Material stockpiles had to be carefully managed so not to further constrain the site. Many items of plant had to be lifted into and out of site via a 60t crane due to the highly restrictive access.

Another key congestion challenge was maintaining access to the loading dock for servicing the Adelaide Festival Centre, the Intercontinental Hotel and the Skycity Casino, which was located within and adjacent the construction site. The loading docks had to remain accessible and open at all times and often featured long lines of trucks loading and unloading goods.





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