Project Profile

Highbury Landfill LFG Management

Client	Highbury Landfill Authority
Location	Highbury, SA
Duration	Ongoing Contract
Contract	Landfill Gas System Design and Management
Cost	$310,000

Project Overview

Due to decreasing gas volume and quality on a former EDL landfill power generation site, an innovative flaring system was required by Highbury Landfill Authority to continue controlling migration of LFG for the long term, as the power generator was decommissioned.

The project involved controlling the LFG from two landfill sites, termed the Highbury and SUEZ landfills, adjacent each other but linked by a common gas collection system. Houses were present on the northern, western and southern boundaries, with a high risk of off-site LFG migration due to the sandy geology of the area.

McMahon Services installed a temporary elevated flare whilst the power generator was decommissioned to ensure gas extraction occurred on a 24/7 basis. The gas collection system (GCS) was balanced to provide data for the design and commissioning of a permanent flare for the site. The temporary elevated flare operated for approximately six months whilst the permanent flare provided by Biogas Systems Australia was commissioned.

The aging GCS infrastructure and geology of the site created a number of issues in terms of maintaining 24/7 operation of the flare, and was a major consideration in the design of the permanent system. Continual remedial works were undertaken on the

GCS to allow effective operation of the flare system as well as to mitigate off-site gas migration. These works included draining flow lines, replacing broken or seized valves, repairing manifolds and installing condensate pumps.

The final design was a 600 m3/hr Lo-CalTM HT flare, the largest of its type in Australia. The flare was successfully installed and commissioned, and has been effectively controlling the migration of LFG at the site for close to a year.

It is expected the flare will be able to operate for over 10 years, providing a cost effective solution for the client. McMahon Services will continue the maintenance of the flare and associated works, further strengthening the working relationship.

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