



COMPANY PROFILE

August 2017



COMPANY BACKGROUND



Established in 1988, McRobert Contracting Services ("MCS") are proud to be a 100% Australian owned and operated entity. Based in Perth, Western Australia the company's rapid expansion since the early 1990's has seen the company develop into a business whose specialised services are sought nationwide by both the private and public sectors.

McRobert Contracting Services is a leader in PVC pipe technology and related services. We provide infrastructure and construction projects with unique solutions based on our full range of applications including:

- 3D Laser Scan inspections
- Sewer Access Chamber and Pump Station refurbishment
- PVC and polyethylene welding
- High pressure jet pipe cleaning
- CCTV inspections of piping and sewage systems

We are total pipeline project managers with highly skilled and experienced staff. We have worked on hundreds of projects over three decades, including public and private sector construction and development projects across Australia.



Strategic alliances with major facilities managers and corporations such as the Water Corporation, Western Power, Rio Tinto, BHP, Woodside, McMahon, Holcim, Power & Water Corporation, Transfield, Humes, Interflow, Programmed FM, Georgiou Group, Mousellis & Sons and many others, has further driven the company's development.

With a reputation for maintaining the traditional values of personal service and professional acumen, MCS are now widely regarded around the country as leaders in the fields of pipeline maintenance, inspection, plastic welding and fabrication services. During the last few years MCS have rehabilitated more than 450 sewer access chambers and sewer pump stations across Australia.

The company's vision is to become the first choice for PVC and HDPE pipeline welding technology and waste water refurbishment related services Australia wide, by offering first class service and products to our existing and future customers.

McRobert Contracting Services prides itself on putting our customers' satisfaction as one of our main priorities. We are renowned for maintaining traditional values of personal service and professional pride, while developing and incorporating the latest technical innovations.



PATENTS & QUALITY ASSURANCE

McRobert Contracting Services is committed to the development of innovative solutions for the infrastructure and construction projects and the company invests in research and development projects. Over the years MCS has been recognized with several awards.

Recognition for the company includes a 'Western Australian Job Safe Award' for a scaffold system for manhole and access pits, and in 2009 was a recipient of a 'WA Excellence Award' for the development of unique relining system for sewerage access chambers.

Patents

MCS holds a number of Australian patents associated with the lining of structures. These specific patents are:

PATENT NUMBER	TITLE	TYPE	STATUS	FILING DATE
AU2017900680	Sewer Access Chamber Protection System	Standard	Filed	28/02/2017
AU2017200554	A Welding Carriage and Welding Apparatus	Standard	Filed	27/01/2017
AU2016253601	Method of lining a utilities manhole	Standard	Filed	2/11/2016
AU2016101938	Method of lining a utilities manhole	Innovation	Granted	2/11/2016
AU2016900310	Welding apparatus	Provisional	Filed	01/02/2016
AU2014250707	A system and method for lining a structure	Standard	Filed	17/10/2014
AU2011101397	A rotary welding system	Innovation	Granted	21/10/2011
AU2010101120	Scaffolding system	Innovation	Granted	13/10/2010
AU2009222579	Method of lining a utilities manhole	Standard	Accepted	02/10/2009

Quality Assurance

MCS has an on-going commitment to Quality Management Systems and has the following accreditations:

- ISO 9001:2008 - Quality Management Systems.
- AS/NZS 4801:2001 - Occupational Health and Safety Management Systems.
 - NSW Government WHSMS Auditing Guidelines

OUR PEOPLE

One of our strengths is our people, many having been with us from the start, and in caring for their welfare and wellbeing. We value our people and encourage them to achieve their best. At McRobert Contracting Services, we believe that the growth of our company is the strongest testimonial to the quality and character of our people, products and services. And it is upon this base that we will achieve our strategy to become the industry's first choice for pipe technology and related services Australia wide.

MCS crew members are trained and competent in the following areas:

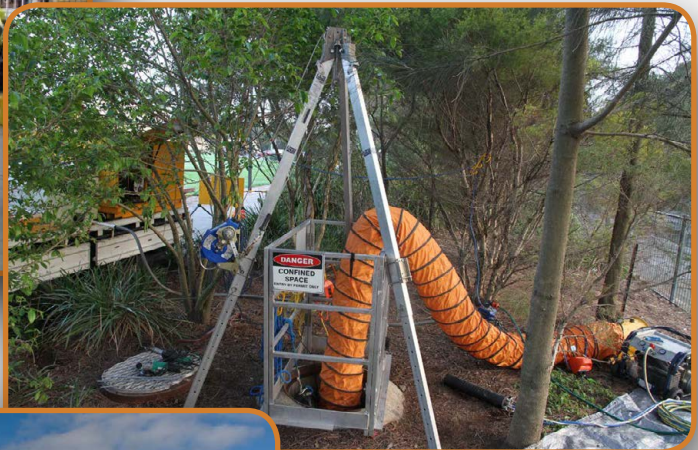
- Confined Space Entry
- Gas Test Atmospheres
- Working at Heights
- Plastic Welding Certifications
- High Risk Licences, including EWP, Forklift & Dogging
- Senior First Aid

Confined Space Entry

MCS has developed several improvements to existing confined space systems, such as platform ladders, portable "gated" barriers and internal scaffolding systems with mesh floors providing ventilation and light and trapdoor access between levels to allow entry, exit and rescue.



MCS personnel partaking in confined space training



Confined space system setup for access chamber entry



Confined space system setup for sewer pump station entry

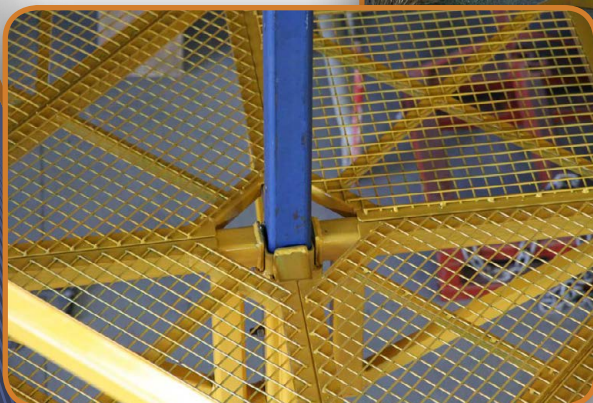
SCAFFOLD AND BRACING SYSTEMS

MCS Scaffold System - Patent No. AU2010101120

MCS have developed specialised internal scaffolding and bracing systems, specifically designed for use in wastewater pump stations, access chambers and other similar structures.

Our systems are of a modular design to make installation easier and to ensure access through smaller openings. They are built in a range of sizes to suit various diameters. Some of our scaffold systems have a built-in adjustable bracing system that can be used to stabilise the rigid PVC lining during grout pours in the refurbishment process of wet wells.

In 1997 MCS was the recipient of a prestigious "Job Safe Award" (from the then Department of Occupational Health & Safety) for its original scaffolding system. The system has since been modified to suit other applications and still remains in continual use within our operations.



SERVICES

Sewerage Asset Assessment and Refurbishment

Laser Scan and CCTV Inspections

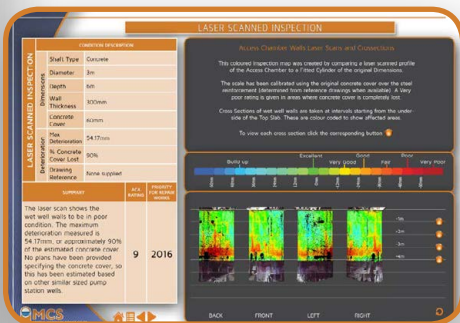
McRobert Contracting Services provides a specialised service of completing 3D laser scan and CCTV inspections on sewer pump stations and access chambers.



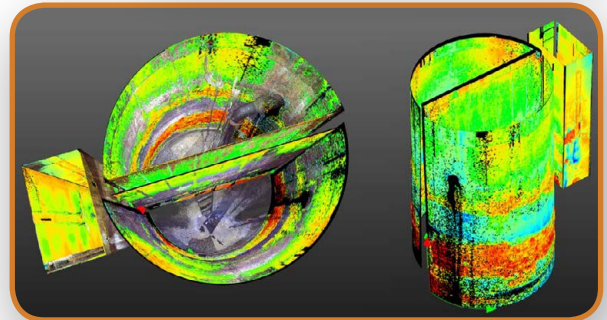
A specifically designed apparatus is used to lower a laser scanner and high resolution camera into the asset, preventing the need for man entry to complete internal inspections.



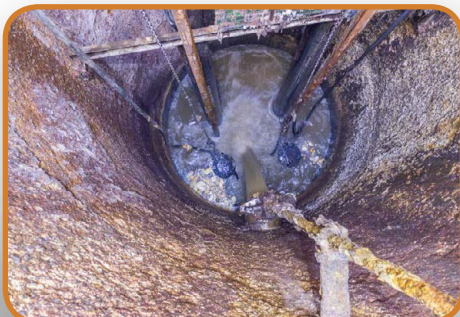
Data is collected from the laser scanner and used with specialised software to create 3D point cloud imagery which is then used to assess the structural integrity of the asset walls.



In conjunction with the laser scanner, a high resolution camera is then used to visually inspect the walls and internal components of the wet well.



A detailed report is then generated assessing the internal components of the asset, and a full HD video recording of the inspection and high resolution photographs are provided as attachments to the report.



"THE SLEEPING GIANT"

Australia, along with many countries worldwide is literally sitting on a sleeping giant that slowly but surely grows larger day by day. Major problems are increasingly being found within systems where unprotected concrete components have been exposed to continuous gas attack. Left unchecked this corrosion can lead to eventual system failure, interruption of essential services and contamination of the environment.

SERVICES

Sewerage Asset Assessment and Refurbishment

Access Chamber Refurbishment

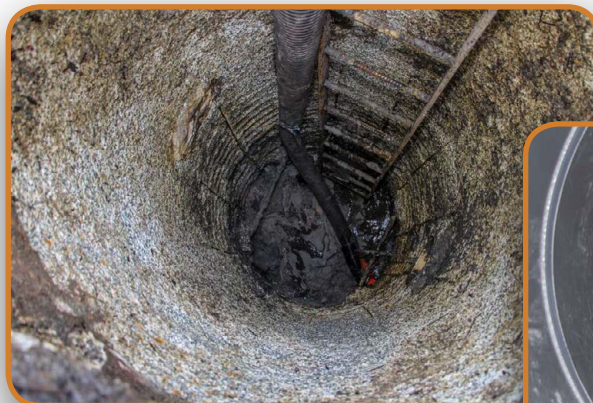
MCS has developed a unique patented method of structurally relining access chambers which suffer from biogenic sulphide corrosion, more commonly known as 'gas attack' or 'concrete cancer'. Using a minimum 10mm rigid PVC sheeting, the chamber walls are prefabricated into sleeves which can then be lowered into place directly into the asset. MCS also prefabricates the PVC channel and benching components which are then plastic welded into place in the chamber.

After installation, the preformed sleeves, channels and benching are secured to the original asset using a minimum 40mm of high strength grout. MCS relines access chambers from top to bottom including pipe connections, channel and benching resulting in a 100% gas tight structural PVC lining. This ensures complete protection of the asset from concrete deterioration. Replacement of asset top slab and lid can also be performed at this time if required.

Our relining methodologies have been developed to ensure we maintain a safe working environment that enables us to complete each task more efficiently, while spending the minimum amount of time in the chamber.

"OUR REFURBISHMENT SYSTEMS EQUATE TO LESS THAN 20% OF THE COST OF REPLACEMENT AND CARRY A MINIMUM 50 YEAR GUARANTEE"

Cockburn WA

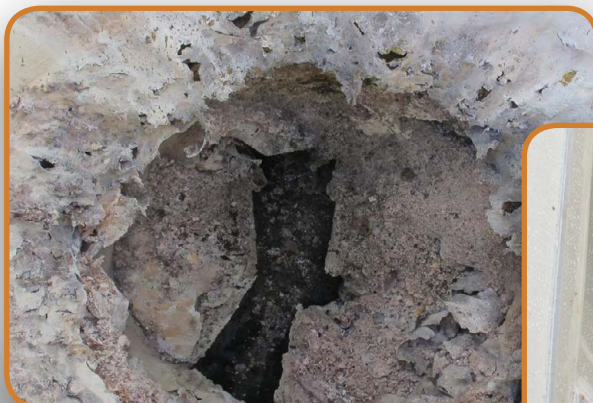


Before

After



Karlooloo, Geraldton WA



Before

After



Sewerage Asset Assessment and Refurbishment

Sewer Pump Station Refurbishment

The structural relining method used to refurbish access chambers has been adapted and patented to be used for the refurbishment of sewer pump stations that are in poor condition. Using a minimum 12mm rigid PVC sheeting, preformed to required specifications in our factory, the original asset is rebuilt from the inside out to protect it from any further deterioration.

The preformed lining is installed and secured to the original asset walls using a minimum 40mm of grout. The grout not only secures the lining in place, it also rebuilds what concrete has already deteriorated due to biogenic sulphide corrosion, or 'gas attack'.

The use of the 40mm grout to rebuild the internal concrete surfaces of the structure ensures that the structural integrity is maintained, while the rigid PVC provides corrosion protection to the asset.

Other services that MCS can provide during the refurbishment process include:

- Replacement of damaged pipework and mechanical components
- Retrofitting of new pump station lids
- Removal of components that are obsolete (including steps, ladders and brackets)

Coconut Grove, Darwin NT



Before



After

Karlooloo, Geraldton WA



Before



After

SPS RELINING PROCESS



Existing Top Slab In Place



Bypass Pumping Operating



Excavate Around Slab For Removal



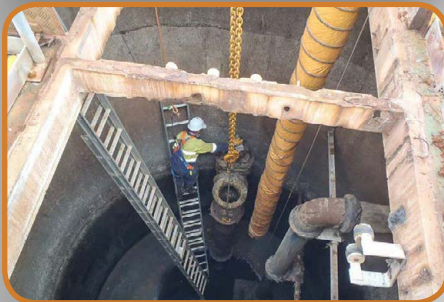
Removing Top Slab



Top Slab Removed



Install Steel Mesh Safety Cover



Remove Pipes, Valves, Fittings



Start Plastic Lining At Bench Level



Continue Plastic Lining



Plastic Lining Continues To Top



New Plastic Lined Top Slab



New Top Slab In Place



Plastic Lining Completed



Pipework and Fittings Replaced

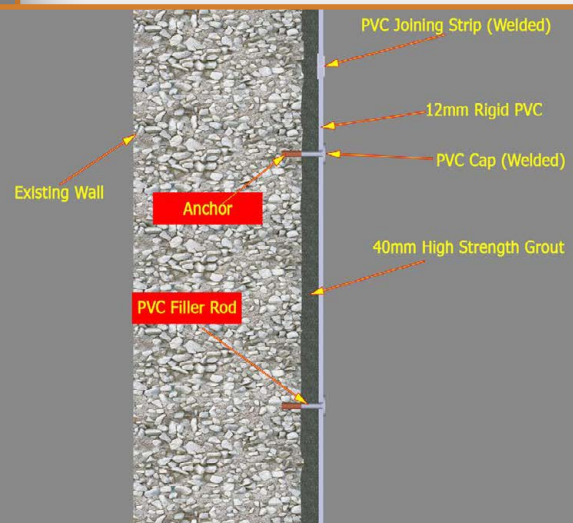


Back In Operation

SERVICES

MCS "Whaler System" - Patent No. AU2014250707

Our patented whaler system eliminates the need to use complicated formwork and bracing systems that may be large, heavy and expensive during the refurbishment process. The whaler system simply takes advantage of the strength of the rigid PVC lining by using it as the formwork while the grout is being poured.



The whalers are secured to the original concrete wall with fixings through the PVC lining holding it in place. Once the grout has cured, the whalers then are removed and can be re-used over and over again. The remaining fixing holes in the PVC lining are then capped and welded ensuring a gas tight seal.

This method makes it possible to structurally reline assets of many different shapes and sizes without the need for various sets of formwork/bracing.



SERVICES

Plastic Fabrication

Workshop Fabrication

MCS' workshop is based in Jandakot, 20km south of Perth, Western Australia.

The methods used to complete refurbishment works allows MCS to prefabricate much of the required components in the workshop. This reduces the time spent onsite, which in turn minimises the risks involved in working in hazardous conditions such as confined space areas.



CNC routing capabilities as well as a custom built oven and specially built moulds are used to prefabricate and thermoform the PVC components used in the refurbishment process of sewer access chambers and pump stations. The components are then packed and sent to site.

MCS "Welding Table" Patent No. AU2017200554

MCS has custom-built a 'welding table', which we use to secure anchor strips to the back to flat PVC sheets, prior to moulding into shape for refurbishments. The use of heat welding to secure these strips ensures that the strip cannot be separated from the lining, even with a significant amount of force applied. The strips are used to anchor the PVC lining in place after the 40mm of grout is poured during refurbishment.



SERVICES

Plastic Fabrication

Onsite Fabrication

MCS were one of the first companies to become involved with the onsite fabrication and installation of PVC / HDPE components during the construction of large infrastructure projects such as sewerage treatment works and desalination plants.



This work requires highly skilled trademen who are required to work in confined spaces and difficult conditions where safety procedures are a priority at all times. Our tradesmen are all currently certified in confined space, gas testing and working at heights, as well as having employees with specialty licences including plastic welding certifications, high risk and plant licences. The safety of our employees is paramount, and all our tradesmen are provided with the skills and equipment to complete onsite fabrication in the safest way possible. MCS has developed several new innovative systems to improve working conditions and safety, one of these is our series of patented modular platform scaffolding systems.

Some of the major projects that MCS has been involved in include:

CLIENT	ACTIVITY	COMPLETED
RCR WATER	Subiaco WWTP - 67 MLD Upgrade Project, Perth, WA	Current
WDS LIMITED	HDPE sewer pipeline welding and access chamber construction for new Woogaroo Creek Trunk Sewer, Ipswich, QLD.	2012
SAVCOR	AKS lined permeate tanks, SA desalination plant	2011
BARWON WATER	AKS lined pipe, 4.7 metre diameter pre-cast aqueduct, Werribee, VIC	2010
AZZONA DRAINAGE CONTRACTORS	Plastic welding of pipe joints at Laverton and Kororoit Creek, VIC	2010
GEORGIU / WATER CORPORATION	New PVC lined sewer pump station, Medina, WA	2009
GEORGIU JOINT VENTURE	10km pipe welding - 1500mm and 900mm HDPE lined concrete pipe of approx. 4000 joints, Berwick, VIC	2007
JOHN HOLLAND	Plastic welding contract - 10km pipe welding, 28 access chambers and 12 PVC lined structures.	2006



MCS PLASTIC LINING GUARANTEE

McRobert Contracting Services provide a fifty (50) year guarantee on all materials and workmanship for the plastic lining of sewer access chambers and waste water pump stations.

*McRobert Contracting Services
50 year guarantee
for the plastic lining of
utilities access chambers
and sewer pump stations*

PVC Life Expectancy

The Water Services Association of Australia (the peak industry body representing the major water utilities across Australia) has appraised PVC pressure and non-pressure pipe products as fit for purpose and with a life expectancy in excess of 100 years.

Piping systems are often buried. PE and PVC have shown their suitability as piping products in all natural soils. They have been successfully used in highly aggressive environments such as saline interception schemes for decades. Plastics pipe systems are not subject to corrosion. Furthermore there are no significant environmental impacts associated with buried PE or PVC. For these reasons plastics pipe products dominate in the gas, water and sewer reticulation markets across Australia and the World.

Provided no physical damage or prolonged exposure to UV occurs in the future, PVC linings should last well in excess of 100 years

SERVICES

Pressure Jetting and CCTV Services

High Pressure Jet Pipe Cleaning

MCS was one of the first company's in WA to introduce pressure jet cleaning to the state.



We currently have three specifically designed vehicles for completing high velocity pressure jet cleaning and root cutting in sewer pipelines. Our vehicles are mounted with high pressure jet cleaners capable of jetting water with a pump capacity of 2500psi.

Our vehicles are equipped with

- Hydraulically controlled rotating nozzles
- High pressure rotating head (Warthog) nozzles
- 3,000L water tanks
- 220m of one-inch hose
- Three-stage pumps with stainless steel heads

Chemical Control of Tree Roots

Our pressure jetting vehicles are also capable of applying rootfoam herbicide to tree root affected pipelines, through the use of a larger capacity hydraulic pump and a specialised high/low rootfoam jetting nozzle. This treatment only affects tree roots within the vicinity of the pipeline, without causing damage to the tree itself.

MCS and its staff are highly trained and licensed in the handling, preparation and application of these herbicides.



CCTV Inspections

MCS has a specialty vehicle equipped to complete CCTV pipeline inspections, as well as a combination pressure jetting and CCTV vehicle. We use the latest Ipek Rovver CCTV pipeline inspection unit with a variable speed six wheel drive. This unit has a pan, tilt and ten-times optical zoom colour camera head, and a built-in inclinometre and sonde for tracking. It is capable of filming up to a distance of 200 metres in any direction from the starting point, and can be used for inspecting pipes from 65mm to 2,000mm in diameter.

We use WinCan 8, the latest professional pipe inspection software which produces high quality videos, still images and inspection reports which are all provided to the Client on completion.



Scale	Start	Stop	Time	Depth	Flow	Temp	Pressure	Speed	Altitude	Location
0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0

McRobert Contracting Services
ABN: 77 063 441 725
ACN: 063 441 725
53 Solomon Road, Jandakot, W.A. 6164
PO Box 3467, Success WA 6964
FREE CALL: 1800 33 55 64
HEAD OFFICE: (08) 9411 0666
FAX: (08) 9414 7242
admin@mcrobert.com.au