

Statement Capability

3 May 2021

INDUSTRIES SERVED



Company Details

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ICN Gateway Company ID: 74809

ABN: 57 008 116 130

Locations: 12

NT CAL Accredited: Yes

Works in Remote Locations: Yes

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Fyfe provides a national survey service across a broad range of industry sectors.

Summary

Fyfe Pty Ltd (Fyfe) is a multi-disciplinary consultancy providing comprehensive engineering, environmental, planning, and surveying services throughout Australia. Fyfe work with a wide range of clients in the energy & resources, infrastructure and property sectors to provide high quality, commercially pragmatic solutions with a strong focus on client service and delivery.

Fyfe was established in South Australia in 1982 and is headquartered in Adelaide, Australia. Fyfe is an employee-owned company, and as such delivers a business model with a vested interest in project ownership and client satisfaction.

Fyfe has approximately 250 staff located in offices throughout metropolitan and regional areas of South Australia, Queensland, Northern Territory, New South

Description

Fyfe's workforce is situated in offices throughout metropolitan and regional areas of Queensland, Northern Territory, South Australia, New South Wales, Victoria and Western Australia.

Fyfe maintains offices at the following locations – Adelaide, Alice Springs, Ballera, Brisbane, Chinchilla, Darwin, Melbourne, Moomba, Mt Barker, Muswellbrook, Perth and Roma.

Fyfe has the capability to provide the following services:

- Automation
- Civil Engineering
- Electrical and Instrumentation
- Environmental
- GIS/Survey Plans

- 3D Laser Scanning
- Mechanical Engineering
- Pipeline Engineering
- Planning
- Process Engineering
- Project Management
- Structural Engineering
- Survey / Drone Survey
- Urban Development

Fyfe has established business systems that have proven successful through the achievements of the Company. These systems provide the necessary control of the business and cater for our key objective of 'fit for purpose project outcomes', which provide value for money services.

Associations

- Australian Pipeline & Gas Association
- SACOME Council (President)
- APGA Research and Standards Committee
- APGA Young Professionals
- HIA Committee
- Member of Surveyors Board of South Australia (Chair)
- Membership of Trimble Trusted Advisory Committee
- Member of Surveying Spatial Science Institutions SA
- Women in Resources SA
- Member of Norwood Resource Incorporated
- SACOME
- UDIA
- Young Energy Professionals (SA)

Accreditations

- ISO 9001:2015 Quality Management System -Certificate No. 516051-Q
- AS/NZS 4801:2001 Occupational Health & Safety Management System - Certificate No. 516051-S
- ISO 14001:2015 Environmental Management System - Certificate No. 516051-E

Industries Served

- Clean Energy
- Construction & Engineering
- Defence
- Land & Agriculture
- Mining
- Oil, Gas & Energy
- Professional Services
- Rail
- Steel
- Transport
- Water

Products & Services

- Automation
- Engineering (civil, structural, mechanical, E&I, process, pipeline)
- Environmental services
- Planning
- Survey / 3D laser scanning / GIS / UAV drone survey

Major Clients

- Adelaide Brighton Cement
- Adrail
- APA Group
- Arrow Energy
- ATCO Gas Australia
- AV Jennings
- Bardavcol
- Beach Energy
- BHP
- BMD Constructions
- Bunnings
- CPB Contractors
- Department of Defence
- Department of Infrastructure and Transport (formerly DPTI)
- Department of Infrastructure, Planning & Logistics (DIPL)
- Downer EDI
- Enerflex
- Enerven Energy
- EPA SA
- Epic Energy
- ExxonMobil
- Fluor
- Gladstone LNG
- Glencore Hunter Valley
- Halikos Group
- Heathgate Resources
- Hickinbotham
- Jemena
- Juwi Renewable Energy
- Kogas
- Laing O'Rourke
- Lendlease
- McConnell Dowell Constructors (Aust) Pty Ltd

- Mach Energy Australia
- MacMahon Services
- MPC
- NACAP
- NT Gas
- OM Manganese
- Origin
- Ostojic
- Peregrine
- Petronas
- PowerWater Corporation
- QGC
- Quadrant Energy Australia
- Renewal SA
- Rio Tinto
- SA Government
- Saipem
- Santos
- SEA Gas
- Senex Energy
- Sitzler
- Starfish Developments
- Stratco
- Strike Energy
- Territoria Civil
- Territory Alliance
- Total
- Ventia
- Victoria Petroleum
- Viva Energy
- Worley

Facilities & Equipment

- 12D
- Leica Laser Scanner
- AutoCAD
- ArcView
- Bentley
- CAD (various)
- AutoCAD Map
- CivilCAD
- Cloudworx
- GIS
- Hysis
- 3D laser scanners
- MapInfo
- Pipesim
- Phast
- Plant 3DRevit
- Staad
- TEDDS
- Terra Model
- Trimble Total Stations
- Trimble GPS
- Trimble GNSS GPS
- Trimble S6 Robotic station
- Vehicles | Field Survey Vehicles (x 70)
- Surveyors | Licensed Surveyors (x 20)

Previous Significant Projects

Client: Laing O'Rourke Australia Construction Pty Ltd (Client owner Australian Naval Infrastructure Pty Ltd (ANI))

Project: OSBORNE NAVAL SHIPBUILDING PRECINCT (FUTURE SUBS PROGRAM) INFRASTRUCTURE DEVELOPMENT

Year: 2021 Value: \$1,000,000

Description: The Osborne Naval Shipbuilding Precinct (Future Submarine Program) (ONSP(FSP)) Infrastructure Development will provide the necessary build, test, and integration facilities (BTIFI) to design, produce and accept into service a fleet of future submarines (FSM). Fyfe provided initial site survey works and is the site surveyor to LOR and many contractors for this project.

Client: Sitzler (Principal Department of Defence)

Project: UNITED STATES FORCE POSTURE INITIATIVE (USFPI) Northern Territory Training Areas and Ranges Project

Year: 2021 Value: \$1,000,000

Description: Project EST01990 (formerly J0139) United States Force Posture Initiatives (USFPI), Northern Territory Training Areas and Ranges project will provide upgrades to

- Robertson Barracks Close Training Area (RCTA)
- Kangaroo Flats Training Area (KFTA)
- Mount Bundey Training Area (MBTA); and
- Bradshaw Field Training Area (BFTA).

Fyfe is providing site survey services for this project.

Client: Jemena Limited

Project: Atlas Lateral Pipeline Detailed Design

Year: 2018 Value: \$500,000

Description: Scope: Pipeline engineering design (mechanical, process, electrical, civil/structural, cathodic protection, GIS and drafting/design)

The Atlas Lateral will be one continuous pipeline (DN200 15.3 MPa) from the Atlas Compressor Station to the tie-in point on DDP approximately 60 km in length. Project Atlas is planned to commence commercial production in 2019.

Client: Jemena Limited

Project: Atlas Lateral Pipeline Survey

Year: 2018 Value: \$100,000

Description: Scope: Cultural heritage and environmental survey, pipeline control survey, centreline survey, 3D scanning of tie-in facilities, cadastral survey (easement plans)

The pipeline alignment comprises three parts:

- Part 1: 11 km from Atlas Compression facility to Gadsbys Road north of QGC's Woleebee Creek facility.
- Part 2: 41 km from south of QGC's Woleebee Creek facility to the Darling Downs Pipeline (DDP).
- Part 3: Approximately 4 to 5 km route connecting part 1 and part 2

Client: Ventia Pty Ltd (Principal DELWP)

Project: Australian Height Datum (AHD) Determination for Groundwater and Surface Water Monitoring Networks

Year: 2018 Value: \$400,000

Description: Ventia currently monitor both groundwater and surface water sites across Victoria for DELWP. Approximately 1450 groundwater sites are monitored on a quarterly basis and approximately 250 surface water sites (of a total 750) are monitored monthly.

Fyfe's main role with this project was to utilise the Global Navigation Satellite System (GNSS) and Continuously Operating Reference Station (CORS) network for height determination and site calibration.

Client: BHP

Project: BHP Olympic Dam Tailings Retention System

Year: 2018 Value: \$500,000

Description: Fyfe has been engaged by BHP to provide ground survey and aerial photogrammetry services of the following areas as part of the portfolio of Tailings Retention System Upgrade Projects at Olympic Dam -

- TSF4 Buttress Upgrade
- Dam Break Barrier Wall
- Evaporation Pond 3 Raise
- Northern and Southern Borrow Pits
- Existing Stockpiles

Client: LSG Group	
Project: Chinchilla Solar Project	
Year: 2018	Value: \$50,000

Description: The Chinchilla Solar Project is a 20 MW solar farm located 10 km west of Chinchilla, Queensland. Fyfe has been engaged by the LSG Group to provide survey services across the site.

Client: Gateway South (JV Laing O'Rourke / Fulton Hogan - Principal: DPTI)

Project: Darlington Upgrade Project Offsite Bridge Construction Set-Out Survey

Year: 2018 Value: \$300,000

Description: The Darlington Upgrade Project is an important stage in the delivery of Adelaide's North-South Corridor and will deliver an upgrade of approximately 3.3 kilometres of the existing Main South Road.

Fyfe provided:

- Design and set out temporary structural towers for the construction of bridge spans off site
- Establish high accuracy survey control around bridge construction site
- Determine logistical travel paths for Self-Propelled Modular Trailers (SPMT) + 3D Modelling
- And more

Client: Peregrine Corporation		
Project: Environmental Services		
Year: 2018	Value: \$300,000	
Description: 2011-ongoing Scope:Trusted Advisor, Acquisition Due Diligence Assessments, Risk Management, Environmental Site Assessments, Site Remediation, Regulatory Liaison, Portfolio Management		
Client: Santos Ltd		
Project: GLNG Project, Eastern Queensland		
Year: 2018	Value: \$1,000,000	

Description: Fyfe is providing design, costing and construction documentation for Santos CSG gathering systems. The gathering systems range from a few flowlines to hundreds of flowlines. Fyfe is

- . Performing constructability reviews, including consideration for environmental and safety requirements
- . Integrating GIS with engineering and drafting tools and processes
- . Provide GIS data of pipeline routes and related infrastructure for construction

Client: Starfish Developments

Project: Hamilton Hill Estate, Woodforde

Year: 2018 Value: \$400,000

Description: Starfish Developments is the Development Manager and Sales Agent to Hamilton Hill Estate at Woodforde consisting approximately 400 dwellings progressively constructed over some four years.

Fyfe's role and responsibility

- Planning Phase Works
- Project Management
- Project Engineering and Service Authority Liaison

- Stormwater Management Design
 Civil Design and Documentation
 Tender Call, Contract Award, Superintendency & Contract Administration

Client: BGC and Rhomberg (Principal MACH Energy)

Project: Mount Pleasant Mine Rail Loop

Year: 2018 Value: \$300,000

Description: Scope: Survey services, land division, project management, drone surveys, as-built information, laser scanning and machine guidance

Fyfe was recently engaged to undertake the survey of a new 6km private rail line for a new coal mine in the Hunter Valley. The track was diligently surveyed over a week during day and night shifts as a tamping machine chased us down the line moving the rail to millimetre accuracy.

Client: McConnell Dowell Constructors (Aust) Pty Ltd (Principal Jemena / Owner NT Government)

Project: Northern Gas Pipeline Land Survey and Dilapidation Survey

Year: 2018 Value: \$1,000,000

Description: Stage 1:

Fyfe's Subcontract Scope of Services comprises of land surveying and dilapidation survey as separable portions to support the construction of the Northern Gas Pipeline (NGP). The works include construction of 481km of the 622km 12 gas pipeline between Tennant Creek and Mt Isa, main line valves, CP stations and a scraper station.

Stage 2:

Fyfe were also engaged to carry out the construction survey.

Client: Origin Energy

Project: Origin Energy 3D Laser Scan (Various facilities)

Year: 2018 Value: \$100,000

Description: Fyfe has been providing 3D laser scanning services to many of Origin's assets located throughout Queensland for many years. Of particular note are sites visited as part of the HV Cable Replacement Project including:

- Orana GPF
- Combabula GPF
- Condabri South GPF
- Condabri Central GPF
- Condabri North GPF
- Reedy Creek GPF
- Eurombah Creek GPF

Client: Starfish Developments Pty Ltd

Project: Port Adelaide Redevelopment Dock 1 & Port Approach South

Year: 2018

Value: \$125,000

Description: Fyfe have been engaged by Starfish Developments to undertake the civil engineering design, survey and construction phase services for the Port Adelaide Redevelopment (Dock 1 and The Port Approach South). The Port Adelaide Redevelopment is an ongoing high density redevelopment of a brownfield site located on the banks of the Port River. An old, unused dock breaks the site into two sections which have been given the names, Dock One and Port Approach South.

Project value \$32m (2016-present)

Client: BHP

Project: Replacement M6 Pipeline Survey

Year: 2018 Value: \$100,000

Description: Fyfe were engaged by BHP to undertake a topographical survey providing:

- Placement of original survey marks to establish a local datum and to locate the existing pipeline easement corridor.
- Location of valves in subject area to aid in establishing the location of the existing pipeline.
- Topographic survey of corridor of interest.
- Establish one temporary bench mark every kilometre, which is available for use by the construction contractor.

Client: Santos Ltd	
Project: Roma East Gathering	
Year: 2018	Value: \$1,000,000
the Roma East gathering system. The no kilometres of gas and water pipelines an	y Santos to provide detailed design services for ew gathering system comprises more than 600 and more than 400 wells. The gathering system has lease risers, isolation valves, low point drains

Client: MPC Kinetic (Principal Australian Gas Infrastructure Group [AGIG])

Project: Tanami Gas Pipeline Construction Survey

Year: 2018 Value: \$1,500,000

Description: Running for approximately 440 km, the Tanami Gas Pipeline will carry gas from an Inlet Meter Station connecting to the Amadeus Gas Pipeline, at a location approximately 180 km north west of Alice Springs.

MPC Kinetic has been awarded the construction contract which is anticipated to take approximately ten months commencing in the second quarter of 2018. Fyfe was subsequently awarded the Construction Survey Services Package for the duration of the construction phase.

Client: Santos Ltd (formerly Quadrant Energy)

Project: Varanus Island Firewater and Produced Water Upgrade Projects

Year: 2018 Value: \$500,000

Description: 1. Varanus Island firewater upgrade program 2. Varanus Island water system upgrade program

Fyfe's scope of services includes

- Site laser scanning and underground survey
- FEED for tank location study
- Engineering and detail design for process, mechanical, E&I, civil and structural works

Client: Upper Hunter Shire Council

Project: Volumetric Reporting Waste Facilities

Year: 2018 Value: \$175,000

Description: Location Scone, Aberdeen, Merriwa and Murrurundi Landfills, NSW

Scope Engineering Surveying, Volumetric and Ancillary Reporting

Year(s) 2018 - 2021 (four year contract)

Fyfe has been engaged by the Upper Hunter Shire Council (UHSC) to provide timely and accurate volumes to meet Environmental Protection Authority (EPA) requirements for each of the UHSC waste facilities around their area.

Client: Viva Energy	
Project: WAG Altona and Geelong Metering Upgrade	
Year: 2018	Value: \$100,000
Description: A feasibility study was completed, providing the options for Installation of new meters, associated piping and metering control system that would bring metering and data control in line with current API standards and remove the risk associated with corrosion of the underground components of this system, including dead legs, flanges and small bore fittings. The proposed upgrade will also improve redundancy of the system, reduce ongoing operation and maintenance costs and remove redundant pipework	
Client: Santos	
Project: Arcadia Lateral Design	

Description: Fyfe was engaged by Santos to provide engineering services for the detailed design of the Arcadia Lateral Pipeline. The pipeline connects the Arcadia Compressor Station (ACS01) to the Gladstone Transmission Pipeline (GTP) at MLV80.

Value: \$150,000

Year: 2017

Client: Juwi Renewable Energy	
Project: Blackwater Solar Farm	
Year: 2017	Value: \$50,000

Description: Fyfe was engaged by juwi to undertake an initial site detail for the design and construction of a proposed 150 MWac solar farm for Energy Developments Limited on a property approximately 14 km south of Blackwater in the Bowen Basin. Detail of part of the Capricorn Highway and nearby rail line was required together with Cadastral surveys to reconfigure the lot for titling purposes.

Client: CPB Contracors

Project: C-17 Maintenance Facility, Aircraft Apron and Associated Infrastructure

Project

Year: 2017 Value: \$200,000

Description: Existing heavy aircraft maintenance facilities at RAAF Base Amberley including the shared hangar and workshops were found to have significant shortfalls when required to support both the C-17A and KC-30A aircraft.

Fyfe has been contracted by CPB to provide survey services for project control establishment, survey set-out and auditing and service location in addition to GFIS.

Client: Downer EDI	
Project: Muswellbrook Recycled Water Treatment Works	
Year: 2017	Value: \$100,000
Description: Fyfe are Downers' on-site related to the project.	epresentative for all surveying services
Client: Fulton Hogan	
Project: O-Bahn City Access Project	
Year: 2017	Value: \$125,000

Description: Fyfe has been working with Fulton Hogan since August 2017 to complete pavement surfacing works for all roads on this project. The project is expected to be complete by the end of 2017. Fyfe has provided its survey personnel experienced in working with asphalt crews in providing: fill or cut numbers; QA reports; accumulative spreadsheet of volumes; and set-out as required.

Fyfe has performed the surveys in accordance with the requirements of Fulton Hogan and their approach to the works.

Client: Seymour Whyte Constructions

Project: Pacific Highway Upgrade Project

Year: 2017

Value: \$600,000

Description: Construction of enabling works for 30 km of the Woolgoolga to Ballina section Wave 5A, from Wooli to Tynedale (bulk earthworks, drainage, soft soils, bridges, local road diversions, haul roads and subsidiary roads).

Fyfe's role and responsibility included construction survey services, providing up to six surveyors including survey manager and data manager.

Client: Zen Energy

Project: Port Augusta Northern Power Station

Year: 2017 Value: \$25,000

Description: Zen Energy was interested in acquiring current aerial photography plus levels over the former switchyards at the Northern Power Station to enable the design of new infrastructure. Fyfe was able to accomplish both of these requirements in one package by using a survey grade Drone incorporating a good quality camera and a suitable coverage of ground control targets which were surveyed using GPS to obtain accurate coordinates to control the photography.

Client: Confidential		
Project: Port Augusta Solar Farm Redevelopment (UAV Drone Survey)		
Year: 2017	Value: \$75,000	

Description: Fyfe was engaged to carry out a topographic site feature and boundary survey of the 800 Hectare site for the proposed 300MW photovoltaic solar power generation plant located just kilometres outside a regional town centre. Fyfe provided:

- outer boundary and certified land division survey
- preparation of a Lease Plan for registration with the Lands Titles Office:
- topographic and site feature survey
- drone survey of the site

Client: Territory Civil for City of Darwin

Project: Shoal Bay Waste Management Facility

Year: 2017

Value: \$150,000

Description: The Shoal Bay Waste Management Facility is Darwin's singular waste management facility. It incorporates a landfill capacity, recycling facility and an independently operated recycle shop and mulch facility for green waste. Fyfe undertakes an end of month survey to calculate volume of mulch piles which has previously been done using conventional survey methods.

Client: Environmental Projects Pty Ltd (for Tarcoola Gold)

Project: Tarcoola Gold Flora and Fauna Monitoring

Year: 2017

Value: \$50,000

Description: Tarcoola Gold is required to undertake regular flora and fauna monitoring on its mining lease site in South Australia as part of its Program Environment Protection and Rehabilitation (PEPR) requirements.

The project is an established monitoring program which began in 2013. Fyfe has completed annual

The project is an established monitoring program which began in 2013. Fyfe has completed annual monitoring to determine if there are any long term trends in flora and fauna abundance and composition that may be attributed to the mine and its operation.

Client: Adelaide Brighton Cement

Project: Adelaide Brighton Cement - Various Environmental Assessments

Year: 2016 Value: \$100,000

Description: 2013 ongoing Scope Groundwater monitoring and management

Fyfe has to date undertaken the monitoring and management of a number of identified groundwater plumes across a number of sites for Adelaide Brighton Cement.

Client: Lendlease Building Contractors Pty Ltd (Principal Department of Defence)

Project: Air 7000 Phase 2B - Service Identification and Survey Recording

Year: 2016

Value: \$175,000

Description: Lend Lease has engaged Fyfe to undertake the Services Identification and Survey Recording of the existing underground services for the proposed construction of facilities required as part of the Maritime Patrol Aircraft Replacement Capability Project at the RAAF Base, Edinburgh - Main Operating Base.

Client: Department of Lands, Planning and the Environment (now DIPL)

Project: Alice Springs Regional Land Use Plan

Year: 2016 Value: \$100,000

Description: The Northern Territory Planning Commission (NTPC) identified the need to develop and implement an Alice Springs Regional Land Use Plan into the NT Planning Scheme to provide direction for growth of the municipality of Alice Springs.

Fyfe led the multidisciplinary team and undertook the preparation of the plan in consultation with key stakeholders and the general public with the ultimate aim for it to be included into the NT Planning Scheme as a Policy Document.

Client: Heathgate Resources	
Project: Beverley Road Upgrade Project	t
Year: 2016	Value: \$300,000
Description: Fyfe was engaged to undertake engin documentation for 115 km of haul roads, which inc new roads to service Heathgate Resources Beverloonstructed of poor quality local material and had area through regular maintenance, resulting in poor	luded upgrade of six existing and creation of two ey Uranium mine site. The existing roads were
Client: Ottoway Engineering	

Description: Due to corrosion BHP Billiton required replacement of an existing molten sulphur tank and associated equipment.

Project: BHP Billiton Sulphur Tank Replacement

Extensive use of a 3D laser scan was used to align tie-in points with existing pipework. A 3D model was generated to facilitate an operability review with BHP Billiton onsite. Based on the final model construction drawings for the tank, pipework and structure were generated.

Value: \$300,000

Year: 2016

Client: Pascale Constructions	
Project: Bunnings Store, Seaford	
Year: 2016	Value: \$150,000

Description: New Bunnings Store at Seaford delivered as a design and construct contract. The new building is 5,300 square metres and the development has a 252 space car park. The store is of steel frame construction and concrete pre-cast walls. Fyfe provided

- Geotechnical investigations
- Design of all structural elements of the buildings
- Design of all civil works including pavements and stormwater, both internal to the site and external in Council and DPTI controlled roads

Client: Fulton Hogan

Project: Coober Pedy Airport Runway Upgrade

Year: 2016

Value: \$25,000

Description: Fyfe carried out surveying activities over a three month period for Fulton Hogan's construction crews as a part of Coober Pedy's regional airport upgrade project. This upgrade included the widening of the main runway, improvement of the taxiways and re-marking of all pavements to meet current airport standards.

Project: Frost Road Meter Station Upgrade

Year: 2016

Value: \$200,000

Description: 2015-2016: Detailed facility design including survey services

Fyfe provided engineering services for detailed design involving process, mechanical, structural and electrical disciplines. To complement the engineering services Fyfe provided survey services for the determination of existing site boundary and as-build location of piping, equipment and supports to ensure minimal on-site work through the use of prefabricated spooling.

Client: Environment Protection Authority, South Australia

Description: 2015-2016 Environmental Consultancy Services

Project: Glenelg East Stage 3: Environmental Site Assessment

Fyfe was engaged by the SA EPA to provide environmental consultancy services involving the assessment of soil, groundwater and soil vapour along with vapour intrusion modelling and human health risk assessment within the SA EPA designated assessment area.

Value: \$150,000

Year: 2016

Client: Renewal SA

Project: Kilburn Blair Athol Urban Renewal Master Plan

Year: 2016

Value: \$150,000

Description: The study area comprised the northern portion of the suburbs of Kilburn and Blair Athol. The objective of the study was to provide a robust and flexible renewal strategy for the renewal of the study area, particularly the future redevelopment of government assets. Multiple development scenarios were considered having regard to the key factors influencing the study area, in particular the impacts of industry on the development potential of the area.

Client: Qattro Pty Ltd

Project: Marden Connect

Year: 2016 Value: \$3,000,000

Description: 2014-2016 Scope: Planning, Survey, Civil Engineering, Project Management

Project Value \$3million

Marden Connect is a comprehensive and sustainable medium density brown field redevelopment located at an innermetropolitan area, 5 mins away from the Adelaide CBD.

Fyfe provided "one stop shop" services through the full life -cycle of this development, including planning, survey, engineering, project managing other consultants.

Client: Department of Planning Transport and Infrastructure	
Project: Northern Connector - Engineering Survey	
Year: 2016	Value: \$300,000

Description: 2015-2016: Full Engineering Survey

Fyfe was awarded the DPTI contract to survey the Northern Connector Underground Services which was undertaken during November and December 2015. Fyfe delivered this project to DPTI on time and within budget on 14 December 2015.

Fyfe was subsequently awarded the full Engineering Survey contract which commenced on completion of the underground services survey in December 2015 and was delivered at the end of February 2016.

Client: Commercial & General

Project: WEST Residential Project Stage 1 and 2

Year: 2016

Value: \$75,000

Description: Commercial & General's residential project WEST encompasses the redevelopment of the former Footy Park in West Lakes.

Fyfe's work included gaining approval to create 146 residential allotments together with associated internal roads, reserve areas and subsequent dwelling applications.

Client: City of Whyalla and RDAWEP

Project: Whyalla Northern Coastal Master Plan

Year: 2016

Value: \$50,000

Description: In 2015, the City of Whyalla jointly with Regional Development Australia Whyalla Eyre Peninsula (RDAWEP) decided to take a strategic approach to the economic diversification of Whyalla, through the preparation of a tourism master plan for the Northern Coastline.

Awards: Winner, UDIA SA Awards for Excellence 2017, Category: Professional Consulting (Fyfe)

Client: Aldi Stores

Project: Aldi Stores - Strategic Advice

Year: 2015 Value: \$100,000

Description: Provision of strategic advice regarding the rollout of supermarkets across South Australia in terms of legislation and planning policy.

Undertaking research and analysis of potential sites which led to the preparation of development applications seeking planning consent, then negotiation with planning authorities to obtain approvals.

Client: Department of Planning, Transport and Infrastructure

Project: APY Lands Access Road

Year: 2015

Value: \$250,000

Description: Fyfe's role and responsibility included providing survey crews and drafting services necessary for the provision of an engineering survey model for approximate 40 kilometres of dirt road for the purpose of design work for new road to DPTI Rural Standards; and providing survey control and project manage the subcontracting for photogrammetry of 231 kilometres as per the above specifications. Fyfe were able to employ three Traditional Owners on a casual basis during stages of the project.

Client: ASC Shipbuilder Pty Ltd / Air Warfare Destroyer Alliance

Project: ASC Dimensional Control Survey

Year: 2015 Value: \$700,000

Description: 2013-2015

Fyfe supplied five surveyors to assist the AWD Quality Control team during the construction the new fleet of navy ships. This highly confidential work involved precision surveys of the ship parts and components during construction. Our surveyors took sub millimetre measurements during the build that was critical for the designers and construction crews. Survey work was carried out on land and on the water, during critical parts of construction in 'round the clock' shifts.

Client: WorleyParsons (Principal: Kepco)

Project: Bylong Coal Project - Hunter Valley NSW

Year: 2015 Value: \$500,000

Description: Scope: Site survey services within mine site including roads; cadastral boundaries; fencelines; proposed rail loop; existing services; communications; UG MIA; OC MIA; and ARTC Level Crossings and Underpasses.

Client: Department of Defence

Project: Defence Hazardous Areas Survey and Rectification Project - RAAF Base Edinburgh

Year: 2015 Value: \$200,000

Description: Scope: Hazardous Area Classification

Fyfe was engaged to undertake the Hazardous Area Classifications (HAC) of 20 facilities at RAAF Base Edinburgh. A hazardous area classification report was generated for each of the twenty facilities.

Client: Department of Defence

Project: Defence Hazardous Area Survey and Rectification Project - Larrakeyah, Coonawarra, Humpty Doo and Berrimah

Year: 2015 Value: \$150,000

Description: Scope: Hazardous Area Classification

Fyfe was engaged to undertake the Hazardous Area Classifications (HAC) of 19 facilities at Larrakeyah Barracks, HMAS Coonawarra, Defence Establishment Berrimah and Humpty Doo Transmitter Station located at Northern Territory. A hazardous area classification report was generated for each of the nineteen facilities.

Client: McMahon Services for the Department of Defence

Project: Harts Range Defence Fuel Installation (DFI) Remediation

Year: 2015 Value: \$150,000

Description: Fyfe's role and responsibility included 3D laser scan of the existing facilities to allow as built information and reverse engineering of the installation; and design and documentation of all remedial works to the non-compliant items for submission to Defence including replacement of the fuel storage facility of horizontal tanks and delivery piping, upgrade of the flammable liquid drum store and installation of additional safety showers.

Client: Department of Infrastructure NT	
Project: Lajamanu Road Upgrade, Katherine Region	
Year: 2015	Value: \$100,000

Description: Scope civil services for the design and documentation to upgrade Lajamanu Road. The Department of Infrastructure required the detailed design of approximately two kilometres of road upgrade (chainage 331.360 km to 333.360 km), incorporating part of the existing unsealed Lajamanu Road as sub-base.

Client: Santos Ltd

Project: Moomba to Gidgealpa Fuel Gas Pipeline

Year: 2015 Value: \$400,000

Description: Scope: Engineering Services for FEED and Detailed Design

Project specification:

- Sales gas line from Moomba to Gidgeapla satellite to supply fuel gas to compressors
- Project specifications: DN 200, 26.5 km long with two midline risers with provisions for future connections.

Client: Department of Planning, Transport & Infrastructure (DPTI)

Project: North-South Corridor (T2T) - Property Condition Assessment

Year: 2015 Value: \$250,000

Description: The North South Corridor Torrens Road to Torrens River is a critical piece of infrastructure for the creation of an improved north-south transport link in Adelaide. Fyfe has been engaged to complete building inspections for over 300 premises and buildings to undertake the condition assessment and critically advise on any structural issues arising from the construction works.

Client: Bardavcol Pty Ltd

Project: Property Condition Addessments - Park Terrace, Fitzroy Terrace and Torrens Road Capacity Upgrade

Year: 2015 Value: \$100,000

Description: The Park Terrace, Fitzroy Terrace and Torrens Road capacity upgrade is being undertaken to improve capacity and ease traffic congestion during construction of the North-South Corridor Torrens Road to River Torrens project.

Fyfe were engaged by Bardavcol to undertake Property Condition Assessments for over 70 residential and commercial buildings within the project area, and critically advise on any structural issues arising from the construction works.

Client: WorleyParsons & QGC	
Project: QCLNG Project	
Year: 2015	Value: \$60,000,000

Description: The Scope of work covered the survey of 2000 CSG wells and 3500 km of access and pipeline gathering corridors.

The Engineering Survey Services contract scope for the QCLNG Upstream Project included control surveys, trunkline surveys, detail/cadastral/setout/cultural heritage and fencing surveys, pegging party surveys, rectification of digital cadastral database (DCDB) boundaries, petroleum well location survey, dual surveys for earthworks calculations, QA and GIS mapping.

Client: Rio Tinto Alcan Pty Ltd

Project: Rio Tinto Alcan - Gove Operations Groundwater Assessments

Year: 2015 Value: \$500,000

Description: Fyfe was engaged by Rio Tinto Alcan Gove Operations (Gove Operations), to undertake bi-annual and quarterly groundwater monitoring events and surface water monitoring events at their mine and processing operations located in Nhulunbuy, Northern Territory. The groundwater monitoring events completed by Fyfe are part of a long term groundwater monitoring program that has been running for over ten years at the site.

Client: Santos Ltd

Project: Santos Panel Contract

Year: 2015 Value: \$4,500,000

Description: Engineering, Design, GIS, Survey and Environmental Services, Queensland and NSW

Project Value \$4 million per annum Survey only

Client: Santos Ltd

Project: Strzelecki Track South Australia

Year: 2015 Value: \$200,000

Description: Fyfe carried out the engineering design and project management associated with the road upgrade works on a 20 kilometre unsealed section of the Strzelecki Track from Moomba to the Big Lake Facility in the Cooper Basin.

The upgrade included changes to the horizontal and vertical alignments to meet Austroad Guidelines for unsealed road design.

Fyfe also carried out the Engineering survey on which the road design was based.

Client: BMD Constructions Pty Ltd for Department of Infrastructure

Project: Tiger Brennan Drive - Duplication Project

Year: 2015

Value: \$1,000,000

Description: 2014-2016
Fyfe has been contracted to provide the Survey Services for the construction of the Tiger Brennan Drive - Duplication Project.
Construction on the project began in December 2014 and is scheduled for completion in June 2016. Project Value \$88 million

Client: Wilton Junction Land Owners Group

Project: Wilton Junction Master Plan and Consultation

Year: 2015

Value: \$100,000

Description: Fyfe is currently involved in the master planning, research and rezoning of Wilton Junction, a 35,000 person 11,700 worker new town south west of Sydney. Our role has involved the co-ordination of multiple landowners, the preparation of master plans, town centre and key location designs, input into the retail and employment strategies, establishment of a centres' hierarchy, input into the transport network formulation, the running of workshops with Council staff and elected representatives.

Client: WDS Limited

Project: APLNG Upstream Project Phase 1, Gas Gathering System - Surveying Services

Year: 2014

Value: \$300,000,000

Description: Fyfe has been providing survey services since December 2012 (current). The Surveying Services contract scope for the project includes: control surveys; right of way (ROW) pegging; set-out and as-built surveys of pipelines and associated utilities; quality assurance (QA) and production of client specific geographic information system (GIS) deliverables.

Client: Jacobs (Principal Santos Ltd)

Project: Big Lake Fuel Gas Pipeline

Year: 2014 Value: \$250,000

Description: Scope: Pipeline design and engineering services

Fyfe's pipeline design services for the Big Lake fuel gas pipeline included:

^{- 20} km buried DN150 steel fuel gas line from Moomba Plant to Big Lake with a lateral connected into Moomba South Central Facility.

^{- 20} km buried optic fibre cable terminated at the Moomba Plant, Big Lake and Moomba South Central Facility ending at a junction box in a buried concrete pit at a convenient location adjacent to the trunkline pig traps.

Client: Environment Protection Authority, SA

Project: Clovelly Park / Mitchell Park Environmental Assessment

Year: 2014 Value: \$1,000,000

Description: Fyfe were engaged by the SA EPA to provide environmental consultancy services including soil, groundwater and soil vapour assessment works along with vapour intrusion modelling and human health risk assessment within the SA EPA designated assessment area located within the suburbs of Clovelly Park and Mitchell Park, South Australia. The designated assessment area is bordered by Main South Road to the east, Sturt Road and Sturt Creek to the west.

Client: Santos Ltd

Project: Coal Seam Gas Gathering Systems

Year: 2014 Value: \$10,000,000

Description: Since 2005 (current)

Santos continues to expand the Fairview, Roma and Scotia Coal Seam Gas Fields, and is using a standard wellhead gas gathering skid, developed by Fyfe, for all wellheads and standard flowline components.

Fyfe design for gas and water gathering systems includes:

- two-phase separator sizing and design
 FEED studies
- detailed mechanical design
- HAZOP facilitation
- detailed E&IC design (power & control systems and telemetry)
- issuing of IFC packs

Client: Monadelphous/ConocoPhillips

Project: DLNG CO2 Absorber Tower (Darwin)

Year: 2014

Value: \$100,000

Description: A new CO2 Absorber Vessel was to be installed at the Conoco Phillips DLNG onshore gas plant. The vessel was manufactured in Korea and shipped to the DLNG plant, where it was placed in a lay down yard for final dressing before being lifted into position. During these preparations, Fyfe were engaged to undertake a variety of dimensional surveying services to ensure the vessel would align with its design position and could be placed within its vertical operating tolerances.

Client: Transfield Services, CMS South Australia (Principal: Department of Defence)

Project: HEA and EEHA Engineering Services: 140 Defence Sites

Year: 2014 Value: \$100,000

Description: Fyfe has been engaged by Transfield Services to provide HEA (Hazardous and Explosive Area) and EEHA (Electrical Equipment for Hazardous Area) consultancy services for verification dossiers and classification auditing including preparation of new classifications for approximately 140 areas. This represents nearly every Defence site in South Australia. (Project Value Confidential)

Client: Macmahon John Holland JV

Project: Ichthys LNG Project Civil Works (CVL2 & CVL6)

Year: 2014

Value: \$300,000,000

Description: Provided site survey services from 2012 to June 2014.

Client: WorleyParsons

Project: Longford Liquids Pipeline Replacement (Survey)

Year: 2014 Value: \$1,000,000

Description: Feed pipeline route and boundary survey. The Longford to Long Island Point pipeline replacement project will construct and commission 186 kilometres of DN350 crude oil transmission buried pipeline with mainline valves. The project along the existing easement will replace a crude oil pipeline between Longford and Long Island Point in Victoria, Australia.

Client: Sitzler Baulderstone Joint Venture	
Project: Northern Territory Secure Facilities	
Year: 2014	Value: \$400,000,000

Description: Fyfe has been providing survey services since 2011.

Brief project description:

A 100 ha greenfield site at Howard Springs is being developed through a public-private partnership. The secure facility will contain an 800 bed multi-classification men's and women's prison with capacity for a further 200 beds, a mental health facility and a supported accommodation and program centre.

Client: Renewal SA

Project: Port Adelaide Precinct Plan

Year: 2014

Value: \$100,000

Description: Master Planning and Urban Design: Preparation of the Precinct Plan for the rejuvenation of Port Adelaide.

Combining master planning and urban design principles formulation of ten precincts at Port Adelaide, delivery of an implementation strategy, including evaluation of the economic impact of the proposed strategy on Port Adelaide and a consultation strategy, involving presentations, meetings, information flyers and static displays.

Client: QGC

Project: QCLNG Engineering Survey Services

Year: 2014

Value: \$40,000,000

Description: Provided ongoing engineering survey services since 2011. The SOW covered the survey of 2000 CSG wells and 3500 km of access and pipeline gathering corridors. The engineering survey services included control surveys, trunkline surveys, detail/cadastral/(DCDB) boundaries and petroleum well location survey.

Client: Santos

Project: Cooper Infrastructure Expansion Program (CIEP) - Pipeline Concept Design

Year: 2013 Value: \$250,000

Description: Scope: Concept design for Stage 1 and Stage 2 gas field developments in the Cooper Basin.

As part of Santos' Cooper Infrastructure Expansion Project (CIEP) Santos engaged Fyfe to develop the concept design for several hundred new wells with associated flowlines and gathering lines into selected satellites in the Cooper Basin. Concept design also included a new trunkline from Gidgealpa to Moomba and a return fuel gas line from Moomba to Gidgealpa.

Client: SapuraClough (Principal Chevron)

Project: Gorgon Project - Rock Bolting Rig (RBR)

Year: 2013 Value: \$250,000

Description: The AUD 52 billion Chevron operated Gorgon project is focused on developing the Gorgon and Jansz gas fields off the northwest coast of Western Australia. Part of this project is the 59.4 kilometrelong DomGas pipeline. Robert Elks & Associates (a Fyfe company) was retained to perform structural and mechanical engineering design and fabrication detailing for the rock bolting rig, which installed 1,546 pairs of stabilisation anchors along the pipeline. Won: 2013 Aust National Eng Excellence Award

Client: Santos Ltd

Project: Roma Town Gas Supply

Year: 2013 Value: \$1,000,000

Description: Fyfe's role and responsibility

- Project management services from FEED through to commissioning
- Survey, including line of sight survey, detailed alignment survey, site layout, and as-built survey
- Survey plans
- Front end engineering designDetailed designProcurement services

- Commissioning documentation
- HAZOP facilitation
- Safety management study facilitation

Client: Santos Ltd

Project: Environmental Assessments, Cooper Basin

Value: \$100,000 Year: 2012

Description: Commenced in 2012 (ongoing) Various Locations - SA and Queensland

Fyfe has been engaged to conduct Environmental Assessments for flowline corridors and well locations. The scope of these assessments includes:
- Flora
- Fauna
- Land use
- Water resources
- Air and noise
- Wetlands
- Cultural heritage (desk top only)



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