

## Appendix 1 – Technical Resources

Detailed CV's for Directors/Executives & Key Consultants of Terra Firma Mining Ltd are included with this MPA:

- Lincoln Smith;
- Craig Smith;
- Lucy Smith;
- Borys Poborowski;
- s 9(2)(a) .

### Professional Experience

- Director
- Mine Manager
- Production Manager/Operations Manager
- Site Senior Executive
- Under Manager/Underviewer
- Section Manager/Coal Mine Deputy
- Mining Technician/Surveyor
- Operator
- Mines Rescue Brigadesman

### Qualifications & Competencies

- First Class Coal Mine Managers Certificate of Competence, NZ and NSW (by mutual recognition)
- Site Senior Executive Certificate of Competence
- National Diploma in Mining Administration
- National Certificate in Mines Rescue
- University of Queensland Minerals Industry Risk Management (Mine 7033)
- G2, G3, G7 Certificates
- ICAM Lead Investigator
- IRATA L1

Lincoln has worked in the extractives industry for over 27 years as a Miner, Deputy, Under Manager, Production Manager, Mine Manager and Site Senior Executive.

For the past seven years Lincoln has built and led Terra Firma Mining Ltd, a contracting business providing services to metalliferous and coal mining, tunnelling and quarrying operators. The services have included contract mining, providing specialist staff and advice to mining operations and providing a range of management services including carrying out hazard and risk management assessments. The services have often involved overcoming difficult geological conditions and carrying out non-routine mining, quarrying and tunnelling activities such as recovering and reinforcing unstable ground, fallen roadways, cavity support and recovery operations. The provision of specialist mining staff has included the safety critical roles of SSE, Mine Manager, Ventilation Officer and Mechanical and Electrical Superintendents.

Lincoln has considerable first-hand and leadership experience in risk management, ground control, and productivity improvement and optimisation projects. He is experienced in risk assessment facilitation, and in the preparation of safety management systems and hazard management plans. He has experience in the peer review and audit of health and safety management systems. Lincoln has extensive experience in accident investigation and accident causation.

Lincoln is experienced with many types of mining and tunnelling equipment and methods. He is familiar with numerous New Zealand, European and Australian operations, and is able to draw on this experience to assess the suitability of methods and equipment to the generally difficult geological conditions encountered in New Zealand.

### Operations

- Talisman Gold Mine
- Tatu Mine
- Huntly East Mine
- Mt Davy Mine
- Moody Creek
- Stockton
- Strongman
- Strongman 2
- Pike River Recovery Agency

Lincoln is an active Brigadesman and registered assessor for the New Zealand Mines Rescue Service. He is also registered as a Mine Incident Controller with WorkSafe New Zealand and a member of the New Zealand Board of Examiners - Register of Examiners.

### Memberships

- Mine Managers Association of Australia
- New Zealand Mines Rescue Service
- AusIMM (Australasian Institute of Mining and Metallurgy)

### Professional Experience

- Mining Engineer
- Under Manager
- Assistant Mine Manager
- Mine Manager
- Production and Development Manager
- Business Unit Manager
- General Manager

### Qualifications

- BSc (Hons – 1st Class) Mineral Technology, Otago University
- First Class Coal Mine Managers Certificate of Competency, Queensland
- First Class Coal Mine Managers Certificate of Competence, New Zealand

### Operations

- Mining Engineer - Blackwater Mine, Qld
- Undermanager - Collinsville No 2 Mine, Qld
- Undermanager - Laleham Colliery, Qld
- Undermanager - Nattai-Bulli Colliery, NSW
- Assistant Mine Manager - Strongman Mine
- Mine Manager - Liverpool Mine
- Mine Manager - Denniston Mines

Craig has a First Class Honours degree in Mineral Technology from Otago University. He has 45 years' experience in the mining industry in Australia and New Zealand. Craig started out as a mining engineer but the majority of his experience has been in management roles predominantly in coal. Craig spent 11 years as Under Manager, Assistant Mine Manager and Mine Manager in a number of operations and for the past 26 years has been in senior operating and general mine management roles with Solid Energy NZ Ltd.

Craig has hands-on experience in all aspects of running a coal mining company from being part of mine worker groups carrying out risk assessments and developing standard operating procedures through to strategic planning within senior leadership teams. His experience includes leading a number of project teams investigating and developing new mining operations, transportation options, developing and implementing organisational change, developing new training and competency systems, and leading coal supply negotiations with a number of large customers. He has extensive experience in planning and leading union wage bargaining and in industrial relations. He has wide experience in stakeholder relations in the exploration, development and operational phases of mining operations, engaging with local and central government, Iwi and community groups that have an interest in mining and the environment.

Craig was a mines rescue Brigadesman in Australia and New Zealand and spent 14 years as a board member of NZ Mines Rescue Service. Craig is a member of the New Zealand Extractive Industry Advisory Group and up until December 2017 was a member of the Mining Board of Examiners.

Craig formed his own mining consultancy in early 2013 and in that capacity was engaged by the New Zealand Government as a full time member of the Pike River Implementation team tasked with producing new mining regulations to cover the coal, metalliferous and tunnelling sectors of the extractive industry.

- Operations Manager - South Island State Coal Mines
- SENZ South Island Operations Manager - Stockton, Sullivan, Wairaki, Morley, Mt Davy, Strongman No 2, Island Block, Terrace
- SENZ North Island General Manager - Huntly East, Rotowaro, Maramarua
- SENZ Underground Operations General Manager - Huntly East, Spring Creek Mines

Craig was appointed Terra Firma's Mining Executive in 2014. As Terra Firma Mining Executive, Craig has provided planning, operational, risk management and general management advice to a number of clients in the extractive sector including quarry operators, tunnelling and mining companies.

## Referees

- Murray McKee, consultant and past GM Solid Energy NZ Ltd, s 9(2)(a)
- Mark Pizey, Chief Inspector Extractives, WorkSafe, s 9(2)(a)
- Barry Bragg, past COO Solid Energy, NZ Ltd, s 9(2)(a)
- Craig Coburn, HR consultant, s 9(2)(a)
- Gavin Taylor, past Chief Mines Inspector, Queensland, and Acting Chief Inspector, NZ, s 9(2)(a)
- Michael Papesch, Group Manager, Policy, NZ Customs, s 9(2)(a)

### *Director*

#### Professional Experience

- Director  
Terra Firma Mining Ltd (2013-)
- Senior Consultant  
Mitchell Daysh Ltd (2016-2018)
- Environmental Consultant  
Environmental Management Services Ltd (2004-2011, 2016)
- Environmental Advisor  
Mighty River Power (2000-2004)
- Environmental Manager  
HortResearch (1997-2000)
- Environmental Engineer  
Fraser Thomas Ltd (1993-1997)
- Technical Officer  
Works Consultancy Services (1991-1993)

Lucy's career has always been within the broad environmental field, commencing with a period of environmental engineering and then moving into resource management. She has more than 20 years' experience in advisory and project management roles, and for over 15 years has worked as a planner on Resource Management Act processes, predominantly in resource consenting and plan/policy preparation.

This role has required working within the many constraints and time frames of the RMA and within the political frameworks of councils to achieve positive outcomes for clients.

Areas of work have included developing strategies to achieve clients' goals; consultation with stakeholders; preparation of applications and submissions, coordinating, interpreting and presenting technical input to best support a given proposal; analysis of decisions, plans and consent conditions; preparation of evidence; coordination of technical evidence by others; and delivery of evidence at hearings.

Lucy's engineering background contributes to her ability to understand and communicate well with technical experts. Her experience ranges from working independently on projects through to active roles on large multi-disciplined teams. She has a collaborative working style and enjoys the camaraderie of a team focused on a common goal.

## Qualifications

- Bachelor of Technology in Biotechnology and Bioprocess Engineering (Hons.) (Massey University, 1991)
- Postgraduate Diploma in Resources and Environmental Planning (University of Waikato, 2000)

## Experience Summary

### ▪ District and Regional Plan Processes

Lucy has represented clients in a range of sectors including dairying and electricity during various district and regional plan processes throughout the country. Tasks have included the determination of potential issues, preparing submissions and further submissions, preparing and delivering hearing evidence and managing technical experts' input.

### ▪ Resource Consents

Lucy has secured resource consents for numerous clients ranging from major industry to individuals. Tasks have included strategic planning, appointing and managing multiple technical experts, preparation of assessments of environmental effects, stakeholder consultation, preparation and presentation of planning evidence, appeals and mediation. One such example was the Taupo-Waikato Resource Consents Project for Mighty River Power, in which Lucy's tasks included background research for the AEE, stakeholder consultation and preparation and delivery of planning evidence. Lucy also project managed the appeals resolution process.

### ▪ Environmental Management System

Lucy developed and implemented an environmental management system for a Crown Research Institute in accordance with ISO 14001. As part of this project, she assisted in the preparation of an environmental policy, and worked with site representatives around the country to determine and prioritise potential environmental risks, develop objectives and action plans and implement review procedures for improving environmental performance.

### Professional Experience

- Ventilation Engineer/Ventilation Officer
- Mining Engineer
- Underviewer/Section Captain/Coal Mine Deputy
- Operator
- Mines Rescue Brigadesman

### Qualifications & Competencies

- Ventilation Officer Certificate of Competence NZ and NSW
- MSc in Mining Engineering (Silesian Technical University – Poland)
- Graduate Diploma in Mine Ventilation (UNSW – Sydney)
- Minerals Industry Risk Management (Mine 7033) (University of Queensland)/G3
- Integrated Management Systems Lead Auditor – PwC
- ICAM Principal Investigator

### Memberships

New Zealand Mines Rescue Service

Borys has over 20 years of underground mining experience from 3 countries as a miner, deputy, underviewer, mining engineer and ventilation engineer. Borys specialises in underground mining ventilation management, system design, modelling, forecasting, auditing, plus hazard management and monitoring including: gaseous contaminants (explosive and noxious); respirable dust; combustible dust; diesel particulate matter; spontaneous combustion. Borys has extensive experience in risk management and risk assessment including facilitation. During the course of his work he has prepared and audited numerous ventilation and emergency principal control plans and principal hazard management plans.

Borys was actively involved as an industry representative in the consultation group in the drafting of the Mining and Quarrying Regulations, 2013, and in the drafting of ventilation and emergency response codes of practice.

Borys is an active brigadesman of the New Zealand Mines Rescue Service.

### Career Achievements

Borys led the trial and developed the first in NZ coal mine nitrogen inertisation system to manage spontaneous combustion.

Borys was instrumental in developing and managing a sophisticated underground atmosphere monitoring system which successfully detected multiple frictional heating incidents and several incipient spontaneous combustion incidents.

Through the ongoing upgrade of mine-based ventilation rules and ventilation practices he actively contributed to the improvement of safety standards to satisfy higher regulatory and public expectations post the Pike River Royal Commission findings and recommendations.



## Operations

- Various shafts and tunnels throughout NZ
- Pike River Re-entry (Pike River Recovery Agency)
- Talisman Mine
- Huntly East Mine
- Spring Creek Mine
- Austar Coal Mine (Australia)
- Kazimierz-Juliusz Coal Mine (Poland)

Borys led the establishment of respirable dust and DPM exposure monitoring systems for Solid Energy's underground mining operations long before it became a regulatory requirement.

Borys is currently the Ventilation Officer and Ventilation Engineer on the Pike River Re-entry Project for the Pike River Recovery Agency. He holds or has held these roles for various civil tunnels and shafts throughout New Zealand.

## Publications

- The 21<sup>st</sup> World Mining Congress.  
*Managing the Spontaneous Combustion Hazard in a Sub-bituminous Underground Coal Mine.* Krakow (Poland), 2008.
- Australian Mine Ventilation Conference.  
*Spontaneous Combustion Management Comparison between Australia and China.* Sydney, 2011.
- AusIMM NZ Branch Conference.  
*The influence of dilution on Graham's Ratio Determination.* Hamilton, 2014.

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