



BLACK GOLD, THE SCENIC RIM AND THE THEORY OF THE
FIRM

IMPLICATIONS OF THE EXPLORATION FOR COAL AND COAL
SEAM GAS IN THE SCENIC RIM OF SOUTH EAST
QUEENSLAND FOR THE EVOLVING THEORY OF THE FIRM

A Thesis submitted by

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ABSTRACT

The implicit social contract between Australian society, government and business does not provide an environment in which communities within the Scenic Rim of South East Queensland believe that their values and development desires are adequately protected. Consequently, the communities are insisting that their local values, particularly regarding the environment, good quality agricultural land and water, be recognised and respected by both governments and mining companies. This changing social contract has significant implications for: (i) the nature of the engagement between communities and mining companies that might result in a more equitable distribution of both the benefits and disadvantages of mining; and; (ii) the evolving theory of the firm. This change applies particularly to those theories that focus on the reasons for existence of corporations, their relationship with external stakeholders and the values placed on corporate resources.

The thesis is based on qualitative research into the values and development desires of communities and companies active within the Scenic Rim of South East Queensland and draws heavily on archival material available from both Australian and Queensland government sources. A model for evaluating the utility of theories of the firm is developed and twelve existing groups of theory are analysed. Few of the theories meet many of the criteria proposed in the model (particularly regarding tests of their validity and reliability) and characteristics of an enhanced theory of the firm applicable to all companies are identified.

CERTIFICATION OF THESIS

This thesis is entirely the work of Cecil William Edward Maddox except where otherwise acknowledged. The work is original and has not previously been submitted for any other award, except where acknowledged.

Student and supervisors signatures of endorsement are held at USQ

Marie Kavanagh
Principal Supervisor

Geoff Slaughter
Associate Supervisor

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I had originally intended to develop a research project that drew on the growth and collapse of AWB Limited to examine the contribution of ethics and governance procedures to corporate performance, but was unable to formulate a research proposal that adequately reflected my intent. My Principal Supervisor, Professor Marie Kavanagh, suggested that I examine a current and local problem (that of community and mining company conflict within South East Queensland) within the same framework and I am much indebted for this suggestion. It has led me to a depth of research and understanding that I had not contemplated. The research took me up many 'dry gullies' and I am grateful to Professor Kavanagh and my Associate Supervisor, Associate Professor Geoff Slaughter, for their informed comments and guidance.

A research program, such as this has been, imposes considerable stress on the family of the researcher and I am forever thankful for the forbearance and support of my wife Carolyn. Carolyn's sense of context and keen eye for detail has contributed much to the final form of this thesis.

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LIST OF ABBREVIATIONS

A\$	Australian dollars
ABC	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
ACF	Australian Conservation Foundation
AIPC	Australian Institute of Professional Counsellors
APPEA	Australian Petroleum Production and Exporters Association
ASIC	Australian Securities and Investments Commission
ASX	Australian Stock Exchange
ATP	Authority to Prospect
BSR	Business for Social Responsibility
CBO	Community based organisation/s
CEO	Chief Executive Officer
CMB	Clarence Moreton Basin
COE	Code of Ethics
CSG	Coal seam gas – Except in the name Arrow CSG (Australia) Pty Ltd
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSR	Corporate social responsibility
Cth	Commonwealth
CTL	Coal to Liquids
DEEDI	(Queensland) Department of Employment, Economic Development and Innovation
Dept	Department
DITR	(Australian) Department of Industry, Tourism and Resources
DNRM	(Queensland) Department of Natural Resources and Mines
DSDIP	(Queensland) Department of State Development, Infrastructure and Planning
EIS	Environmental Impact Statement

ed/s	Editor/Editors
edn	Edition
EPC	Exploration Permit Coal
EPP	Exploration Permit Petroleum
et al.	and others
FPIC	Free, prior and informed consent
GOC	Government Owned Corporation/s
HGL	Hudson Investment Group Limited
ICC	Ipswich City Council
ILUA	Indigenous Land Use Agreement
KRA	Key Resource Area
KTSRS	Keep The Scenic Rim Scenic
LCC	Logan City Council
LGA	Local Government Authority
LNG	Liquified Natural Gas
LVRC	Lockyer Valley Regional Council
MDL	Mineral Development Licence
ML	Mineral Lease
MP	Member of Parliament
Mt	Million tonnes
mtpa	million tonnes per annum
NAIDOC	National Aborigines and Islander Day Observance Committee
n.d.	No date
NSESD	National Strategy for Ecologically Sustainable Development
NHC	New Hope Corporation Limited
NSW	New South Wales
OGL	OGL Resources Limited

PFL	Petroleum Facility Licence
PhD	Doctor of Philosophy
plc	(UK) Public Limited Company
PUMA	Protest Against Urban Mining Association
QAG	Quarry Action Group
QGC	Queensland Gas Corporation
Qld	Queensland
RDPO	Rosewood District Protection Organisation
QRC	Queensland Resources Council
SA	South Australia
SCU	Southern Cross University
SIA	Social Impact Assessment
SRRC	Scenic Rim Regional Council
SRC	Somerset Regional Council
SLTO	Social licence to operate
TOTF	Theory/ies of the Firm
UCQ	University of Central Queensland
UGC	Underground gasification of coal
USA	United States of America
US\$	United States of America dollars
USQ	University of Southern Queensland
WCM	Walloon Coal Measures

BLACK GOLD, THE SCENIC RIM AND THE THEORY OF THE FIRM

1. INTRODUCTION

This thesis presents the findings of research into the relationship between communities of the Scenic Rim of South East Queensland and companies exploring for coal and coal seam gas (CSG) within the region. It examines the conflict that exists between the two groups to highlight changes to the social contract between Australian society, government and mining companies that are occurring. It also draws implications for a constantly evolving theory of the firm that are applicable to all companies.

1.1. Objectives of this chapter

The objectives of this chapter of the thesis are:

- to present the background to the research problem and to identify the Research Question that arises from that problem;
- to outline the structure of the thesis;
- to identify the theoretical base behind the research undertaken;
- to present an outline description of the research philosophy and of the methodology adopted;
- to identify the contribution that this work will make to both theory and practice;
- to summarize the principal findings of the research; and
- to identify the research needed to expand this thesis into a PhD program.

1.2. Structure of the chapter

This chapter of the thesis is structured as follows:

- Section 1.1 identifies the objectives of the chapter;
- Section 1.2 presents the structure of the chapter;

- Section 1.3 describes the background to the research problem;
- Section 1.4 identifies the Research Question behind the work undertaken;
- Section 1.5 develops the structure of the thesis;
- Section 1.6 describes the contribution to theory and practice that the findings make;
- Section 1.7 provides a summary of the findings of the research;
- Section 1.8 describes further research that is required; and
- Section 1.9 summarizes the content of the chapter.

1.3. Background to the research problem

Conflict between mining companies and the communities in which they operate is not new. What is different within the Scenic Rim is that although coal and CSG activity is mostly only at the exploratory stage, conflict is already well advanced. This thesis, therefore, examines community and mining company interaction in a region that is more noted for its residential, agricultural, environmental and tourism values than it is for mining.

Three concepts form the base for the project. They are: (i) the area identified as the Scenic Rim; (ii) the communities of the region; and (iii) the mining entities working within the region. For this thesis, the Scenic Rim comprises the area administered by the Scenic Rim Regional Council (SRRC), that part of the Logan City Council (LCC) to the west of the Mt Lindsay Highway, the entire area of the Ipswich City (ICC) and Lockyer Valley Regional Councils (LVRC) and that part of the Somerset Regional Council (SRC) south of Harlin. The two legal entities that can hold mining permits in Queensland are individual persons and companies (including government owned corporations): but this research only explores the activities of proprietary limited (private) and limited liability (public) companies (because they are the only organisations currently holding coal or CSG exploration permits within the Scenic Rim). The project also considers communities on the basis of geographic location (i.e. the thirty plus cities, towns and villages of the region) rather than on a basis of common interest or structure and leadership. These communities hold values and development desires that reflect their residential, agricultural and tourism bases and that do not include mining (SRRC 2011a).

Coal mining in the region began in 1843 and it is estimated that reserves of thermal coal still exceed 2 500 million tonnes (Murray 2010). These reserves may also contain commercial volumes of CSG. The companies exploring for these carbon based minerals hold permits issued by the Queensland Government with access and exploration rights that bring them into conflict with environmental, residential and agricultural uses of the land. This conflict is the base for the Research Question explored in this thesis.

1.4. The Research Question

The question explored in this thesis is *What responsibilities do the companies exploring for coal and coal seam gas within the Scenic Rim have to the communities within the region that are additional to the responsibilities that they have towards their shareholders?*

1.5. Format of the thesis

This remainder of this thesis is structured as follows:

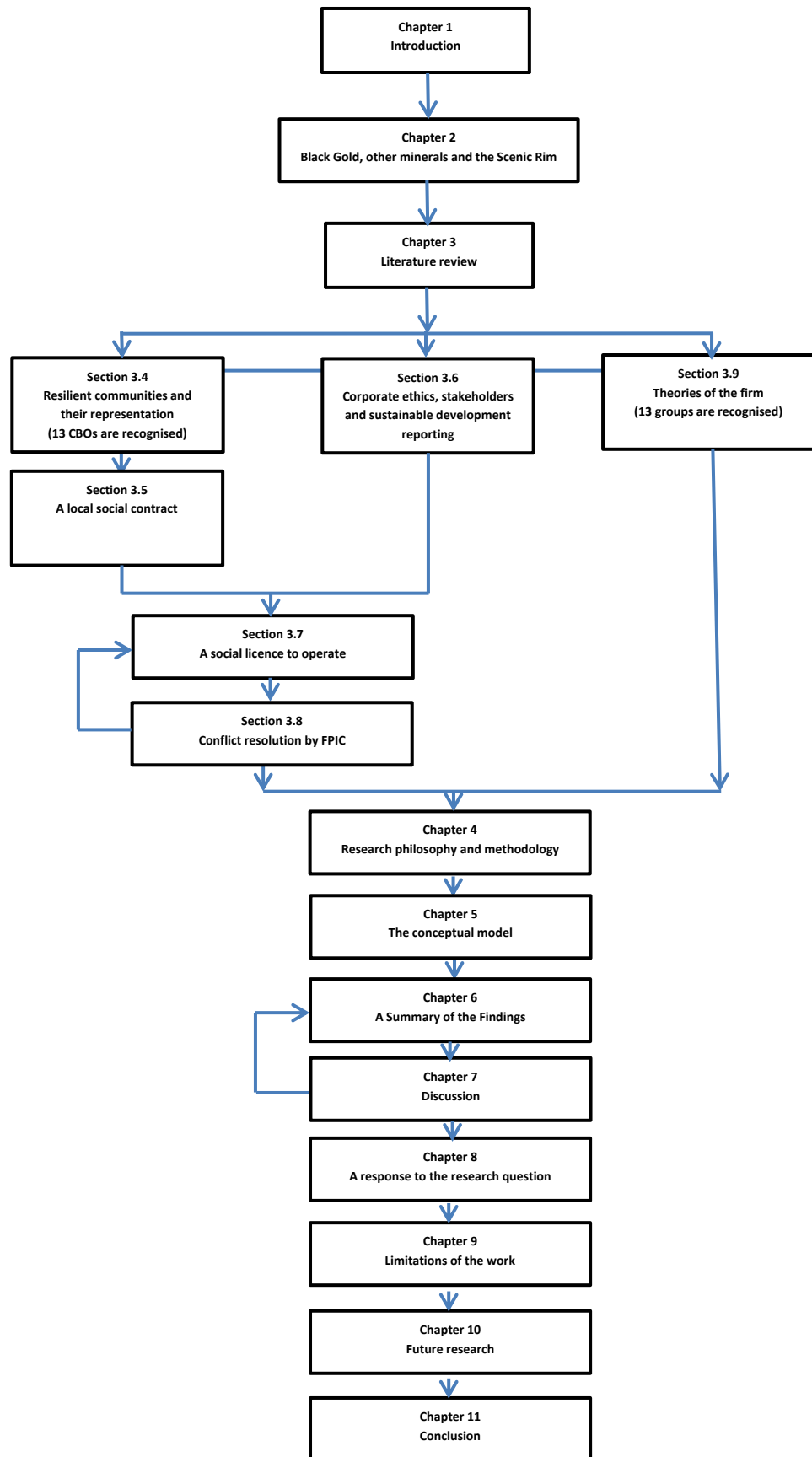
- Chapter 2 presents an overview of the geology and hydrology of the Scenic Rim and briefly examines the possibility that commercial reserves of carbon based minerals might be found within the region.
- Chapter 3 presents the literature review on which the model and theory development described in Section 1.6 will be built.
- Chapter 4 describes the research philosophy and methodology by which the work proceeds.
- Chapter 5 identifies the three concepts on which the research project is based and presents a framework that binds them together. It also lays out three major causes for the conflict that already exists between the communities of the Scenic Rim and the companies exploring for coal and CSG within the region.
- Chapter 6 briefly presents the findings of the research undertaken for the project.
- Chapter 7 presents a detailed discussion of the research and draws implications for a base for an evolutionary theory of the firm.
- Chapter 8 develops a response to the research question posed in Section 1.4.

- Chapter 9 suggests limitations to the research and the impact of these on the discussion and findings.
- Chapter 10 contains suggestions for the future research that will advance the project to a PhD level.
- Chapter 11 concludes the thesis with a summary of the research undertaken, the discussion and the findings.

There are several appendices to this thesis. While they all provide additional data to support its general development, attention is drawn to Appendix 5 as it presents the analysis of existing theories of the firm (TOTF) that will later form the base for an enhanced theory.

A diagrammatic representation of the above format is given in Figure 1.1.

FIGURE 1.1: A diagrammatic representation of the format of this thesis



1.6. Contribution to theory and to practice

The objectives of the research behind this thesis are twofold. The first is to use the areas of theory recognised (resilient communities and their representation, a social contract, corporate ethics, stakeholder theory and sustainable development reporting, a social licence to operate and conflict resolution using free, prior and informed consent and theories of the firm) to develop an outline for a comprehensive enhancement of the theory of the firm. The second is to develop principles for a model of interaction between mining companies and communities that could more equitably distribute the advantages and disadvantages of mining between the companies and their external stakeholders. These outcomes may later be used in a PhD program to develop such a model and an evolutionary theory of the firm that is applicable to all companies.

1.7. Summary of the findings

The principal findings arising from the research are:

1. The responsibilities that the companies exploring for coal and CSG within the Scenic Rim have towards the communities of the region include: (i) establishing effective communication; (ii) the early passage of information about the nature and scope of their project; (iii) the building of trust; (iv) the creation of a mechanism by which community responses can be captured and incorporated into project planning and implementation; and (v) explaining how the benefits of the project will be shared and potentially adverse impacts modified. These responsibilities are in addition to the fiduciary responsibilities that the companies have to their shareholders and could be used, by the companies, as strategies for community engagement.
2. The community based organisations (CBOs) now active within the region have been more effective in raising awareness in the wider society than in bringing about local community development desires. However, there may be a role for a different type of organisation to play in raising awareness of and in representing all community values (not just the anti-mining values) across the whole Scenic Rim.

3. The general social contract between society, government and business must be modified to include recognition of local values relating to the preservation of both a rural lifestyle and agricultural production and the protection of limited groundwater and surface water resources.
4. Existing theories of the firm have limited utility in explaining the reasons for the existence of corporations exploring for coal or CSG within the Scenic Rim, their structure or the reasons that they behave the way that they do.

1.8. Future research

The research behind this thesis examines only the small number of companies exploring for coal or CSG within the Scenic Rim (30) and this number will need to be expanded if the findings of the proposed PhD program are to apply to all companies. The ASX 100 companies have been used by other researchers and may be a suitable base for the expanded research. The thesis is also based on archival material and this data may be out of date or not reflective of current company values, intentions or activities. The findings will need to be reviewed against data to be obtained from interviews with company executives, community members and officers of CBOs active within the region. This data will then be used to expand the understanding of the social contract that the communities now believe exists and to propose an enhancement to the theory of the firm that will better explain why corporations exist, are structured as they are and act the way that they do.

1.9. Summary of the chapter

This chapter identifies the Research Question that drives the work behind this thesis and lays out the structure by which the work proceeds. It provides a summary of the methodology used and the key findings and suggests an approach to future research. Section 1.3 of this chapter establishes the need for an understanding of the potential for mineral development to contribute to ongoing conflict. This potential is explored in Chapter 2.

2. BLACK GOLD, OTHER MINERALS AND THE SCENIC RIM

2.1. Introduction to this chapter

Whether or not the conflict between the communities of the Scenic Rim and companies exploring for commercial mineral deposits within the region endures and becomes more extensive will mainly depend on whether or not those deposits are of sufficient quality and quantity to warrant further development. This chapter reports on preliminary research into the extent of mineral deposits (but principally on carbon and basalt based materials) within the region and concludes that the known deposits of coal, CSG and basalt might warrant further exploration and subsequent development. This background research later helps identify theories that might explain the reasons that communities and companies act the way that they do.

2.2. Objective of the chapter

The objective of this chapter is to develop an understanding of the potential for commercial discoveries of both carbon and basalt based minerals within the Scenic Rim. Without such potential, exploration activities will eventually stop and future development (and the probable continuation of conflict) will not occur.

2.3. Structure of the chapter

The chapter is structured as follows:

- Section 2.1 introduces the chapter;
- Section 2.2 sets the objective for the chapter;
- Section 2.3 develops the structure of the chapter;
- Section 2.4 develops an overview of the geology and hydrology of the Scenic Rim;
- Section 2.5 discusses the potential for commercial oil discoveries;
- Section 2.6 outlines the potential for commercial coal discoveries;
- Section 2.7 identifies the potential for commercial CSG discoveries;

- Section 2.8 raises the possibility of the discovery of commercial deposits of other minerals;
- Section 2.9 discusses the ultimate ownership of existing carbon based exploration permits (EPCs) held within the Scenic Rim; and
- Section 2.10 summarises the possibility of continuing carbon and basalt based mineral development within the Scenic Rim.

2.4. An overview of the geology and hydrology of the Scenic Rim

The principal geological component of the Scenic Rim is the Clarence-Moreton Basin (CMB) - a Late Triassic to Late Jurassic feature that covers some 26 000 square kilometres of South East Queensland and Northern New South Wales. The sedimentary deposits of the CMB (sandstone, mudstone, shale and coal) are some 2 000 metres thick and are recognised as lying in three discrete sub-basins (Cecil Plains, Laidley and Logan) (Geoscience Australia n.d. a). The Laidley and Logan sub-basins underlie much of the Scenic Rim while the Cecil Plains Sub-Basin is on the eastern edge of the Darling Downs. The Walloon Coal Measures (WCM) are the most economically important component of the CMB, but the overlying Main Range Volcanics are a source of road making and civil construction materials. Some areas of alluvium are exploited for clays and shales for brickmaking purposes – as are segments of the WCM. In many parts of the CMB, the WCM are being explored for coal and CSG (Raiber & Cox 2012, pp. 1–2).

The CMB is the only part of the Great Artesian Basin in which the groundwater flow is to both the east and the south-west. The flow to the east commences under the basalts of the Main Range Volcanics – which also generate the main flows to the south-west. While the groundwater of the Gatton Sandstone, in the middle CMB, is mostly saline, that of the Woogaroo Sandstone (in the east) is predominantly fresh and is better suited for agricultural use (Raiber & Cox 2012, p. 4). The important alluvial aquifers of the CMB include the Lockyer Valley alluvium, the Bremer-Warrill alluvium and the Logan-Albert River alluvium. These aquifers are mostly less than thirty five metres thick and are tapped by many shallow wells (Rassam et al. 2014, Section 1.1.4).

Surface water flows within the Scenic Rim are from the north-west and the south-west to the east. The flows occur mainly in the Albert, Logan, Bremer and Brisbane Rivers and in their tributaries. There are dams, for agricultural purposes, on the Logan, Bremer and Brisbane systems and for town water on the Logan and Brisbane systems.

2.5. The possibility of commercial oil discoveries

The term ‘oil’ covers the full range of hydrocarbons – including crude oil and condensate (Geoscience Australia n.d. b). There is abundant oil prone organic matter in the WCM and proven reservoirs lie within the Woogaroo and Marburg sandstones – however, the Basin has been poorly explored and only about thirty petroleum wells have been drilled (Geoscience Australia n.d. b). A major study of the petroleum potential of the CMB was undertaken by Lockwood (1978) but it has proven impossible to recover a copy of the report from the (previous) Bureau of Mineral Resources in Canberra.

Work undertaken by Gray (1990) identified nine petroleum exploration wells that had been drilled within the Scenic Rim. Three wells had been drilled around Beaudesert, a further three around Boonah, one near Lowood, one in the Brisbane area and one other at an unidentifiable location. The wells were drilled to depths of between thirty four and four hundred and eighty eight metres and were then plugged and abandoned. Six of the wells penetrated the carbon deposits of the CMB and two penetrated the deposits of both the CMB and the deeper Ipswich Basin. No oil shows were found within the Scenic Rim and the prospects for future discoveries were classified as ‘poor’ – due to the immaturity of the source rocks (Gray 1990, pp. 159–163).

There is, therefore, almost no possibility of commercial oil discovery within the Scenic Rim.

Despite this gloomy prospect, successive Queensland Governments remained optimistic about the potential for producing oil (although they did change their

opinion about the possible source of such a product). The January 1977 issue of the *Queensland Government Mining Journal* contained the following comment:

Our great hope is that Queensland's virtually limitless reserves of coal can come to our rescue, or rather that science and technology will do so. With vast deposits suitable for conversion to oil, we might well be on the threshold of great expansion in this field ... and everything possible must be done to encourage the development of plant for the extraction of oil from coal (Murray 2010, p. 308).

Even Government optimism was not enough to quickly bring about private sector investment in such technology and it was to be several decades before the New Hope Corporation (NHC) built a pilot plant within the Scenic Rim. However, the investment did not lead to a commercial development and, in 2015, the company announced that it had terminated its coal to liquids development 'due to lack of commercial applications' (NHC September 2015, p. 1).

2.6. The possibility of commercial coal discoveries

Coal was first identified near Limestone Hills (Ipswich) between 1825 and 1828 (Whitmore 1981). By 1843, the mineral was being mined near Redbank (Murray 2010) and by 1997-98 approximately 4 000 000 tonnes per annum (Smith 1999, p. 5) were being extracted from deep lead and open cut mines in the Ipswich, Walloon and Rosewood areas. Coal has been extracted from the WCM at Nymboida in north-eastern NSW (Guardian 9 February 2005) and is still being recovered at Acland on the eastern Darling Downs. There is still one working open cut coal mine at Jeebropilly (south of Ipswich) within the Scenic Rim and each year approximately 800 000 tonnes of coal are despatched from this mine to overseas customers (NHC September 2014, p. 4).

Walloon coals have proven to be of a high quality and to be excellent fuels for a wide range of industrial boilers (including those used for power generation) (Smith 1999, pp. 5-6).

Murray (2010) suggested that reserves of thermal coal within the eastern WCM still approximate 2 500 million tonnes. Extensive exploratory drilling by Cuesta Coal Limited on its permit area south of Ipswich has indicated an inferred coal resource of 5 100 000 tonnes and an exploration target of 40-60 million tonnes (Cuesta Coal Limited 2012). Together with work by Allegiance Coal Limited at its Mintovale site south of Boonah (Allegiance Coal Limited 29 July 2014), this data suggests a strong possibility of commercial deposits of coal being found within the Scenic Rim.

All except one of the carbon based ATPs held within the Scenic Rim are either exploration permits (EPCs) or mineral development licences (MDLs) (Appendix1). This means that, for most proposals, there are still two development stages to go through before mining can start. A requirement of these stages is that environmental impact statements (EIS) must be prepared and approved before any environmental authorities are issued. There may also be a requirement for social impact management plans to be prepared and most of this will have to be done before a mining company can attempt to raise money for a new, greenfield, mine site.

However, the possibility of any coal deposit being developed might also depend on the technology to be used. Underground gasification of coal (UGC) has long been proposed as a 'safe' and environmentally benign way of extracting the energy from coal without having to extract the coal from the ground. However, the Queensland government now proposes to ban the use of UGC technology and any exploration permit that depended on this technology may have no value (Queensland Government 18 April 2016).

2.7. The possibility of commercial coal seam gas discoveries

There have been many fires and explosions in deep lead coal mines in the Ipswich area that have been attributed to the presence of gas. Three of the more notable explosions were at Redbank in 1928 (three miners killed), at the Ebbw Vale Number 3 mine, at Wood End, in 1943 (four miners killed) and at the Box Flat mine at Swanbank on 31 July 1972 (seventeen miners killed and ten injured) (ICC n.d.). Additionally, Gray (1990, p. 160) reported that, based on analyses of samples taken

from the Department of Resource Industries core library, ‘... carbonaceous shales in the Marburg Formation and the WCM may form source rocks for hydrocarbon generation’. Gray (1990, p. 160) also concluded that ‘some organic matter in shales has reached (the) thermal maturity (required) to produce gas’.

Geoscience Australia has reported sub-economic flows of gas at several locations within the Logan Sub-Basin (Geoscience Australia n.d. b) and one of these locations (in the Clarence River sequence of the WCM) produced an initial gas flow of 10 000 cubic metres per day (Gray 1990, p. 162). By 2012, Metgasco Limited had established the presence of sufficient CSG in this area to warrant preliminary planning for the supply of gas to industrial customers in the Northern Rivers area, for the construction of a gas fired power station near Casino and for a pipeline to carry gas through the SRRC area to Swanbank (near Ipswich) and then to Brisbane (Metgasco 2010, p. 1; Metgasco 2012). Gray (1990, p. 102) also reported that numerous oil and gas flows were recorded in wells drilled into the Ipswich Basin (underlying the WCM) but that the oil shows were unconfirmed and the gas rates were not measured. It was later suggested that ‘gas prospects, including coal bed methane, should be rated as fair to good’ Gray (1990, p. 102).

Given that the WCM underlie most of the Scenic Rim, there would appear to be a reasonable chance of a commercial CSG discovery within the region. However, Arrow Energy is quite circumspect in discussing its discoveries in the region as is indicated below:

The Clarence-Moreton has not been a strong focus for Arrow to date so we do not have the same knowledge as for the Surat and Bowen Basins. We also know enough to say that the coals in this area are not as good in production terms as those in the Surat and Bowen Basins, which is why there has not been a strong push to explore the area. However, there is gas here and it represents a valuable resource that we need to at least know is there, even if only for future reference (Arrow Energy 17 September 2010, p. 15 Question 3).

2.8. The possibility of commercial discovery of other minerals

Other minerals currently being exploited within the Scenic Rim include:

- diatomaceous earth (near Gatton);
- sandstone (around Helidon);
- dolomite for agricultural purposes (near Peak Crossing/Harrisville);
- basalt materials for road base (near Peak Crossing, Boonah and Beaudesert); and
- basalt materials for construction purposes (Beaudesert and Mt Marrow).

Applications for exploration permits and mining leases for these materials are made infrequently but, when they are made, they also incur objections from nearby communities. A proposal for a ‘mega quarry’ south of Beaudesert raised such a level of objection that a specific CBO (the Quarry Action Group) was created as a focus for community action (Scenic Rim Rate Payers Association Incorporated 2011). Similarly, a proposal to quarry basalt at Mt Walker (south of Rosewood), which was approved by the SRRC in 2014, has now raised strong objections in both the local area and in nearby Rosewood and has led to the formation of the No Mt Walker Quarry group. This group has held several public meetings and established a strong presence on Facebook (No Mount Walker Quarry group n.d.).

There have been proposals for the establishment of an iron and steel industry at Ipswich. In February 1918, a deputation from the Ipswich Chamber of Commerce suggested to the Minister for Mines that such an industry could be established with its base in the coal deposits of the area and on ‘valuable’ iron ore deposits near Pine Mountain and Dundas (near Toogoolawah). A small, experimental, smelter was established at the railway workshops but nothing came from the suggestion (Brisbane Courier 23 February 1918, p. 6).

2.9. The ultimate ownership of existing carbon based exploration permits held within the Scenic Rim

There have been thirty ATPs, Mineral Development Licences (MDL) and Petroleum Facility Licences (PFL) for coal or CSG granted over parts of the Scenic Rim during

the last twenty years and all but four are still current. Most of the SRRC area, considerable areas around the towns of Gatton and Laidley and a large part of the catchment of Wivenhoe Dam are still being actively explored for carbon based minerals. Appendix 1 gives details of these permit areas as well as identifying both the companies that have been granted the permits/licences and their ultimate ownership.

These ATPs only allow the holder to:

Undertake exploration activities including prospecting and surveying, sampling, drilling, ancillary environmental studies, conducting geophysical surveys and soil testing ... Generally, exploration permits do not allow holders to carry out production activities or to make permanent changes to the landscape. At advanced exploration stage, production testing or bulk sampling may be permitted. Additional approvals will generally be required (Department of Natural Resources and Mines 2014, p. 4).

Many of the ATPs/MDLs are held by private companies and most of these companies are then owned by either other private companies or by public companies listed on the Australian Stock Exchange (ASX). However, several of the ultimate owners are companies registered in China, Mauritius, Great Britain and the Virgin Islands and there is little easily accessible data available on the activities of these parent companies. Appendix 2 gives outlines of this complex ownership structure.

The mining activities examined during the research are mostly at the exploratory stage and it may be many years (if ever) before they advance to production. Currently, less than one percent of exploration permits for coal and other minerals held in Queensland lead to economic discoveries that then lead to a mining lease (Department of Natural Resources and Mines 2014, p. 3). If this general guide was to apply within the Scenic Rim, one mine might emerge from all the exploration activity identified in Appendix 1.

2.10. Summary of the chapter

The data presented in Sections 2.6, 2.7 and 2.8 indicates that there could be commercial deposits of coal, CSG and basalt materials found within the Scenic Rim. This likelihood suggests that there is a need to identify theories that could explain the relationship between companies and their external stakeholders (e.g. communities) and for a model of stakeholder engagement that could better distribute the benefits and disadvantages of mining between a company and its stakeholders. These theories are examined in Chapter 3.

3. LITERATURE REVIEW

3.1. Introduction to this chapter

The conflict identified in Chapter 1 and the (possibly) enduring nature of corporate interest in the development of mineral resources within the Scenic Rim outlined in Chapter 2 suggest that a wide theoretical base for any related research is needed. The recognised theories would then explain the nature of resilient communities and their representation, the development of a local social contract between communities and companies, corporate ethics, stakeholder engagement and sustainable development reporting, establishment of a social licence to operate and conflict resolution. Such an understanding could then lead toward theories of the firm that would identify reasons for the existence of companies, suggest why they are structured and behave the way that they do and why the boundaries between the company and their markets are located where they are. Thirteen groups of theories of the firm are recognised in Section 3.9 and the utility of twelve of these theories is explored in Appendix 5 and Chapter 7.

3.2. Objectives of the chapter

The objectives of this chapter are:

- to identify theories that could help understand the values and development desires of communities and companies exploring for coal and CSG within the Scenic Rim;
- to identify the content of the social contract that communities within the Scenic Rim expect should exist between them and companies exploring for coal and CSG in the region;
- to identify theories of the firm that might help understand the reasons for the existence of firms, their structure and mode of operation and why they react to external stakeholders the way that they do; and
- to identify gaps in the literature that the research undertaken should address.

3.3. The structure of the chapter

This chapter is structured as follows:

- Section 3.1 contains an introduction to the chapter;
- Section 3.2 sets the objectives for the chapter;
- Section 3.3 outlines the structure of the chapter;
- Section 3.4 identifies theories relating to resilient communities and their representation;
- Section 3.5 develops an understanding of a social contract within the Scenic Rim;
- Section 3.6 identifies theories relating to corporate ethics, stakeholders and sustainable development reporting;
- Section 3.7 identifies material relating to a social licence to operate (SLTO);
- Section 3.8 identifies theories relating to conflict resolution;
- Section 3.9 identifies theories of the firm; and
- Section 3.10 develops a summary of gaps in the literature reviewed.

3.4. Resilient communities and their representation

This section of the thesis explores the nature of resilient communities and the reasons that they might create community based organisations (CBOs) to assist in the representation of their values and in the achievement of their desired development outcomes. Each of these sub-sets is illustrated by examples identified by research within the Scenic Rim. The summary at the end of the chapter identifies gaps in the literature reviewed that ensuing research could address.

3.4.1. Resilient communities

There are more than thirty cities, towns and villages that provide the geographic base for the communities of the Scenic Rim. For the purposes of this research project, the major community groupings are considered to be:

- Scenic Rim Regional Council Beaudesert and Boonah
- Logan City Council Jimboomba and Yarrabilba
- Ipswich City Council Ipswich and Rosewood
- Lockyer Valley Regional Council Laidley and Gatton
- Somerset Regional Council Esk and Toogoolawah.

Much has been written about individual and infrastructure resilience (Australian Institute for Professional Counsellors (AIPC) 2013; Carlson et al. 2012) but the concept of community resilience (in regard to mining) appears to be reasonably new. A resilient community could be described as one that is aware of its values and strategic requirements and that has prepared for an event (e.g. the commencement of mining) in a way that means that it will emerge after the event with its values and infrastructure intact. The endurance of community resilience is particularly important as coal and CSG development within the Scenic Rim (if it proceeds) could have an impact for thirty to fifty years (allowing for land rehabilitation to be completed). This timescale could require, at least, a second generation of community members and company managers to be involved in community/company engagement.

If we define a community as a group of people united by at least one common interest and living together in a wider society (Merriam-Webster n.d.) then it appears that there are many communities within the Scenic Rim. This definition also leads towards the social ecology theory proposed by Bronfenbrenner (1994, pp. 37-43) (Table 3.1) and to question the application of his five subsystems of development to communities – as well as to children. It is his macro system that is particularly applicable (with its references to belief systems, culture, bodies of knowledge, customs, lifestyles and material resources) to this research. However, the exo system, with its emphasis on neighbourhood-community contexts, is also relevant.

TABLE 3.1: Bronfenbrenner’s ecological model – environments as contexts of development

THE GENERAL ENVIRONMENT				
MICRO SYSTEMS	MESO SYSTEMS	EXO SYSTEMS	MACRO SYSTEMS	CHRONO SYSTEMS
Activities, social roles and interpersonal relationships in face to face settings.	The linkages and processes between two or more settings containing the developing person (e.g. home and the workplace).	... workplaces, social networks and neighbourhood – community contexts.	Belief systems, knowledge, material resources, customs, lifestyles, hazards, opportunity structures, and life course options.	Changes over time in family structures, socio economic status, employment, place of residence.

Source: Bronfenbrenner 1994, pp. 39 – 40.

Lee (n.d.) considered a community to be an organised and interconnected system of social networks with a ‘leader’. He also suggested that these leaders might not be at any particular location, that they might not be obvious to anyone outside the community and that they might only be a person with a small group of followers whom they could influence. These leaders might be formal or informal but they would all exhibit a shared vision and have good communication skills. Walton, McCrea, Leonard and Williams (2013) developed a five dimension concept of resilience that extended the leadership, links and internal relationships described by Lee. These dimensions are strategic thinking, links within communities, effective use of resources, commitment and building meaningful relationships (Walton et al. 2013, Abstract). Hannah, Avolio and Walumbwa (2011, p. 562) suggested that authentic leadership would, by soliciting views from the followers, lay out what each expects

from the relationship and make explicit what each is willing to contribute. Building ongoing relationships appears to be a key component of leadership within a resilient community.

The formal leadership of the communities within the Scenic Rim (the elected local government councillors) has been actively involved in encouraging the recognition of community values and development desires (for example, the SRRC (2011a) Community Plan 2011–2026, the LVRC (2011) Draft Community Plan 2011 and the SRC (2011) Somerset Futures 2010–2020). These community values and development desires (Appendix 3) meet the need for shared values and beliefs identified by McAsian (2011, pp. 9–10). The SRRC has also been active in supporting the anti-mining views of its residents through its *ANTI COAL MINING AND CSG SUBMISSION* to the Queensland Government (SRRC December 2011b). The LVRC has conducted (and lost) a legal campaign to prevent the construction of a gas fired power station close to Gatton (Gould 13 May 2014) and supported a public meeting to discuss the implications of CSG mining within its region early in November 2014 (Barry 23 October 2014). The SRC has a long standing moratorium on all exploration, mining and coal seam gas activities in its region and has said that it would support landowners threatened by CSG work on their property (Latimer 16 January 2012). In August 2015, the ICC (ICC 25 August 2015) adopted a broadly based policy towards coal and CSG exploration and development that:

- recognised the economic contribution that the existing NHC mine at Jeebropilly was continuing to make to the city and its residents;
- recognised the potential employment prospects that post mining land rehabilitation could offer to the city;
- stressed Council belief that mining was in a ‘sunset phase’ in the city and that neither coal nor CSG developments had a role to play in its future development; and
- offered to work with other levels of government to find appropriate economic development activities that better fitted into the future of the city.

This approach by elected (formal) community leaders within the Scenic Rim reflects both the view of Lee (n.d.) about leaders possessing shared vision and good communication skills and the belief systems, customs, lifestyles and hazards

identified by Bronfenbrenner (1994, pp. 39-40) in the macro systems of his ecological model (Table 3.1). It also reflects the strategic thinking and building of meaningful relationships proposed by Walton et al. (2013) and the shared values and belief systems suggested by McAsian (2011, pp. 9-10).

Aboriginal occupation and use of lands within the Scenic Rim has been sufficiently continuous for it to be accepted as a base for a Native Title claim (National Native Title Tribunal 10 November 2004). The value of traditional lands to the Aboriginal residents has also been recognised by an Indigenous Land Use Agreement (ILUA) that has been negotiated between the ICC and the Jagera, Yuggera and Ugarapul peoples (ICC 30 January 2008). These values must be recognised in any social contract that may be proposed between the communities of the region and companies exploring for carbon based minerals.

There have been no independent surveys of community opinions about CSG developments within the Scenic Rim and it is necessary to look at surveys in other areas to see what attitudes have been revealed there. In 2013, a survey into community attitudes to CSG was undertaken around Tara and Chinchilla (Queensland) and Murwillumbah, Lismore and Casino (NSW). The results of this survey showed that primary community concerns were about: (i) inadequate consultation; (ii) potential impacts on farmland; (iii) cumulative impacts on aquifers and future water supplies; and (iv) the claimed economic, social and environmental benefits. A common demand was that companies cease exploration and development until a better understanding of underground water system interconnectivity and the methane extraction and processing cycle was available (Lloyd, Luke & Boyd 2013, p. 144).

A CSIRO survey of 400 residents in the Chinchilla, Dalby, Miles and Tara area similarly produced interesting results. There were mixed feelings towards CSG development – almost seventy percent of respondents said that they tolerated or accepted CSG developments, a minority of twenty two percent were prepared to approve or embrace such activities and a much smaller minority (nine percent) rejected the developments (Walton, McCrea & Leonard 2014, p. 1). Respondents to the survey recognised potential opportunities arising from CSG developments as

being increased employment and business, new services and new facilities and a more vibrant community. The associated challenges were seen to be water and land management, traffic conditions, safety and affordable housing. Almost fifty percent of the respondents felt that their community was struggling to adapt to the changes. Other results included that positive attitudes towards CSG were associated with perceptions of the community as being resilient, the environment being well managed, there being good employment and business opportunities arising from development activities and the resource companies, government and business working with residents to manage change (Walton, McCrea & Leonard 2014, p. 2). There is much in these surveys that formal and informal community leaders (as well as executives of mining companies) could use to build a constructive debate about possible mining developments within the Scenic Rim.

Much of the above material addresses the potential impact of mineral development on the communities of the Scenic Rim. However, there is a more immediate and (mostly) unavoidable stress arising from population growth. The South East Queensland Regional Plan 2011-2036 (Department of State Development, Infrastructure and Planning (DSDIP) 2009) estimated the total population of the SRRC, ICC, LVRC and SRC areas as being 228 700 people in 2006 and suggested a population of 601 000 in 2031 (a growth of more than two hundred and sixty percent in twenty five years). The population and growth of the LCC area within the Scenic Rim is more difficult to estimate but the Australian Bureau of Statistics (ABS) estimated the population of the Jimboomba State Suburb as being 11 387 people in 2006 (ABS 2013). The new suburb of Yarrabilba (now being built north of Jimboomba) is estimated to reach a population of 52 000 people within 25 years (RPS Australia 2010, pp. 22-23). This population growth will require the alienation of considerable areas of land from its current purpose, the construction of many thousands of new residences and the use of state and municipal funds for new roads and community infrastructure (schools, libraries, sports fields). The values and development desires of the communities of the Scenic Rim outlined in Appendix 3 recognise the need to manage growth and to provide adequate employment opportunities; this is also in line with both the exo systems and chrono systems proposed by Bronfenbrenner (1994, pp. 39-40).

3.4.2 Community based organisations

Within the Scenic Rim, there are thirteen CBOs that have provided some informal leadership and representation of community views regarding potential mining developments to the wider population. Although they have organised rallies and meetings, protest demonstrations and blockades of exploration activities, these organisations seldom appear to have directly approached the mining companies. There is also no positive link between their activities and the surrender of exploration permits previously held within the Scenic Rim. If the communities of the Scenic Rim have recognised and acknowledged their values and development desires and have formal leaders who reflect these values, why might they feel the need to create additional organisations to represent them when they face adverse impacts? An answer to this question might be that they feel the need to undertake collective action in order to influence key decision makers. If this is so, then there is a need to consider just how effective such groups are in bringing about the desires of their members.

A study by Hornsey et al. (2006) of people attending a rally to protest against a Commonwealth Heads of Government Meeting in Brisbane in 2001 established that the common concept of protest effectiveness given above might be too narrow and that there are four possible measures of effectiveness that should be considered.

These are:

- the extent to which policy and/or decision makers could be influenced by collective action;
- the extent to which relevant third parties (e.g. the general community) could be influenced by collective action;
- the extent to which collective action would be successful in building opposition to a proposal; and
- the extent to which the collective action would be successful in expressing the values of participants (Hornsey et al. 2006, pp. 10–11).

Findings from this study suggest that, for individual participants who were not involved with any organisation, their willingness to be involved could be based on

the effectiveness of the collective action in expressing their own values and in influencing the general public. For participants who were already involved with an organisation, their willingness to be further involved could be linked to the effectiveness of the activity in building an opposition to the activity against which the protest had been organised (Hornsey et al. 2006, p. 21).

The thirteen CBOs that have played some role in representing community values and development desires within the Scenic Rim are:

1. the Australian Conservation Foundation;
2. the Beechmont Business and Enterprise Network;
3. the Boonah Organisation for a Sustainable Shire;
4. the Croftby Community Group;
5. the Keep The Scenic Rim Scenic (KTSRS) group;
6. the Logan and Albert Conservation Association;
7. the Lock The Gate Alliance;
8. the Mt Beppo Community Action Group;
9. the No Mount Walker Quarry group;
10. the Quarry Action Group (QAG);
11. the Rosewood District Protection Organisation (RDPO);
12. the Sustainable Scenic Rim organisation; and
13. the Willowbank Action Group.

The above list does not deny the value of the work of CBOs such as the churches, Lions, Rotary and Zonta but recognises the advocacy of organisations closely related to the conflict outlined in Chapter 1.

There are five CBOs that were formed specifically to protest against coal and CSG developments within the Scenic Rim (the Croftby Community Group, Keep The Scenic Rim Scenic, the Mt Beppo Action Group, the Rosewood District Protection Organisation and the Willowbank Action Group) and two that were formed to protest against hard rock mining developments near Beaudesert (the Quarry Action Group) and Rosewood (the No Mount Walker Quarry group).

The above CBOs are those that presently exist; but there have been others (such as the Protest Against Urban Mining Association (PUMA) that was instrumental in having Queensland Government approval for Rylance Collieries and Brickworks Pty Ltd to mine for coal at Redbank Plains overturned in 1981 (Parliament of Queensland 12 March 1981). There have also been informal groupings of residents to protest against a proposed basalt quarry on the Sugarloaf south of Boonah (Boonah Organisation for a Sustainable Shire c2011) and the *Stop the Trains* movement that protested against the initial proposal for the Melbourne to Brisbane freight rail proposal that was to run from Rosewood to Kagaru (Australian Rail Track Corporation July 2010; Department of Transport and Main Roads 2010).

The lessons to be learned from this material are: (i) that the communities within the Scenic Rim have not been reluctant to protest against proposed mining and other developments; and (ii) that they have become adept at forming CBOs to support their values and development desires.

Walton et al. (2013, pp. 20-21) concluded that community groups could play a role in providing informal leadership within resilient communities. However, they also established that, mainly because these groups were often dependent on the interests, time and effort of volunteers, that the role that they could play may be limited and that there was a need for collaboration between these groups and other agencies. A finding of the research behind this thesis is that there is limited evidence to support any claim that the CBOs identified have played a major role in bringing about the suspension or cancellation of mining activities within the Scenic Rim.

Arrow Energy Holdings Pty Ltd has surrendered one of the three exploration permits for CSG that it once held within the Scenic Rim (Kennedy, 18 September 2012) and the areas covered by the remaining two permits are now much smaller than they were in previous years. There have been protests against CSG exploration within the region (e.g. the October 2012 blockade of a site at Kerry where the Arrow Energy subsidiary BNG Pty Ltd had resumed drilling for CSG (KTSRS n.d. Highlights page)) and it is tempting to tie these protests to the surrender of permit areas or their reduction in size. However, Arrow Energy has given other reasons for its actions

(mostly the requirements of its exploration permits and lack of success in finding commercial deposits of CSG (Kennedy, 18 September 2012)).

In June 2011, the (Quarry Action Group) QAG was formed to ‘object strenuously’ against plans to develop a very large quarry to the south of Beaudesert (QAG n.d., Home page). When the local council refused a development permit for the quarry, the QAG probably felt that its work was done and the group appeared to become inactive. However, in early 2013, the Queensland Government proposed five Key Resource Areas (KRA) in which the development of very large quarries would be considered (one of the areas was again to the south of Beaudesert) and the QAG was reactivated. One outcome of the revitalization of the group was the broadcast of an ABC 7.30 Queensland report ‘Storm clouds build over development planning in the Scenic Rim’ (ABC 7.30 Queensland 20 September 2013). It would appear that the initial success of the QAG (in stopping the development of a quarry on agricultural land) might be overturned by the actions of a higher level of government.

There have been several surrenders of EPCs and MDLs within the Scenic Rim (e.g. EPC 1303 and MDL 138), but reports from the companies involved again suggest that these areas were relinquished for reasons other than actions by CBOs. However, there are two proposed mining developments where actions by CBOs appear to have been effective in preventing coal mining from starting. The first of these was the proposal by Rylance Collieries and Brickworks Pty Ltd to develop an open cut coal mine on Redbank Plains (ML 736) and the second was a proposal by OGL to resume mining at Ebenezer and then to develop the Bremer View/Mt Mort deposit. Actions by CBOs against both these proposals involved them (both the CBOs and the mining companies) in extensive legal proceedings and resulted in Queensland Government approval for the Redbank Plains development being overturned and, possibly, in OGL being unable to obtain finance for its proposed development.

Although it can be claimed that the CBOs active within the Scenic Rim have had some success in representing the anti-mining values of their constituents to mining companies and in obtaining the outcome that the communities desire, that success has not been widespread.

3.4.3. Gaps in the literature

Appendix 3 outlines the values and development desires of communities within the Scenic Rim and Section 3.4.1 suggests the pressures that urban development/population growth might place on those communities. The establishment of such values and development desires and the creation of a system of formal and informal leaders with good communication skills are characteristics of resilient communities (Lee n.d.; Walton et al. 2013) – as is the ability of these leaders to work together. However, the literature is silent on how existing communities might use their values and development desires to manage (and shape) future communities so that they also might be able to appreciate much the same lifestyle and environment.

Section 3.4.2 recognises the contribution of CBOs towards the conflict between communities and mineral exploration companies and their informal leadership role within the communities. What the literature does not recognise is the role that such organisations could play in assessing and raising awareness of the contribution that mineral developments might make to the long term maintenance of community values and development desires (e.g. Could CSG development contribute to increasing water supplies that would support expanded agricultural output? (see Queensland Gas Company (QGC) 2014, Part 14.0 pp. 198-199)).

An understanding of how these gaps in the literature might be addressed could guide the preparation of a response to the Research Question posed in Section 1.4.

3.5. The content of a local social contract between the communities of the Scenic Rim and mining companies

In late 2014, the Queensland Resources Council (QRC) published a paper *'Listening to the Community'*. The research behind this paper involved QRC members and approximately 200 members of regional communities throughout Queensland (QRC 2014, p. 2). The project developed five principles that the QRC believes underlie effective community/mining company engagement (QRC 2014, p. 8). These

principles are: (i) communication; (ii) integrity and transparency; (iii) follow through; (iv) understanding and awareness; and (v) respect. The QRC believes that the application of these principles would drive positive behaviour that would lead to acceptance and trust (QRC 2014, p. 8).

It would seem, therefore, that the application of these principles should improve the understanding of the social contract between society and business and make it easier for mining companies to obtain and then maintain the SLTO that they believe that they have been granted. This does not appear to have happened, however, and the *QRC State of the Sector Report* for the December 2015 Quarter reports that ‘over the previous twelve months, (mining company CEOs’) sentiment towards the SLTO has worsened – which translates to an increased concern for social licence pressures over the coming twelve month period’ (QRC 2016. p. 6). The remainder of this section of the thesis explores the background to the social contract that exists between society and business and identifies changing community expectations that could underlie mining company CEO concerns – at least within the Scenic Rim.

3.5.1. The general social contract

The concepts behind an implied social contract were first expressed by the Greek philosopher Epictetus and were further developed by Thomas Hobbes in the early 17th century (Anshen 1970, p.8). From his understanding of the relationship between the state and individuals, Hobbes postulated a view of the consent of the citizens to a relationship based on reciprocal duties and obligations. In the next century, Rousseau expanded this view into an intellectual system in which each member of a society entered into an implicit contract with every other member and which defined the norms of human behaviour and the terms of exchanges and trade between individuals and organisations (Anshen 1970, p.8). He believed that the implied social contract stipulated that the minority would accept the decisions of the majority – and that dissent could be expressed through legitimate channels but would stop short of revolt.

There are two major components of the social contract that make up a balance between the values and needs of society and the rights and privileges that might be

granted to a business. The privileges granted to a business mainly concentrate on a legal, corporate, personality (and, in the past, relative freedom from concerns about impacts on the environment and local communities) and limited liability for investors in the business. The needs of society previously centred on employment and general economic advancement. Society appeared to accept this balance, as long as the social benefits of business activity outweighed the social costs (Jeurissen 2004, p. 89), but this acceptance can no longer be taken for granted.

The terms of this implied social contract existed, almost unchanged, for more than one hundred years before John Kenneth Galbraith challenged the view that the contract defined the function and role of private enterprise in **today's** (emphasis added) society and the reciprocal relationship between corporations, governments and citizens (Anshen 1970, p. 8). An assumption that appeared to underlie the implicit terms of the contract was that social progress was an outcome of economic progress and would be impossible to achieve without it (Anshen 1970, p. 9). Throughout the world (and certainly throughout Australia), there are now many pressures for a reformulation of the terms of this implicit contract as it affects traditional institutions – including the goals and responsibilities of both private business and public agencies (Anshen 1970, p. 7).

On the other hand, Friedman strongly maintained the view that:

... there is only one social responsibility of business – to use its resources and engage in activities to increase its profits so long as it stays within the rules of the game, which is to say, engages in free and open competition, without deception or fraud (Friedman 1962, p. 133);

and that:

It is the responsibility of the rest of us to establish a framework of law such that the individual in pursuing his own interest is ... 'led by an invisible hand to promote an end which was not part of his intention' (Friedman 1962, p. 133).

One example of how 'the rest of us establish a framework of law' (or attempt to do so) can be drawn from a review of the Victorian *Limited Liability Act* in 1895 (McQueen 1991). Some 173 new provisions were proposed – most of which were

aimed at increasing the responsibility of corporate controllers for financial mismanagement and at making fraudulent practices criminal offences (McQueen 1991, p. 36). However, when the bill passed from the Legislative Assembly to the Legislative Council, that body attempted to remove many of the clauses. *The Age* newspaper described the reason for this obstruction as follows:

The Council's action in the Companies Bill is one dictated by the most direct of personal interests. It is a house of company directors, and it is determined to minimize the responsibility of directors towards shareholders (McQueen 1991, p. 37).

Anshen (1970) later articulated this self-interest driver a little differently when he wrote that management must participate actively in the redesign of the social contract because:

There can be no greater danger than to permit the new rules to be formulated by either the small group of critics armed only with malevolence towards the existing system or the much larger group sincerely motivated by concern for ameliorating social ills but grossly handicapped by their ignorance of the techniques and dynamism of private enterprise (Anshen 1970, p. 12).

Bishop (2008, p. 210) supported the view postulated by Friedman and wrote that:

... corporations have the right to be autonomous, to engage in economic activities and to pursue private purposes. They have a responsibility to respect human freedom and rights, but they do not have pre-legal responsibilities to pursue any social goals;

but Cho (2009, p. 35) maintained that:

Society provides corporations with a legitimate status: thus an organisation's quest for legitimacy is primarily defined by a social contract that is established between corporations and society ... not merely with its shareholders. However, a breach of this contract (i.e. the failure to meet societal expectations) may lead to revocation of the contract itself.

As Anshen (1970, pp. 9-10) suggested, there are now mounting pressures for the reformulation of the social contract between society and business and such pressures may prove to be far reaching, powerful and inescapable. The social gains being delivered by modern businesses are no longer so great that there are no concerns about the costs of the system (e.g. environmental pollution and impacts on local communities) that are being thrown on society. It is now clear that quality of life will weigh equally with economic progress. This understanding can be translated directly to the conflict that exists between communities and mining companies within the Scenic Rim merely by recognising a basic tenet proposed by Johnsen (2009, pp. 33-62) – all communities are free ... to specify appropriate ethical norms for commercial conduct as the product of a microsocial contract based on constructive consent. He then expanded this understanding to include a base for the authenticity of such ethical norms:

As long as they meet certain conditions, such as a substantial majority acceptance within the community and the option of community members to exit and exercise voice, these norms achieve the status of authenticity.

Ferenbach and Pinney (2012, p. 11) also took issue with the proposition advanced by Friedman (1962, p. 132) and suggested that society is looking to business for leadership in creating a renewed social balance. They hypothesised that it might be necessary to bring philosophical and theological perspectives to bear on the dialogue about the social purpose and roles of corporations and markets and suggested that there was a need for a regulatory environment that would be conducive to long term value creation. This view is in accordance with that proposed by Porter and Kramer (2006, 2011) in their creation of a 'shared value' concept – an approach in which business encompasses societal outcomes without sacrificing long run financial returns to investors (Ferenbach & Pinney 2012, p. 12).

Serafeim (2014, p. 3) contended that, as economic power has become concentrated in fewer organisations, their role in society has changed to serve broader interests and that, as a result, society, and not just shareholders, has become a principal in such organisations. This change, he suggested, placed the community in a position to

demand that corporations serve not just the owners or the managers, but all of the community. He later suggested that:

While in the early twentieth century there was a discussion of companies' social responsibility, no mention was made of resource scarcity and planetary effects such as climate change. The combination of concerns (about these matters) further exacerbated pressure on large companies to serve the interests of society (Serafeim 2014, p. 3).

While the actions of governments are often seen as a replacement of society's values by laws, it may be that those actions also serve to reinforce the implicit terms of the social contract between society, government and business. One example of such reinforcement can be found in a suggestion by a former Commonwealth Minister for the Environment that miners and coal seam gas companies recognise that the 'moral' right of farmers to determine what happens on their land overrides the companies' legal right to explore or mine. This suggestion was followed by another that mining companies should acknowledge farmers' right to 'lock the gate' (Taylor & Chan 1 November 2015).

It could be, as Anshen (1970, p. 7) has written, that our society is fast approaching (but, perhaps, fumbling with) a new definition of the role and responsibility of private enterprise. This new definition could have vast implications for the theory of the firm and such possible links are examined in Chapter 7.

Perhaps an adequate summary of the social contract between a community and any company working within it can be taken from Freeman (n.d.):

When the firm mismanages its relationship with the local community, it is in the same position as a citizen who commits a crime. It has violated the implicit social contract with the community and should expect to be distrusted and ostracized. It should not be surprised when punitive measures are invoked.

3.5.2. Scenic Rim input to the general social contract

There are three sources of data relating to Scenic Rim community input to a ‘local’ social contract. The first source is LGA publications, the second is the material collected in the preparation of the Community Plans that contain the values and development intentions identified in Appendix 3 and the third is in material prepared by the CBOs listed in Section 3.4.2.

Priorities expressed by the SRRC (SRRC December 2011a, p. 7) include:

- understanding, protecting and enhancing those things our residents and visitors value about the character and heritage of our towns and villages; and
- limiting development which detracts from our town and village centres and main streets.

The values expressed by the communities of the Scenic Rim (Appendix 3) include;

- the scenic rural landscape;
- protecting the rural and natural heritage;
- protecting the natural environment is paramount;
- preserving rural character, lifestyle and liveability;
- consultation and participation in decision making;
- sustaining rural industry;
- ecotourism opportunities;
- economic opportunities building on regional environment and geography; and
- ensuring that new businesses are compatible with lifestyle and environment.

To the above list must be added the beliefs and values of Aboriginal clans that have found expression in the Native Title claim and in the ILUA mentioned in Section 3.4.1.

One of the more active CBOs, the KTSRS, is against ‘inappropriate development’ and suggested that exploration for coal and CSG in the region be suspended until:

- an independent study into the interconnectivity of the water systems/aquifers under the Scenic Rim has been undertaken by a mutually agreed party and the report made public,
- all landowner water bores have been tested so that, if contamination or mining induced drawdown occurs, baseline studies will enable landowners to prove that their water supplies have been affected; and
- genuine consultation takes place and includes public meetings where ‘people who know the issues’ are able to ask questions that others may not have identified (KTSRS n.d., Highlights page).

That the issues raised by KTSRS are worthy of examination is confirmed by a study undertaken by Arrow Energy in the Walloon Coal Measures in its Surat Basin gas field:

Direct impacts on the groundwater levels and flow directions in the Walloon Coal Measures during CSG production are unavoidable as CSG water extraction from this aquifer system is an intrinsic part of production. The extraction of groundwater has the potential to cause subsequent indirect impacts on groundwater levels in aquifer systems above and below the Walloon Coal Measures and subsidence and deformation of the land surface (Arrow Energy April 2012, p. 3).

Arrow Energy also considered that the affected aquifers could take twenty years to recover significantly after depressurisation ceased (Arrow Energy December 2012, p. 5).

All of the above points reflect strongly held views within the Scenic Rim and would need to be considered in preparing a local version of the social contract between society, government and business. As such, they would then form a base for negotiating an SLTO between those communities and companies proposing any mineral development activity within the region. The general approach to negotiating an SLTO is discussed in Section 3.7.

3.5.3. Gaps in the literature

The material in Section 3.5.1 clearly outlines the nature of the general social contract between society, government and business and that in Section 3.5.2 identifies additions that would more closely relate the general social contract to needs within the Scenic Rim. Two elements missing from the literature are discussion on how local input is ratified and on how such a 'local' social contract is communicated to companies. These elements are particularly important when the companies do not appear interested in making contact with the communities. Similarly, the published literature contains little guidance on how a local social contract might be used as the base for negotiating an SLTO for any specific mining activity.

The development of a local social contract along the lines suggested in Section 3.5.2 would provide a base from which community representatives could approach companies in an attempt to negotiate development outcomes that build long term resilient communities.

3.6. Corporate ethics, stakeholders and sustainable development reporting

Appendix 3 outlines the values and development desires of communities within the Scenic Rim and it is reasonable to expect that any company seeking to work within the region would wish to demonstrate that its ethics and development intentions are aligned with community values. This section of the thesis sets out to establish such company values and ethics from readily accessible public documents and to relate those values to stakeholder engagement.

3.6.1. Corporate ethics

The Applied Corporate Governance (n.d.) organisation defined business ethics as being the application of a moral code of conduct to the strategic and operational management of a business and suggested that the following elements needed to be considered: (i) the role of business in the national and international marketplace; (ii)

corporate social responsibility and ethical issues facing individual enterprises; and (iii) the behaviour and actions of individuals within the enterprise. El-Garaihy, Mobarak and Albahussain (2014, p. 110 – 111) examined these elements and recognised that one of the four aspects of corporate activity that could contribute to creating a socially responsible corporation was ethical standards. Duztas (2008, p. 28) took this contribution by ethical standards further when he suggested that the owners of a business should ask, of their appointed agents (the senior executives), questions such as ‘How trustworthy are these executives?’ and ‘Do they put themselves or the firm first?’

Obtaining an answer to such questions requires a definition of corporate ethics – particularly as business ethics is one of the key factors influencing investment decisions (Sullivan & Shkolnikov 2006, p. 2) such as the development of coal and CSG exploration permits within the Scenic Rim. Sullivan and Shkolnikov (2006, p. 1) described business ethics as ‘a set of principles and guides of business behaviour rather than a set of rigid rules’ and concluded their definition with the statement ‘business ethics is not only an attempt to set a standard by which all of the employees of a firm can know what is expected, but it is also an attempt to encourage employees, managers and board members to think about and make decisions through the prism of a shared set of values’. Francis and Armstrong (2003, p. 375-6) extended the application of business ethics by suggesting that ‘there are compelling reasons to consider good ethical practice to be an essential part of ... good risk management’ and described business ethics as being ‘... the moral philosophy, values and norms of behaviour that guide a corporation’s behaviour within society’.

Newton (2014, p. v) summed up the potential contribution of business ethics as being ‘properly understood, the practice of business had a fine logical and ethical foundation, and enabled real improvement in the welfare and dignity of the individual and in the equality of society’. However, the Ethics Resource Centre (2011), in its National Business Ethics Survey, was less sanguine about the contribution of ethics to business outcomes when it concluded that: (i) the proportion of companies with weak ethical cultures had climbed to near record levels; (ii) the survey data showed that companies behaved differently during times of economic

difficulty; and that (iii) as the economy improved and companies and employees became more optimistic about their financial futures, misconduct would rise and standards of reporting would drop.

Mackay suggested that, in business, ‘ethics may be incidental’, that the underlying problem was community standards and that when the survival of the company was at risk, ethics may be ‘suspended’ (Longstaff, 1991). Perhaps this feeling was behind a question asked at a community workshop in Rosewood on 17 January 2012 (personal notes taken by the author):

Is it ethical for companies to persist with exploration and then mining developments in areas where they have no community support and where there are more attractive uses for the land – for example, where there are sustainable farming businesses that could have a long term life and regional output greater than that of any proposed mining?

The availability of information on the values, ethics and codes of conduct of companies exploring for coal within the Scenic Rim is given in Table 3.2.

TABLE 3.2: Documents published by the parent companies of private companies exploring for coal within the Scenic Rim

Parent Company	Permit Number	Readily available document		
		Values Statement	Code of Conduct	Sustainability Report
Carabella Resources Limited	EPC 1149 EPC 1249	No	Yes	No
Carbon Energy Limited	EPC 1109	No	Yes	No
Coalbank Limited	EPC 1524 EPC 2239	No	Yes	No
Cockatoo Coal Limited	EPC 1509	No	Yes	No
Cuesta Coal Limited	EPC 2172	No	Yes	No
Golden Cross Resources Limited	EPC 2082 EPC 2257	No	Yes – and also a code of ethics	No
Hudson Investment Group Limited	EPC 1271 EPC 1273	No	Yes	No
New Hope Corporation Ltd	PFL 17	Yes	Yes	Mentioned in annual report

Source: The information in this table was compiled from both the 2014 Annual Report for each company and from their web site (usually from the section on Corporate Governance).

Business ethics is about the norms that guide a corporation’s behaviour within a society (Francis & Armstrong 2003, p. 376) and this definition suggests that there could be a risk posed to a company if it does not follow these norms. Risk

management can refer to management of stakeholders as well as to management of resources (Francis & Armstrong 2003, p. 376) and much of the management of stakeholders relies on the values and ethics that company directors and officers are required to observe. In 2000, Francis reported that a review of the annual reports of major Australian companies showed that few reported 'adequately' on ethics and that while some asserted a commitment to ethical behaviour 'almost none gave details of ethical infrastructure, monitoring or training' (Francis 2000, p. 14). Francis (2000, p. 5) suggested that 'Codes of ethics need to be of a fixed quality. It is not appropriate to have a series of codes of increasing leniency from which to select.' This lack of fixedness was also warned against by Jackall (1988, p. 101):

The moral ethos of managerial circles emerges directly out of the social context (of managers). It is an ethos most notable for its lack of fixedness. In the welter of practical affairs in the corporate world, morality does not emerge from some set of internally held convictions or principles, but rather from ongoing albeit changing relationships ...

Perhaps this is what the Corporate Governance Council of the ASX was trying to guard against when it introduced its best practice principles in March 2003. In regard to the promotion of ethical and responsible decision making (Principle 3), a comprehensive code of conduct was recommended and in regard to the recognition of the legitimate rights of stakeholders (Principle 10), it was recommended that the code of conduct should ensure that stakeholders were 'adequately informed' and 'able to be involved in the company's operations to an appropriate extent'. The listing rules of the ASX were modified in November 2002 to require that listed companies that did not report against these principles each year be required to explain why they did not do so (ASX 2010).

There is sufficient data available to suggest that companies exploring for coal within the Scenic Rim do have (at the parent company level) values and codes of conduct and this data is summarised in Table 3.2. However, there is little in this literature to suggest how directors and officers of the mining companies might react to challenges to the sustainability of their company (i.e. Do they strengthen or abandon their ethics in difficult times?). Appendix 4 illustrates the extent to which the parent companies

of organisations exploring for coal and CSG within the Scenic Rim report on their obligations under the ASX listing rules. However, anyone attempting to use these reports to understand the values of the coal and CSG exploration companies active within the Scenic Rim would come up against the same difficulties Longstaff (2003) found with the ASX document as a whole:

... the guidelines are entirely silent about the role of values and principles in decision making. Instead, the guidelines limit themselves to comments about the standards of ethical behaviour – which are further defined to apply in very limited areas included in suggestions for the content of a code of conduct being: conflicts of interest, corporate opportunities, confidentiality, fair dealing ... compliance with laws and regulations It is not that these areas of concern are unimportant. It's just that these defined areas are a breathtakingly narrow sample of what a sound ethical framework should apply to a corporation ... (Longstaff 2003, p. 1).

There are no published values, ethics and business principles that can be readily associated with Arrow CSG (Australia) Pty Ltd, BNG Pty Ltd or Arrow Energy Holdings Pty Ltd. However, these companies are subsidiaries of Royal Dutch Shell plc and the PetroChina Company Limited and Arrow Energy Holdings Pty Ltd (the immediate parent company) is a member of the Australian Petroleum Production and Exploration Association (APPEA). It is, therefore, reasonable to expect that the subsidiary companies will reflect the values, ethics and business principles of the holding companies – even though neither of the holding companies is the sole owner of any of the subsidiaries. Table 3.3 contains an outline of these values and codes. Were Arrow Energy and its subsidiary companies to reflect the values of its parent company (Shell) and of its industry association (APPEA), then, at the least, Arrow CSG (Australia) and BNG would display the following values in their interaction with communities within the Scenic Rim:

- honesty, trust and integrity;
- concern for social performance and sustainable development;
- give proper regard for the environment; and
- seek to maintain a social licence to operate (SLTO).

A suitable summary to this section on corporate ethics can be drawn from Robins (2012, pp. 210-211) after his study of the rise and collapse of the (English) East India Company (1600-1874):

... society gives companies the privilege of limited liability; such a privilege should have social responsibility associated with it. For this to happen, an ‘ethics gene’ needs to be inserted into company law. The first law of ethics is to ‘do no harm’. To realise this in the corporate context, company directors need to be given a legal duty of care to ensure that their actions do not damage society or the environment; investors equally need to have a parallel duty to ensure that their demand for financial returns does no harm. Generate a profit at all means, but this cannot be at the expense of others.

TABLE 3.3: The values, ethics and codes of conduct of the parent companies and of the industry association to which Arrow Energy belongs

Item	Royal Dutch Shell plc	APPEA	PetroChina Company Ltd
Core values	Honesty, integrity and respect for people		Credibility, innovation, performance, safety and harmony
Code of ethics (COE)	The COE governs how companies in the Shell group conduct business.		Applicable to all staff and to wholly owned subsidiaries.
Code of conduct (Headings only)	<p>Applicable to every wholly owned company and in every joint venture under Shell control.</p> <ul style="list-style-type: none"> • People and safety (environment, social performance and sustainable development) • Fighting corrupt practices • National and international trade • Safeguarding information and assets • Communications. 	<p>APPEA members must comply with all laws and regulations but also meet the industry’s objective of maintaining an SLTO:</p> <ul style="list-style-type: none"> • by striving to improve health, safety and environmental performance • by promoting and adhering to ethical business practices; and • supporting social and economic development. 	
Responsibility to society	To conduct business as a responsible member of society, to comply with applicable laws and regulations, to support human rights in line with the legitimate role of business and to give proper regard to health, safety, security and the environment.		

Sources: Royal Dutch Shell – Code of Ethics, Code of Conduct and Shell General Business Principles 2014
APPEA – APPEA Principles of Conduct n.d.; PetroChina – PetroChina Company Limited n.d.

A variable observance of these values and ethics can be found in Arrow Energy's performance in the Surat–Dawson Basin as well as around Beaudesert. In June 2011, Arrow was fined \$40 000 (the largest fine (to that date) against a CSG company in Queensland) for breaches of land access regulations and in regard to technical issues relating to a pipeline. The then Chief Executive Officer of Arrow Energy expressed regret over these breaches and stated that they were 'unacceptable' (Burke 22 June 2011). In 2012, community groups protested against Arrow Energy's drilling of a CSG exploration well at Kerry (south of Beaudesert) and police had to be called to calm the unrest. As the drilling rig was removed from the site, it drove over clothing that protesters had thrown in front of it and this further fuelled farmer and landholder distress (Coal Seam Gas News 21 January 2012).

Such actions may not have been in accord with APPEA's requirement for all actions to be directed towards developing trust between the parties and maintaining an SLTO.

The gaps in this literature that might be addressed by the research behind this thesis are identified in Section 3.6.4. Suffice it is to say here that if the communities of the Scenic Rim were aware of and understood the values, ethics and development intentions of the companies exploring for coal and CSG within the region, it might help them to select a company with which to negotiate an SLTO.

3.6.2. Stakeholder theory

The fiduciary responsibility of directors to a company (and, hence, to its shareholders) is well established within the Australian *Corporations Act 2001*. What is less clear is what responsibilities, if any, the company and its directors have towards any other stakeholders associated with the enterprise. This section of the thesis sets out to establish guidelines as to how a company could recognise the various stakeholders who might be affected by its activities and then engage with them for a mutual benefit.

3.6.2.1. Stakeholder recognition and engagement

Francis and Armstrong (2003, p.376) suggested that business ethics was a set of norms that guided a corporation's behaviour within a society. However, they did not suggest who or what made up the society within which the corporation might wish to exist. However, this understanding had earlier been developed by Freeman (1984) and this section of the thesis opens with his definition of those who could be affected by a corporation's actions as 'stakeholders'.

Freeman (1984, p. 46) described stakeholders as being 'any group or individual who can affect or be affected by the achievement of an organisation's objectives' and Werhane (2011, pp. 115-6) gave models by which the stakeholders surrounding a firm could be assigned to primary and secondary categories. The primary group included communities (such as Beaudesert, Rosewood and Esk) and the secondary group included CBOs (such as KTSRS). Wilburn and Wilburn (2011, pp 9-11) enlarged this understanding by dividing external stakeholders into vested and non-vested categories. Vested stakeholders (such as landowners) would have both a voice and a vote in proceedings but non-vested stakeholders (CBOs such as KTSRS) would only have a voice. However, Wilburn and Wilburn (2011) did recognise that this voice might be powerful and influential when amplified by the media and the internet.

Other bases for stakeholder recognition exist and Xstrata Coal, in the Social Impact Management Plan for its Wandoan Project used an approach based on: (i) the level of impact that the project may have on the stakeholder; (ii) the level of influence that the stakeholder might be able to exert on the project; and (iii) the level of interest that the stakeholder might exhibit in the project. Using these criteria, Xstrata was then able to recognise thirty-four sub-categories within its twelve initial stakeholder groups (Xstrata 2007, pp. 16-19). It is worth noting that this approach presupposes that the company is the only group able to 'recognise' stakeholders and that external stakeholders have no ability to 'identify' themselves and to independently raise their interests and concerns.

The approach adopted by Xstrata could be used by other mining companies to identify potential stakeholders within the Scenic Rim. Table 3.4 is a listing of possible stakeholders that could be recognised using this approach.

TABLE 3.4: Key coal and CSG project stakeholder groups within the Scenic Rim

GROUP 1 High, frequent level of impact, interest or interest in activities	GROUP 2 Medium/semi frequent level of impact, interest or influence	GROUP 3 Low/infrequent level of impact, interest or influence
<ul style="list-style-type: none"> • directly affected landowners • neighbours • town/village residents and local businesses • community based organisations (e.g. KTSRS) • Yugera No2 people • SRRC/LCC/ICC/LVRC/SRC • Qld Government (Departments of State Development, Infrastructure and Planning; Local Government, Natural Resources and Mines and Environment and Heritage Protection) • (Cth) Department of Environment, Water, Heritage and the Arts • employees and contractors 	<ul style="list-style-type: none"> • Brisbane, Toowoomba and Northern Rivers district residents and local government authorities • Queensland MPs for Albert, Beaudesert, Bundamba, Lockyer, Logan, Ipswich and Ipswich West • Commonwealth MPs for Blair, Forde, Oxley and Rankin • Qld Dept of Health • Qld Dept of Education 	<ul style="list-style-type: none"> • company shareholders • Qld Ambulance Service • Qld Fire and Rescue Service • Qld Police Force • Qld Resources Council • environmental and conservation groups • academic and research groups

Source: The format for this table is taken from Xstrata 2007, p. 18-19.

This stakeholder base is viewed from a company centric point of view. The approach is adopted on the basis that it is the companies that initiate action (coal/CSG exploration) and that the external stakeholders react and seek to engage with the companies to obtain a better outcome.

Once the stakeholders in a project have been recognised and some form of ranking applied to their values and needs, it becomes possible for a firm to apply a strategy towards the satisfaction of those needs. Friedman and Miles (2006 p. 162) developed a ladder of stakeholder engagement and management that contains twelve levels of engagement that could be applied to mining company/community interaction within the Scenic Rim. The levels of ‘management’ that they outline range from manipulation of stakeholders to stakeholder control of events. The degrees of power that they give to stakeholders range from non-participation (with

stakeholders just being the recipients of data) through some involvement (with stakeholders having some decision making capacity over specific events) to a high degree of stakeholder power over the overall project. The detail of this ladder of stakeholder engagement is given in Table 3.5.

TABLE 3.5: A ladder of stakeholder engagement and management

Degree of Power	Stakeholder Management Approach	Intention of Engagement	Form of Engagement	Level of Stakeholder Influence
Some degree of stakeholder power	12. Stakeholder control	Majority representation of stakeholders in decision making	Multi-party dialogue	Forming or agreeing to decisions
	11. Delegated Power	Minority representation of stakeholders in decision making	Multi-party dialogue-board representation	
A degree of involvement	1. Partnership	Joint decision making over specific projects	Multi-party dialogue – joint ventures Multi-party dialogue –strategic alliances	Having an influence on decisions
	9. Collaboration	Some decision making power given to stakeholders over specific projects		
	8. Involvement	Stakeholders give conditional support		
A degree of tokenism	7. Negotiation 6. Consultation	Organisation has the right to decide but stakeholders can advise	Constructive dialogue	Being heard before a decision is made
	5. Placation	Appease the stakeholders but no assurance of being heard	Reactive bargaining Two way dialogue – questionnaires, focus groups	
Non-participation	4. Explaining 3. Informing	Educate stakeholders	Advisory panels	Knowledge about a decision
	2. Therapy	Educate stakeholders		
	1. Manipulation	‘Cure’ stakeholders of their ignorance and preconceived beliefs ‘Misleading’ stakeholders, attempting to change stakeholder expectations			Workshops Verified corporate social reports Briefing sessions, leaflets, newsletters, magazines, corporate reports

Source: Friedman and Miles 2006, p. 162

The approach to managing external stakeholders identified in Table 3.5 is centred on the business case that managing stakeholders successfully could give a firm a competitive advantage and so benefit its shareholders. However Harrison, Bosse and Phillips (2010) introduced the concept of managing for stakeholders and proposed a model in which both the firm and its stakeholders would, based on mutual trust, disclose their ‘utility functions’ to each other in order to develop the firm and its activities for their mutual advantage. This paper revealed a seminal change in thinking. Another trend that became prominent after 2010 was that the greater involvement of stakeholders could lead to more sustainable development and so benefit a much wider ‘community’. Clifton and Amran (2011, p. 124) pointed out that there are two criteria by which a firm could be considered ‘sustainable’. The first criteria is that its actions would enable it to continue as a going concern. The second is that it would make a significant contribution to sustainable world goals, wellbeing and justice. This approach recognised the values and desires of both internal and external stakeholders and, as Wu (2012, p. 160) later pointed out, ‘An enterprise should acknowledge the needs of its multiple stakeholders and collaborate with them to generate value that can benefit itself as well as its stakeholders’.

Both the concept of managing for stakeholders proposed by Harrison, Bosse and Phillips (2010) and the link between stakeholders and sustainability proposed by Clifton and Amran (2011) are based on trust. This particularly applies to the trust extended by the stakeholders towards the corporation – and it could be suggested that the major base for trust is the good name (or reputation) of the company. Tuck (2012) examined the bases on which stakeholder groups might assess the reputation of a company and so form an estimate of how trustworthy it is. Reputation was found to have three major components: (i) the estimate of reputation formed by individual stakeholder groups (e.g. farmers, community residents, suppliers), (ii) the network of associations by which individual stakeholder groups transmitted and compared their estimate of reputation and (iii) the general perception of the reputation of the industry (Tuck 2012).

Tuck’s (2012) study was based on mining companies operating in Victoria, but the findings of the study offer a base for similar analysis within the Scenic Rim. The factors that were found to have a direct impact on reputation formation were: (i)

company impact on the community; (ii) activities at the local mine site; and (iii) the actions of managers and employees at the local mine site whereas general company performance and leadership and management were of limited importance. Those factors that had a less direct impact on reputation creation were: (i) performance at other mine sites; and (ii) change of company ownership. The impacts of company economic contribution to the community and/or region and salaries and wages paid within the region were only of limited importance in reputation formation (Tuck 2012).

Despite the weight of evidence that suggests a strong link between stakeholder engagement, competitive advantage and sustainable development, Sarker (2011) (after a study of corporate social responsibility in the Malaysian and Australian oil and gas industries) was still able to conclude that ‘A severe lack of stakeholder engagement is a major failing of the Australian mining industry especially when it comes to coal seam gas projects.’ He then suggested that regulation was not the answer and that there should be ‘a strategic stakeholder engagement model involving governments, the mining company, farmers and community groups on a continuous basis throughout the mining project’. This conclusion supports the contribution to practice that this research project is expected to make (Section 1.6).

An adequate summary of the relationship between companies and their external stakeholders (particularly between mining companies and communities within the Scenic Rim) comes from Freeman (n.d., p. 47) – ‘If a contract (such as an exploration permit for coal or CSG) between A (government) and B (companies holding ATPs for carbon based minerals) imposes a cost on C (communities), then C has the option to become a party to the contract and the terms are renegotiated.’.

The gaps in stakeholder literature and their meaning for the research that is the background to this thesis are identified in Section 3.6.4. Suffice it is to say here that if communities felt included and empowered by a decision making role, they might be more inclined to enter into discussions with companies exploring for coal and CSG within the region.

3.6.2.2. Stakeholder engagement through corporate social responsibility

Sprinkle and Maines (2010, pp. 445-453) suggest that there are six reasons that companies might engage in corporate social responsibility (CSR) activities. The first three reasons have an economic base (increase market share, reduce production cost and reduce costs of potential litigation and compliance investigations), another reason could be socio-economic in its base (help recruit, motivate and retain employees) and the other two reasons are ‘greenwash’ and altruism. A review of the CSR activities undertaken by the NHC gives three examples of altruism – albeit with a strong economic base.

The first example is based on the NHC operations at Acland (north of Toowoomba). At this site, mined land is being rehabilitated, planted with pasture and returned to grazing. Tests carried out by staff of the University of Southern Queensland suggest, that at an early stage of rehabilitation, there is no difference in chemical properties between the soils on an unmined site and those on rehabilitated land. Other tests suggest that the growth rates of a trial herd of cattle on rehabilitated land matched or exceeded the growth of a control herd on nearby unmined land (NHC 17 April 2015). It may be possible for NHC to reproduce such success at its Jeebropilly site when rehabilitation takes place there.

NHC supports a Community Reference Group at Rosewood and the other two examples come from the work of this Group. At a public meeting in Rosewood, early in 2012, members of the Rosewood District Protection Organisation (RDPO) described how their engagement with NHC had led to vegetation that was once endemic to the Rosewood Vine Scrub of the area being used in rehabilitation of the New Oakleigh open cut mine (just to the north of the town) rather than the use of plant material more generally spread in the Scenic Rim (personal notes taken by CWE Maddox 17 January 2012). NHC also gives examples of financial support (more than \$250 000) made available to the Rosewood and Ipswich communities over past years - organisations assisted include the Rosewood State Primary and High Schools, the Rosewood Community Centre and the Cabanda aged care facility (Moreton and District News 25 January 2013). Such activities would fit in well with NHC’s belief/value statement that ‘We work with our communities through effective

partnerships to achieve mutual benefit.’ (NHC n.d.). However, company views are not always shared by the intended recipients of their CSR activities and the Ipswich City Councillor for Division 10 (Rosewood and surrounding districts) offers a contrarian view when he asks ‘What legacy has mining left after 150 years? It is difficult to point to one physical piece of infrastructure that they have built for our community.’ (Pahlke 18 January 2013).

Although Arrow Energy has yet to engage in any CSR activities within the Scenic Rim, it has an active CSR program in the Surat-Bowen Basin (where its CSG activities are far more advanced) (Arrow Energy n.d. (c2015-16)). Some of the components of this program are:

- support for NAIDOC Week activities in Dalby and Moranbah;
- the establishment of an Agricultural Scholarship program to assist the education of the next generation of farmers;
- the support of Indigenous students studying at five Queensland universities; and
- the provision of cardiac care in St George and Dalby by specialist doctors and a mobile clinic.

Other mining companies active within the Scenic Rim also support community engagement and involvement activities in areas where they have more advanced mining activities. For example, Carabella Resources Limited (holder of EPC 1149 and EPC 1249 in the SRRC area) has an active program to enlist and support local business in the supply of services for its Bluff open cut coal mine near Blackwater (Carabella Resources Limited 26 March 2014, Stanley 27 November 2013).

Similarly, Golden Cross Resources Limited (holder of EPC 2082 and EPC 2257) has financially supported community activities at Molong (NSW) and Oodnadatta (SA) (Golden Cross Resources n.d).

Although it is relatively easy to find some examples of mining company CSR activities within the Scenic Rim, it is not possible to establish a link between these activities and the sustainability of company operations.

3.6.3. Sustainable development reporting

The discussion in Section 3.6.1 suggests that an important reason to involve all stakeholders in the activities of a corporation is that they could contribute to its long term sustainability (Harrison, Bosse & Phillips 2010; Clifton & Amran 2011). Sustainable development is also one of the values of communities within the Scenic Rim identified in (Appendix 3). It is, therefore, worthwhile examining the current state of corporate sustainable development reporting in Australia as any such reports by the public companies recognised in Appendix 2 might assist the communities of the Scenic Rim in assessing their value as partners in an SLTO.

There are several definitions of sustainable development available but the one used in this thesis is that described in the Australian *National Strategy for Ecologically Sustainable Development* (NSES D) viz:

Ecologically sustainable development is using, conserving and enhancing the community's resources so that ecological processes, on which life depends, are maintained and the total quality of life, now and in the future, can be increased (Department of the Environment 1992, Part 1 – Introduction).

Part 2 Chapter 5 of the NSES D is directly related to mining and contains three objectives that are relevant to such activities within the Scenic Rim:

- Objective 5.3 – to improve community consultation and information, (to) improve performance in occupational health and safety and (to) achieve social equity objectives;
- Objective 5.2 – to provide appropriate community returns for using mineral resources and achieve better environmental protection and management in the mining sector; and
- Objective 5.1 – to ensure mine sites are rehabilitated to sound environmental and safety standards and to at least a level consistent with the condition of surrounding land (Department of the Environment 1992, Part 2 Sectoral Issues - Chapter 5).

These objectives are presented in reverse order to that given in the NSES D for the reasons that: (i) improving community consultation and information is the most pressing current need for communities within the Scenic Rim; and (ii) the requirement for the rehabilitation of proposed mine sites within the Scenic Rim is (mostly) several decades in the future.

In June 2003, the Australian Department for the Environment and Heritage published *Triple Bottom Line Reporting in Australia – A Guide to Reporting Against Environmental Indicators*. Chapter 1 of the *Guide* states that ‘Triple Bottom Line reporting is becoming an accepted approach for organisations to demonstrate they have strategies for sustainable growth.’ (Department for the Environment and Heritage 2003, p. 3). Fifty three organisations participated in the development of the *Guide* and, although eight of these organisations were involved with mining and energy (e.g. MIM Holdings and Origin Energy), only one of them (the Minerals Council of Australia) had any direct (or indirect) link with mining exploration within the Scenic Rim (Department for the Environment and Heritage 2003, p. 67) – so, perhaps, it is not surprising that the *Guide* contains no major segment on mining. Any mining company wishing to use the *Guide* in its reporting would have to search for relevant references under the Environmental Performance Indicators for Energy, Waste, Water, Waste – Solid and Hazardous, Emissions to Air, Land and Water and Biodiversity in Chapter 5 (Department for the Environment and Heritage 2003, pp. 20–61). For larger organisations, such as Shell (an ultimate owner of both BNG Pty Ltd and Arrow CSG (Australia) Pty Ltd), reporting against these indicators may provide some benefit, but for smaller organisations, such as Scorpion Energy Pty Ltd and Moreton Energy Pty Ltd, it is probably not worth the effort.

In 2007, KPMG published *Sustainability Reporting in Australia*. This report analysed the sustainability reporting of the top 100 public companies and the top 100 private companies in Australia (ranked according to revenue) (KPMG 2007, p. 5). The names of the companies were not disclosed but the following comment suggested that some mining companies were included – ‘The four industry sectors that dominate the ASX 300 (mining, property and business services, manufacturing and finance and insurance) are well represented in sustainability reporting.’ (KPMG 2007, p. 2). The report suggested that:

- the incidence of corporate sustainability reporting in Australia continues to increase;
- sustainability reporting in Australia continues to lag international levels;

- the extent of reporting varies significantly between industry sectors (mining companies make up 19% of the ASX 300 index and 24% of these companies publish sustainability reports);
- levels of sustainability reporting among both the top 100 public and private companies are similar; and
- most companies publish stand alone sustainability reports (KPMG 2007, pp. 6–9).

A further report by KPMG and SustainAbility Ltd (2008, pp. 2-3) stated that:

- publishing a sustainability report has a strong positive impact on readers' perception of the reporting company;
- readers want to see a stronger role for stakeholders in reporting;
- readers believe reporting companies are likely to omit failures from their sustainability reports; and
- a majority of readers feel assurance is important, both on sustainability reports and on sustainability performance.

Figure 4 of the report (KPMG et al. 2008, p. 9) contained the following reasons that readers use sustainability reports:

- to understand the specific sustainability issues of the company;
- to know how the company performs;
- to establish the company's accountability; and
- to use it as a base for further decisions/actions in relation to the company.

The above material suggests that published company reports may perform a valuable role in informing 'the public' (and, therefore, communities) about company intentions, standards and performance. However, a review published in 2004 suggested that these reports should be reviewed and used carefully as the published material may be an attempt to manipulate public perceptions. Yongvanich and Guthrie (2004) studied the descriptions of 'non-economic performance' contained in the financial year 2002 annual reports of seventeen mining companies listed on the ASX and being part of the ASX 100 index (Yongvanich & Guthrie 2004, p. 10) and concluded that:

... there were seven reporting elements of the environmental performance indicators that were rarely reported. These reporting elements were: materials; water; biodiversity; suppliers; products and services; transport; and overall were rarely reported (Yongvanich & Guthrie 2004, p. 16).

Although the report recognised that disclosure against the topic 'community' was high for almost all the sample companies, the authors concluded that 'The greater disclosure of community could be seen to represent the companies' strategy of deflecting the attention of 'relevant publics' away from other issues by concentrating disclosure only on community.' (Yongvanich & Guthrie 2004, p. 17). Their overall conclusion was that:

It may be concluded from this ex post examination of management's choices of legitimisation strategies that the strategy of changing the perception of the 'relevant publics' and the strategy of manipulating perception by deflecting attention from issues of concern were adopted to a similar extent and more so than the other two legitimisation strategies. (Yongvanich & Guthrie 2004, p. 19).

In July 2014, McKinsey and Company published their 2014 Global Survey on sustainability's strategic value. The survey covered some 2 904 organisations – of which ninety four were classified as 'extractive services' (McKinsey & Company 2014, p. 1). The three principal reasons that the surveyed organisations addressed sustainability were reported as being:

- alignment with the company's business goals, mission or values;
- to build, maintain or improve corporate reputation; and
- to improve operational efficiency and lower costs (McKinsey and Company 2014, Exhibit 1).

Executives of extractive services companies are reported as pursuing seven core sustainability issues with seventy five percent of the respondents saying that reputation management was one of these issues. Reputation building activities included: (i) local community investments; (ii) external reporting; and (iii) employee volunteering. The activity that would maximise financial value is community investment (McKinsey and Company 2014, Exhibit 3).

Some of the external reporting of companies exploring for coal and CSG within the Scenic Rim is explored in Appendix 4. An understanding of the availability of this data is critical for communities within the Scenic Rim as it is unlikely that any of the companies directly involved in mining exploration within the region (Appendix 2) would fall within the definition of the top 100 private or public companies in Australia and so may not produce sustainability reports that the communities could use to assess their value as possible partners in an SLTO.

Gaps in the literature relating to sustainable development reporting are identified in Section 3.6.4.

3.6.4. Gaps in the literature

The literature reviewed in Section 3.6 relates to corporate ethics, stakeholders and corporate development reporting. The literature is extensive but there are significant gaps in it. The gaps that are addressed by the research behind this thesis are as follows:

3.6.4.1. Corporate ethics

When the ASX published its best practice principles in 2003 and suggested that companies listed with it should report on performance against those principles (one of which was ethics) each year (FindLaw Australia 2003), Longstaff (2003) immediately protested that the guidelines were silent about the role of values and principles in decision making. The ASX principles only apply to public companies and no private company registered in Australia is required to produce similar reports. The literature reviewed gives many reasons as to why corporate values, ethics and codes of conduct are important, but it contains no guidance as to how communities might obtain information about corporate values and guidelines for behaviour if a company chooses not to publish such material. This shortcoming is important within the Scenic Rim as most of the corporations exploring for coal or CSG are private companies.

3.6.4.2. Stakeholder theory

In 2011, Sarker found that ‘a severe lack of stakeholder engagement is a major failing of the Australian mining industry especially when it comes to coal seam gas projects’ (Sarker 2011) and a year later Wu (2012, p. 160) was still suggesting that companies should acknowledge the needs of their multiple stakeholders. Within the Scenic Rim, none of the companies exploring for coal or CSG has sought to engage with external stakeholders in any meaningful way and none of the literature reviewed suggests how communities might initiate consultation and engagement when the companies are not willing to do so.

3.6.4.3. Sustainable development reporting

In 1992, the Commonwealth Department of Environment, in publishing its NSESD (see Section 3.6.3), suggested that one reason that a company might publish a sustainability report was ‘to improve community consultation and information’ (Department of Environment (1992, Part 2 Chapter 5). More than a decade later, a survey by KPMG (2008, p. 9) suggested that the reasons that readers studied environmental reports included: (i) to understand the sustainability issues of a company; and (ii) to use it as a base for future decisions/actions in relation to a company. This tool for understanding company intentions is not available to communities within the Scenic Rim as none of the companies exploring for coal or CSG in the region publishes such reports. The literature reviewed is silent on how communities might obtain such useful knowledge if companies do not release it.

3.6.4.4 So what does it all mean?

There have been very few exchanges of data between the communities of the region and the companies exploring for coal/CSG. It would not be surprising, therefore, if the communities object against those activities strongly. If the companies exploring for coal and CSG within the Scenic Rim have a genuine wish to obtain an SLTO for their proposed operation, they will need to recognise the implicit, local, social contract and provide data on their values and intentions in a timely manner and in a form that community members will understand.

3.7. A social licence to operate

3.7.1 The social licence to operate defined

CSIRO defined a social licence to operate as follows ‘An operation is said to have a social licence when it achieves ongoing acceptance or approval from the local community and other stakeholders who can affect its profitability.’ and claimed that ‘Without a social licence it is very difficult for a mine to operate effectively or profitably.’ (CSIRO 10 September 2012 - updated 16 October 2012, p. 1). The Business for Social Responsibility group (BSR) added another dimension (that of legal issues) to the definition as follows – ‘Gaining a social licence to operate simply means gaining support for the project from concerned groups, or stakeholders, over and above meeting any legal requirements.’ (BSR n.d., p. 4). Boutilier and Associates added other components to the concept as follows:

However, at the level of individual projects, this acceptance is neither automatic nor unconditional. Today, there is the need to gain and maintain the support of the people who live and work in the area of impact and influence of any given project – to have the social licence to operate. There is ample evidence that a failure to gain and maintain this Social Licence can lead to conflict, delays or cost for the proponents of a project (On Common Ground Consultants Inc & Boutilier and Associates n.d. p. 1).

3.7.2. Understanding the concept of a social licence to operate

There are several ‘peak’ membership based groups that represent the mining industry in Australia. However, representation of the coal exploration and mining industry was streamlined a little when the then Australian Coal Association and the Minerals Council of Australia combined to create the present Australian Coal Association on 23 August 2013 (Australian Coal Association n.d. a, Home page). As at 29 February 2016, the Association claimed to have twenty-six members: only one of which (New Hope Corporation Ltd) is active within the Scenic Rim (Australian Coal Association n.d. a, Home page, Members). The Association’s previous Home page made several claims about the industry’s SLTO that adequately frame this analysis of the theory surrounding the topic:

The Australian coal industry respects that its long term future relies on its 'social licence to operate'. ... While the concept of a social licence to operate is not new, it has come under increasing scrutiny in the last decade as the industry has expanded to meet global demands for Australia's coal resources. This expansion has brought about pressures on local infrastructure, some issues of competing land use and increased impacts on some communities. ... The Australian coal industry places premium value on maintaining its social licence to operate. In order to do so, the industry promotes the proactive steps that it is taking to address impacts on the environment and some local communities and works with those communities and governments to address concerns as they arise. ... (Australian Coal Association n.d. b, Home page, Social Licence to Operate).

Wilburn & Wilburn (2011, p. 3) wrote that 'Some companies are adopting a model, the Social Licence to Operate, as part of their corporate social responsibility strategy.' The relationship between stakeholders, corporate social responsibility and an SLTO is to be explored in another part of the overall research project and, for this thesis, it is assumed that CSR strategy is a path to gaining an SLTO.

BSR, in developing a business case for an SLTO, maintained that the most immediate reason for a company to gain an SLTO was 'so that it can get the mine permitted' and claimed that:

Even minor opposition can lead to work stoppages or delays that increase the cost of putting a mine into production. Local opposition can lead to problems with regulatory or political authorities. In turn, such problems can cause lack of investor confidence, affecting the viability of a project. ... These reputational costs can linger for many years (BSR n.d. p. 5).

None of the mining companies active within the Scenic rim has sought to negotiate an SLTO so far, but the question of whom they would approach arises. Table 3.4 recognises a large array of stakeholders who would need to be engaged. But even the high priority group (Group 1 in the table) still contains a very diverse set of stakeholders – there are more than thirty communities of very different sizes and composition spread over several hundreds of kilometres, thousands of landowners covering a wide range of agricultural, horticultural and pastoral activities and tens of government departments and local government authorities. Boutilier and Associates (2012, What is a Social Licence? page) suggested that any social licence would be

site specific and this could complicate matters for companies (such as Carabella Resources, Coalbank and Metro Mining) that hold several EPCs within the Scenic Rim (Appendix 1) even further. Even if a ‘network of stakeholders’ was substituted for ‘community’ (Boutilier and Associates 2012, What is a Social Licence? page), there is still the question of how any such group could legitimately represent the interests of the diverse groups identified in Table 3.4. Boutilier and Associates (2012, What is a Social Licence? page) raised the issue that communities and stakeholders need to be assured of the legitimacy and credibility of the project as part of trust building activities and it would surely be reasonable for a company to seek to be assured that its negotiating partners were equally legitimate and credible.

Wilburn and Wilburn (2011, p. 5) quoted Asmus as believing that, quite apart from the lack of a leader or spokesperson with whom to start a dialogue, three key issues surrounded all attempts to negotiate an SLTO: viz

1. How is the ‘community’ defined? Is there a strict geographical limitation to the ‘community’ and are elected officials given greater or equal status with local citizens?
2. If there is a lack of consensus within the ‘community’, what process validates any decision making? and
3. Absent a political process, what exactly represents an adequate level of consent?

The On Common Ground group (2012, Measuring the Social Licence page) suggested that, if these difficulties could be overcome, activities against a social licence could be measured and evaluated and that, given that the level of approval granted to a project is likely to vary throughout its life, it should be measured regularly. They proposed a four level model of such a licence and this is outlined in Table 3.6. As well as listing the levels of acceptance that may be found over the life of a project, the table identifies the indicators that might be used to assess just where a project is in terms of its SLTO.

TABLE 3.6: The levels of a social licence to operate and their indicators

LEVEL OF SOCIAL LICENCE	INDICATOR OF LEVEL
Acceptance withheld or withdrawn	Shutdowns, blockades, boycotts, violence, sabotage, legal challenges
Acceptance/tolerance	Lingering/recurring issues and threats, presence of non-local groups and watchful monitoring
Approval/support	Company seen as a good neighbour and pride in collaborative achievements
Psychological identification	Political support, co-management of projects, united front against critics

Source: On Common Ground Consultants Inc and Boutilier and Associates 2012, Measuring the Social Licence to Operate page

Within the Scenic Rim, there have been: (i) blockades against exploratory drilling for CSG organised by the KTSRS organisation (KTSRS n.d. Highlights page); (ii) a legal challenge against the validity of the Ebenezer mineral lease that OGL Resources proposed to buy (OGL Resources Limited 3 June 2013) and; (iii) marches protesting against the proposal by Coalbank Limited to explore for coal in the Esk - Harlin area (Foley 26 December 2013). The communities and ‘networks of stakeholders’ of the area do not appear to be in a mood to even consider granting mining companies an SLTO.

Arrow Energy has some experience in negotiating with stakeholders in the Surat Basin and, in 2011, lodged a Social Impact Assessment (SIA) and Social Impact Management Plan with the (Queensland) Co-ordinator General as part of the Environmental Impact Assessment (EIS) associated with its Surat Basin Project. The ‘consultation report’ associated with the EIS covers 579 pages. Despite this seemingly extensive consultation process, the authors of the report stated:

The issues of concern have remained largely unchanged since the consultation process commenced in late 2009, (but) the community has become increasingly informed and aware of the CSG industry and the Arrow Surat Gas Project, through project consultation activities and through the media ... Despite this increasing awareness, there remains a high level of confusion and misunderstanding amongst stakeholders (URS Australia 2011, p. 74).

In a review of the EIS and accompanying documents, de Rijke (2013) commented that ‘In this context, the SIA and associated documents are notably silent on the

‘social licence to ^{operate}’ and whether the proponent is of the opinion that such a licence has ultimately been obtained.’ (de Rijke 2013, p. 17).

Arrow Energy has attempted to communicate with its Scenic Rim stakeholders by way of public meetings (Arrow Energy 17 September 2010), ‘public update’ notifications (Arrow Energy January 2012) and the release of technical reports (Arrow Energy 5 December 2012) but has not been able to reduce the conflict between community desires and company intent. This is not surprising, for, as Friedman and Miles (2006, p. 162) explained, such activities are directed at informing, explaining and placation, are at the lower end of the ladder of stakeholder management processes and are some distance from the consultation, negotiation, collaboration and partnership that may have had more impact with Scenic Rim communities.

Arrow Energy officers may have been able to recognise community values from the work of the SRRC reported in Appendix 3, but the above material suggests that they have not recognised the interests of individual stakeholder groups or made any serious attempt to engage them. Also, there are no public records of attempts at external stakeholder engagement by any of the coal exploration companies active within the Scenic Rim. The closest attempt at such engagement is a statement from OGL that it would hold a public meeting ‘to explain its plans’ once a certain stage in its attempted buy out of the Ebenezer, Fraser View and Mt Mort coal deposits had been reached (OGL 3 June 2013).

3.7.3 Gaps in the literature

The literature reviewed contends strongly that an SLTO is important and details possible consequences of a failure to negotiate such an agreement with local communities. Despite several suggestions that discussions should begin early in the mine development cycle, the literature is silent as to how communities could initiate such discussions if the exploration companies are unwilling to do so.

3.8. Conflict resolution using free, prior and informed consent

3.8.1. Approaches to resolving conflict

It could be expected that communities ‘just’ become resilient over time and that they ‘learn’ how to adjust to challenging circumstances and to emerge from those challenges with their values (and community) intact. While this may be possible with homogeneous communities, the range of values expressed by the residents of the Scenic Rim (Appendix 3) and by the companies exploring for coal and CSG within the region suggests that it may be too difficult for this to ‘just happen’. These differing views and values may also make it very difficult for any company to recognise appropriate negotiating partners and to resolve conflict under any of the social process theories mentioned by Schellenberg (1996, p. 13) or under the bargaining, negotiation or distributive justice concepts proposed by Deutsch (1983). While it may be possible that the theories of games and economic behaviour outlined by Von Neumann and Morgenstern (1944) could yield better results, it appears certain that an external agent will be needed to help resolve the existing conflict. This is because existing CBOs (such as the Australian Conservation Foundation, Keep The Scenic Rim Scenic and the Lock the Gate Alliance) have attempted to become stakeholders in their own right and cannot be seen to be value free and independent negotiators (the assisted negotiation of Schellenberg 1996).

Realising that external influence might be needed, the Queensland Government developed a mandatory model for the resolution of land access disputes between mining companies and landowners (Department of Employment, Economic Development and Innovation (DEEDI) 2010). The process relies on voluntary negotiation but does allow that ‘the (ATP) holder and landholder should each appoint a responsible person with good interpersonal skills to negotiate the agreement ...’ (DEEDI 2010). This is one approach to conflict resolution.

This same ‘responsible person’ might be required to bring the diverse communities of the Scenic Rim together and to develop an agreed position that could be presented to the exploration companies. This process could be a complex and lengthy task and

would, undoubtedly, require that such a negotiator be adequately funded. Given that negotiations between communities and companies are not imminent, there is no clear driving force that might cause the communities to take such action immediately.

3.8.2. Free, prior and informed consent

Any negotiating process requires a free flow of information and discussion between the parties involved before any outcome can be reached. For that outcome to be readily accepted by all parties, the process must also be free of pressure, the parties must each be fully informed and agreement reached before any action regarding the outcome of the negotiation is taken.

Free, prior and informed consent (FPIC) was developed as a ‘process for empowering indigenous people in less developed countries to manage the resources of their land and to negotiate with mining companies ... to gain a fair share of the wealth ...’ (United Nations 2006). Neither the principles of, nor the process for applying, FPIC suggest any reason that it could not be applied within the Scenic Rim. In this context, FPIC should be seen as a process for resolving conflict and for obtaining an SLTO and not as a substitute for that approach.

The Australian Conservation Foundation (ACF) (ACF 2011, Policy Statement No 75) views the ‘free’ component of FPIC as meaning ‘the absence of coercion and outside pressure, including monetary inducements (unless they are agreed to) and ‘divide and conquer’ tactics ...’. It also includes the absence of any threats or implied retaliation if the result of the decision is to say ‘no’. This is a challenging position for the ACF to adopt as the mining law, in Queensland, does not give communities any decision making role in the award of mining leases. This role is held by the state only and is generally exercised through the *Petroleum Act 1923*, the *Mineral Resources Act 1989* and the *State Development and Public Works Organisation Act 1971*. An example of this lack of freedom can be found in the inability of a landowner to grant or refuse to grant a right to explore for coal on land that that person owns. Only the State has that right (Parliament of Queensland 1989, *Mineral Resources Act 1989* sec 8 and sec 9).

Herz, Vina and Sohn (2007, pp. 12-15) argued that a business case for obtaining community consent for a project could be built on the principles of information, inclusiveness, dialogue, legal recognition, monitoring and evaluation and corporate buy-in. In regard to inclusiveness, they postulated that ‘all interested community members should be allowed and encouraged to take part in the FPIC process’ and this is a challenging variation on the vested stakeholders only position of Wilburn and Wilburn (2011, pp. 9-11). They also suggested that dialogue should continue throughout the life of a project and that project proponents should view FPIC as an inherent and necessary cost of a project.

The BSR group suggested that the FPIC process should:

- not be unilaterally imposed;
- not be time bound;
- be thoroughly documented and agreed to by all parties;
- incorporate traditional or customary decision making processes;
- build capacity within the (indigenous) community to understand international and national standards and frameworks;
- provide technical assistance to (indigenous) groups in language and modes of communication that ensure a complete understanding of the project development phases and processes; and
- encourage (indigenous people) communities to use external, third party advice (BSR September 2012, p. 15).

Szablowski (2010, p. 126) considered that the data given to stakeholders should include basic information such as the purpose, nature, size, pace and reversibility of the project, preliminary assessments of its likely economic, social, cultural and environmental impacts, details about benefit sharing and details of personnel likely to be involved. Critical aspects of the giving and understanding of data are the credibility of the data presented and how the assembly, distribution and understanding of the data (including any advice requested by the stakeholders) are to occur. Szablowski (2010, p. 125) claimed that it is the questions of access to resources and payment for them that raise ‘the stark imbalance of power among the participants’ and claimed that ‘Extractive industry firms have vastly superior

economic resources, very often they enjoy the active support of host country governments eager to promote investment and they have access to advanced technical and legal advice.’.

3.8.3. Gaps in the literature

Szablowski (2010, p. 127) further suggested that ‘while direct corporate and community engagement has become an established practice in the field of extractives, there is no consensus on the adoption of FPIC as the guiding standard for engagement’. The research behind this thesis addresses this gap in the literature by exploring the contribution that FPIC could make to the resolution of conflict between mining companies and communities within the Scenic Rim. This work will then be included in a PhD program that will seek to develop a model for community/company interaction that could more equitably distribute both the benefits and disadvantages of mining developments between companies and their external stakeholders.

3.9. Theories of the firm

The basic shareholder theory of the firm (TOTF) originated in the economic analyses of Adam Smith (Pfarrer 2010, p. 86) in the mid 18th century. From this base, the range of theories has proliferated and can now be suggested as having bases in law, principal/agency arrangements, transaction costs, resource dependency, evolutionary theory (Frederick 2004) and in new institutional theories (Powell & Dimaggio 1991). This section of the thesis explores these bases for theory as well as proposing a new model for the evaluation of such TOTF. This work also concentrates on incorporated business entities (corporations) and does not consider unincorporated entities such as sole traders and partnerships.

3.9.1. Reasons for the existence of corporations

If we draw on the work of Friedman (1962), it could be assumed that corporations exist to make a profit and not for social purposes. However, it only takes a little

research to discover that there could be many more reasons behind the creation of a corporation. These reasons include:

- credibility of the business activity;
- ease in raising capital;
- flexibility of ownership including ease of ownership transfer;
- limited liability for shareholders;
- a recognised legal structure and management responsibilities;
- a credit rating that is separate from that of its owners;
- taxation advantages (including deductibility of a wider range of expenses);
- asset protection; and
- perpetual existence.

The above reasons (or, probably more correctly, characteristics) have either an economic or legal basis but, although they adequately represent the advantages of a formal corporation (as against business activity undertaken by a sole trader or a partnership), they do not easily lead to an understanding of the corporation as a social entity with rights and responsibilities or to the boundaries that might limit corporate activities in the marketplace. Section 3.9.3 of this thesis examines existing theories of the firm that might give a wider understanding than does just a consideration of the characteristics above.

3.9.2. Models for evaluating theories of the firm

Before advancing an investigation into theories of the firm, it is worthwhile considering how the utility of such theories as are found might be evaluated. Several evaluation techniques can be easily recognised and they range from the generality of what can be found on Wikipedia to the more specific approach suggested by Radin.

An undated review of TOTF found on Wikipedia (n.d.) suggests the following bases for analysis:

- Existence – why do firms emerge?
- Boundaries – why is the boundary between firms and the market, in relation to output and size, located where it is?

- Organization – why are firms structured in a specific way?
- Uniformity of actions/performance – what drives the different actions and performance of firms?
- Evidence – what tests are there for the different theories of the firm?

If we compare the characteristics of corporations identified in Section 3.9.1 with the criteria identified above, it can be seen that most of the reasons given for the formation of a corporation fit against the existence and organisation bases identified in Wikipedia but that they do not address the questions of boundaries and performance. Foss, Lando and Thomsen (2000, p. 632) suggested that there was a need for a theory that would address: (i) the reasons for existence of a firm; (ii) the boundaries of the firm relative to markets; and (iii) the internal organisation of the firm. Radin (2004, p. 291) later suggested different bases for evaluation as follows:

- What drives business strategy?
- What generates business productivity?
- What shapes the business organisation?
- What motivates firm behaviour?
- What determines the firm's moral posture?

There are several other bases on which TOTF might be evaluated and one that appears to fit the Wikipedia – Radin continuum quite well is that proposed by Lozano, Carpenter and Huisingh (2015). These researchers suggested three elements for evaluation as follows: (i) boundaries (which sets the limits to the application of the theory); (ii) falsifiability (which determines whether or not an empirical refutation is possible); and (iii) utility (which refers to the usefulness of the theory) (Lozano et al. 2015, pp. 43–2). Lozano et al. also suggested a further three factors that could be considered:

- entity or personality – which addresses the firm in a legal context;
- nature of the firm – why the firm exists and how it relates to stakeholders; and
- obligations – the firm's obligations to shareholders and other social and non-social groups (Lozano et al. 2015, p. 432).

It can easily be seen that several of the bases suggested by Foss et al. (2000) and Radin (2004) match (even if relatively loosely) those within Wikipedia (e.g. existence, organisation, boundaries and actions/performance) but that each proposed several other criteria. The work of Lozano et al. (2015) and Radin (2004) do not appear to match all that well (even though both approaches use some of the same words) but the entity/personality of Lozano et al. (2015) can be matched to the existence of Wikipedia (and Foss et al. (2000)) and their nature of the firm can be matched to Radin's (2004) shaping, motivation and (to some extent) moral posture. For the purposes of the analysis and discussion in Chapter 7 and Appendix 5 of this thesis, the following criteria will be used to evaluate the utility of theories of the firm recognised in Section 3.9.3:

- existence (why does the firm exist?);
- obligations of the firm to its stakeholders/what drives business strategy?
- what generates business productivity/profitability?
- what shapes the business organisation?
- what motivates firm behaviour?
- what determines the firm's moral posture? and
- evidence/tests for the validity of the theory.

These seven criteria for the evaluation of TOTF will be collectively referred to as the Maddox Model and are used in the analysis of utility undertaken in Appendix 5.

Radin (2004) suggested that it may be possible to overcome the 'isolation thesis' between complementary TOTF and that a single theory of the firm could answer many questions. While the above review suggests that such an outcome may not be possible, it could be that the 'evolutionary firm substrate' identified by Frederick (2004, pp. 145–176) might be a base for developing an evolutionary TOTF.

3.9.3. Theories of the firm

3.9.3.1. A background to theories of the firm

There are several definitions of the TOTF, but the one adopted throughout this thesis is that proposed by Investopedia. The theory of the firm is:

A microeconomic concept founded in neoclassical economics that states that firms (corporations) exist and make decisions in order to maximize profits. Businesses interact with the market to determine pricing and demand and then allocate resources according to models that maximize profits (Investopedia 2008).

The TOTF groups identified in this section of the paper are: (i) the Neoclassical economic approach initially outlined by Adam Smith (Pfarrer 2010 p. 86); (ii) Corporate Entity theory; (iii) Managerial theory; (iv) Transaction Cost theory; (v) Contract theory; (vi) Principal Agency theory; (vii) Resource Based theory; (viii) Natural Resource Based theory; (ix) Behavioural theory; (x) Stakeholder theory; (xi) Evolutionary theory; (xii) Corporate Sustainability theory; and (xiii) New Institutional theory. Lozano et al. (2015, p. 437) suggested that the social contract described in Section 3.5 of this thesis is one of the current TOTF. This view is respected but, for this thesis, the social contract is regarded as an implicit and evolving understanding that forms the background to all modern theories of the firm and so is much larger and wider in scope than any individual theory (see Section 3.5).

Several researchers have tried to group these theories together so as to make analysis and comparison easier. For example, Foss et al. (2000, pp. 631–658) suggested that most of the theories (except for the work of Smith) could be grouped as either principal/agency contracts or incomplete contracting approaches and Crossan (n.d.) attempted to group them as profit maximization, managerial theories and behavioural theories. Lozano et al. (2015) produced a far more extensive grouping under the headings of corporate entity theories, corporate nature theories and corporate obligation theories and it is this grouping that is used as the base for discussion in Chapter 7 of this thesis.

An interesting conclusion to this section of the thesis, particularly in regard to mining exploration companies working within the Scenic Rim, can be found in the work of McQueen (1991, p. 26) – who suggested that, even from very early years in many Australian colonies, mining was one of the three prominent industries in which the corporate form was thought to be an appropriate organisational structure.

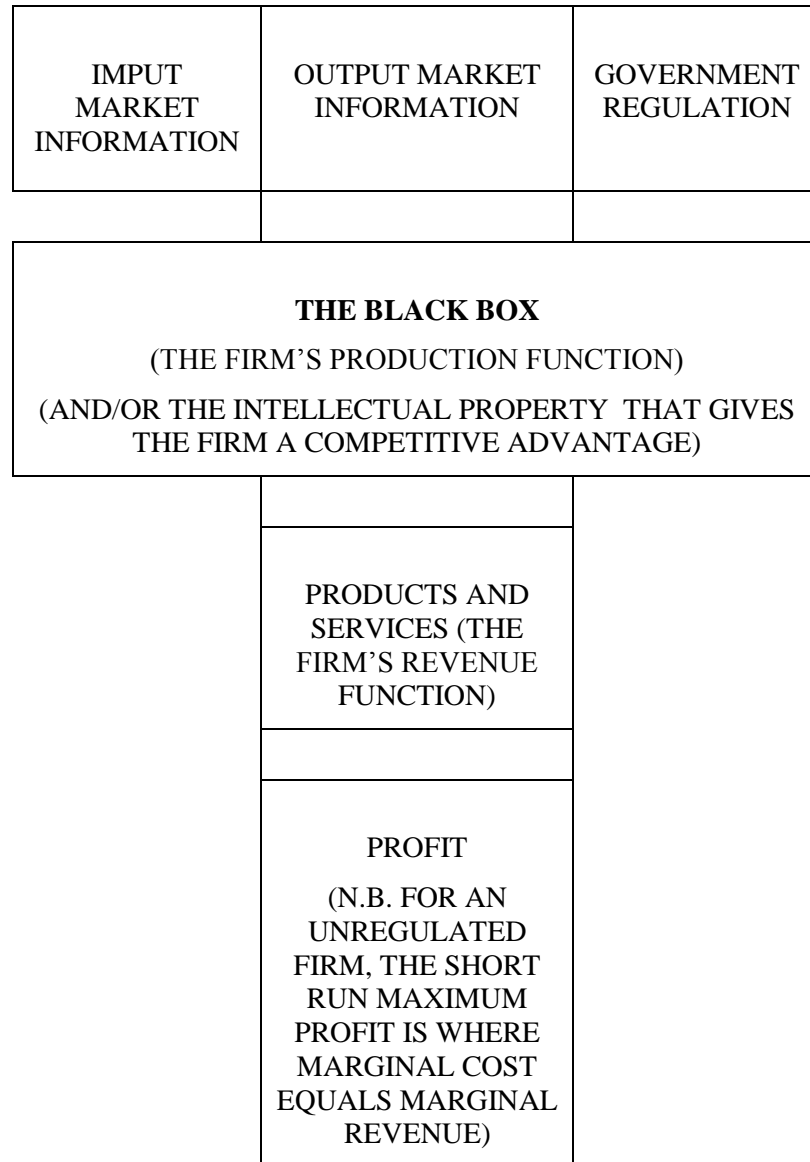
3.9.3.2. The neoclassical theory of the firm

As Investopedia (2008) suggests, the firm is a microeconomic concept and its functions can be described in economic terms. Although Adam Smith (1723-1790) thought that there were some advantages to joint stock companies, Micklethwait and Wooldridge (2003 p. 34) claim that he was more worried that hired managers would not bring the same “anxious vigilance” to their firms’ interests as would owner-managers. Marshall (1890) later wrote about firm structure and markets in terms of the activities of representative firms and their profit maximizing output function and this remains the prevailing view (Friedman 1962). Kantarelis (2007, p. 42) agreed that the ultimate objective of a business firm was to maximize profit subject to given information but recognised that ‘some economists maintain that the pursuit of profit maximization is not realistic due to complexity and objectives other than profit’ (at least in the short term if not in the long term). However, he suggested that, for an unregulated company, the short run maximum profit would occur when the marginal cost of production equalled the marginal revenue from a unit of production sold (Kantarelis 2007, p. 45). This understanding of the features of the neoclassical firm is depicted in Figure 3.1.

This understanding of the firm is difficult to relate to most of the companies exploring for coal or CSG within the Scenic Rim – not least because the understanding is based on the generation of a ‘profit’ that arises from the difference between the cost of producing an additional unit of product and the revenue gained from selling that unit of production. Few of the private exploration companies active within the Scenic Rim either produce or sell anything. However, the public companies (Appendix 2) that explore for coal within the Scenic Rim, either in their own name or through fully owned subsidiaries, can be easily fitted against Kantarelis’ model of the neo-classical firm as they all produce and sell some product or service (e.g. Carabella Resources, Coalbank, Cockatoo Coal, Cuesta Coal and Metro Mining all currently produce and sell coal, Carbon Energy markets its proprietary underground coal gasification technology, NHC produces and sells coal, oil and gas (as well as port facilities), Golden Cross Resources produces and sells copper and gold and Hudson Investment Group builds, leases and manages shopping

centres and parking stations). Of the private companies exploring for coal or CSG within the Scenic Rim only Arrow Energy engages in any commercial activities.

FIGURE 3.1: The features of the neoclassical firm



Sources: Crossan n.d., p.1; Kantarelis 2007, p. 45

3.9.3.3. Corporate entity theory

Corporate entity theory seeks to establish how a corporation has been established legally and the influence that the method of establishment exercises over its relations with government. Lozano et al. (2015, p. 433) suggested that the three subsets of this

theory that need to be considered are: (i) artificial entity theory; (ii) aggregate entity theory; and (iii) real entity theory.

Under the artificial entity theory, a business was granted the right to exist by a sovereign power and was seen to be an extension of the state rather than being a corporate citizen (Lozano et al. 2015, p. 433). Examples of this form of entity are The Governor and Company of Merchants of London trading into the East Indies (the (English) East India Company) formed by Royal Charter in 1600 (Robins 2012, p. xvi), the Dutch East India Company (similarly formed in 1602), The Governor and Company of Adventurers of England trading into Hudson Bay (the Hudson Bay Company (formed by Royal Charter in 1670)), the Royal African Company (formed by Royal Charter in 1672) and the New Zealand Company (formed by Royal Charter in 1841). All of these companies were established with agreed objectives (although that of the Royal African Company was to co-ordinate the English slave trade in Africa – a now illegal activity) and at least one of them was formed to further a government policy (the New Zealand Company was formed to facilitate settlement in New Zealand). The companies also had defined membership, a paid up capital and a management structure that was an agent for those who subscribed money to form the company (Robins 2012, pp.23-24). Not all the companies enjoyed a perpetual existence – the Hudson Bay Company still exists but the Royal African Company went out of business after only fifty nine years and the English East India Company after two hundred and seventy five years (Robins 2012, pp. xi-xviii).

The modern version of the artificial entity corporation is the government owned corporation (GOC). In Queensland, these entities are formed under the *Government Owned Corporations Act 1993* (Parliament of Queensland 1993). and have ownership and management functions that are very similar to those of companies formed by royal charter A Queensland GOC could hold mining permits and leases but none does so within the Scenic Rim.

The aggregate entity theory states that: (i) the corporation is created by the association of people who agree to undertake an enterprise; and (ii) the company's property is not the possession of any person or group of persons within the company but is at the use of the managers. Thus the company can be considered to be the sum

of its human and non-human components (Machen 1911). It can be deduced from this base that the company is an extension of its shareholders and not (as suggested by the artificial entity theory) an extension of the state. Based on this approach, the company is separated from society and the environment, labour is expendable (in that a skilled worker can be replaced by an unskilled worker and technology) and, as a general rule, the company is a profit generating activity for the benefit of its shareholders (Crossan n.d., p.2). Although the directors and managers of such a company have influence and the power to make changes, they are, ultimately, bound by the shareholders' wishes.

Whereas the above two corporate entity theories see companies being created as either extensions of the state or of their shareholders, the real entity theory sees a company as being 'a new real person, a real corporate animal ... It is endowed with a will and with senses.' (Machen 1911, p. 256). Under this theory, the company:

- is an actual being;
- must be incorporated within the legal and civic laws of a particular state;
- is integrated within the fabric of society;
- acts through agents (its employees, managers and appointed agents);
- can be accused of certain crimes and be judged at law; and
- has the responsibility to ensure that its employees comply with the law of the land (Lozano et al. 2015, p. 433).

This latter approach suggests that such a corporate entity might have a responsibility towards its external stakeholders.

3.9.3.4. Managerial theory

Under the Australian *Corporations Act 2001*, the ownership of most companies (shareholders) is separated from the management of the companies and the owners appoint agents (the senior managers) to carry out the business of the company on their behalf. This separation of ownership and management immediately raises the question as to whether or not it is wise for the owners to assume that the managers

will always act in their interest (Crossan n.d., p. 2). This is the quandary that underlies managerial theories of the firm.

Many researchers see managerial theory as a convenient description for a group of related approaches. Crossan (n.d.p. 2-3) suggested that this group contained: (i) a revenue maximization hypothesis (Baumol 1959); (ii) a managerial discretion model (Williamson 1964); and (iii) a growth maximization model (Marris 1964). This grouping is used as the base for analysis in this sub-section of the thesis.

The revenue maximization hypothesis (originally advanced by Baumol (1959)) suggested that, after the minimum acceptable level of profit (acceptable to the shareholders) has been attained, the managers of firms operating in an oligopolistic market will act so as to maximize revenue and not profit (Crossan n.d., p. 3). The reasons for this action can be: (i) decreasing sales revenue could paint a poor picture of the firm and so make it difficult to raise money for expansion or to sell the firm; and (ii) managers' pay and benefits are often tied to revenue (rather than to profit). The question of the timing of sales maximization is only poorly addressed by this hypothesis and it could be that the action of the managers is aimed at increasing short term sales so as to maximize market share and so maximize long run profits (Crossan n.d., p. 3). Baumol (1959) suggested that managers aiming at revenue maximization would advertise, at least, to the same extent as profit maximizing firms as additional money spent this way could increase sales (revenue).

The managerial discretion model (Williamson 1964) was developed from the neoclassical model described in Section 3.9.3.2 in that both price and the level of output would be determined from the marginal revenue equals marginal cost model. However, Williamson (1964) hypothesised that managers would gain benefits (e.g. power, status and salary) for themselves by increasing expenditure on special projects, increasing support staff and spending on other activities that would decrease the profits that could otherwise be paid to shareholders.

The managerial capitalism model suggests that managers are concerned with maximizing the rate of growth of sales subject only to maintaining the capital value of the firm and to retaining funds to finance continued growth (Mariss 1964). This

latter aspect is important because, if the market value of the company falls below the value of the firm's assets, the company could be subject to a takeover bid and the managers might lose their jobs (and associated benefits) (Crossan n.d., p. 4).

3.9.3.5. Transaction cost theory

The concept of transaction costs was introduced in Ronald Coase's (1937) paper 'The Nature of the Firm'. His definition of the term was not precise and merely alluded to the concept as being 'the cost of using the price mechanism'. Because of this loose definition, many recent researchers have claimed that the concept includes 'any cost that is convenient and elusive enough to avoid critical examination' (Allen 2000, p. 893). Coase's argument was that, in the neoclassical theory of the firm, there was no room for direction or co-ordination and yet, in all observable examples of the company, there was a function (management) whose job it was to direct and to co-ordinate. His solution to this puzzle was to suggest that there were costs of using the price mechanism and that these costs included those associated with establishing what prices existed in the market place, negotiating and closing contracts and then those costs associated with enforcing contracts. His argument became simply that transaction costs were both a necessary and sufficient explanation for the existence of the firm (Allen 2000, p. 895).

Many researchers have taken this argument further by claiming that some transaction costs can be seen as contributing to the discussion on property rights. An example of this can be found in the development and protection of intellectual property – where the legal costs of establishing the ownership of intellectual property (such as the patents, trademarks and proprietary processes that might be found within the firm's 'black box') can be high but are essential if a business is to prevent others from using its proprietary research and development (Allen 2000, p. 893) and so eroding the firm's competitive advantage.

Following on from this argument, it can be seen that corporations exist because the internal costs of doing business (organisational shape, technology, management, marketing and legal services) are lower than would be the costs associated with obtaining the same support, by contract, in the market place.

The Coase Theorem can be summarized as ‘In the absence of transaction costs, the allocation of resources (within an enterprise) is independent of property rights’ (Allen 2000, p. 897).

3.9.3.6. Contract theory

By drawing on the transaction cost theory outlined above, it can be seen that many activities of a corporation are based on contracts between parties (be they internal parties such as managers and other employees or external parties such as suppliers and customers). The firm is thus a nexus of contracts in which various constituents agree to carry out directions for an agreed remuneration (Lozano et al. 2015, p. 435). The contracts may be seen as a means of maximizing profits for shareholders.

Criticisms of contract theory include that:

- contracts are usually bilateral;
- contracts are often incompletely specified and so run the risk of being vague, general and omitting the interests of stakeholders other than shareholders;
- contracts between management and organised labour may lead to unforeseen outcomes for one or other of the parties;
- the firm, markets and governments (regulatory agencies) may treat the contract differently;
- there may be hidden or unrepresented social costs (e.g. ineffective addressing of corporate impacts on the environment);
- the firm is treated as a black box that is supposed to meet marginal conditions with respect to inputs and outputs while maximizing profits;
- technological and organisational aspects of production may be neglected; and
- large corporations may use their size to negotiate unfair contracts (Lozano et al. 2015, p. 435).

3.9.3.7. Principal/agency theory

The classical understanding of a firm (company/corporation) is that of a business entity in which ownership (e.g. the shareholders) is separated from the direct

management of resources and restricted to receiving the profit (or nett excess of revenue over expenses) from the trading activities of the managers. Such a view places the shareholders as the principals of the organisation and regards the managers as agents (Kantarelis 2007, p. 185). This understanding immediately raises questions such as:

- How do the principals transfer their values and expectations to their agents?
- How do the principals ensure that their agents faithfully implement these values and expectations and act in their (the principals') best interests? and
- How can the principals monitor the performance of their agents in a cost effective manner (particularly if the agents have an information advantage over the principals)?

One of the major defects in this linear relationship is that the agent may look for short term benefits for the principals and neglect the possibility of better long term benefits (Lozano et al. 2015, p. 435). Baumol (1959) had earlier developed this approach as his 'Revenue Maximization Hypothesis' in which he suggested that, after minimum (or agreed) profits had been reached, managers might maximize sales (rather than profits) as increasing the size of the firm could give them increased benefits and status.

3.9.3.8. Resource based theory

Resource based theory suggests that a corporation is a collection of productive resources that are innate to the corporation and that are either (i) tangible (plant, equipment, natural resources, finished goods and waste products; or (ii) human (skilled and unskilled labour, financial, technical and managerial staff) – intangible resources such as team skills and capabilities are also applicable (Lozano et al. 2015, p. 435). The bases of this view are that one corporation can then produce goods or offer services better than can another, that the emphasis is on reducing costs and that the company needs to develop its internal resources (including the transfer of knowledge between individuals) in order to create a competitive advantage. This resource based view considers the social and time dimensions of resource development but, in its original concept, did not consider environmental impacts.

The resources of a company that may lead to a competitive advantage (or, and perhaps more importantly, to competitive survival) can be described as being: (a) valuable; (b) rare; (c) inimitable; and (d) non-substitutable (Barney 1991, pp. 106-7). It is hard to use these adjectives to describe the coal and CSG resources of companies exploring within the Scenic Rim (particularly as those resources are not rare, their value is, as yet, unproven and they may, even in the intermediate term, be subject to substitution by other energy types). Therefore we need to look at the non-physical assets of those companies to see if they have other resources that meet the attributes listed above. Based on the work of Baxt (2002), two possibly unique assets of any company could be its board of directors and their approach to corporate governance: for, as Duztas (2008, p. 18) stated ‘a good corporate governance structure is a working system for principled goal setting, effective decision making and appropriate monitoring of compliance and performance’. Udayasankar (2008, pp. 164-172) developed this thought further by suggesting that ‘boards of directors can be a key source of various resources based on human capital and social capital’. These resources are said to include advice and expertise, legitimacy and links to other organisations. Udayasankar (2008, pp. 164-172) also claimed that ‘The relationship between board capital and firm performance is well documented, thereby making the resource dependence view a key theory in corporate governance.’ Duztas (2008, pp. 39–40) extended this relationship further by quoting Pfeffer and Salancik (1978) ‘when an organisation appoints an individual to a board, it expects the individual will come to support the organisation, will concern himself with its problems, will favourably present it to others and will try to aid it’. Such assistance could improve organisational performance and increase returns to shareholders.

Increasing the variety of people who serve on boards could be important as it would offer the opportunity to tap into a rich pool of talented candidates, help to add depth to existing skills and ideas and could bring the board closer to properly representing its stakeholders (Al-Jarah 2012, pp. 11-12). One source of variety at board level can be found in gender diversity and a Conference Board of Canada study suggested that ‘those (corporations) with two or more women on the board were far more likely to be industry leaders in revenues and profits’ (Al-Jarah 2012, p. 12). Al-Jarah (2012, p.

15) also summarized other research findings (e.g. Burgess & Fallon (2003); Huse & Solberg (2006); and Ourcommunity.com.au (2007)) as suggesting:

Many people believe that there are a range of qualities that only women can bring to a boardroom – things like better communication and consultation skills, a more ‘caring’ attitude towards the organisation they are governing, a better knowledge of community issues and so on.

Having women on the board also makes a strong statement about the organisation’s willingness to seek out and take into account the views of all of its stakeholders.

A summary of the human resources of the boards of companies exploring for coal or CSG within the Scenic Rim is given in Appendix 2.

3.9.3.9. Natural resource based theory

In 1995, Hart proposed a variation of the Resource Based Theory that has become known as the Natural Resource Based Theory (View) of the firm – he claimed that such a view was necessary because traditional management theory ignored the constraints imposed on a firm by its natural environment (Hart 1995, p. 986). This theory gives a view of the firm that attributes its competitive advantage to its relationship with the natural environment. It also suggests that there are three interconnected strategies (pollution prevention, product stewardship and sustainable development) that underlie sustained competitive advantage (Hart 1995, p. 986).

The initial competitive advantage of the companies that hold coal exploration permits (natural resource based) within the Scenic Rim is based on three very important premises as follows:

- the coal has a proven potential for generating electricity (Smith 1999);
- the existing, government granted, permits are exclusive and, while the companies hold onto their permits, no competitor can enter the market place; and
- transport distances from the potential West Moreton mine sites to an existing coal export port are much less than are those in other potential Queensland and New South Wales mine sites (OGL 31 October 2012).

The extension of this initial competitive advantage into sustained competitive advantage will require that mining firms working within the Scenic Rim recognize and work very hard to implement a proposition advanced by Hart: sustainable development is dependent upon a firm’s capability in pollution prevention and product stewardship (Hart 1995, p 1006). A track record in either pollution prevention or product stewardship would be impossible to demonstrate within the Scenic Rim (given that all existing permits are merely for resource exploration) and the firms may have to demonstrate that their mining activities in other areas (other parts of Queensland, in other states or internationally) meet these criteria.

Table 3.7 summarizes the components of Hart’s Natural Resource Based Theory and links them to issues that could lead to a sustained competitive advantage.

TABLE 3.7: A natural resource based view of the firm

Strategic Capability	Environmental Driving Force	Key Resource	Competitive Advantage
Pollution prevention	Minimize emissions, effluent and wastes	Continuous improvement	Lower costs
Product stewardship	Minimize life-cycle costs of products	Stakeholder integration	Pre-empt competitors
Sustainable development	Minimize environmental burden on firm growth and development	Shared vision	Future position

Source: Hart 1995, p. 992

3.9.3.10. Behavioural theory

Most of the economics based TOTF identified above have profit maximization, perfect knowledge or a lack of internal resource allocation problems as a base. They also appear to exclude uncertainty from their consideration. Simon (1955) and, much later, Cyert and March (1992) considered these bases for a TOTF inadequate and proposed a model that attempted to predict firm behaviour in respect to price, output and resource allocation. Their work became the base for behavioural theories of the firm.

Many corporations (such as the public (and larger private) companies exploring for coal, CSG or other minerals within the Scenic Rim) are coalitions of individuals

and/or groups that include shareholders, managers, other employees, suppliers, customers and external stakeholders such as governments, communities and environmental protection groups. Many of these groups have differing values and expectations of a company and there is often conflict between stakeholder groups as to how the company should react in any given circumstance. Just as a company will have to develop (and defend) an order of priority amongst its stakeholders, it will be unable to satisfy all demands made upon it and both the company and its managers will have to develop goals that are compromises between the demands of its stakeholders (Ahuja 2007, p. 942). That is, a firm will attempt to satisfy all its stakeholders rather than maximize the returns to any particular group.

Hornby (1995) found that almost fifty two percent of firms could be classed as satisfiers – that is once an objective had been achieved, there were no drivers to improve on this. Shipley (1981) had reached a similar finding over a decade earlier and also found that the firms in his study neither specified their targets nor the time over which they were achieved.

Although the strategic goals of a company may be set by its shareholders (directors) and senior managers, those goals will be implemented (mostly) by secondary management levels and these managers will require guidance through financial and improvement (e.g. the health of the organisation) standards. However, the preparation of these standards and the monitoring of performance against them require the use of resources that might otherwise be directed towards the satisfaction of stakeholder (certainly shareholder) goals (Ahuja 2007, p. 942). Cyert and March (1992, p. 353) suggested that these costs would lead to a certain amount of ‘organisational slack’ – such as payments that were higher than necessary (or prices that were lower than would otherwise be the case) in order to keep stakeholders (shareholders, managers, other employees and customers) involved with the firm.

The behavioural theory of the firm thus contained four major components: (i) a coalition of groups; (ii) satisfying behaviour on the part of the firm and its senior managers; (iii) a value weighted decision making process; and (iv) a degree of organisational slack. It gives reasonable insights into goal formation, decision

making and resource allocation within a firm, but many critics question its value as a means of predicting the behaviour of firms (Ahuja 2007, p. 944).

3.9.3.11. Stakeholder theory (including Stockholder theory)

Stakeholder theory can be described as being a conceptual framework of business ethics and organizational management that addresses moral and ethical values in the management of business or other organizations (BusinessDictionary.com n.d.). The theory suggests that the purpose of a business is to create as much value as possible for all stakeholders. In order to succeed and be successful over time, executives must keep the interests of customers, suppliers, employees, communities and other stakeholders aligned and going in the same direction (Financial Times Lexicon n.d.).

There are two major components of stakeholder theory. The first relates to the largest group of internal stakeholders (shareholders) (and is often treated as a separate theory) and the second mostly relates to external stakeholders (such as communities and environmental protection groups). Pfarrer (2010, p. 86) described these components as follows:

... shareholder theory emanates from an economic perspective, focussing on the firm's purpose of creating wealth for its owners while minimising the importance of the firm's interaction with its other constituents and its role in society. ... stakeholder theory broadens the first perspective, recognising the importance of wealth creation as well as the firm's relationship with multiple constituent groups – shareholders, creditors, employees, customers, suppliers, regulators and local communities – and impact on society at large.

Hartman (2011, p. 89) attempted to combine both theory sets (shareholder and stakeholder) when he suggested that 'most would say that business ought to be an engine of general prosperity, though they would also agree that managers should not make every attempt with an eye to improving general prosperity'.

Freeman (1984, p. 46) described stakeholders as being 'any group or individual who can affect or be affected by the achievement of an organisation's objectives' and

Werhane (2011, pp. 115-6) developed a model by which the stakeholders surrounding a firm could be assigned to primary and secondary categories. The primary group included communities (such as Beaudesert and Croftby) and the secondary group included community based groups (such as KTSRS). Wilburn and Wilburn (2011, pp 9-11) enlarged this understanding by dividing external stakeholders into vested and non-vested categories. Vested stakeholders (such as landowners) would have both a voice and a vote in proceedings but non-vested stakeholders (community based organisation such as KTSRS) would only have a voice. (However, Wilburn and Wilburn (2011) do recognise that this voice may be powerful and influential when amplified by the media and the internet.). Other bases for stakeholder recognition exist and Xstrata Coal, in the Social Impact Management Plan for its Wandoan Project used an approach based on: (i) the level of impact that the project may have on the stakeholder; (ii) the level of influence that the stakeholder might be able to exert on the project; and (iii) the level of interest that the stakeholder might exhibit in the project (Xstrata 2007, pp. 16-19).

It is worth noting that these approaches presuppose that the company is the only entity able to 'recognise' stakeholders and that external stakeholders have no ability to 'identify' themselves and to independently raise their interests and concerns. Once the stakeholders in a project have been recognised and some form of ranking applied to their values and needs, it becomes possible for a firm to apply a strategy towards the satisfaction of those needs. Friedman and Miles (2006 p. 162) developed a ladder of stakeholder engagement and management that contains twelve levels of engagement that could be applied to mining company/community interaction within the Scenic Rim. The levels of 'management' that they outline range from manipulation of stakeholders to stakeholder control of events. The degrees of power that they give to stakeholders range from non-participation (with stakeholders just being the recipients of data) through some involvement (with stakeholders having some decision making capacity over specific events) to a high degree of stakeholder power over the overall project.

For the purposes of this thesis, stakeholder theory is held to be an all inclusive term and to include both major sub-sets outlined above.

Freeman (n.d., p. 47) later suggested that there may need to be changes made to corporate legislation so as to ensure that the rights of all stakeholders were recognised and protected. He suggested that such changes could be based on three principles as follows:

- the stakeholder enabling principle – Corporations shall be managed in the interests of all stakeholders, defined as employees, financiers, customers and communities.
- the principle of director responsibility – Directors of the corporation shall have a duty of care to use reasonable judgement to define and direct the affairs of the corporation in accordance with the stakeholder enabling principle.
- the principle of stakeholder recourse – Stakeholders may bring an action against the directors for failure to perform the required duty of care.

The Australian *Corporations Act 2001* (Parliament of Australia 2001) currently does not reflect these principles: but it could be claimed that it does not prevent the first principle (and, therefore, possibly the second) being acted upon.

Stakeholder theory is not without its critics and Weiss (n.d., p. 1) suggested that there are serious questions that can be raised concerning the utility and validity of any moral conclusions or prescriptions that it offers. He suggested ‘cracks’ in the theory (Weiss n.d., pp. 1-7) that call its validity and utility into doubt: viz

- conceptual confounds - The terms enterprise and corporation are used interchangeably when they are two different concepts. A business enterprise could be (and in most cases is) a sole trader activity where the owner is in complete control of the business and both moral and legal responsibility lie with that owner. On the other hand, a corporation is an artificial entity whereby a group of people own the business and, although the corporation is a legal entity, it is not a natural person and cannot hold any moral responsibility in its own right.
- the idea of a social contract for business – If there is a social contract for business in a capitalist society, it lies in the provision of rights and institutional arrangements that support the creation of enterprises and in that the owners who

have created the business have an exclusive moral claim on the benefits produced by that business.

- the general applicability of Stakeholder Theory – Because Stakeholder Theory does not make a clear distinction between enterprises and corporations, it dramatically overstates the separation of ownership and control and generalizes from corporations to enterprises.
- ownership and property rights – Stakeholder Theory requires arguing that the claims of all stakeholders surrounding an enterprise are legitimate in that they have a comparable status to the claims of owners which are based on property rights. Stakeholder Theory argues that the property rights of owners are eroding and that there are multiple legitimate claims on the business – none of which have priority over any other.

3.9.3.12. Evolutionary firm theory

The Evolutionary Theory considers the firm to be motivated by profit but differs from neo-classical theory in that the firm is not assumed to be profit maximizing. Rather, the theory suggests that the evolutionary (and profitable) corporation will drive less profitable competitors out of business (Lozano et al. 2015, p. 435). Proponents of the theory further suggest that this ‘survival of the fittest’ approach does not mean that the firm that does survive is the most ruthless, corrupt or unethical or that the long term survival of any firm is guaranteed (Lozano et al. 2015, p. 435). According to Holzl (2005) this theory can help to understand industrial dynamics (e.g. routines and behaviour) and the cognitive nature of the firm (e.g. knowledge development, processing and storage).

Frederick (2004, pp. 147–149) described the evolutionary firm as follows:

The firm has organic and non-organic parts but is not itself organic or genic. The firm’s organic core is a coalition – an alliance, a collective, a team – of biological agents (i.e. people) who act collectively and symbolically as an adaptive unit, displaying a suite of organic behaviours and interacting with the environment as do all organisms.

Frederick (2004) identified the five core functions of the evolutionary firm as being: (i) motivator/driver; (ii) innovator/generator; (iii) organiser/co-ordinator; (iv) enabler/strategizer; and (v) moralizer/valuator. He then suggested that a careful examination and delineation of these functions offers a framework for enquiry into the moral behaviour of firms.

There is one company exploring for and developing coal within the Scenic Rim that could be categorised as being evolutionary and that is the New Hope Corporation Limited (NHC). NHC began as an underground coal miner in the Bundamba section of the West Moreton Coal Field and became a horizontally integrated miner when it expanded into open cut mining at Jeebropilly. Downstream vertical integration began when the company acquired a bulk coal export terminal on the Brisbane River and the evolutionary growth of NHC began when it realized that the bulk loading facility was of interest to others and expanded its capacity. This learning and growth in different directions continued when NHC acquired a significant interest in Arrow Energy NL – a major player in the then embryonic CSG industry in Queensland. The evolution of NHC into a diversified energy company continued when it bought the Bridgeport Energy Group - and so entered into oil exploration and production. Innovation gained pace when NHC invested in coal to liquids research and started to build a pilot conversion plant at its Jeebropilly site. Innovation also continued when NHC began a project to demonstrate that rehabilitated land at its Acland mine (north of Toowoomba) could produce cattle at least as profitably as could nearby unmined land. NHC has always held a major crossholding of shares in its own major shareholder (Washington H Soul Pattison) and annually receives a significant cash flow from this and other investments. Not all of these diversifications have been long lasting or successful (and this is always a risk for evolutionary companies). NHC sold out of Arrow Energy when that company was bought by Royal Dutch Shell plc and PetroChina Ltd and closed its CTL pilot plant when no commercial application could be found for the research (NHC 2015).

The NHC 2015 Annual Report showed that its net profit for the year resulted from significant income from its investments, a small profit on its coal sales and handling activities and a loss on its oil based operations (NHC 2015 Annual Report and Financial Statements). While many of its competitors have ceased operation, NHC

continues to trade profitably (even if at a declining rate of profit) and so is an reasonable example of the characteristics of an evolutionary firm identified by Lozano et al. (2015) and Frederick (2004).

3.9.3.13. Corporate sustainability theory

As described in Section 3.5 of this thesis, the social contract between society, government and business is evolutionary in nature and responds fairly rapidly to changing values within communities. It is not surprising, therefore, that researchers should look for similar, or at least complementary, changes within the TOTF. Lozano et al. (2015) set out to explore the relationship between existing TOTF and the concept of corporate sustainability (including both economic and environmental sustainability) and rapidly concluded that, although existing theories covered sustainability in part, they did not provide an extensive coverage of corporate response to such issues. Accordingly, they proposed a new *Sustainability Oriented Theory of the Firm* as follows:

The firm is a profit generating entity in a state of constant evolution. This entity is a system comprised of resources and networks of relationships with stakeholders. The firm's employees are responsible to represent the firm, manage its resources and empower its stakeholders so that the firm complies with laws, maintains its 'licence to operate', increases its competitive advantage and better contributes to foster the evolution of more sustainable societies by holistically addressing the economic, social and time dimensions (Lozano et al. 2015, p. 440).

This new theory has an advantage in that it builds on the profit oriented thinking of Friedman (1962) (rather than either ignoring it or trying to set it aside) and sets out to integrate agency theory, transaction cost theory, resource based theory, stakeholder theory and the evolutionary approach postulated by Frederick (2004) as well as recent changes in social contract thinking. An evaluation of this new approach is undertaken in Appendix 5 of this paper.

3.9.3.14. New Institutional theory

Institutional theory attends to the deeper and more resilient aspects of social structures. It considers structure, rules and routines and does not concentrate on just stability and order but examines conflict and change (Scott 2004, p. 408-414). A knowledge of the theory could, therefore, contribute to a greater understanding of the resilient community concept outlined in Section 3.4 and to the evolutionary firm approach of Frederick (2004) outlined in Section 3.9.3.12.

Powell and DiMaggio (1991) suggested that ‘new institutionalism’ had quickly moved away from the economics base of the neo-classical theory of the firm (Figure 3.1) (and, hence of its derivatives) and was looking for cognitive and cultural explanations of organisational phenomena. In particular, they suggested that ‘new institutionalism’ set out to examine matters that could not be claimed to be the direct consequences of the attributes or motives of individuals within the ‘institution’. This places ‘new institutionalism’ some distance from the Contract and Natural Resource Based theories outlined in Sections 3.9.3.6 and 3.9.3.9 respectively, but not that far from the Managerial (Section 3.9.3.4), Principal/Agency (Section 3.9.3.7) and Behavioural (Section 3.9.3.10) theories. The reasoning behind this claim is that although many of the actions attributed to principals and managers are based on the motives of those individuals, the theories do have a base in organisational culture.

Scott (2004) also claimed that organisations must conform to the rules and beliefs prevailing in the environment and this equates to companies needing to be aware of changes that are occurring in the local social contract (see Section 3.5).

Because New Institutional theory relates closely to other theories, as outlined above, it is not considered in the analysis undertaken in Appendix 5. It may, however be re-examined as input to the PhD program to be undertaken later.

3.10 Gaps in the literature

Each of the TOTF identified in Section 3.9 contains gaps in its coverage of the reasons for the existence of corporations, in the understanding of why such organisations act the way that they do that it presents and about why a firm is structured the way that it is. These gaps are not detailed here, but emerge fully in the analysis of the TOTF given in Appendix 5 and in the discussion in Chapter 7. An understanding of these gaps is critical to developing the enhanced TOTF suggested as an objective in Section 1.6.

3.11 Summary of the chapter

The purpose of this chapter has been to identify and examine theories that could lead to a better understanding of the issues behind the problem identified in Section 1.4 and so lead to a response to the Research Question posed in Section 1.6. The theoretical background to resilient communities and their representation, the social contract between society, government and business and corporate ethics, governance and sustainability reporting has been examined in some depth: as have theories relating to a social licence to operate and conflict resolution. This work has created a background against which theories of the firm have also been reviewed. Several gaps in the current literature have been identified and this has established a base on which a research philosophy and methodology can be built. This is explored in Chapter 4.

4. RESEARCH PHILOSOPHY AND METHODOLOGY

4.1. Introduction to this chapter

The scenario behind this thesis is one of reality (certainty) and uncertainty. The existence of coal and CSG deposits is real (Sections 2.6 and 2.7), but their commercial value, at this stage, is uncertain. The likely impacts of exploration and mining on the communities of the Scenic Rim and their agricultural base are also uncertain – but could be large and long lasting. Similarly, the ability of small

communities to have officers of mining companies (who are faced with balancing the expenditure of shareholders' funds against uncertain returns from possible coal/CSG developments) consider their values and development desires (as against those officers' fiduciary responsibility to their shareholders) is equally uncertain. It is these questions of reality (certainty) and uncertainty (Zikmund 1997, p. 36) that shape the philosophy, methodology and strategies that drive the research behind this thesis.

Exploratory research against the problem outlined in Chapter 1 (Section 1.3) recognised that a considerable array of data relating to community values and development desires, mining exploration permits and company ethics, governance and development intentions was already available in the public realm. The existence of this documentary, secondary, data (Saunders, Lewis & Thornhill 2009, pp. 258-259; Zikmund 1997, pp. 46-47, 50-51) suggests that qualitative analysis is an appropriate approach and this technique forms the base for the analysis and discussion undertaken in Chapter 7. The use of qualitative data requires the development of a conceptual model to underpin any analysis (Saunders et al. 2009, p. 482) and such a model is formulated in Chapter 5.

4.2. Objectives of the chapter

The objectives of this chapter are:

- to identify the philosophy, methodology and strategies appropriate to the research undertaken against the Research Question identified in Section 1.4; and
- to identify the data collection and analytical techniques to be used to produce meaningful findings against the contributions to theory and practice outlined in Section 1.6.

4.3. Structure of the chapter

The structure of the chapter is as follows:

- Section 4.1 provides an introduction to the chapter;
- Section 4.2 develops the objectives for the chapter;
- Section 4.3 outlines the structure of the chapter;

- Section 4.4 develops the philosophy behind the research approach;
- Section 4.5 outlines the strategies and techniques of the research methodology;
- Section 4.6 identifies the databases used in archival research;
- Section 4.7 outlines the approach to data collection, analysis and presentation;
- Section 4.8 provides a summary of the chapter.

4.4. Research philosophy

The research project is based on realities – the natural environment, the mineral deposits, human habitation, indigenous culture and the present uses of land exist independently of any person’s thoughts or beliefs. What is interpreted, through social conditioning, is the value placed on each of these items that might cause an individual (or a company) to value one more highly than any other. This suggests that realism, with a touch of interpretivism, might be an appropriate philosophy on which to develop a research design (Saunders et al. 2009, p. 119). The present conflict between communities and companies suggests that there can only be a ‘win-lose’ outcome. However, that expectation may be based on a set of world views and upbringing (Saunders et al. 2009, p.119) that, if changed, could give a different result. It is possible that something closer to a ‘win-win’ outcome is achievable and such a statement of axiology is in keeping with the realism paradigm. The focus of the research behind this thesis has been on observing phenomena that provide credible data and facts – always realising that the observed phenomena could be open to different interpretations (Saunders et al. 2009, p. 119).

There are different ways of describing philosophical paradigms and Healy and Perry (2000, pp. 118-126) suggested one that used positivism, critical theory, constructivism and realism as bases for a research philosophy. Their description of the ontology of realism – ‘realism is “real” but only imperfectly and probabilistically apprehensible’ – fits the research project behind this thesis well. The conflict recognised in Chapter 1 is real and it poses a research problem that deals with ‘complex social science phenomena involving reflective people’ (Healy & Perry 2000, p. 122). As such, it forms a perfect base for research undertaken within the realism paradigm.

4.5. Research methodology (strategies and techniques)

The strategies and techniques used in the research that underlies this thesis are consistent with the philosophy described in Section 4.4 and are also dependent on the Research Question (Section 1.4) and its objectives. These objectives are described in Table 4.1.

TABLE 4.1: The Research Question, its objectives, data sources and associated strategies and techniques

The Research Question	Objectives and Data Sources	Methodology (Strategies and techniques)
What responsibilities do companies exploring for coal and coal seam gas within the Scenic Rim of South East Queensland have to the communities of the region that are in addition to those responsibilities that they have towards their shareholders?	1. To identify the communities of the region and their values and development desires. The data required was mainly obtained from documents produced by relevant Local Government Authorities (LGAs).	The strategy used was archival research using LGA maps and Community Plans to identify locations, values and development desires. These details were triangulated against material from newspapers and industry journals.
	2. To identify the companies exploring for coal or CSG within the region and their values and development intentions. The data required was obtained from Queensland Government, ASIC and ASX reports and from individual company reports and web sites.	The strategy used was archival research using Queensland Government mining reports, ASIC reports on corporate registrations, ASX reports on listed companies and company annual and quarterly reports and web sites. The data obtained was triangulated against material contained in newspapers and industry journals.
	3. To identify the nature and sources of the conflict that exists between the communities and the companies. The data required was obtained from LGA Community Plans and web sites, newspaper reports and from publications issued by CSIRO and several universities (SCU and UCQ).	The strategy used was archival research using LGA documents and web sites and CSIRO and university publications. The data obtained was verified by personal contact with relevant officers and by triangulation against newspaper and other news media reports.
	4. To identify the community based organisations that have represented community values and development desires to mining companies and to the wider community and to assess the effectiveness of their actions.	The strategy proposed was to compare names and activity lists obtained from respondents during field testing of questionnaires now to be submitted to the USQ Ethics Committee. This data was then to be triangulated against media reports and organisational web

The Research Question	Objectives and Data Sources	Methodology (Strategies and techniques)
	The data required was obtained from media reports, industry journals and organisational web sites.	sites. The questionnaire was abandoned as the test respondents showed almost no knowledge of CBO activities.
	5. If the community based organisations identified are not effective in bringing about the development of the communities that they represent, to establish the characteristics of an organisation that might be able to achieve such outcomes. The data required was sourced from organisational web sites, company reports (regarding the surrender of ATPs), media reports and trial interviews.	Claims of success in limiting or overturning company decisions regarding continued exploration of ATPs held within the Scenic Rim were compared with relevant statements in company reports and government documents. Literature relating to resilient communities and the effectiveness of community based organisations was reviewed to establish the characteristics of an organisation that might be more effective in achieving desired community outcomes than are the present groups.
	6. To identify the theories of the firm that might describe the reasons for the existence, structure and operation of the corporations identified against Objective 2 and, if existing theories do not assist the development of such an understanding, to recognise the principles that might drive the development on an enhanced theory that might lead to such an understanding. The theoretical background was drawn from books, published articles and papers obtained from the CSIRO, USQ and other university libraries as well as from academic papers downloaded through a web search engine (Google).	The strategy used was based on a key word search of published texts and journals. A list of TOTF was created and the characteristics of each identified. Each TOTF was then assessed for its utility in explaining company actions within the Scenic Rim and shortcomings recognised. From these shortcomings, the characteristics of an enhanced TOTF are proposed and a recommendation for further work developed. Google was used to recover copies of papers recognised from other sources as it was frequently quicker to use this method than to rely on obtaining copies through the USQ Library.

4.6. Archival sources used in data collection

The archival research behind this thesis accessed and manually perused the following databases:

- The Department of Natural Resources and Mines *Local Area Mining Permit Report – All resources* for each of the local government authority areas relevant to the project was used to identify mining tenement types and numbers. This database was compared with a map of Scenic Rim coal and coal seam gas permits extracted from the Department of Natural Resources and Mining's *Interactive Resource and Tenure Map* database.
- The location of the mining tenements was confirmed from maps of *Environmentally Sensitive Areas – Mining Activities* from the Queensland Department of Environment and Heritage Protection's data base.
- The identity of the permit holder and details of permit conditions were obtained from the *Exploration Permit Public Enquiry Report* for each mining tenure from the Department of Natural Resources and Mines.
- Details of private companies identified in the *Exploration Permit Public Enquiry Reports* were extracted from the Australian Securities and Investments Commission (ASIC) database *Current and Historical Company Extracts*.
- Details of public companies identified in the *Exploration Permit Public Enquiry Reports* and in the ASIC searches were downloaded from the ASX database *Company Research and Company Information*.
- Details of individual company quarterly, half yearly and annual reports were obtained from the ASX databases given above and supported by additional data (e.g. presentations to investors) obtained from individual company websites (e.g. Carabella Resources Limited – <http://www.carabellaresources.com.au>).
- Details of community locations, values and development desires were extracted from Local Government Authority web sites.
- The identity of community based and representative organisations was established through a review of newspaper databases (particularly those of the *Courier-Mail*, *The Australian*, the *Australian Financial Review*, the *Fassifern Guardian* and the *Queensland Times*. The relevance of each organisation to community/mining company interaction within the Scenic Rim was confirmed by a search of relevant websites (e.g. the Keep The Scenic Rim Scenic site <http://www.keepthescenicrimscenic.com> and the Quarry Action Group website <http://www.quarryactiongroup.org.au>).

4.7. Data collection, analysis and presentation

The above archival sources and academic papers (for the theoretical background) were obtained in either hard copy or electronic form (over a period of three years) and each was manually inspected for material that contributed to an understanding of the Objectives set out in Table 4.1. Relevant material was then assembled (in precis form) in a searchable data base using Microsoft Word and Excel. Material from this database was accessed by key word searches as required. Where Queensland Government, ASX and company reports were available on a quarterly, half yearly or yearly basis, they were accessed each time they were published. The index of each issue of relevant journals (e.g. *Journal of Economic and Social Policy* and *Strategic Management Journal*) was manually searched for relevant key words and articles were obtained electronically (or in hard copy from the USQ Library) as required.

The above data was manually compared with (and its usefulness assessed against) material obtained from an ongoing search of newspapers circulating within the Scenic Rim and from industry journals (e.g. the *Queensland Government Mining Journal* and *Mining Australia*).

Research into the social contract between society, government and companies and into theories of the firm was undertaken in two stages. The first stage was based on an extensive literature review relating to the nature of the social contract that might exist within the broader community (but particularly within the Scenic Rim). The second stage was based on a similarly extensive review of the literature relating to TOTF and concluded with the development of a model for evaluating the utility of the theories identified.

Summaries of data relevant to mining tenements and companies exploring for coal or CSG within the Scenic Rim are presented in Appendices 1 and 2 and data about the values and ethics of these companies is presented in Tables 3.2 and 3.3. Data concerning the values and development desires of the communities recognised in Section 1.3 is detailed in Appendix 3. Thirteen groups of TOTF are reviewed in Section 3.9 and a model for evaluating their utility is prepared in Section 6.11. The

theories are analysed against this model in Appendix 5 and a summary of this analysis is presented in Section 7.10. From this analysis, a proposal to develop an enhanced theory of the firm is presented in Chapter 10.

4.8. Summary of the chapter

The research paradigm most relevant to this thesis is realism with a touch of interpretivism (Section 4.4). The data readily available is documentary and archival in nature and this suggests a qualitative approach to data analysis (Section 4.1) - which fits comfortably within the realism paradigm. As the data available comes from several sources (Section 4.6) triangulation (such as the comparison of material from media sources with that from CSIRO and company reports) is used to develop a consistent narrative. Much of the data can be succinctly presented in tabular form and this approach is used extensively in the text and the appendices. This qualitative approach requires a conceptual base and such a model is developed in Chapter 5.

Software such as Nvivo can be used to enhance data presentation. However, the need in this thesis is for a tabular form of compilation and presentation and software that could give a pictorial representation is not used.

The conceptual model that arises from this methodology is explained in Chapter 5.

5. THE CONCEPTUAL MODEL

5.1. Introduction to this chapter

The qualitative approach that underlies this thesis requires the formulation of a model that describes the relationships between the components of the problem described in Section 1.3. These components are (i) the region described as the Scenic Rim; (ii) the companies that are exploring for carbon based minerals within the Scenic Rim; and (iii) the communities of the region.

5.2. Objectives of the chapter

The objectives of this chapter are:

- to identify the major components of the problem described in Section 1.3;
- to locate the interaction between the parties to the conflict; and
- to present a model that describes the relationship between the parties to the conflict.

5.3. Structure of the chapter

This chapter is structured as follows:

- Section 5.1 provides an introduction to the chapter;
- Section 5.2 develops the objectives of the chapter;
- Section 5.3 outlines the structure of the chapter;
- Section 5.4 defines the region referred to as the Scenic Rim;
- Section 5.5 describes the companies exploring for coal or CSG within the Scenic Rim and provides a base for Appendices 1 and 2;
- Section 5.6 describes the base from which the communities within the Scenic Rim are identified;
- Section 5.7 identifies the bases for conflict between the communities (Section 5.6) and the companies exploring for carbon based minerals (Section 5.5);
- Section 5.8 develops the conceptual model against which qualitative research was undertaken; and
- Section 5.9 presents a summary of the chapter.

5.4. The Scenic Rim

There are two descriptions of the Scenic Rim that could form the base for this thesis: but neither encompasses the geographic area described in Section 1.1. The first description is that of the area administered by the Scenic Rim Regional Council – an area that covers less than one third of the region being considered. The second description is – ‘... South East Queensland’s chain of mountains, plateaux and peaks to the west and south of Brisbane’ (visitscenicrim.com.au n.d.) and this region

includes all the local government areas mentioned in Section 1.1 except for that part of the Somerset Regional Council south of Harlin. The concept of the Scenic Rim used in this work is thus much larger than is encompassed by either of the two descriptions above and also allows inclusion of the whole area of the A for coal and CSG that are held within the more narrowly defined SRRC area.

The Scenic Rim is more than just the geographic area in which the research has been undertaken. It also helps to identify the corporate ethics being applied and the corporate social responsibility (CSR) activities being undertaken by several of the companies identified in Appendix 1. All of the public companies identified in this appendix operate on a national or international scale and their approaches to community consultation and engagement in their other areas of operation are different to their approaches within the Scenic Rim.

5.5. The companies exploring for coal, CSG or other minerals

In Queensland, both individuals and companies can hold exploration permits (Business Queensland n.d.; Department of Natural Resources and Mines 2014, p. 2). Because: (i) all coal and petroleum exploration permits held within the Scenic Rim are held by companies; and (ii) an objective of this thesis is to examine the implications of the conflict between communities and companies for an evolving TOTF, any additional conflict that could exist between communities and individuals is ignored. The types of companies that could hold exploration permits include limited liability (public) companies, proprietary limited (private) companies, no liability companies and government owned corporations. Although coal and petroleum exploration permits held within the Scenic Rim are only held by public and private companies, the discussion in Chapter 7 will draw implications for all forms of companies.

5.6. The communities of the region

Many meanings can be given to the term ‘community’. Examples taken from the Merriam-Webster (n.d.) online dictionary include:

- social activity (fellowship);
- a group of people who have the same interest (a community of interest);
- a group linked by common policy;
- a group of nations;
- society at large;
- an interacting population of various kinds of individuals in a common location;
and
- a group of people with a common characteristic or interest living together within a larger society.

For the purposes of this thesis, a community is considered to be a group of people with a common characteristic or interest living together within a larger society. This definition allows easy recognition and description of the more than thirty cities, towns, villages and neighbourhoods that form the bases for residential, business, farming and environmental activity within the Scenic Rim. This definition is more descriptive than that of the ‘Statistical Areas’ used by the Australian Bureau of Statistics (ABS) (ABS July 2001, p.1) and is also in line with a University of Queensland web site (aboutqueenslandplaces.com.au) that uses the terms cities, towns and villages (University of Queensland n.d.).

5.7. Conflict between communities and exploration companies

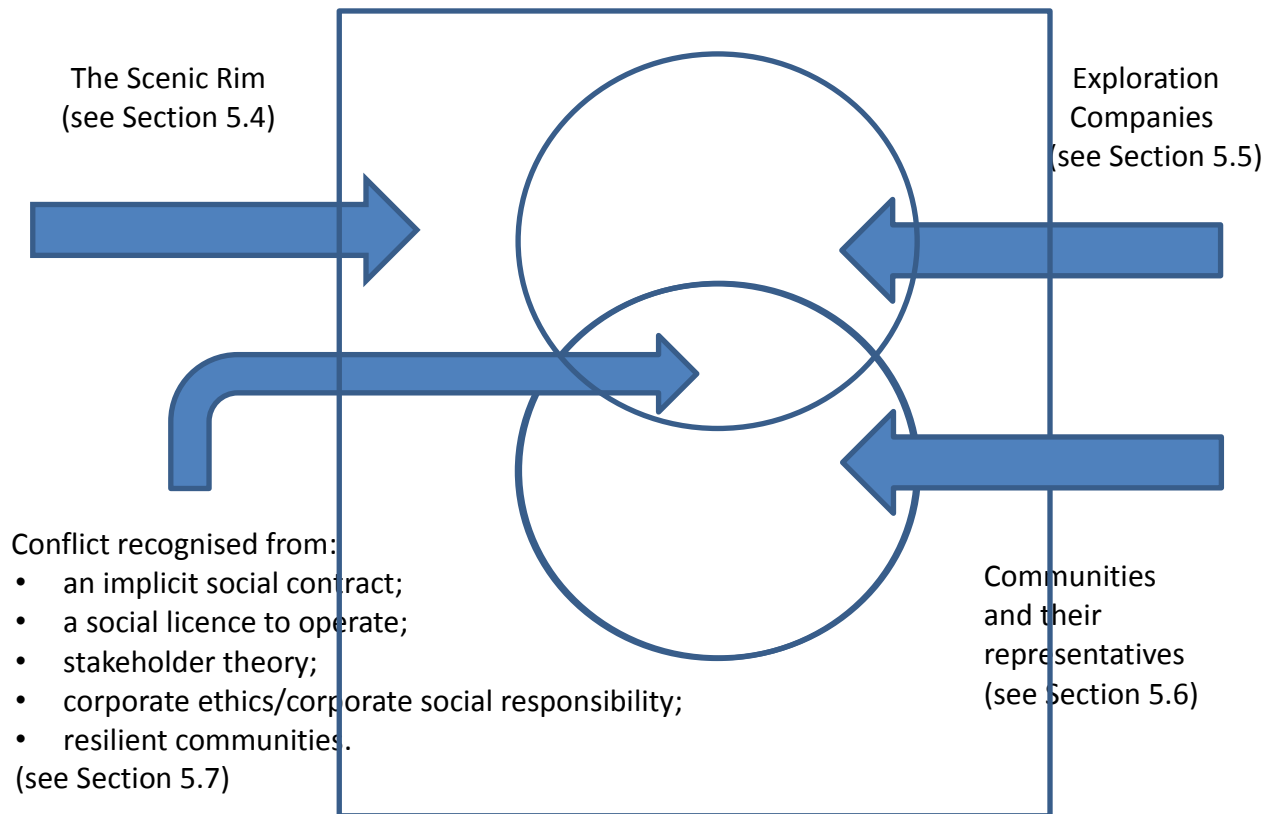
The conflict between the communities and the companies arises because:

- (i) The companies, individual residents and the communities hold legal rights to the occupation and use of the same land for purposes that could be mutually exclusive.
- (ii) The values and development desires of the communities and individual residents are often quite different from the values and development intentions of the companies.
- (iii) Various Queensland political parties have made promises regarding resolution of the conflict but, once in office, have not delivered against those promises.

5.8. A conceptual framework for the research project

These concepts and the conflict that has arisen from the interaction between them are illustrated in Figure 5.1.

FIGURE 5.1: A conceptual framework for the research project



5.9. Summary of the chapter

This chapter has: (i) described the major parties to the conflict over mineral exploration that exists within the Scenic Rim; and (ii) identified the sources of that conflict. It also presents a conceptual framework on which analysis and discussion could take place.

Findings from the research based on this conceptual model are summarized in Chapter 6.

6. FINDINGS

6.1. Introduction to this chapter

Chapter 1 identifies the problem that drives the Research Question behind this thesis and Chapter 2 outlines the possibility that commercial discoveries of carbon based minerals might be made within the Scenic Rim. Chapter 3 then identifies the theoretical base for the research undertaken and recognises gaps in the literature that the research addresses. This chapter summarises the findings of the work undertaken against the Research Question and thus acts as the base for the contributions to theory and practice that a proposed PhD program will make.

The major findings to emerge from the discussion in Chapter 7 are:

1. The responsibilities that the companies exploring for coal and CSG within the Scenic Rim have towards the communities of the region include: (i) establishing effective communication; (ii) the early passage of information about the nature and scope of their project; (iii) the building of trust; (iv) the creation of a mechanism by which community responses can be captured and incorporated into project planning and implementation; and (v) explaining how the benefits of the project will be shared and potentially adverse impacts modified. These responsibilities are in addition to the fiduciary responsibilities that the companies have to their shareholders and could be used, by the companies, as strategies for community engagement.
2. The CBOs active within the region have been more effective in raising awareness in the wider society than in bringing about local community development desires. However, there may be a role for a different type of organisation to play in raising awareness of and in representing all community values (not just the anti-mining values) across the whole Scenic Rim.
3. The general social contract between society, government and business must be modified to include recognition of local values relating to the preservation of both a rural lifestyle and agricultural production and the protection of limited groundwater and surface water resources.

4. Existing theories of the firm have limited utility in explaining the reasons for the existence of corporations exploring for coal or CSG within the Scenic Rim, their structure or the reasons that they behave the way that they do.

6.2. Objective of the chapter

The objective of the chapter is to summarize the findings of the research behind this thesis. These findings are discussed, in detail, in Chapter 7.

6.3. Structure of the chapter

The findings of the research are extensive and are presented as follows:

- Section 6.1. gives an introduction to the contents of this chapter;
- Section 6.2. introduces the objectives of the chapter;
- Section 6.3. describes the structure of the chapter;
- Sections 6.4. summarises a response to the research question;
- Section 6.5. identifies the sources of the conflict between communities and companies exploring for coal and CSG within the Scenic Rim;
- Sections 6.6. and 6.7. cover the values and development intentions of the communities within the Scenic Rim and of the companies exploring for coal, CSG and other minerals within the region;
- Section 6.8. briefly outlines the role of community based organisations in this conflict;
- Sections 6.9. and 6.10. identify the nature of the social contract that might exist between the communities and the companies and suggest a possible model for community/company engagement that might more equitably distribute both the benefits and disadvantages of mining between the communities and the companies;
- Sections 6.11. presents a model for evaluating the utility of theories of the firm and draws implications from the conflict between the communities and the companies for the continued evolution of such theories; and
- Section 6.12. Identifies the implications of the findings for the theory of the firm.

6.4. A response to the Research Question

This section of the thesis summarizes material discussed in Section 8.4.

The fiduciary responsibility of Australian company directors and officers towards the primary internal stakeholders (shareholders) in their company is clearly identified in the *Corporations Act 2001* (Parliament of Australia 2001). Whilst this *Act* is silent on any responsibility towards external stakeholders (such as communities), there is nothing in it that specifically excludes consideration of the needs of these groups. This silence could be fortuitous as it allows recognition of (and actions in accord with) the proposition that well managed stakeholder relationships can confer a competitive advantage on a company. Such a consideration would enable recognition of changes in the social contract between society, government and corporations that are taking place in areas such as the Scenic Rim and promote awareness of the implications of these changes for the longevity of the firm. Such changes do not try to set aside the fiduciary responsibility of company directors and officers but seek to expand this responsibility to include the needs of all stakeholders. These additional responsibilities would include: (i) the establishment of effective communication between the company and the communities; (ii) the early passage of information about the scope of the intended project; (iii) the building of trust between communities and the company; (iv) extending the understanding of (and respect for) the rights, working operations and existing development intentions of landowners by company officers and contractors; (v) the creation of a model by which community responses can be incorporated into company decision; and (vi) explanation as to how benefits of the project will be shared and potentially adverse impacts modified. These responsibilities are those that the communities would like to see honoured. From a company point of view, they could be seen as strategies on which negotiations for a SLTO could be based. The implementation of such strategies might turn communities from opponents of a project into (at least) modest supporters and so contribute to the long term sustainability of the project, the environment and the company.

6.5. The origins of conflict

As in many mining areas, the conflict between communities and companies exploring for coal and CSG within the Scenic Rim has its origin in three areas: viz

- the companies, individual residents and the communities hold legal rights to the occupation and use of the same land for purposes that could be mutually exclusive;
- the values and development desires of the communities and individual residents are often quite different from the values and development intentions of the companies; and
- various Queensland political parties have made promises regarding resolution of the conflict but, once in office, have not delivered against those promises.

These sources of conflict are first identified in Section 5.6 and characteristics of a model for an organisation that might contribute to their resolution are proposed in Section 7.9.

6.6. The values and development desires of the communities

This section of the thesis summarizes material discussed in Section 7.5 and Appendix 3).

The values and development desires of the communities within the Scenic Rim are identified in Appendix 3. They include values based on the environment, settlement of the region (including both Indigenous and non-Indigenous occupation), farming and tourism backgrounds of the communities and do not include mining. The communities are strongly of the view that agriculture and planned industrial development (such as the proposed Bromelton Industrial Estate) can lead to a sustainable future and that mining is an inappropriate use of land that could otherwise be directed towards these ends (see Section 7.5).

6.7. The values and development intentions of the companies

This section summarizes material discussed in Section 7.4 and Table 3.3.

Most of the companies exploring for coal and CSG within the Scenic Rim are private companies and are not required to lodge any public documents with the Australian Securities and Investments Commission. As a result, little information on their values is available. However, whilst the public companies exploring for coal are required to annually lodge statements on conformation with ASX ethical standards, such statements seldom provide any data about corporate values.

The values of companies exploring for CSG can be deduced from the public documents of their parent companies and are presented in Table 3.3. Similarly, their development intentions can be deduced from *Exploration Permit Public Enquiry Reports* lodged with the Queensland Government – the most informative of these deductions is that the companies do not have to reveal their future development intentions until 2017. The reports provided by companies exploring for coal are treated as ‘commercial in confidence’ and are not accessible. However, some information on parent company intentions can be obtained from their publically available annual reports. Three examples, taken from company annual report for 2013-14, are:

- Allegiance Coal Limited – Discussions were held with a potential joint venture partner regarding the Mt Marrow deposit (EPC 2374) and with the State Government regarding the surrender of Mintovale (MDL 138).
- Coalbank Limited – A drilling program on EPC 2239 (Esk-Harlin) was completed. Some coal seams were identified and further drilling is being planned.
- New Hope Corporation Limited – Drilling associated with a possible expansion of the Jeebropilly Mine continued.

6.8. The role of community based organisations

This section of the thesis summarizes material discussed in Section 7.7.

Thirteen currently active CBOs that have played some role in representing community values and development desires to mining companies and to a wider society are recognised in Section 3.4.2. Five of these CBOs were created specifically to focus community actions against coal exploration proposals. Whilst it could be claimed that some CBOs have achieved the outcome for which they were created (the abandonment of mining proposals), such a claim cannot be generalized and the organisations have been more successful in raising wider community awareness of the potential impacts of mining within the Scenic Rim.

6.9. The nature of the social contract between the communities and the companies

This section of the thesis summarizes material discussed in Section 7.8.

The nature of the implicit social contract between society, government and business is constantly evolving (Section 3.5). Much of this evolution is driven by a belief that any community must be free to specify ‘appropriate ethical norms’ that apply to developments in its area (Johnsen 2009, p. 792). Values espoused by Scenic Rim communities include protection of the environment, preservation of a rural lifestyle and a future based on farming (see Section 7.5 for discussion on the value of agricultural production within the Scenic Rim). There is a fear that limited surface and groundwater supplies could be damaged by mining and that this local value is not respected by exploration companies. Because the value of exploration permits held within the Scenic Rim is not yet proven, it may be that the companies holding these permits are not yet willing to apply themselves to the lengthy and expensive process of negotiating a local social contract and of obtaining an SLTO from the relatively new concept of shared value (Porter & Kramer 2011).

6.10. Characteristics of a model for conflict resolution

This section of the thesis summarizes material discussed in Section 7.9.

The characteristics of an organisation that might assist the solution of the conflict outlined in Section 6.5 are identified in Sections 7.9.2 and 7.9.3. They include that:

- the organisation should be seen to be local;
- the organisation should be focussed on an agreed objective;
- all community members who wish to participate should be able to do so;
- the organisation must be adequately staffed and sustainable over the longer term;
- the organisation must be willing to form strategic partnerships; and
- the organisation must be effective in keeping communities informed and in meeting key performance objectives.

6.11. A model for evaluating the utility of theories of the firm

This section of the thesis summarizes material discussed in Section 7.10.

Although several references to models for evaluating the validity and reliability of TOTF have been found (such as Crossan), no references to models for evaluating the utility of TOTF have been located. Such a model (the Maddox Model) is proposed in Section 3.9.2 and applied to twelve groups of such theories in Appendix 5.

The Maddox Model asks the following questions:

1. Does the theory explain reasons for existence of the firm?
2. Does the theory explain what drives enterprise strategy?
3. Does the theory explain what generates productivity and profitability?
4. Does the theory explain what shapes the business organisation?
5. Does the theory explain what motivates firm behaviour?
6. Does the theory explain the firm's moral posture?
7. What tests are available to support the validity of the theory?

A five point Likert scale is applied in the model and the results are summarised in Table 7.4. Although a ranking of the utility of the theories is identified, none of them meets all criteria and all, except one, fail to suggest tests by which their validity might be tested. The most useful theory is Transaction Cost theory and that is

followed by Contract theory, Natural Resource based theory, Resource based theory, Stakeholder theory and the Neo-classical TOTF described in Figure 3.1.

6.12. Implications for an evolving theory of the firm

The failure of existing theories of the firm to provide an adequate base for an understanding of the reasons for existence of companies exploring for coal or CSG within the Scenic Rim has two foundations as follows:

- each individual theory is limited in its application and only addresses a narrow range of the characteristics examined; and
- the public data that is readily available about each corporation is limited in coverage (mainly because it only supports analysis of a consolidated entity) and does not support the more detailed cost/revenue analysis that the Neo-classical, Transaction Cost and Contract theories would require.

Although the theory of the evolutionary firm developed by Frederick (2004) suggests five core functions from which an analysis of the moral behaviour of firm might be undertaken, it does not address the shortcomings above. What is needed now is an evolutionary theory of the firm that draws on the strengths of existing neo-classical, resource based and stakeholder theories (as does Corporate Sustainability theory (Section 3.9.3.13)) and that provides a base for inclusion of a changing social contract. Most importantly, such a theory must include tests for its validity, utility and applicability that can be replicated by others. Such a theory must be applicable to all companies and its development will be undertaken as part of a PhD program that will extend the research behind this thesis.

6.13. Summary of the chapter

This chapter summarizes the findings of the research that underlies this thesis. Particularly, Section 6.4 outlines a response to the Research Question proposed in Section 1.4, while Section 6.9 identifies changes to the local social contract between communities and exploration companies within the Scenic Rim. Section 6.10 develops the characteristics of a model for community and mining company

interaction that might more equitably distribute the benefits and disadvantages of mining between companies and their external stakeholders. These characteristics now need to be tested and further developed by future research. Section 6.11 suggests a model for evaluating the utility of theories of the firm and Section 6.12 draws implications for the development of an evolutionary theory of the firm that could be addressed in future research.

7. DISCUSSION

The findings of the research behind this thesis have already been summarized in Chapter 6. This chapter discusses those findings in some depth.

7.1. Introduction to this chapter

This discussion initially concentrates on two major issues that emerge from the research question as follows: (i) Are the exploration permits that companies hold within the Scenic Rim sufficiently valuable to warrant the angst that the companies are already experiencing?; and (ii) Is the agricultural base of the region sufficiently valuable for the communities to be able to turn their back on the wealth that mining might bring to the region? From these issues, the discussion focusses on whether the conflict that now exists can be resolved and the role that various actors have played. This then leads to the social contract that might form the base for conflict resolution and to the theories of the firm that might explain why the companies are pursuing the actions that they are. The discussion concludes with a summary of the characteristics that might help form a better model for negotiations between communities and mining companies and with suggestions as to how an evolutionary theory of the firm might be created.

7.2. Objectives of the chapter

The objectives of the chapter are:

- to explore whether or not the ATPs held within the Scenic Rim potentially have a commercial value;
- to explore whether or not the communities within the Scenic Rim might have a sustainable future without carbon based mineral development;
- to explore whether or not the conflict between the communities and companies might be able to be resolved and if there is a role for a CBO in this resolution;
- to recognise the issues that might be regarded as local input to a social contract between the communities and mining companies;
- to identify and evaluate the utility of present TOTF; and
- to draw implications for an evolutionary TOTF that might be developed by further research.

7.3. Structure of the chapter

This chapter is structured as follows:

- Section 7.1 introduces the chapter;
- Section 7.2 outlines the objectives of the chapter;
- Section 7.3 details the structure of the chapter;
- Section 7.4 explores the value of exploration permits held within the Scenic Rim to the companies holding them;
- Section 7.5 examines the possible contribution of coal and CSG, industry and agriculture to a sustainable future within the Scenic Rim;
- Section 7.6 explores whether or not resolution of the conflict between communities within the Scenic Rim and the exploration companies is possible;
- Section 7.7 explores a possible role for CBOs;
- Section 7.8 recognises possible additional content for a social contract between communities and mineral exploration companies within the Scenic Rim;
- Section 7.9 develops possible characteristics for a model for conflict resolution;
- Section 7.10 evaluates existing TOTF;
- Section 7.11 applies existing TOTF to mining exploration within the Scenic Rim;

- Section 7.12 draws implications for an evolutionary TOTF: and
- Section 7.14 contains a summary of the chapter.

7.4. Are the exploration permits held within the Scenic Rim valuable?

The potential coal resource within the region lies within the Walloon Coal Measures (WCM) of the Clarence-Moreton and Ipswich Basins. The coal of the WCM is described as being ‘slightly higher in rank’ than that of the Surat Basin and is highly volatile (Rassam et al. 2014, Section 1.1.3.4). The WCM generally lie between 100 and 300 metres from the surface and are uniform in neither depth nor thickness (The coal within the previous Ebenezer mine workings near Amberley was described as being ‘approximately 50 separate Walloon coal seams – some only 10 cm thick.’ (Murray 2010, p. 356). By 1995–6, there were three open cut coal mines working within the Scenic Rim (Ebenezer, Jeebropilly and New Oakleigh) and, in that year, they produced approximately 3 200 000 tonnes of thermal coal (Murray 2010, p. 367). Ebenezer and New Oakleigh have now ceased production and output from Jeebropilly decreased from 1.1 million tonnes of steaming coal in 2012–13 to only 870 000 tonnes in 2013–14 (NHC September 2014, p. 4).

Mineral Development Lease (MDL) 172 (Bremer View and Mt Mort) and Mineral Lease (ML) 4712 (the Ebenezer mine) are presently owned by a small, private, company (Zedemar Holdings Pty Ltd) - but the owner is seeking to sell the leases. In 2012, a potential buyer (OGL - a Malaysian based timber company) announced that it proposed to develop the combined leases to produce 3 000 000 tonnes of thermal coal per year within five years (OGL 31 October 2012). The coal was to be transported to the Port of Brisbane via road and through an existing rail loading loop owned by the Queensland Government. The planned purchase collapsed when OGL was not able to raise the required capital (OGL 1 April 2014). A second purchase arrangement, between Zedemar Holdings and Coalbank Ltd, has also fallen through and, on 26 June 2015, the RDPO announced that neither Zedemar nor Coalbank had ever had a social licence to operate the mine (Foley 26 June 2015).

Immediately to the south east of ML 4712 is Exploration Permit Coal (EPC) 2127 - held by Cuesta Coal Ltd and containing an inferred resource of 5.1 million tonnes of export quality thermal coal (Cuesta Coal Limited 2012). Most other coal exploration permit areas within the Scenic Rim have not been examined to the same extent but exploration is still being undertaken in some areas and Coalbank Limited completed five exploratory drill holes on EPC 2239, between Esk and Toogoolawah, between February and March 2014 (Barry, D 27 February 2014). However, MDL 138 (near Mintovale) was surrendered in 2014 on the grounds that it was too small to be commercially viable (Allegiance Coal Limited 30 June 2014). Several other EPCs (notably EPC 910 near Rathdowney) have been sold by their initial permit holder within the last eighteen months' The terms of such sales sometimes place great uncertainty on any value that might be ascribed to exploration permits. Four greenfield exploration sites (including EPC 910) and several other development projects were sold by Linc Energy for A\$1.00 (Linc Energy Limited 16 February 2015).

The companies that hold EPCs within the Scenic Rim have mineral rights that give them a strategic advantage in three forms viz: (i) the steaming quality of the coal is well established and recognised (Smith 1999); (ii) the existing permits/licences are exclusive and no competitors can gain entry to the region without buying a lease from an existing holder; and (iii) the transport distance from the mine sites to the export Port of Brisbane is much less than the distance from mines in the Surat and Dawson Basins to potential ports (OGL 31 October 2012, p. 9).

However, the export market into which coal from the Scenic Rim could be sold is changing rapidly. The average international price for Australian thermal coal has fallen from US\$140 per tonne in January 2011 to US\$55.86 per tonne in March 2016 (Index mundi 17 April 2016) and China (the second largest purchaser of Australian thermal coal) has announced its intention to reduce its reliance on imported coal and to set quality parameters for the coal that it will import (Robins & Ker 17 September 2014). Not all projections about the international market for coal are gloomy and a previous Queensland Minister for Mines reiterated an International Energy Agency projection that the global demand for coal would increase by 15% by 2030 and that prices would again rise (McBryde 2015). Such occurrences would be fortuitous for

any coal mines developed within the Scenic Rim as their transition from an exploration prospect to a working mine could easily take another ten years. The existing EPC/MDL holders within the Scenic Rim might, therefore, hold rights that could be developed to give them a competitive advantage that is worth protecting.

However, not all permit areas might be able to be developed – even if they are proven to contain commercially viable deposits of coal. EPC 910 was once held by Linc Energy Limited and the extraction technology then being developed by Linc was that of underground coal gasification (UGC). UGC is an as yet unproven technology and, following years of agitation by community groups in the Chinchilla area, the Queensland Government is now pursuing Linc Energy, through the District Court, over (allegedly) ‘the biggest pollution event probably in Queensland’s history’ (Queensland Government 18 April 2016) – (as outlined above, Linc Energy sold EPC 910 in 2015 for less than \$1.00). The company is now in voluntary administration (Queensland Government 18 April 2016) and its technology may never be commercially developed. Another EPC (1109), on the far western edge of the SRRC area, is held by Carbon Energy (Operations) Pty Ltd and its parent company (Carbon Energy Limited) is also developing UGC technology. The Queensland Government (18 April 2016) now proposes to ban the use of UGC in Queensland completely and EPC 1109 may have no value – unless it is able to be developed by another technology.

The situation in regard to CSG is different in that: (i) exploration for CSG is now taking place only in the SRRC area; (ii) the two private companies (Arrow CSG (Australia) Pty Ltd and BNG Pty Ltd) exploring for CSG have a common intermediate owner in Arrow Energy Holdings Pty Ltd; (iii) the base resource (the WCM) has not previously been extensively explored for deposits of CSG (Geoscience Australia n.d.b); (iv) the potential gas field is small in size (by comparison with gas fields now being developed by Arrow Energy in the Surat – Bowen Basin and that have proven and probable reserves greater than 8 900 Petajoules (DNRM January 2014, p. 2); and (v) there is no existing transport mechanism between the potential location of a gas field (around Beaudesert and Boonah) and any possible market.

Arrow Energy's subsidiary companies initially held three EPPs (641, 644 and 791) that covered most of the SRRC area and that extended into parts of the LCC, ICC and LVRC areas and into the Warwick - Millmerran area to the west of the Great Dividing Range. More than 20 exploratory gas wells were drilled and all but five of these have now been plugged and abandoned (ABC n.d.). The remaining wells are located in the Swanbank, Silverdale and Mt Lindsay areas. EPP 791 (around Boonah) was surrendered in 2012 after Arrow Energy announced that it would relinquish '... those properties under which there are insufficient gas resources, to give landowners certainty' (Kennedy 18 September 2012) and parts of EPP 644 have also been surrendered in compliance with Queensland Government licence conditions. Arrow Energy is currently considering the commercial potential of its Scenic Rim petroleum permit areas and has until 2017 to make a decision about further investment (DNRM 5 November 2014).

The future market demand for CSG is also uncertain. Although CSG is seen as a fuel that may help meet global energy demand during the transition from solid fuels (such as coal) to renewable energy (such as solar, wind or nuclear), there are also signs that the demand in markets such as China may be peaking. Australian CSG may, in the near future, face increasing competition from gas produced in central Asia or from massive shale deposits in the USA. Against this background, the intentions of Royal Dutch Shell plc (one of the two ultimate owners of Arrow Energy) are of great interest. Shell has made a successful takeover bid for the gas interests of British Gas - the ultimate owner of QGC (which has a major interest in CSG in the Surat - Dawson Basin and in one of the three LNG export terminals nearing completion in Central Queensland). QGC is believed to have insufficient CSG supplies to meet the production capacity of its Curtis Island plant and it is possible that Shell might see its Arrow Energy CSG as input to the QGC plant. This approach would be acceptable to PetroChina (the other 50% owner of Arrow Energy) as that company announced in February 2015 that it would consider '... an outright sale of its Arrow gas, a gas tolling arrangement whereby Arrow gas was processed through an existing LNG project or any other arrangement, provided it offered value for PetroChina' (Macdonald-Smith 26 February 2015). As with the holders of coal exploration permits within the Scenic Rim, Arrow Energy may hold mineral rights that give it a competitive advantage and that are worth protecting.

7.5. Black gold, industry or agriculture: Which way to a sustainable future?

The values and development desires of the communities within the Scenic Rim outlined in Appendix 3 show that agriculture plays a strong role in both their present and foreseeable futures. It is very hard to obtain current data on agricultural production within the region but Table 7.1 gives an indication of what it has been.

TABLE 7.1: Selected agricultural production within the Scenic Rim 1992-93

LGA	PREVIOUS NAME	TOTAL AREA ('000ha)	AGRIC ESTAB. (Number)	AREA ('000ha)	MEAT CATTLE (Number)	DAIRY CATTLE (Number)	VEG ('000 ha)	FRUIT NUTS ('000ha)
SRRC	Beaudesert	286	438	141	79 514	21 777	0.1	0.3
	Boonah	148	272	81	38 115	6 307	1.8	NA
LCC	Logan City	24	38	NA	24	188	NA	NA
ICC	Ipswich	12	5	NA	118	NA	NA	NA
	Moreton	181	263	64	27 600	10 276	0.4	NA
LVRC	Laidley	69	228	34	10 495	2 640	3.5	NA
	Gatton	158	294	52	17 959	2 545	4.5	0.3
SRC	Esk	385	350	220	84 958	6 130	1.9	0.1

Source: ABS Agricultural Statistics Selected Small Area Data Queensland 1992-93 Tables 1 & 3

Table 7.1 gives a reasonable view of the broad picture: within the SRRC area, agricultural production uses about fifty one percent of the available land, within the LVRC area thirty six percent of available land is devoted to agricultural activities and within the SRC area the figure is fifty seven percent. Some thirty five percent of the rural land within the ICC area is used for agriculture but no data on agricultural land use is available for the LCC. The SRRC area contains the largest herd of cattle and the LVRC contains the largest area devoted to vegetable production.

Data on the value of agricultural production is also difficult to obtain. The ABS undertakes its agricultural census infrequently and the most recent survey for which comprehensive data is available is that of 2005–06. Two sets of data from this collection are presented. Table 7.2 gives summary data on the value of agricultural production, by type of production, by LGA and Table 7.3 gives a more complete outline of production by crop type for the Lockyer and Fassifern Valleys (NB: the Fassifern Valley approximately equates to the previous Boonah Shire within the SRRC area). It should be noted that there was a redistribution of LGA areas in 2008

(Parliament of Queensland 2007) and that while the previous LGA areas are presented in Table 7.2 against the present areas, the match is only approximate and this leads to an inconsistent matching of data sets. The data presented in the two tables is, therefore, indicative rather than definitive.

TABLE 7.2: Value (A\$'000) of agricultural production within the Scenic Rim 2005-06

ITEM	SRRC		LCC	ICC	LVRC		SRC	TOTAL
	Beaudesert	Boonah	Logan	Ipswich	Laidley	Gatton	Esk	
Hay	3 744	5 560	0	1 166	3 257	3 704	5 382	22 813
Other crops	66 400	24 408	8 277	5 529	44 200	86 968	55 088	290 870
TOTAL CROPS	70 144	29 968	8 277	6 695	47 457	90 672	60 470	313 683
Veg	28 320	22 573	3 625	2 930	40 347	73 075	40 441	211 311
Fruit	2 016	33	201	45	726	3 451	1 717	8 189
Livestock (slaughter)	69 553	31 286	15 344	12 762	8 612	36 069	40 691	214 317
Livestock Products	24 097	8 487	0	3 131	2 862	1 155	6 890	46 622
TOTAL AGRIC.	194 130	92 347	27 447	25 563	100 004	204 422	150 209	794 123

Source: Office of Economic and Statistical Research: Value of Agricultural Commodities: Small Area Data 2005-06

TABLE 7.3: Selected horticultural production: Lockyer and Fassifern Valleys 2005-06

Commodity	Lockyer Valley (tonnes)	Fassifern Valley (tonnes)	Queensland (tonnes)	Lockyer as % Qld	Fassifern as % Qld
Beetroot	27 634	2 465	31 475	87.8	7.8
Cabbage	12 691	79	20 373	62.2	0.4
Carrot	7 400	13 358	22 148	33.4	60.3
Cauliflower	8 332	33	15 072	55.3	0.2
Lettuce	37 058	173	53 152	69.7	0.3
Onion	14 084	4 433	27 410	51.4	16.2
Potato	21 436	744	93 589	22.9	0.8
Pumpkin	9 620	2 116	47 161	20.4	4.5
Sweet corn	8 546	495	28 014	30.5	1.8
Tomato	5 073	58	108 672	4.7	0.05
Other	20 668	4 182	224 632	9.2	1.9
Total production (tonnes)	172 542	28 136	671 698	25.7	4.2

Source: Mainstream Economics 2013, p. 26

A summary of the key points contained in the Mainstream (2013) report to Regional Development Australia Ipswich and West Moreton shows that the opportunities and challenges facing increased horticultural crop production in the region include:

- the region currently produces about forty percent of South East Queensland's annual consumption of fresh vegetables;

- based on projected population growth up to 2031, even to maintain the current market share would require a thirty to thirty five percent increase in production;
- the processed fruit and vegetable sector in Australia has declined dramatically because of rising input costs, cheap imports and from a growing tendency of major supermarket chains to establish private labels (mostly based on imports);
- the (Australian) horticultural sector is constrained, in the international market, by a strong dollar, high production costs and well established competition;
- availability of more land for horticultural crops is not a constraint;
- the volume and reliability of rain is a significant constraint and expansion of the sector will require supplemented water sources;
- almost all available surface water within the region is already allocated and this is a major constraint on expansion;
- the availability of surface water is relatively unreliable – making long term planning and investment decisions commercially risky;
- while there is underutilized capacity (both through underemployment and unemployment) in the local labour force, there is a limited availability of technical and trades workers and machine operators; and
- most workers in relevant key occupational groups already earn above average weekly earnings.

Given the already major contribution of the region to Queensland's horticultural production, the unreliability of (current and future projected) rainfall and the almost complete lack of water (both surface and underground) for additional development, it is no wonder that many residents fear adverse impacts from coal and CSG activities on existing water supplies. While it may be possible to case CSG wells and prevent the loss of water from alluvial aquifers, it would be less likely that adverse impacts from open cut coal mines (which would cut through the alluvial aquifers on their way to the deeper WCM) could be avoided.

The two CSG ATPs that still exist within the Scenic Rim cover much of the good quality agricultural land within the Logan River and Warrill Creek valleys. It could be that the 'waste water' brought to the surface by CSG extraction could be treated and made suitable for agricultural use in these areas (as has water being recovered in

the Surat Basin (QGC 2014)) and this might help alleviate the water shortage identified by Mainstream Economics (2013). However, Chen and Randall (2013) have warned that, given the potentially cumulative costs of extracting huge volumes of water from the Great Artesian Basin, the economic and environmental costs of treating the water and of disposing of the sludge and the ultimate costs of disturbing aquifers and subsurface geosystems, it may be that the long term economic benefits of agriculture exceed those from either CSG only or any CSG-agriculture coexistence case.

Considering the size of the cattle herd in the Scenic Rim (Table 7.2), the work that NHC is undertaking to demonstrate that its rehabilitated mine site at Acland is comparable to unmined land in turning off quality beef cattle (NHC 17 April 2015) should be of interest to graziers within the region. However, rehabilitation of any mines that were developed within the Scenic Rim would only occur some years after the alluvial aquifers had been cut through and there might still be a substantial final void after mining has been completed.

There is also the potential for significant industrial development within the region as both the SRRC and the ICC have plans for the development of major industrial estates to attract large scale industry. The proposal to create the Bromelton State Development Area is an example of what is proposed for the SRRC area. In 2008, the Queensland Government announced its intention to create the Bromelton State Development Area – a 15 000 hectare site about six kilometres west of Beaudesert (DSDIP 16 November 2012). The site is adjacent to the Sydney to Brisbane standard gauge railway and is expected to attract freight and logistics operations, medium and large scale manufacturing enterprises, warehousing activities and industry support activities such as transport servicing depots. This development is expected to create 18 000 jobs by 2026 (SRRC 15 October 2008).

It would appear that the residents of the Scenic Rim have alternative paths to the future and that they might not need carbon based mineral developments to bring about that future.

7.6. Is resolution of the conflict between the communities and the mining companies possible?

The term ‘community’ is defined in Section 3.4.1 and that description fits well with the definition proposed by the DITR (2006, p. 48) – ‘In mining industry terms, community is generally applied to the inhabitants of immediate and surrounding areas who are affected by the company’s activities.’. DITR then describes community engagement as:

A good engagement process typically involves identifying and prioritising stakeholders, conducting a dialogue with them to understand their interest in an issue and any concerns they may have and exploring with them ways to address these issues and providing feedback ... At a more complex level, engagement is a means of negotiating agreed outcomes over issues of concern or mutual interest (DITR 2006, p. 48).

The reasons that companies should want to engage with local communities are that, unless a company is able to negotiate an SLTO with the relevant community, that community: (i) may seek to delay or block any development; (ii) the project may face ongoing legal challenges that could, potentially, stop it (even after regulatory approvals have been granted); and (iii) prospective employees may seek to work for a company that is a better corporate citizen (DITR 2006, p. 2).

Although none of the companies exploring for coal within the Scenic Rim has yet sought to engage with the communities of the region (and Arrow Energy has only engaged in low level presentations about its CSG activities), the communities are not of a mind to initiate engagement with the companies. As suggested in Section 6.6, the communities generally regard coal and CSG developments as an inappropriate use of the land and this view is supported by both the formal leaders (the elected councillors) and informal leaders (the officers of CBOs) within the communities. As shown in Appendix 1, four companies (the Arrow Energy group, Coalbank Ltd, Mineral and Coal Investments Pty Ltd and XMC Australia Pty Ltd) have exploration permits that cover more than one LGA area and so include communities that may hold different values and approaches. This could lead to major difficulties in that the

companies would not be able to negotiate with just one group to arrange an SLTO for their permit areas.

The Queensland Government has developed several regulations (e.g. the Land Access Code (DEEDI November 2010) and the Code of Practice for the construction and abandonment of CSG wells and associated bores (DNRM 2013) by which it has sought to bring order to the relationship between residents and companies. However, such arrangements do not address the basic issue that the landowners wish to have the final say over how 'their' land is managed and are not prepared to let this decision rest with government. This landowner desire is the rationale behind the Lock the Gate Alliance and its advice to landowners that they should lock their boundary gates and not permit representatives of mining companies to enter onto their land. It would appear that, until this basic issue is addressed, the conflict between communities within the Scenic Rim and companies exploring for coal and CSG within the region will not be easily resolved. This observation fits well with Bridge's (2004) finding that conflict often arose over the ability of citizens to determine the appropriateness of mining as an acceptable land use.

As identified in Section 3.5.2, many landowners are concerned about the potential impact of deep CSG wells on their shallow alluvial aquifers. The Queensland Government recognised this fear in 2013 when it implemented both horizontal and vertical 'setbacks' for fracture activities associated with CSG development. The horizontal setback between a CSG well and a groundwater well was set at 2 000 metres and the vertical setback between the bottom of an existing groundwater well and any fracking activity in a CSG well was set at 200 metres (Department of Environment and Heritage Protection 2013). This setback allowance could assuage the fears of some landowners and also decrease the likelihood of CSG development in a large section of the SRRC area.

Because of a lack of shared values and low levels of consultation and engagement, it does not appear that the existing conflict between communities and companies exploring for coal and CSG within the Scenic Rim could be easily resolved.

7.7. Do community based organisations have a role to play?

Walton, McCrea, Leonard and Williams (2013, pp. 20-21) concluded that CBOs could play a role in providing informal leadership within resilient communities. However, they also established that, mainly because these groups were often dependent on the interests, time and effort of volunteers, the role that they could play may be limited and that there was a need for collaboration between them and other agencies. The communities of the Scenic Rim appear to have no doubt as to the usefulness of such groups and, of recent years, have formed five organisations to help represent their views about the inappropriateness of mining activities within the region (Section 3.4.2).

The Queensland Government, however, has been ambivalent about the value of such groups (at least in participation in legal proceedings relating to the grant of mining leases) and, on 9 September 2014, enacted a law that restricted the right of Queenslanders to object to proposed mining projects. The *Mineral and Energy Resources (Common Provisions) Act 2014* provided that only affected persons, such as landholders and members of the community who had genuine concerns with the proposed mining activity, would have the opportunity to object, to the Land Court, during the lease application process (Australian Associated Press 10 September 2014). The ‘affected persons’ included neighbours and councils but not ‘green’ groups that might launch ‘vexatious and frivolous’ objections. A successive Queensland Government was of a different view and, in July 2015, moved to overturn the ban (Australian Mining 16 July 2015).

Rather than becoming a participant in the conflict between the communities of the Scenic Rim and companies exploring for coal and CSG within the region, there could be a role for a CBO as an ‘honest broker’ of information. There has been no open discussion on the pros and cons of mining within the region and it is possible that neither the potential benefits nor the disadvantages of mining are widely understood. Thomas (2015, pp. 1-2) suggested that the net economic benefits of CSG development (which included increases in employment, output, consumption and government revenue and that could contribute to reversing rural decline) would be

positive but that such developments were not without risk. Many of these gains and risks would be unevenly distributed between regions, towns and households but there has been no public discussion of these matters within the Scenic Rim. The organisation of such discussion and debate is a role that an unbiased CBO could fulfil.

Given the depth of community feeling against mining at present, it would take a strong leader and a very representative organisation to venture into the public realm in this way.

7.8. Additional content for a social contract within the Scenic Rim

Thomas (2015) suggested that a social licence for CSG development ‘needs to hold for the entire industry, with high expectations upheld by companies and contractors alike’. This status (if achievable at all) would be relatively easy to accommodate within the Scenic Rim as there is only one company group (Arrow Energy) exploring for CSG in the region. Such a social licence would need to be specific to the Scenic Rim however, as, from the discussion in Sections 3.7, it does not appear that any social licence granted to Arrow Energy in the Surat Basin would be transferable. Similarly, the Australian Coal Association (Australian Coal Association n.d., Home page, Social Licence to Operate) suggests that the coal industry, as a whole, has a social licence granted by Australian society. These views ignore the basic tenet proposed by Freeman (1984, p. 46) that a stakeholder was anyone who could be affected by a project and so ignore the communities of the Scenic Rim. Similarly, neither of the views fits with the contention by Kuch et al. (2013, p. 6) that any dialogue about a social licence would ‘include the **joint** (emphasis added) development of a narrative’ about the diverse social and economic contributions of a project - or the proposal by Wu (2012, p. 160) that an enterprise should ‘acknowledge its multiple stakeholders and **collaborate** (emphasis added) with them to generate value ...’.

A base for the negotiation of any social contract within the Scenic Rim must include the contention by Johnsen (2009, p. 792) that all communities ‘are free to specify appropriate ethical norms ... as the product of a microsocial contract based on

constructive consent'. This approach would require companies to recognise the values and development desires outlined in Appendix 3 (specifically the role of agriculture and the need to sustain rural industry) and strengthened by the actions of LGAs as outlined in Section 3.4.1. The base should also include specific recognition of the priority agricultural areas, strategic cropping areas and priority living areas proposed in the *Regional Planning Interests Act 2014* (Parliament of Queensland 2014b sec 8-11). These inclusions would cover the macro systems (belief systems, lifestyles and material resources) as well as part of the exo system (neighbourhood and community contexts) proposed by Bronfenbrenner (1994, pp. 39-40).

As the lifecycle (from exploration to the completion of rehabilitation) of any coal or CSG development could extend for thirty to fifty years, any social contract would need to include the concept of time and of the inputs and negotiations that would be needed at each stage. Such an implicit contract would also need to recognise and differentiate between the roles of vested (individual residents, land owners and communities) and non-vested (community groups such as KTSRS) stakeholders and clearly establish how the input of non-vested stakeholders would be recognised. This approach would also achieve the strategic stakeholder engagement model proposed by Sarker (2011) and overcome his observation that 'a severe lack of stakeholder engagement is a major failing of the Australian mining industry especially when it comes to coal seam gas projects'.

Because of the geographic extent of the Scenic Rim, the relatively large number of communities that it contains and the diversity of community members (including Indigenous persons and values, local landowners and people who live within the region but work outside it), it may be necessary to appoint an independent 'leader' to confirm the values and development desires of community members and to initiate discussion with the companies exploring for coal or CSG. The base for a social contract would also need to include the ladder of stakeholder engagement proposed by Friedman and Miles (2006, p. 162) and to ensure that the forms of engagement offered advanced rapidly from data transfer to involvement in the decision making process and to community members having (at least) some degree of power over the whole project (Table 3.5).

Because the value of exploration permits within the Scenic Rim is not yet proven, the companies that hold these permits may not be willing to commit themselves to the lengthy (and expensive) process of engaging with the communities and preparing the base for an SLTO. However Thomas (2015) suggested that such negotiations should commence as early as possible.

This approach to the formulation of a social contract would make use of the five principles (communication, integrity and transparency, follow through, understanding and awareness and respect) proposed by the QRC (QRC 2014, p. 8) and would involve community members in genuine engagement and decision making (Thomas 2015, p. 2).

7.9. Characteristics of a model for conflict resolution

As described in Section 1.6, the second objective of the research behind this thesis is the development of a model for interaction between the communities of the Scenic Rim and the companies exploring for carbon based minerals within the region that would more equitably distribute the benefits and disadvantages of mining between the companies and their external stakeholders. There are already thirteen CBOs (Section 3.4.2) that have been formed to represent community values and development desires. These organisations are not all regionally based but they do all exhibit the defects that: (i) they are based on volunteers with limited time and interest; and (ii) they do not represent the strategic stakeholder engagement model suggested by Sarker (2011). The purpose of this section of the thesis is to recognise the characteristics of an appropriate model for community engagement.

7.9.1. Should conflict resolution be left to governments?

After a review of the socioeconomic impacts of CSG development in Queensland, Thomas (2015) concluded that governments did have a role to play in supporting coexistence between communities and companies exploring for CSG (Perhaps this role could also be extended to include companies exploring for coal?). This role included ensuring that the landowner's agreement for access to their land was

sought, that landowners were fairly compensated and that prime agricultural land and water resources were not compromised by development activity. It is important to note that the conclusion was that there was a role for government and not that government was wholly responsible for resolving all differences.

One of the more challenging aspects of the government's role in resolving a disagreement over land access is illustrated in Section 51 of the *Mineral and Energy Resources (Common Provisions) Act (2014)* - if the landholder does not reach agreement with a resource authority holder (e.g. the holder of an ATP) over land access within twenty days, then either the landowner or the resource authority holder can apply to the Land Court to decide the matter (Queensland Parliament 2014 Sec 51). The *Act* does not allow the landowner to simply refuse to negotiate with the resource authority holder.

As recognised in Section 5.7, one of the reasons for conflict between communities and companies can be found in the promises of political parties – particularly if there is no clear link between when the promises are made and when they are (or might be) implemented. During the lead up to the 2012 Queensland state election, the Liberal National Party Coalition promised that they would protect the Scenic Rim by fast tracking stronger land use planning for the region and that the revised land use plan would 'rule out mining and coal seam gas extraction in areas deemed to be inappropriate' (Liberal National Party Queensland n.d.). Those who relied on this fast tracking promise might feel disappointed in that it has taken three years (and another change of government) to introduce changes that offered some protection (but not the total exclusion of mining) to priority agricultural areas, strategic cropping lands and priority living areas (Parliament of Queensland 2014b secs 8-11).

Perhaps more for the reason that governments would have a conflict of interest in trying to represent regional landowner interests in objecting to mining, in providing legal means for conflict resolution (e.g. the Land Court) and in promoting mining for the royalties and taxes that a successful mine could contribute, governments also could not represent Sarker's (2011) strategic stakeholder engagement model.

7.9.2 Characteristics of a stakeholder engagement model

Some of the characteristics of a strategic stakeholder engagement model that can be deduced from the literature reviewed for this thesis are:

- there is the need to gain the support of people who live and work in the area of impact of any project (On Common Ground Consultants Inc and Robert Boutilier and Associates 2012, p. 1);
- all interested community members should be allowed and encouraged to take part in the process (Herz, Vina & Sohn 2007, pp. 12-15);
- within any community, there will be many stakeholder groups – often each with a different leader and different interests and it may be difficult for companies to recognise with whom they should negotiate (Wilburn & Wilburn 2011, p. 4);
- all stakeholders, based on mutual trust, should disclose their ‘utility functions’ to each other and work together to develop activities for their mutual advantage (Harrison et al. 2010);
- the organisation should acknowledge the needs of its multiple stakeholders and work with them to generate value (Wu 2012, p. 160);
- leaders should exhibit a shared vision and good communication skills (Lee n.d.);
- resilience requires commitment and the building of meaningful relationships (Walton et al. 2013, Abstract);
- there is a need for collaboration between groups (Walton et al. 2013, pp. 20-21);
- any such organisation should enable members to co-exist with other stakeholders so as to generate long-term economic benefit (APPEA n.d.);
- there may be a need for assisted negotiation (Schellenberg 1996, pp. 173-192);
- the concept of an SLTO is evolving and may, in future, be centred more on non-traditional partnerships, dialogue and participation (Lacey et al. 2012, p. 15);
- the role of CBOs is often limited because they depend on the interest, time and effort of volunteers (Walton et al. 2013, pp. 20-21); and
- the measures of organisational effectiveness could include (i) the extent to which collective action could express the values of participants; (ii) the extent to which decision makers could be influenced by collective action; and (iii) the extent to which collective action could build opposition to a proposal (Hornsey et al. 2006, pp. 10-11).

7.9.3. Characteristics of an effective model for conflict resolution

Based on the material in Section 7.9.2 and on feedback from a limited sample of community members within the SRRC (undertaken as field testing of questions now to be revised and submitted to the USQ Ethics Committee), the following are proposed as the characteristics of an organisation that could form the base for Sarker's (2011) strategic stakeholder engagement model:

- the organisation should be focussed on an agreed objective;
- the organisation must be seen to be 'local';
- the organisation should represent all of the Scenic Rim;
- all community members who wish to participate should be encouraged to do so;
- the organisation must be independent of any external agency;
- the organisation should be accessible to members of all communities (by some mix of personal contact, telephone, the internet and social media);
- the organisation must be sustainable over the long term (i.e. not just with an expected life of one or two years);
- the organisation must be adequately staffed by people with a sound knowledge base;
- the organisation should be widely networked;
- the organisation must be willing to form strategic partnerships aimed at achieving its agreed objectives;
- the organisation must be a trustworthy partner;
- the organisation's database must always be current; and
- the organisation must be effective in keeping communities informed and in meeting agreed key performance indicators.

As part of a later research program, these characteristics will be discussed with a wide range of community members within the Scenic Rim, a specific organisational model will be proposed and that concept tested for its acceptability (see Section 10).

7.10. Evaluation of existing theories of the firm

Thirteen groups of TOTF are recognised in Section 3.9 and Appendix 5 contains an evaluation of the utility of twelve of these theory sets for understanding the reasons for the existence of firms, their nature, the reasons that they are structured the way that they are and the reasons that they operate the way that they do. It is possible to reduce this evaluation to a numerical base by applying a Likert scale analysis with the values:

- 0 No contribution to an understanding;
- 1 A limited contribution to an understanding;
- 2 A reasonable contribution to an understanding;
- 3 A significant contribution to an understanding; and
- 4 A major contribution to an understanding.

The total of the individual ratings for each theory will then give a score that could allow a ranking of the utility of each theory against other theories. The resultant scoring is detailed in Table 7.4.

The horizontal scale in Table 7.4 corresponds with the evaluation criteria in the tables in Appendix 5 and is structured as follows:

1. Does the theory explain reasons for existence of the firm?
2. Does the theory explain what drives enterprise strategy?
3. Does the theory explain what generates productivity and profitability?
4. Does the theory explain what shapes the business organisation?
5. Does the theory explain what motivates firm behaviour?
6. Does the theory explain the firm's moral posture?
7. What tests are available to support the validity of the theory?

TABLE 7.4: An evaluation of the theories of the firm

THEORY	EVALUATION CRITERIA							TOTAL SCORE
	1	2	3	4	5	6	7	
Neoclassical	4	4	4	1	4	0	0	17
Corporate entity	4	4	0	0	0	0	0	8
Managerial	3	2	1	0	4	0	0	10
Transaction cost	4	4	4	4	4	3	0	23
Contract	0	4	4	4	4	3	0	19
Principal/agency	0	4	2	3	3	3	0	15
Resource based	4	1	4	0	4	4	0	17
Natural resource based	4	3	3	1	4	4	0	19
Behavioural	0	2	0	0	0	4	0	6
Stakeholder	4	4	0	1	4	1	3	17
Evolutionary	0	4	0	4	4	4	0	16
Corporate sustainability	0	4	0	4	4	4	0	16

Based on Table 7.4, the ranking of the utility of the TOTF (from most useful descending to least useful) is as follows:

1. Transaction Cost theory;
2. Contract theory and Natural Resource Based theory;
3. Resource Based theory, Stakeholder theory and Neoclassical theory;
4. Evolutionary theory and Corporate Sustainability theory;
5. Principal/Agency theory;
6. Managerial theory;
7. Corporate Entity theory; and
8. Behavioural theory.

No theory meets all criteria, and only Stakeholder Theory readily suggests any means of testing its validity. All of the theories explain the obligations of the firm to its stakeholders (or what drives firm strategy) but five (Contract, Principal/Agency, Behavioural, Evolutionary and Corporate Sustainability) do not suggest reasons that a firm may come into existence (or remain so). Similarly, four of the theories (Corporate Entity, Managerial, Resource Based and Behavioural) do not explain what shapes the organisation. None of the theories suggests any means by which the utility of the theory might be evaluated.

In Section 7.11, the above analysis of the TOTF is used to attempt to understand the companies that are exploring for coal and CSG within the Scenic Rim.

7.11. The theories of the firm and mining exploration within the Scenic Rim

Based on the analysis in Table 7.4, the six TOTF that appear to be the more useful are: (i) transaction cost theory; (ii) contract theory; (iii) natural resource based theory; (iv) resource based theory; (v) stakeholder theory; and (vi) neoclassical theory. It is worthy of note that all of these theories reflect the understanding of Milton Friedman (1962) that the role of the firm (corporation) is to maximize profits to shareholders. These theories are now used to obtain an understanding of the reasons for the existence and operations of the corporations identified in Appendix 1.

Table 7.5 summarises the ownership (both primary and ultimate) of exploration and other permits held within the Scenic Rim by company type.

TABLE 7.5: Summary of the ownership of exploration and other permits held within the Scenic Rim by company type

MINERAL	PRIMARY PERMIT HOLDER		ULTIMATE PERMIT HOLDER		
	Pty Ltd company	Ltd company	Pty Ltd company	Australian Ltd company	International Ltd company
CSG	2	Nil	Nil	Nil	2
Coal	13	3	3	9	3

Source: Appendix 1

The numbers in Table 7.5 are not a simple summary of the data in Appendix 1. The reasons for the discrepancy are:

- the two private companies exploring for CSG are owned by another private company – but that company is ultimately owned by two international public companies;
- several of the private companies exploring for coal (e.g. Downforce Mining and United Queensland Resources) are ultimately owned by other Australian private companies;
- one public company (Coalbank Ltd) holds exploration permits in its own name and through a wholly owned subsidiary); and
- Jindal Steel and Power Pty Ltd, Shenhua International Group Pty Ltd and XMC Australia Pty Ltd are owned by international companies not listed on the ASX.

Only one of the private companies identified as exploration (or other) permit holders within the Scenic Rim (Jeebropilly Collieries Pty Ltd) (Appendix 1) trades in any commodity or service and all such companies except three (Arrow CSG Australia Pty Ltd, Downforce Mining Pty Ltd and Jeebropilly Collieries Pty Ltd) have a paid up capital less than \$1 500 (Appendix 2). This extremely limited capital base and the lack of trading activity make it impossible to analyse either their reason for existence or operations by any TOTF that depends on the profit maximization approaches of Milton Friedman (1962). Given the low capital base of most of the companies (and hence their inability to fund exploration and development activities from internal funds), it is also difficult to apply transaction cost theory (by which corporations exist because the internal cost of carrying out activities is less expensive than any alternative means) to them.

However, the reason for the existence of these private companies can be explained by Corporate Entity theory and they all meet the requirements of the Real Entity theory identified in Section 3.9.3.3. Although this theory explains how the companies have come into being (in accord with the *Corporations Act 2001*), it does not explain what keeps them functioning as private companies. This explanation can, however, be drawn from the *Corporations Act 2001* (Baxt 2002, p. 3) section that separates the responsibility of the shareholders of the companies from the legal responsibility of the companies for their actions. All of the private companies are wholly owned subsidiaries of other companies and their legal structure therefore separates their ultimate owners from the financial (and, mostly, legal) responsibility for the actions of the private companies. For example, if the (primary permit holder) private companies do not have the financial resources to prepare and lodge the annual returns required by their exploration permits or to pay for exploration activities (e.g. the drilling of exploration wells) carried out on their behalf, then, without guarantees being issued by the ultimate permit holder, the primary permit holding company could be liquidated without any recourse to their parent company.

Both Transaction Cost and Contract theory are based on an ability to determine whether or not the cost of activities undertaken internally is less than those costs would be if they were undertaken by external contract. It is not possible to undertake this comparison for the public companies exploring for (or exploiting) coal or CSG

within the Scenic Rim (Appendix 2) because their annual reports contain only consolidated data for both holding and subsidiary companies and it is not possible to divide this data into individual product (e.g. coal sold) revenues and costs.

One company that provides some data in its annual reports is NHC and a summary of relevant data for the years 2010-11 to 2014-15 is provided in Table 7.6. However, each annual report of the company shows that its principal activities include coal mining, exploration, development, production, associated transport infrastructure and ancillary activities. The transport infrastructure includes the activities of Queensland Bulk Handling in facilitating the export of 6–8 million tonnes of coal per annum and ancillary activities include pastoral activities on the Acland mine site (NHC 2013).

TABLE 7.6: New Hope Corporation Limited: Summary product and financial data for the years 2010/11 to 2014/15

Company	Item	2014/15	2013/14	2012/13	2011/12	2010/11
New Hope Corporation Limited	Mt tonnes coal produced	5.7	5.6	5.8	6.29	5.64
	Mt tonnes coal sold	5.8	6.0	6.0	6.25	5.65
	Total revenue (\$'000)	505 781	548 959	652 697	767 152	662 404
	Profit after tax from continuing activities (\$'000)	(21 820)	58 449	74 129	167 125	503 099
	Shareholder funds (\$'000)	1 852 625	1 973 859	2 016 456	2 252 916	2 367 383
	Dividends paid (\$'000)	78 944	132 928	257 466	215 871	197 180
	Weighted average shares on issue ('000)	830 999.4	830 836.9	830 551.1	830 335.9	830 127.8
	Nett tangible asset backing per share (\$)	\$2.206	\$2.346	\$2.397	\$2.688	\$2.786
	Share price (30 June)	\$1.93	\$2.68	\$3.57	\$4.01	\$5.00
	Coal loaded through Qld Bulk Handling (mtpa)	7.1	7.87	8.73	8.67	6.52

Sources: New Hope Corporation Limited Annual Reports for the year ended 30 June 2014 and 2015

Notes: Mt = million tonnes and mtpa = million tonnes per annum.

Qld Bulk Handling loads bulk coal for companies other than NHC and the volume of coal handled reflects the decreasing production of these other organisations.

Table 7.6 contains some interesting data about the performance of NHC over the past five years. Coal production has been steady in the range of five point six to six point two five million tonnes per year and the volume of coal sold has slightly exceeded the volume produced each year. This must mean that there has been a slight reduction in the stockpile of saleable coal held. However, there has been a significant

reduction in total revenue and, although the weighted average number of shares on issue has increased by less than nine hundred thousand (one tenth of a percent) over the five years, the amount of dividends paid has fallen by almost sixty percent, the value of shareholder funds has fallen by almost twenty two percent and the tradeable share price has fallen by over sixty percent. All of this has happened over a five year period when sales have remained high and the volume of coal handled through the company's multi-customer export terminal has also remained high. The \$21 820 000 loss recorded at the end of 2014/15 is made up of a profit of approx. nine million dollars from mining, marketing and logistics activity, a loss of forty two point four million dollars from oil operations and a profit of eleven point six million dollars from investments (NHC 2015, Annual Report and Financial Statements 2015, p. 3).

With decreasing profits from an approximately even level of sales, it is obvious that NHC is not producing at the marginal revenue equals marginal cost assumption in the neo-classical theory of the firm (Figure 3.1). Whilst the existence of NHC can be explained by Corporate Entity Theory, there is no evidence available within the public realm that can be used to examine its performance against Transaction Cost or Contract theory.

NHC is a large organisation with a reasonably large number of stockholders (7 562 – of whom the twenty larger shareholders hold almost ninety two percent of the shares on issue and one of which (Washington H Soul Pattinson Limited) holds almost sixty percent of the shares) (NHC 2015, p 74). The company has seven directors (including the Managing Director) – of whom only one is a woman (NHC 2015, inside front cover). The principals of NHC (the shareholders) have appointed the Board of Directors and the senior managers as their agents and, given the performance of NHC over recent years, it could be expected that the principals would have held their agents accountable for the performance of the company and for their considerable loss of value. However, this has not been the case. The chairman of NHC has been in that position for the five years reviewed in Table 7.6 (as have two of the five non-executive directors) and the present Managing Director was only appointed in 2014. The Board was increased from five to seven members in 2012/13 and the two new members still retain their appointments. Perhaps this continuation of service can be understood when it is realised that the Chairman of

NHC is also Chairman of Washington H Soul Pattinson Limited (Washington H Soul Pattinson 2015, p.1) – the majority shareholder in NHC.

The other public companies identified in Appendix 2 also produce consolidated reports and it is similarly impossible to disaggregate the data to focus on their coal based activities. One of the more diverse companies is the Hudson Investment Group Limited (HGL). The company's Annual Report for 2015 gives its principal activities as 'Investment and development of properties in Australia' (HGL December 2015, p. 7). The consolidated report covers sixteen controlled entities – one of which (Bundaberg Coal Pty Ltd) holds a coal exploration permit within the Scenic Rim. This is the only mention of any interest in coal in the entire report. (N.B. The controlled entities were transferred to the Hudson Pacific Group during the year (HGL December 2015, p. 60)).

The above discussion about the existence and operation of private and public companies can be used to illustrate (and, perhaps, to partially refute) the shortcomings of Stakeholder Theory proposed by Weiss (n.d., pp. 1–7). Weiss proposed that the theory contained conceptual confounds and that its general applicability was suspect – both because it concentrated on large corporations and did not adequately deal with the combined ownership and control represented by sole trader enterprises. The separation of ownership and control is well represented in the operations of NHC and HGL but not in most of the single shareholder, single director/manager structure of most of the private companies identified in Appendix 2. In most of those companies, the single shareholder representative (usually a member of the Board of the holding company) is also the sole director and manager of the subsidiary company. Although this structure only represents the interests of the sole internal stakeholder, it is no more of a barrier to the involvement of external stakeholders (suppliers, environmental groups, governments and communities) than is the usual governance structure of most publically listed companies. In both extent and composition, the external stakeholders of private and public companies are exactly the same.

Freeman (n.d) has suggested that there may need to be changes to corporate legislation so as to ensure that the rights of all stakeholders are recognised and

protected. He suggested that such changes could be based on the following principles: (i) the stakeholder enabling principle; (ii) the principle of director responsibility; and (iii) the principle of stakeholder recourse (see Section 3.9.3.11). When the Commonwealth Parliament set out to review director responsibility towards stakeholders (other than shareholders) in 2005, the recommendations in its report agreed with industry submissions that the *Corporations Act 2001* already permitted directors to have regard to the interests of stakeholders other than shareholders and that no changes to law were required (Parliament of Australia June 2006).

The Corporate Entity theory (on which all companies exploring for coal or CSG within the Scenic Rim can be based) rests on both private and public companies having a foundation in law. The Commonwealth *Corporations Act 2001* adequately provides this base in Australia.

Of the more relevant TOTF identified in Section 3.9.3, only the two resource based views remain to be discussed and this part of the thesis applies the concepts contained within the two theories to the companies recognised in Appendix 1.

Resource Based theory suggests that a corporation is a collection of productive resources that are innate to the corporation and that are either (i) tangible (plant, equipment, natural resources, finished goods and waste products; or (ii) human (skilled and unskilled labour, financial, technical and managerial staff) – intangible resources such as team skills and capabilities are also applicable (Lozano et al. 2015, p. 435). The bases of this view are that one corporation can produce goods or offer services better than can another, that the emphasis is on reducing costs and that the company needs to develop its internal resources (including the transfer of knowledge between individuals) in order to create a competitive advantage. This resource based view considers the social and time dimensions of resource development but, in its original concept, did not consider environmental impacts. The discussion in Section 3.9.3.7 adequately covers the application of this theory to the companies recognized in Appendix 1 and is not continued here.

The initial competitive advantage of the companies that hold coal exploration permits (a natural resource base) within the Scenic Rim is founded on the following premises:

- the natural resource has a proven potential for generating electricity;
- the existing, government granted, permits are exclusive and, while the companies hold onto their permits, no competitor can enter the market place; and
- transport distances from the potential West Moreton mine sites to (a) an existing coal export port or (b) domestic users are much less than are those in other potential Queensland and New South Wales natural resource sites (OGL 31 October 2012, p. 9).

The resources of a company that may lead to competitive survival can be described as being (a) valuable; (b) rare; (c) inimitable; and (d) non-substitutable (Lozano et al. 2015, p. 435). It is hard to use these adjectives to describe the coal and CSG resources of companies exploring within the Scenic Rim (particularly as those resources are not rare, their value is, as yet, unproven and they may, even in the intermediate term, be subject to substitution by other energy types).

The extension of any initial competitive advantage into sustained competitive advantage will require that mining firms working within the Scenic Rim recognize and work very hard to implement a proposition advanced by Hart: sustainable development is dependent upon a firm's capability in pollution prevention and product stewardship (Hart 1995, p 1006). A track record in either pollution prevention or product stewardship would be impossible to demonstrate within the Scenic Rim (given that all existing permits are merely for resource exploration) and the firms may have to demonstrate that their mining activities in other areas (other parts of Queensland, in other states or internationally) meet these criteria.

7.12. Implications for the development of an evolutionary theory of the firm

Appendix 5 identifies twelve groups of TOTF that could be used to understand the reasons for the existence, nature and operations of companies. These theories are

then rated for their utility in understanding the activities of the companies recognised in Appendix 1 (Table 7.4) and the six more useful theories identified. The applicability of these six theories to the companies exploring for coal and CSG within the Scenic Rim is examined in Chapter 7. This discussion clearly establishes that none of the individual theories completely explains the reasons for existence of the companies, their nature or their operations.

The principal reasons for this failure are:

- each individual theory is limited in its application and only addresses a narrow range of the characteristics of the firms examined; and
- the public data that is readily available about the individual firms is very limited in coverage (mainly because it only supports analysis of consolidated entities) and does not support the more detailed cost/revenue analysis that the Neo-classical, Transaction Cost and Contract theories would require.

These failures call for either an enhancement of existing TOTF, so as to provide a better understanding of the companies recognised in Appendix 1, or the development of a completely new theory and such further work is outlined in Section 10.

7.13. Summary of the chapter

The material presented in this chapter has established that: (i) some of the mineral deposits being explored within the Scenic Rim could lead to commercial developments; (ii) that the communities of the region could have a sustainable future without the development of these deposits; and (iii) that none of the CBOs active within the region demonstrates the characteristics needed to play a role in resolving conflict between the communities and the companies. None of the mineral exploration companies has set out to actively engage with the communities and their actions, except for the legal base to their existence, cannot be satisfactorily explained by existing theories of the firm. The discussion at the end of the chapter draws implications for the development of an evolutionary theory of the firm that might overcome this deficit. It also provides a base for the response to the Research Question (posed in Section 1.4) given in Chapter 8.

8. A RESPONSE TO THE RESEARCH QUESTION

8.1. Introduction to this chapter

A response to the Research Question posed in Section 1.4 requires an understanding of both the social contract that communities within the Scenic Rim would like to see in place and the intent of the companies to engage with those communities. The discussion in Section 7.8 helps develop an understanding of what the communities would like to see take place and the material in Section 3.6.2 indicates how the companies view their external stakeholders. The response to the Research Question given in Section 8.4 suggests that there are simple steps that the companies could take to meet the requirements of the communities.

8.2. Objective of the chapter

The objective of this chapter is to summarise the discussion in Chapter 7 so as to provide a response to the Research Question posed in Section 1.4.

8.3. Structure of the chapter

The structure of this chapter is as follows:

- Section 8.1 provides an introduction to the chapter;
- Section 8.2 sets out the objective of the chapter;
- Section 8.3 details the structure of the chapter;
- Section 8.4 details the response to the Research Question in Section 1.4; and
- Section 8.5 provides a summary of the chapter.

8.4. A response to the Research Question

The research question posed in Section 1.4 is *What responsibilities do companies exploring for coal and CSG within the Scenic Rim have to the communities of the area that are in addition to their responsibilities to their shareholders?* A review of the neoclassical TOTF (corporate entity theory, managerial theory, transaction cost

theory, contract theory, principal/agency theory and evolutionary theory (see Appendix 5)) would suggest that the answer to the question is ‘None’. However, such an answer ignores many of the more recent developments in managerial/organisational theory and leaves a company open to actions against it by communities that hold a different view of the social contract on which the community/company relationship is based. It is, however, in line with individual corporation and industry association responses to parliamentary enquiries into whether or not the Australian *Corporations Act 2001* should be changed to force companies to have greater regard of the needs of their external stakeholders (Parliament of Australia June 2006).

The QRC believes that bases for corporate behaviour that would generate acceptance and trust between communities and companies are: (i) communication; (ii) integrity and transparency; (iii) follow through; (iv) understanding and awareness; and (v) respect (QRC 2014, p. 8). Similarly, Royal Dutch Shell plc (one of the two part owners of the companies exploring for CSG within the Scenic Rim) states its core values as being: (i) honesty; (ii) integrity; and (iii) respect for people, that its code of conduct covers sustainable development and communications and that its subsidiaries have a responsibility ‘to conduct business as a responsible corporate member of society’ (see Table 3.3). The code of conduct promulgated by the APPEA (of which Arrow Energy is a member) also requires members to ‘use open and effective communication with communities, regulators, government and other affected parties’ (APPEA n.d.). These values would suggest that associated companies exploring within the Scenic Rim would:

- endeavour to become aware of community values and development desires;
- communicate company values and development intentions to community members openly and honestly;
- maintain ongoing communication with communities within the region; and
- require their employees and contractors to respect the rights and property of landholders and their representatives.

Herz et al. (2010, p.126) argued that the information given to stakeholders should include basic data such as the purpose, nature, size and reversibility of a project,

preliminary assessments of the likely economic, social, cultural and environmental impacts of the project, details of personnel likely to be involved in the project and of potential benefit sharing. It could be said that the preparation and presentation of this data would be an onerous burden on the companies and that, until the value of a permit area was proven by exploration, much of the data suggested should be 'commercial in confidence'. However, much of this data is now required as part of the lodgement of an application for an exploration permit (Queensland Government Business and Industry portal n.d.) and later becomes public knowledge during the preparation of an environmental impact statement. It may be that there is a timing issue associated with release of the data but any such reservation could be explained as part of an ongoing communication process. None of the above suggests that a company faces any requirement to develop or implement a CSR program during the exploratory phase of mining development but the context for and timing of such a program might also be disclosed during an ongoing community consultation and engagement process.

How companies and communities manage this ongoing information exchange and involvement process would need to be identified very early in the engagement process as community members could very easily become convinced that they were being treated as mere data recipients when they expected to have a role in decision making and some power over the overall project (see Friedman and Miles 2006, p. 163 for an explanation of their ladder of stakeholder engagement).

Even if the fiduciary duty of company directors and the appointed officers is to their principal internal stakeholders (the shareholders), part of that duty requires them to preserve the long term sustainability of the company and one way to achieve this is to ensure that the external stakeholders (e.g. communities) are onside and are committed to the achievement of company objectives. To ensure that this commitment is made and sustained, those directors and officers will need to act in accord with the values identified in Appendix 3, disclose the information suggested by Herz et al. (2010, p. 126) and involve their external stakeholders as suggested by the upper levels of Friedman and Miles (2006, p. 163) ladder of stakeholder engagement.

These, then, are the responsibilities that company directors and officers have to their external stakeholders that are in addition to those that they have towards their shareholders.

8.5. Summary of the chapter

The Australian *Corporations Act 2001* clearly establishes the fiduciary responsibilities that companies have towards their shareholders but, because it is silent on the matter, it neither prescribes responsibilities towards other stakeholders nor proscribes them. If the mineral exploration companies active within the Scenic Rim wish to engage with the communities of the region, they will need to: (i) demonstrate that they understand and respect the values and development desires of the communities; (ii) disclose information that at least outlines their own values and development intentions; and (iii) involve the communities in their decision making process in a meaningful way.

9. LIMITATIONS TO THE RESEARCH

There are four major limitations to the research behind this thesis. The first limitation is that most of the companies exploring for coal or CSG within the Scenic Rim are proprietary limited companies and so do not have the disclosure and reporting requirements of public companies listed on the ASX. This has limited the availability of information on which the discussion could be based. The second limitation is that the recognition of companies exploring for coal and CSG within the Scenic Rim (Appendix 1) is based on Queensland Government reports and these reports may not be fully up to date. Some of the companies included in the research might, therefore, no longer hold ATPs within the Scenic Rim. The third limitation is that the analysis of theories of the firm given in Appendix 5 is, necessarily, limited by the need to keep this thesis to a reasonable length and so makes a number of contractions (such as combining Shareholder Theory and Stakeholder Theory in the one analysis) that some researchers may not concede as desirable. The final limitation is that much of the analysis and interpretation is based on the author's

experience as a manager and may, therefore, differ from the views of others whose work includes interviews with many similarly experienced managers.

10. FUTURE RESEARCH

The analysis of the values, nature and operations of companies exploring for coal or CSG within the Scenic Rim is based on data contained in their published documents, This data may be out of date or incomplete and will need to be verified by discussions with company officers and then cross referenced with material available from other sources – such as newspapers and community groups. Draft questionnaires have been developed for this purpose and their usefulness assessed by a limited range of interviews. These questionnaires are being upgraded and will then be submitted to the USQ Ethics Committee before being applied to a larger sample of companies and community groups as part of a PhD research program. The ability to reach many of the companies may be limited by the location of their corporate offices in other states or overseas.

The research behind this thesis has established that the existing theories of the firm are of limited value in determining the reasons for the existence, structure, nature and operation of most of the companies exploring for coal or CSG within the Scenic Rim. An enhancement of these theories (or the development of a new theory) to better describe these companies (and all other companies) is a field worthy of future research.

Section 6.10 of this thesis describes the characteristics of a model for community/company interaction that might more equitably distribute both the benefits and disadvantages of mining between companies and their external stakeholders. These characteristics will be further examined as part of a PhD research program and, from community feedback, a detailed model proposed.

11. CONCLUSION

The implicit social contract between society, government and business is changing (Section 7.8) and it is no longer enough for mining companies to expect that the taxes and royalties that they pay and the employment that they provide is sufficient for local communities to welcome them as good corporate citizens. Within the Scenic Rim of South East Queensland, local communities are demanding that their environmental, residential, farming and tourism values (Appendix 3) be respected and that the water resources and good quality agricultural lands on which they depend (Section 7.5) be protected from the damage that mining could bring. These new requirements form part of the answer to the Research Question posed in Section 1.4 and are enlarged upon in Section 7.8. To date, none of the companies exploring for coal or CSG within the region (Appendix 1) has sought to discuss the local additions to the general social contract that the communities want included and then to negotiate a social licence to operate (Section 3.7). External stakeholders (Section 3.6) do have a role to play in helping companies develop and maintain a sustainable advantage and, if the development desires of the communities within the Scenic Rim continue to be ignored, the conflict over mining exploration that has already occurred will continue. Such continuing conflict may make it difficult for the companies to obtain the finance needed to develop their exploration permits further.

Free, prior and informed consent is one model for conflict resolution (Section 3.8) that might be successfully applied within the Scenic Rim but, to date, neither the communities nor the companies have shown any willingness to engage and negotiate a mutually acceptable outcome. Reasons for this conflict are identified in Section 5.7. Community values are illustrated in Appendix 3 and the values and development intentions of the companies identified in Section 6.7.

Thirteen community based organisations that have played some role in representing community values to mining companies are identified in Section 6.8. However, many of these organisations have a narrow focus and have become participants in the conflict that now exists. There is a need for a different organisation that could help both communities and companies to explore and understand what shared value might

arise in the future. The characteristics of such an organisation are recognised in Section 7.9. How such an organisation could be created will be explored in future research as part of a PhD program suggested in Chapter 10.

The role of corporate ethics is outlined in Section 3.6 but none of these standards really helps to understand why companies exist in their established form, why they act the way that they do or why they espouse the values that they do. To reach this understanding requires a more detailed knowledge of TOTF and of their application in real life. Thirteen TOTF are recognised in Section 3.9.3 and a model for evaluating their utility (the Maddox Model) is developed in Section 3.9.2. Such an evaluation is detailed in Appendix 5 and in Section 7.10. None of the theories recognised meets all of the criteria contained in the Maddox Model and only one theory (Stakeholder theory) suggests any criteria against which its validity and reliability might be measured. One of the theories evaluated is Frederick's (2004) theory of the evolutionary firm and this does have some application within the Scenic Rim. Particularly, it partially explains the growth of New Hope Corporation Limited and its evolution from a coal miner to a diversified coal miner, oil producer, coal seam gas explorer, coal to liquids technology proponent and bulk export terminal operator. Both Natural Resource Based theory (Section 3.9.3.9) and Corporate Sustainability theory (Section 3.9.3.13) come close to explaining why corporations might act as they do but they fail the Maddox Model test in other ways.

What is needed is a theory of the firm that encompasses both the birth and growth of a firm as well as explaining its response to stakeholder pressures and market forces. Such an evolutionary theory would also suggest tests for its own validity and reliability. The base for such a theory is outlined in Section 7.10 and its development and testing (for application to all firms) is also part of the PhD research program suggested in Chapter 10.

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**APPENDIX 1: The ultimate ownership of coal and CSG
exploration permits held within the Scenic Rim**

PERMIT NUMBER	APPROX LOCATION	PERMIT HELD BY	ULTIMATE OWNER	REGISTERED OFFICE
SRRC EPP 641 (Part only) EPP 644 EPP 791	Boonah Beaudesert Boonah	Arrow CSG (Aust) P/L BNG Pty Ltd – 70% As above As above	Royal Dutch Shell plc PetroChina Coy Ltd As above RELINQUISHED	London China As above -
SRRC EPC 910 EPC 1109 EPC 1149 EPC 1152 EPC 1249 EPC 1271 (Part only) EPC 1273 EPC 1303 EPC 1313 EPC 1501 EPC 1509 EPC 1524 EPC 1643 EPC 1656 EPC 1660 (Part only) EPC 1662 EPC 2082 EPC 2120 EPC 2127 (Part only) EPC 2172 EPC 2240 (Part only) EPC 2242 EPC 2257 EPC 2364 (Part only) EPC 2374 (Part only)	Rathdowney Map NA Rathdowney Warrill View Rathdowney E of Pilton N of Boonah Beaudesert Hillview Dugandan Map NA Rathdowney Mt Alford Mt Alford Maryvale Mt Alford Aratula Rathdowney Amberley Rathdowney Hampton Boonah Munbilla Aratula Marburg	United Qld Resources P/L Carbon Energy (Ops) P/L Carabella Resources Ltd NA - RELINQUISHED Carabella Resources Ltd Bundaberg Coal P/L Bundaberg Coal P/L Coalbank Ltd Moreton Energy Pty Ltd MetroCoal Ltd Matilda Coal Pty Ltd Coalbank Ltd – 50% Moreton Energy P/L - 50% Downforce Mining P/L)) Golden Cross Ops P/L XMC Australia Pty Ltd XMC Australia Pty Ltd Golden Cross Ops P/L Carabella Resources Ltd Scorpion Energy Pty Ltd Jindal Steel and Power (Aust) Pty Ltd Coalbank Ltd Downforce Mining P/L)) Golden Cross Ops P/L Shenhua International Group Pty Ltd Mineral and Coal Investments Pty Ltd	United Mining Group P/L Carbon Energy Ltd Carabella Resources Ltd - Carabella Resources Ltd Hudson Investment Gp Ltd Hudson Investment Gp Ltd RELINQUISHED - MAR Treasure Wheel Global Ltd MetroCoal Ltd MetroCoal Ltd Cockatoo Coal Ltd Treasure Wheel Global Ltd Treasure Wheel Global Ltd Longfin Holdings P/L 35% HongGuang She – 65% Golden Cross Resources L Xuzhou Coal Mining Group Corporation Xuzhou Coal Mining Golden Cross Resources Ltd RELINQUISHED – JUNE Cuesta Coal Ltd Jindal Steel and Power Treasure Wheel Global Ltd Longfin Holdings P/L 35% HongGuang She (65%) Golden Cross Resources Ltd Henan Shenhua Group Coy Ltd Allegiance Coal Ltd	Caringbah Brisbane Brisbane - Brisbane Sydney Sydney QUARTER 2013 Virgin Islands Brisbane Brisbane Virgin Islands Virgin Islands Brisbane China Sydney China Sydney QUARTER 2013 Sydney Mauritius Virgin Islands Brisbane China Sydney China Sydney
SRRC MDL 138 SRRC/ICC MDL 172	Mintovale Bremer View	Moreton Coal Pty Ltd Zedemar Holdings Pty Ltd	Allegiance Coal Ltd Zedemar Holdings Pty Ltd	Brisbane Brisbane
ICC EPP 641 (Part only) EPC 2127 (Part only) ML 4712 PFL 17	Purga Amberley Ebenezer Jeebropilly	Arrow CSG (Aust) P/L BNG Pty Ltd Scorpion Energy Pty Ltd Zedemar Holdings Pty Ltd Jeebropilly Collieries P/L	Royal Dutch Shell plc PetroChina Coy Ltd Cuesta Coal Ltd Zedemar Holdings Pty Ltd New Hope Corp Ltd	London China Sydney Brisbane Ipswich

PERMIT NUMBER	APPROX LOCATION	PERMIT HELD BY	ULTIMATE OWNER	REGISTERED OFFICE
LVRC EPP 641 (Part only)	SE Laidley	Arrow CSG (Aust) P/L BNG Pty Ltd	Royal Dutch Shell plc PetroChina Coy Ltd	London China
EPC 1145 (Part only)	E Cambooya	Orpheus Energy (Hodgson Vale) Pty Ltd	Orpheus Energy Ltd	Sydney
EPC 1664 EPC 1665	Gatton Laidley	XMC Australia Pty Ltd XMC Australia Pty Ltd	Xuzhou Coal Mining Group Corporation	China
SRC EPC 2239 EPC 2374 (Part only)	Esk Lowood	Coalbank Ltd Mineral and Coal Investments Pty Ltd	Treasure Wheel Global Ltd Allegiance Coal Ltd	Virgin Islands Sydney
EPC 2534 (Part only)	NE Nanango	Coalface Resources Pty Ltd	Moultrie Hire Corporate Pty Ltd	Brisbane

SRRC: Scenic Rim Regional Council

LVRC: Lockyer Valley Regional Council

ICC: Ipswich City Council

SRC: Somerset Regional Council

The permit numbers in the above table are taken from the Department of Natural Resources and Mines Local Area Mining Permit Report All Resources for each of the LGAs identified for May 2013 and May 2014.

The permit holder names are taken from the Department of Natural Resources and Mines Exploration Permit Public Enquiry Report for the relevant permit number.

The ultimate holder names are taken from the Australian Securities and Investments Commission Current and Historical Company Extract for the relevant permit holder name.

**APPENDIX 2: The public parent companies of organisations
exploring for coal or CSG within the Scenic Rim and
the composition of their board of directors**

PARENT COMPANY AND SUBSIDIARY	PERMIT/ LEASE NUMBER	CAPITAL 30/06/14 \$	BOARD COMPOSITION					HEAD OFFICE
			TOTAL	MEN	WOMEN	EXEC DIR	NON EXEC DIR	
Arrow Energy Holdings Pty Ltd		NA	NA	NA	NA	NA	NA	Brisbane
• Arrow CSG (Aust) P/L	) EPP 641) EPP 644	373,391,577	2	2	0	1	1	Brisbane
• BNG P/L	)	60	2	2	0	1	1	Brisbane
Carabella Resources Ltd	EPC 1149 EPC 1249	66,121,000 (30/06/13)	5	5	0	1	4	Brisbane
Carbon Energy Ltd		20 800 000	6	5	1	1	5	Brisbane
• Carbon Energy (Ops) P/L	EPC 1109	5,200,000	3	3	0	1	2	Brisbane
Coalbank Ltd	EPC 1524 EPC 2240	1,683,382	5	5	0	0	5	Brisbane
• Moreton Energy P/L	EPC 1313 EPC 1524 EPC 1656	1	2	2	1	1	1	Brisbane
Cockatoo Coal Ltd		339,007,450	7	7	0	1	6	Brisbane
• Matilda Coal P/L	EPC 1509	1	1	1	0	1	0	Brisbane
Cuesta Coal Ltd		63,600,000	8	7	1	2	6	Brisbane
• Scorpion Energy P/L	EPC 2127	4	2	2	0	1	1	Brisbane
Golden Cross Resources Ltd		57,812,000	7	6	1	1	6	Sydney
• Golden Cross Operations P/L	EPC 2082 EPC 2257	13	3	3	0	1	2	Sydney
Henan Shenhua Group Coy Ltd		NA	NA	NA	NA	NA	NA	China
• Shenhua Internat. Group P/L	EPC 2364	100	3	3	0	1	2	Brisbane
Hudson Investment Group Ltd		52,067,000	3	3	0	1	2	Sydney
• Bundaberg Coal P/L	EPC 1271 EPC 1273 EPC 1643	50	3	3	0	1	2	Sydney
Jindal Steel and Power (Mauritius) Ltd		NA	NA	NA	NA	NA	NA	Mauritius
• Jindal Steel and Power (Aust) P/L	EPC 2172	2	2	2	0	1	1	Brisbane

PARENT COMPANY AND SUBSIDIARY	PERMIT/ LEASE NUMBER	CAPITAL 30/06/14 \$	BOARD COMPOSITION					HEAD OFFICE
			TOTAL	MEN	WOMEN	EXEC DIR	NON EXEC DIR	
Longfin Holdings P/L and HongGuang She		12	1	1	0	1	0	Brisbane
• Downforce Mining P/L	EPC 2242	NA 4,012	NA 1	NA 1	NA 0	NA 1	NA 0	NA Brisbane
Metro Mining Ltd	EPC 1501 EPC 1660	NA	5	5	0	1	4	Brisbane
New Hope Corporation Ltd		95,119,000	7	6	1	1	6	Ipswich (Brookwater)
• Jeebropilly Collieries P/L	PFL 17	200,000	3	3	0	1	2	Ipswich (Brookwater)
United Mining Group P/L		1	1	1	0	1	0	Caringbah NSW
• United Qld Resources P/L	EPC 910	400	2	2	0	1	1	Caringbah NSW
Xuzhou Coal Mining Group Corporation		NA	NA	NA	NA	NA	NA	China (Xuzhou)
• XMC Australia P/L	EPC 1662 EPC 1664 EPC 1665	5,092,969	4	4	0	1	3	Brisbane (Manly)
Zedemar Holdings P/L	MDL 172 ML 4712	1,200	1	1	0	1	0	Brisbane

NA: Not available EPC: Exploration Permit Coal EPP: Exploration Permit Petroleum
ML: Mineral Lease
MDL: Mineral Development Licence

Sources: Data for the Limited Liability companies was extracted from their Annual Report for 2015.
Dara for the Pty Ltd companies was obtained from the ASIC Current and Historical Company Extracts

APPENDIX 3: The values and development desires of communities within the Scenic Rim

ITEM	SRRC	LCC	ICC	LVRC	SRC
Year of consultation	2011	2011	2011	2011	2011
Form of consultation	Post card and on-line surveys, community meetings and workshops and displays at local markets and shopping centres.	Community values survey, focus groups and interviews.	Focus groups	Steering group, website, on-line survey, workshops and postcards.	Community meetings and surveys, reference group meetings and individual consultations.
Number of participants	More than 1 000 people.	More than 1 000 young people and 80 plus community submissions.	Forty two participants drawn from an open invitation to stakeholders.	More than 1 400 people.	23 separate activities but no participation levels given.
Period of plan	2011 – 2026	The LCC did produce a plan for the period to 2026, but, further change to the Local Government Act disendorsed the plan and has no other similar plan in place.	2011 – 2031	2012 – 2022	2010 – 2020
Challenges and development desires	A growing population. Maintain local employment and ensure that new businesses are compatible with lifestyle and environment. Protecting the environment. Sustaining rural industry. Maintaining community infrastructure. Cost of living.	In 2026, Logan is a city of opportunity. It is strategically positioned within a rapidly changing region and global economy. The people live in a dynamic city that sustains their quality of life. Culture, neighbours and generations connect and lifestyles are in harmony with the environment.	Conservation of the natural environment is paramount. Strong and sustainable economy. Movement towards a knowledge based economy.	Managing population and residential growth. Maintaining position as a leading agricultural production zone and securing a farming future. Community and council work together to make good decisions for the region.	Preserving rural character and lifestyle. Creating economic vibrancy through growth and diversity. Protecting and enhancing the natural environment. Providing adequate community services and infrastructure.

ITEM	SRRC	LCC	ICC	LVRC	SRC
What is valued?	Rural and natural heritage. Protecting the environment. Sense of community. Managing growth and development. Diverse and resilient economy. Sustaining lifestyle and liveability. Parks and natural environment. Scenic rural landscape Consultation and participation in decision making.	Active and healthy living. A creative and innovative community. A green and sustainable community. An inclusive and vibrant community. A regionally and globally connected community.	Great appreciation of history. Culture of achievement and opportunity. Dynamic and resilient urban and rural economy. Home to a range of rural industries (such as cattle grazing, fodder production, wine and hydroponic vegetables) as well as defence, manufacturing, health and education.	Community spirit and resilience. Cultural heritage and history. Natural environment. Lifestyle based on small, quiet, safe and friendly communities. Strong links between agriculture, farming and business that ensure that the region becomes a food destination for tourists.	Cultural heritage and rural lifestyle. Environment and natural assets. Peaceful and scenic landscape. Tourism and ecotourism opportunities. Rural industry. Community identity. Economic opportunities building on regional environment and geography.
Attitude to agriculture	Agriculture, native forests and national parks are the dominant land uses. Major areas along the Logan River and on Warrill Creek are rated as good quality agricultural land.	Not mentioned: except that backyard vegetable patches, urban community gardens and local produce markets are to be encouraged.	See above. Environmental and agricultural innovation are features of the local economy.	One of the top ten most fertile farming areas in the world.	23% of region is rated as good quality agricultural land.
Attitude to mining	Stopping activities such as coal mines that irreversibly damage our natural environment.	Not mentioned.	Not mentioned.	Not mentioned.	Not mentioned.

Sources: SRRC: Scenic Rim Regional Council 2011
LCC: Logan City Council 2011
ICC: Ipswich City Council 2011

LVRC: Lockyer Valley Regional Council 2011
SRC: Somerset Regional Council 2011

APPENDIX 4: Reporting on ethics and codes of conduct by the public parent companies of organisations exploring for coal and CSG within the Scenic Rim

PARENT COMPANY	REPORTING AGAINST ASX PRINCIPLE 3	AVAILABILITY OF CODE OF CONDUCT
Allegiance Coal Ltd	Yes – with an emphasis on the functions of the Board of Directors.	A summary of the Code of Conduct is available on the company’s web site – dealings with stakeholders are mentioned.
Carabella Resources Ltd	Yes – extensive Corporate Governance Statement and a summary of policies under Principle 3. NB: The company was taken over by Wealth Mining Pty Ltd and delisted from the ASX on 19 February 2014.	No Code of Conduct has been found: but the company’s web site does contain policies on (i) responsibilities towards stakeholders and (ii) a charter for sustainability.
Carbon Energy Ltd	Yes – contains an extensive Corporate Governance Statement with a concentration on the functions of the Board of Directors.	A summary of the Code of Conduct is given on the company’s web site. It contains a statement of company values – including meeting the expectation of ‘the community’.
Coalbank Ltd	Yes – contains a Corporate Governance Statement with a summary of performance against ASX principles. Principle 3 reporting concentrates on gender diversity. NB: In September 2013, a (successful) proportional takeover bid (75%) was made by Treasure Wheel Global Ltd.	No mention of a Code of Conduct but there is a mention of ‘significant stakeholder interests’.
Cockatoo Coal Ltd	Yes` - however, the Corporate Governance Statement concentrates on: <ul style="list-style-type: none"> - access to coy data - share dealings and disclosure - conflict of interest - related party dealings - board diversity. - 	Yes – a formal code of conduct exists.
Cuesta Coal Ltd	Yes – the Corporate Governance Statement concentrates on Board Functions. Only Section 3.1 of Principle 3 is fully complied with (Code of Conduct).	Yes – a formal Code of Conduct (for Directors and Key Officers only) can be found on the website. Senior officers are required to consider impacts on the environment, health and safety and competition when making business decisions.

PARENT COMPANY	REPORTING AGAINST ASX PRINCIPLE 3	AVAILABILITY OF CODE OF CONDUCT
Golden Cross Resources Ltd	No – However, the Board has adopted policies on ethics and the environment (p.54).	No – but a Code of Ethics, Risk Management and Environmental Policy can be accessed on company’s web site.
Hudson Investment Group Ltd	Yes – the Corporate Governance Statement contains an extensive report against all ASX principles.	Yes – a formal Code of Conduct (for all Directors and employees) is on the company’s web site.
MetroCoal Ltd	No – the 2013 Annual Report contains no response to the ASX reporting principles. It does contain a section ‘MetroCoal in the Community’ that is about social responsibility.	The company’s web site contains an extensive Corporate Governance Charter (48pp) that contains both a statement on Corporate Ethics and a Code of Conduct.
New Hope Corporation Ltd	Yes – The existence of ethical standards is confirmed. Measurable objectives relating to culture, pay equity and diversity of opportunity exist.	Yes – a formal code of conduct exists.

NB: The ASX Principle 3 refers to ethical and responsible decision making.

Sources: The data in Column 2 was taken from the Annual Report 2013-14 (obtained either in hard copy or on-line) for the relevant company and the data in Column 3 was extracted from (usually) the Corporate Governance section of each company’s web site.

APPENDIX 5a: Evaluation of theories of the firm

EVALUATION CRITERIA (Maddox Model)	NEOCLASSICAL THEORY	CORPORATE ENTITY THEORY	MANAGERIAL THEORY
Does the theory develop or explain reasons for the existence of the firm?	Yes – the firm is a more cost effective means of production than are sole traders and other unincorporated entities.	Yes – the legal base for the formation and continued existence and operation (e.g. multiple shareholders, limited liability, separation of ownership and management, property rights and perpetual existence) of business enterprises is explained.	Yes – in that the firm exists as a vehicle for the maximization of benefits to the managers.
Does the theory explain the obligations of the firm to its stakeholders? (i.e. What drives enterprise strategy?)	Yes – in that the objective of the firm is to maximize profit for its shareholders. Any obligation to other stakeholders or the time scale for maximizing profit is not considered.	Yes – the obligations of the firm and its senior managers to shareholders are clear. However, present Australian corporate law does not stop consideration of obligations to other stakeholders.	In part – the need for a profit level that is acceptable to shareholders is recognised, but any obligation to other stakeholders is subservient to maximizing benefits to managers.
Does the theory explain what shapes the business organisation?	No – matters relevant to internal divisions within the firm and to the use of technological advances are not examined explicitly but are subsumed within the marginal cost/marginal revenue debate.	No – Australian law allows for corporate ownership of other corporations but does not explain the reasons that such a structure might happen.	No
Does the theory explain what motivates firm	Yes – the sole driver is the maximization of profit for	No	Yes – in that the maximization of revenue (rather

EVALUATION CRITERIA (Maddox Model)	NEOCLASSICAL THEORY	CORPORATE ENTITY THEORY	MANAGERIAL THEORY
behaviour?	shareholders. The values and needs of other stakeholders are not considered as the satisfaction of such needs would decrease the profits available for shareholders.		than profit) is the goal and expenditure on items (such as promotion, pricing and advertising) that will increase revenue will dominate.
Does the theory explain what shapes the firm's moral posture?	No – the values and ethics of the firm are not considered.	No – in that many businesses have objected (in parliamentary hearings) to proposals to introduce compulsory corporate social responsibility and sustainability reporting (see discussion in Section 5).	No
What tests are available to support the validity of the theory?	Nil - economics is not a natural science in which laws can be proved or disproved. The validity and reliability of the theory rest in that it describes the normal behaviour of a large number of firms. Attempts by Hall and Hitch (1939), Lester (1946), Machlup (1967) and Hornby (1995) to validate (or invalidate) the theory by empirical work did not provide irrefutable evidence.	Nil	Nil – work by Hornby (1995), Jobber and Hooley (1987) and Shipley (1981) failed to provide conclusive evidence to support the theory.

APPENDIX 5b: Evaluation of theories of the firm

EVALUATION CRITERIA (Maddox Model)	TRANSACTION COST THEORY	CONTRACT THEORY	PRINCIPAL AGENCY THEORY
Does the theory develop or explain reasons for the existence of the firm?	Yes – in that firms exist because the cost of providing internal support and services is less than that of obtaining similar services, by contract, in the market place.	No – the theory describes how a firm might operate after it has been formed.	No – the theory describes how a firm might operate after it has been formed.
Does the theory explain the obligations of the firm to its stakeholders? (i.e. What drives enterprise strategy?)	Yes – in that it is derived from neoclassical theory and thus obligations to shareholders are paramount. The costs of negotiating, fulfilling and/or enforcing many contracts are avoided and profits are maximized.	Yes – in that it is derived from neoclassical theory and thus obligations to shareholders are paramount. The costs of negotiating, fulfilling and/or enforcing contracts are less than the costs of providing similar services in house and so profits are maximized.	Yes – in that the actions of managers and other staff must be designed to maximize returns to the owners (the principals) of the firm.
Does the theory explain what generates business productivity and profitability?	Yes – in that the cost of providing in house activity is less than that associated with obtaining the same support in the market place.	Yes - The costs of negotiating, fulfilling and/or enforcing contracts are less than the costs of providing similar services in house and profits are maximized.	Only in that by appointing agents, the principals seek skills that will maximize their profits.
Does the theory explain what shapes the business organisation?	Yes – in that multiple divisions will be created within the enterprise and technology adopted provided that the costs of doing so are lower than would be the costs of obtaining equivalent support in the market place.	Yes – in that manufacture and supporting services will be obtained by external contract if the costs of doing so are less than the costs of manufacturing and providing such activities in house.	Yes – in that it is the wishes of the principals that shape product range and markets into which those products might be offered.
Does the theory	Yes – in that firms will	Yes – in that firms	Yes – in that

EVALUATION CRITERIA (Maddox Model)	TRANSACTION COST THEORY	CONTRACT THEORY	PRINCIPAL AGENCY THEORY
explain what motivates firm behaviour?	always behave in a way that minimizes the costs associated with any action. (e.g. firms would not work with external stakeholders if the cost of doing so was more than the costs associated with ignoring them).	operating under this theory are profit maximizers and the behaviour of managers and other staff will be directed towards this end.	objectives are set in accord with the values and ethics of the principals and these are reflected in the behaviour of the firm.
Does the theory explain what shapes the firm's moral posture?	Yes - in that such firms would not adopt a more ethical stance (e.g. caring for the environment or for a local community) if the cost of doing so was more than the cost of ignoring such issues.	Yes – to the extent that large firms operating by external contract might attempt to use their size and financial might to impose terms that are to their advantage on their contractual partners.	Yes – in that the moral posture of the firm reflects the values and ethics of its principals.
What tests are available to support the validity of the theory?	Nil	Nil	Nil

APPENDIX 5c: Evaluation of theories of the firm

EVALUATION ITEM (Maddox Model)	RESOURCE BASED THEORY	NATURAL RESOURCE BASED THEORY	BEHAVIOURAL THEORY
Does the theory develop or explain reasons for the existence of the firm?	Yes – in that the firm would not come into being if its resource base did not give it a competitive advantage.	Yes – in that the firm would not come into being if its natural resource base did not minimize its product life cycle costs and/or give it a base for sustainable development.	No – firms are said to consist of a number of decision makers – many of whom will have different objective: but this describes what can happen after a firm is formed and does not give a reason for the formation.
Does the theory explain the obligations of the firm to its stakeholders? (i.e. What drives enterprise strategy?)	No – but it does suggest that the firm would develop links with its stakeholders that could improve its competitive advantage.	Yes – to the extent that the firm’s natural resources would be maintained and/or developed to improve its competitive advantage.	Yes – but only to the extent that firms could aim for a satisfactory level of profit whilst pursuing other objectives at the same time. These other objectives would also be those of the firm’s principals and agents.
Does the theory explain what generates business productivity and profitability?	Yes – diversity in the work force (and in the boardroom) could bring a wider range of experiences that could lead to improved ways of performing tasks.	Yes – in that the firm would act so as to minimize waste and pollution.	No
Does the theory explain what shapes the business organisation?	No	Not particularly. Although the firm would act to reduce waste, pollution and adverse impact on its environment, the theory does not suggest how it would do this.	No

EVALUATION ITEM (Maddox Model)	RESOURCE BASED THEORY	NATURAL RESOURCE BASED THEORY	BEHAVIOURAL THEORY
Does the theory explain what motivates firm behaviour?	Yes – in that the firm would act so as to build and retain resources that are valuable, rare, inimitable and non-substitutable.	Yes – in that the firm would not act so as to harm its relationship with the natural environment (and so damage its competitive advantage).	No
Does the theory explain what shapes the firm's moral posture?	Yes – in that the firm would exhibit values that would build and retain links with stakeholders so as to improve its competitive advantage.	Yes – in that the firm would act to minimize waste, pollution and its impact on the natural environment.	Yes - in that the firm would exhibit those values that would maximize the returns to its managers
What tests are available to support the validity of the theory?	Nil	Nil	Nil

APPENDIX 5d: Evaluation of theories of the firm

EVALUATION ITEM (Maddox Model)	STAKEHOLDER (incl shareholder) THEORY	EVOLUTIONARY THEORY	CORPORATE SUSTAINABILITY THEORY
Does the theory develop or explain reasons for the existence of the firm?	Yes - to the extent that the firm is created to meet the needs of a coalition of stakeholders.	No – in that the theory concentrates on how the firm changes and grows after it has been created.	No – the theory is directed at how the firm might remain in existence rather than at how or why it was created.
Does the theory explain the obligations of the firm to its stakeholders? (i.e. What drives enterprise strategy?)	Yes – in that in order to succeed over time, the firm must keep the interests of its stakeholders aligned and going in the same direction (i.e. the firm must consider the impact that stakeholders could have on its projects).	Yes – in that the theory suggests that the firm might need to change so as to drive its competitors out of business and not be driven out of business by its competitors. By remaining in business, the firm would serve the needs of its shareholders (at least).	Yes – in that the firm would exist to ‘foster the evolution of more sustainable societies’.
Does the theory explain what generates business productivity and profitability?	No	No	No – the theory merely states that the firm is a profit generating entity.
Does the theory explain what shapes the business organisation?	Only in that the theory suggests that the nature of the organisation might need to change so as to better meet the needs of its many stakeholders.	Yes – in that the evolutionary firm is a learning organisation that is based on knowledge development, processing and storage and so will adapt its structure and strategies to meet needs.	Yes – in that the firm is a profit generating entity and that it must comply with laws, maintain its competitive advantage and maintain a social licence to operate.
Does the theory explain what motivates firm behaviour?	Yes – in that the firm is a framework of business ethics and organisational management that addresses moral	Yes – in that the firm is motivated by profit but is not considered to be a profit maximizing entity.	Yes – in that the firm is a profit generating entity but must also maintain a social licence to operate and contribute to the

EVALUATION ITEM (Maddox Model)	STAKEHOLDER (incl shareholder) THEORY	EVOLUTIONARY THEORY	CORPORATE SUSTAINABILITY THEORY
	and ethical values (that is, those values held by its stakeholders). Freeman's Principle of Stakeholder Recourse (n.d.) suggests that stakeholders would be able to bring an action against the directors if they failed to perform the required duty of care.		evolution of more sustainable societies.
Does the theory explain what shapes the firm's moral posture?	Only in that the firm must address moral and ethical values in the management of its business.	Yes – in that the evolutionary firm is a learning organisation based on knowledge development, processing and storage and so will 'learn' those moral and ethical values that best help it to achieve its goals.	Yes – in that the firm is a network of stakeholder relationships, that it must maintain a social licence to operate and that it must empower its stakeholders.
What tests are available to support the validity of the theory?	The ladder of stakeholder engagement proposed by Friedman and Miles (2006, p. 162) could be used to assess whether or not (and how well) the strategies being implemented by the firm recognise and fulfil stakeholder expectations.	Nil	Nil - the theory is relatively new (2015) and tests for its validity have not been proposed as yet.