

Donaldson Coal Pty Limited

**ABEL UNDERGROUND MINE
PART 3A ENVIRONMENTAL
ASSESSMENT**

Appendix B1

Community Consultation



Public Briefing for Abel Underground Mine – 2 March 2006. At Blackhill Public School

The meeting was chaired by Mr. Milton Morris.

Mr. Alick Osborne and Mr. Mark McPherson gave a presentation on the proposed underground operation known as Abel Underground Mine.

Following the presentation, the Chairman opened the floor to questions from the public (67 members present). The following are questions asked and answers offered.

Q What is the thickness of the seams?

MM 1.8 – 2 m

Q What's going on the northern side of John Renshaw Drive?

MM A seagull intersection is being constructed. Reasons are

- Regional Committee requirement following the approval of the Donaldson Coal open cut.
- Tasman Coal being hauled into Bloomfield washery
- Talk about industrial area on Ashtonfield land.

This would also be the entry for Abel mine.

Q The initial plan for the infrastructure – ROM infrastructure, how close is the ROM to JRD?

AO the base of the stockpile will be some 40m below ground level.

Q top of stockpile?

Q 1. Diagram – showing complex array of issues, households etc. doesn't this then clearly demonstrate that the proposal is marginal?

2. If the Donaldson Coal mine wasn't there would anyone else have looked at the underground? That is the resource?

MM Yes there is a benefit.

Areas highlighted aren't no go but where we have to do more detailed investigation.
Lot more coal than 100 million...about 160million

Q Not answering the question

Q Why don't you extend the existing open cut somewhere else?

MM Doesn't create many disturbances

Close to the port

The coal here is VERY good coal

Semi soft coking coal

Q Would it be marginal if Donaldson Coal wasn't there?

MM Maybe

Q Donaldson mine is an open cut....with starting up an underground mine at the moment.
What experience do you have?

MM We have a lot of underground engineering experience but I don't have any previous underground experience.

Q The tonnes per employee is on par with Hunter Valley #1

- What impact development on future development in the area?
- AO We don't see any change
- Q Not in terms of regulations – my family have 3 blocks to build on. Do we need to convey the location to the mine?
- MM no – it's a 20 year plan
The MOP is reviewed every 7 years
- Q The ventilation structure – will it have a fan?
- MM Yes it will be located on company land south of JRD. (pointing to it on the slide)
- Q Second workings – will it be shuttle cars?
- MM No take out pillar of make the road ways wider (....??)
We intend to use continuous miners with underground conveyor belts.
- Q Dr Steele Will there be a Commission of Inquiry like there was for the Donaldson Coal open cut?
- AO Legislation has changed – still provision for COI but now there is also the Independent Panel. A number of coal mines have had them.
- Q What would trigger it?
- AO Don't know – don't think it's the public or the proponent.
- MM A panel would look at definite or specific issues.
- Q Number of difficulties to avoid. Houses etc. are there examples of other mines that have done it?
- MM We will have a consultant at the next meeting that will be able to answer that.
- AO Not long wall -we're using more flexible
- MM Long walls take a lot out
- Q Have people successfully looked /done it?
- Q It appears that one third of mining lease is north of Blackhill road.
- MM years 1 – 7 years to the top of Blackhill
- Q James Ryan – subsidence. Indicate areas where you will take special care. It is part of three catchments. But subsidence over the entire catchment may harm the catchment.
- MM We need to look at the creeks and the effects of subsidence.
We have 6 years data on creeks on the northern side of Blackhill. We have great deal of confidence north of Blackhill.
Need to do more monitoring of that area south of Blackhill
- Q If you are having a meeting on the 22nd then you already have a subsidence plan now?
- MM we have a proposal.
- Q So when people come back on the 22nd would you have a plan for each individual lot?
- MM No – would think that people would want to spend couple of hours talking about it. The consultant (Dr Russell Frith) will be looking at it.

Q Minister can still ask for COI.

? Yes

Q How long is subsidence valid for?

MM Mine subsidence Board (MSB) will look at it. That's why we pay into their fund.

Q So who identifies subsidence area?

MM MSB

Q Does MSB look after sheds, dams etc?

Milton Yes – at Teralba the sheds were covered and dams were covered as well. The MSB is fairly flush with funds.

Q I heard what you say about MSB. People have had troubles with them in the past. Not true but although it's a government body are the people employed by the industry?

Milton MSB is a statutory body with Alan Coutts as Chairman of that Board. There are representatives from Council, the mining companies and people appointed by the minister.

Milton Some of the questions may be answered at the next meeting.

Q Cumulative impact of this proposal with the previously mined areas??

People will be aware of the holes/subsidence over the years. The new mine beneath this. Will there be an impact with the new mine and how will that affect the mine and subsidence?

MM Can't answer you. That's why we've got the consultant (Dr Frith) should be able to answer that question.

Q As the mine moves south will there be an extra ventilation shaft or second means of egress?

MM No

Q Will this area be quarantined for the next 20 years for say subdividing?

AO Shouldn't affect any development. Has had an exploration lease over it for years. Doesn't interact with planning provision.

Q Would the building costs increase due to the footings increasing in size?

AO Will answer that at the technical session at the meeting in March.

Q In response – I've done work for Newcastle Council in Merewether and previous areas.

Definitely yes the plans are referred to the MSB and does increase building costs. Not quite the details but the engineering increases generally cost more.

Q Line on the plan south of JRD is mine subsidence area?

MM MSB has removed this requirement before 1997?

Q How far beneath ground level do you need to before you don't feel or hear it?

MM Probably 50m?

Q This approval process – 20 years. Will there be any provision to review the approval over the seven years?

AO Yes – at Donaldson Coal we put in an Annual Report and if it doesn't meet the requirements then they can shut us down.

Q Say can there be a secondary approval every 7 years?

AO Mine subsidence plan every 7 years.

Milton Would ask the Company to note the questions about Mine Subsidence.

Q Mining leases held by the company?

MM On the slide.....showed the leases.

Q John Feenan

Own significant parcel of land. We have significant aspirations for the land and hope in future year's aspiration

Fair to say that we are anxious. We have had a number of discussions with the company. They have been very good and listened to us and have made good noises. From their prospective there are no deals done. Hopefully we can all work together.

They're coal miners and want to get the coal out.

Q2 375 jobs – how does this match with the open cut over the road? Are they additional jobs or 375 across the road and wont have jobs at the end?

MM Donaldson Coal has approval for 2012. Has about 85 people there. It is an open cut. We couldn't move them at once.

Generally open cut people don't want to work underground.

The bulk of the jobs would be new jobs.

Q2 Down 20 – 30 years down the track?

Q3 Mr. Chair the consultative committee?

How many are represented? Who nominates? How often does it meet?

Milton With respect to the committee – I have to make recommendation to the minister.

Donaldson on has four. Dr Steele was the only representative today because the other two said we don't have any complaints and that everything is going well.

Another committee has seven because it's more diverse.

The minister appoints 2 reps from the company. One would be the environment manager.

One from MSB and one from the council. Each is considered on their merits.

John Feenan then told the meeting about the demountables that they are going to be stored onsite for future uses at other schools. They don't have any approvals for schools etc.

Q In the applications, the air monitoring and noise monitoring in Fig 11 isn't the monitoring locations but is the footprint. Doesn't say where the Dust Deposition Gauges are.

MM Thanks

- Q NSW planning hunter thornton/killingsworth. How does this take it into account? If this was to be a subdivision of say one acre? Where does it become un financial?
- AO Lower hunter draft plan is to be adopted maybe by the end of this month. Local council are required to comply with it then. Draft plan had very little developed in this area especially south of JRD.
- Q But if it went down to 1 -2 acres. Your plan wouldn't work?
- AO If we go through there first there's no reason it wouldn't work in subdivisions.
- Q Does the house include septic tanks etc?
- AO Yes would have to be.
- Q We were subject to MSB rules. We were negotiating to build houses. Lease was dropped because it wasn't financially viable. Does it apply to yours?
- MM Id say yes due to the EL.
- Q RE building troubles, There was problem with MSB put that many restrictions we nearly gave it away. But now it was gone and we could do what we want.
- Milton We will have a report at the next meeting.
- Q Re bushfire requirements – if we can't build brick then are we going to be up for additional costs?
- Q Is Donaldson Coal proposing any benefits for Blackhill?
- AO Not yet. Donaldson job creation trust- donating \$1million over past 6 years Doing other things as well. Education in schools. We are doing things
- Q Modifications to Bloomfield. Have you included Ashtonfield residents in your consultation?
- MM This meeting was particular for the land holders in Blackhill.
- Q Don't understand the road comments? Is Tasman coming in? YES
What additional development would there be on Bloomfield's?
- MM Regional Traffic Committee had two issues:
Donaldson Coal traffic
Ashtonfield were looking at industrial area.
The intersection is designed to take 2500 vehicle movements a day.
The RTA said that the location was the only suitable location on JRD.
- Q What requirements then?
- MM Only about 85. I argued why don't we stay off the New England Highway and they said No.
- Q What is the traffic from Tasman?
- Mm About 113 loads per day.
- Q Twice that in truck movements? YES
- Q What is the link with Tasman and Donaldson?
- MM Tasman is owned by NCC which is 100% owned by Donaldson Coal.
- Q Will there be a connection up to Tasman underground?

The coal is more valuable than us people!

MM No it's not.

There is a 2 ½ klm gap between Tasman and Abel.

And there is about 300 m vertical difference between the seams

Q I've had 3 mines on my property and no one wants to know about the properties because they've got fall-ins on them.

MM I don't think so.

Q Mark Russo, Stockrington. I'm going to leave the meeting more troubled than when I arrived. If you think that the company is going to consider people? As Kerry Packer said you need your head read!

What we should have is a Stockrington/Blackhill action Committee. Suggest those that are interested in the committee stay behind afterwards.

Feenan – if you have trouble with the subdivision etc you have more problems with the lower hunter strategy. Then you need to make submission because you may not be able to subdivide it.

The meeting closed at 9.08 pm.

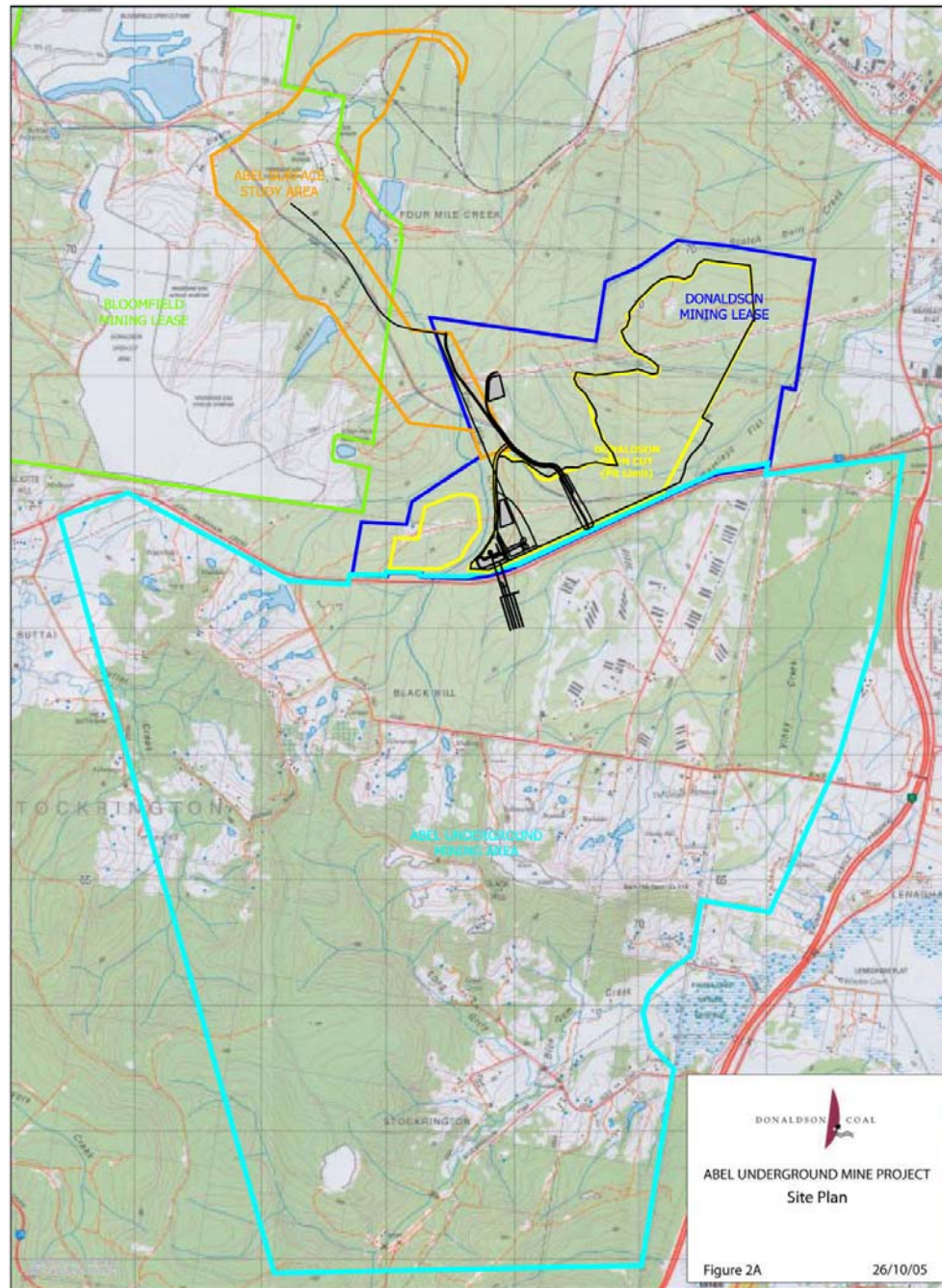
ABEL UNDERGROUND MINE

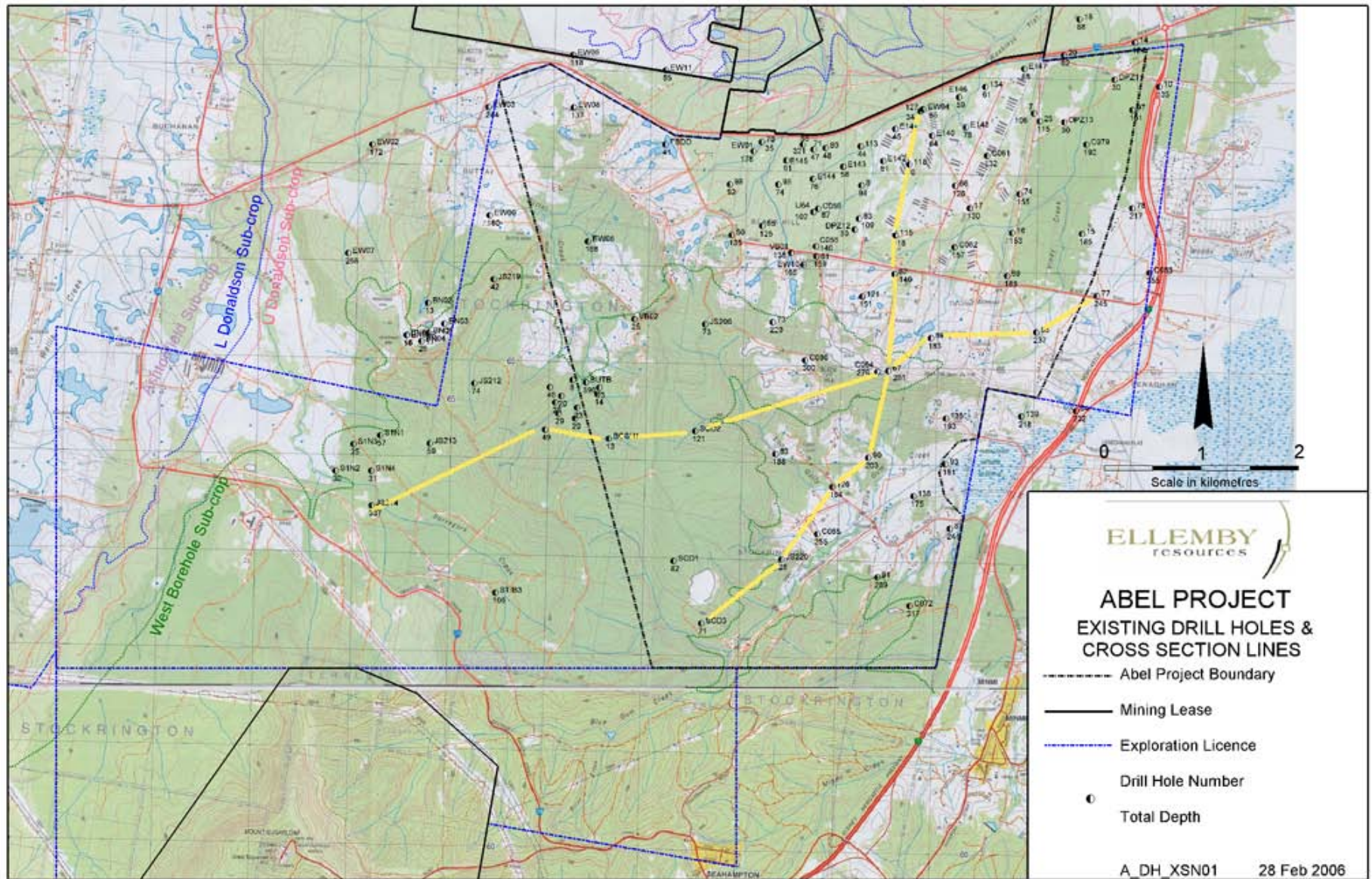
Agenda

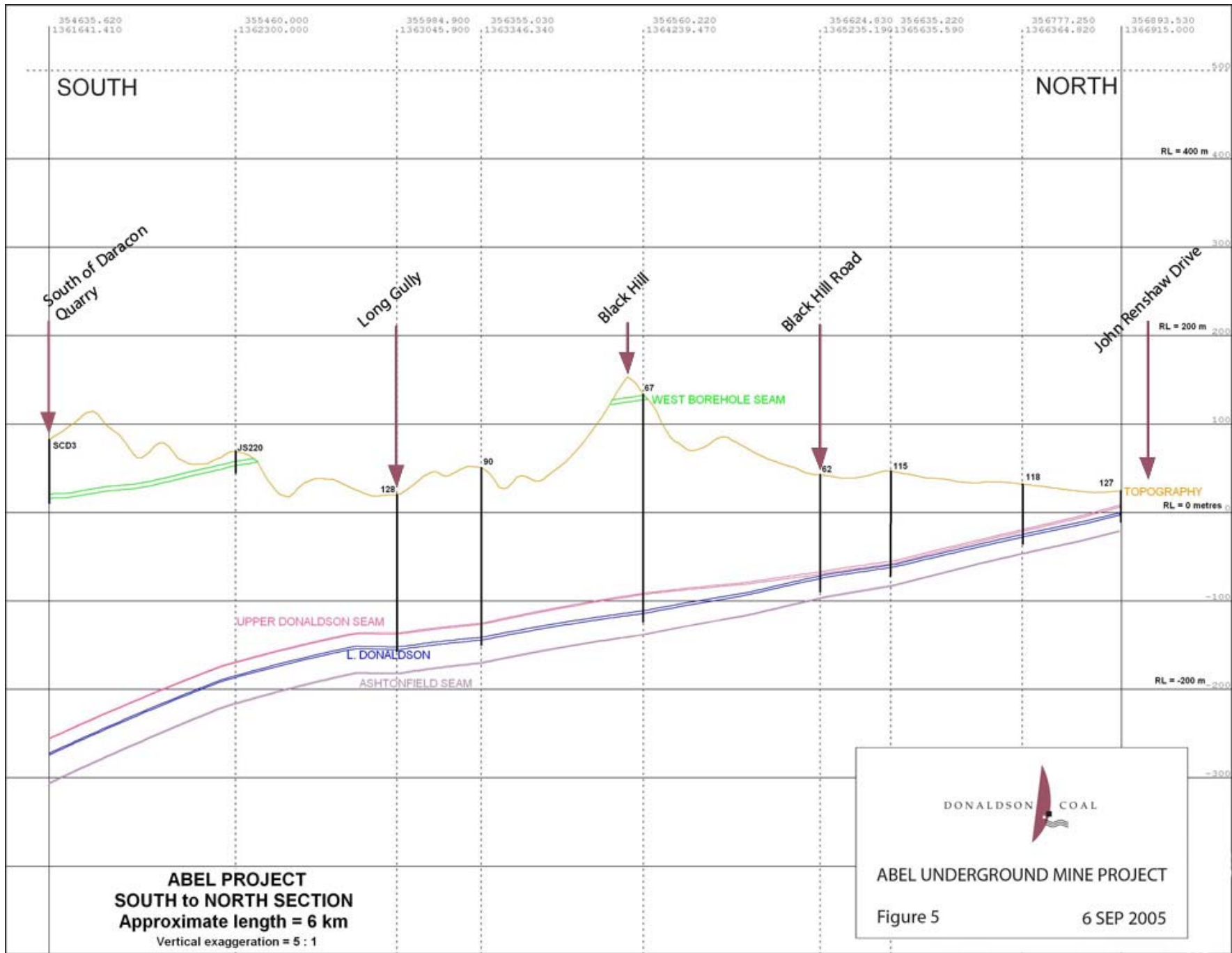
- Introduction
- Coal Resource
- Project description
- Key Issues for the study
- Areas for special consideration
- Approval Process
- Consultation

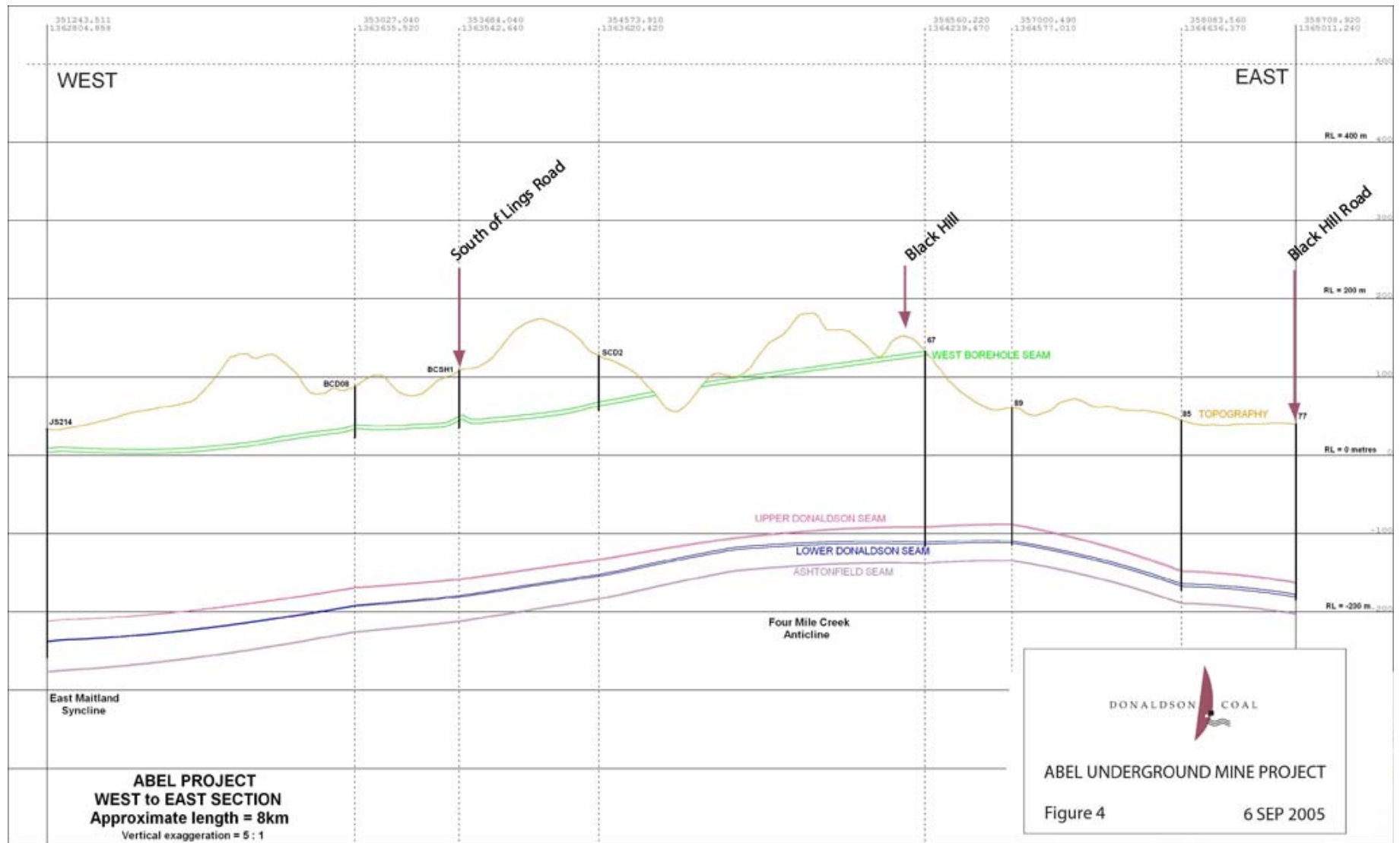
Key Points

- Underground operation no extension to the open cut.
- Continuous miner not longwall operation
- Key infrastructure north of John Renshaw Drive on Donaldson and Bloomfield land.
- More information sessions planned







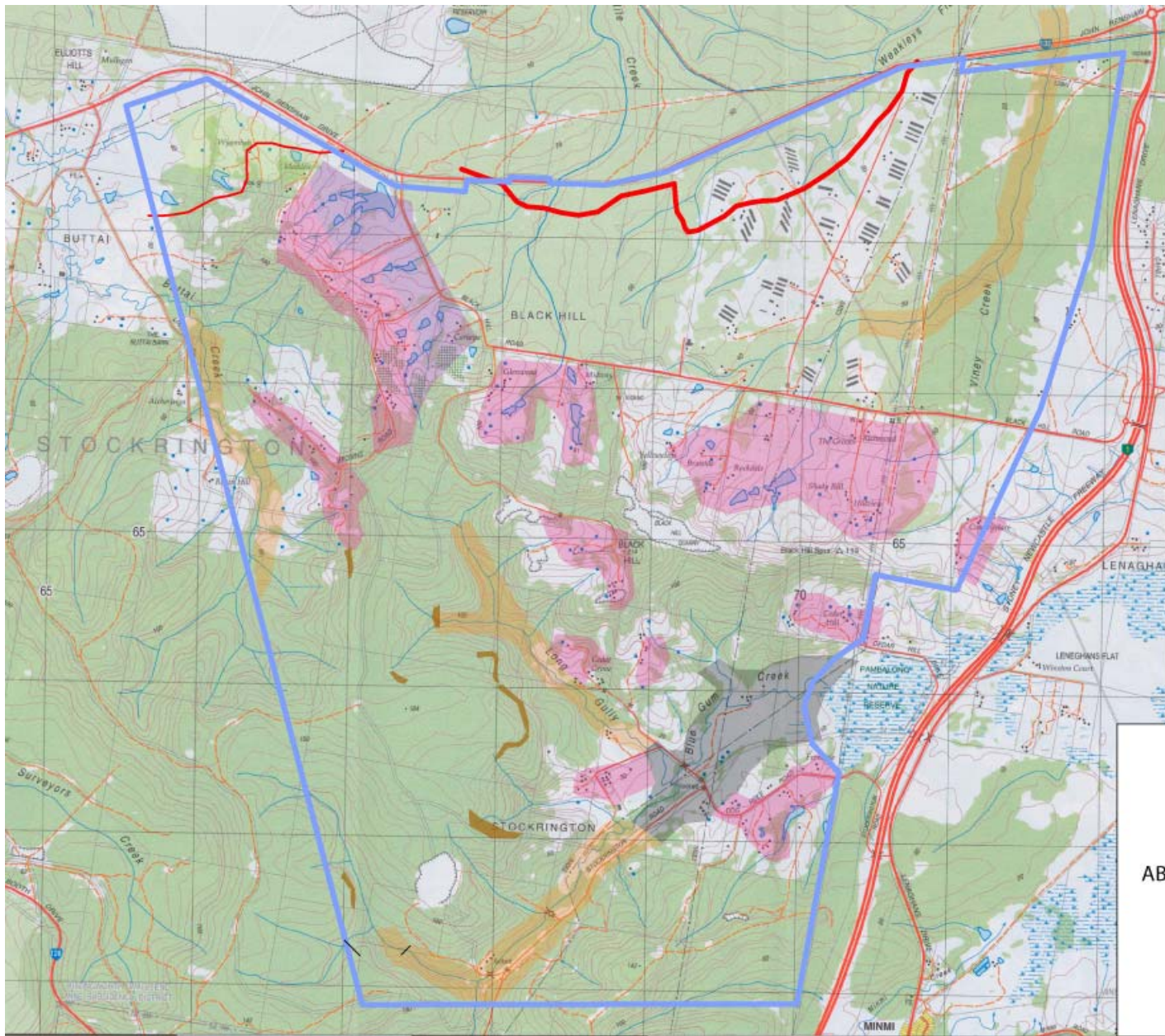


Areas for Special Consideration


- Man Made Structures
 - Houses and sheds
 - Dams
 - Powerlines
 - Pipelines
 - Roads
 - Fibre optic cables

Areas for Special Consideration

- Natural Structures
 - Creeks
 - Swamp areas
 - Cliffs
 - Underground aquifers



- Areas with Dwellings Managed Subsidence
- Low lying area of Blue Gum Creek
- Schedule 2 Water Courses
- High concentration of farm dams
- Low lying flat area part of Buttai Creek
- 30 metres Depth of Cover
- Cliff Lines



ABEL UNDERGROUND MINE PROJECT
Special Study Areas

01/03/06

Mining Method

- Bord and Pillar with secondary extraction
 - Extraction flexibility to manage surface subsidence
 - This will protect surface structures
 - Creates a significant numbers of jobs

Consultation

- Landholder liaison committee
- More information sessions
- Subsidence workshops
- Individual requests for information
- Visits to landholders to discuss aspects of the mine plan and development regarding their specific property

Approval Process

- Project application
- Planning Focus meeting
- Director General of Planning NSW requirements
- Environmental assessment
- Public display of Environmental assessment
- Public input to Planning NSW
- Response of applicant to public input
- Potential Project modification
- Decision by NSW Planning Minister

Second Public Briefing for Abel Underground Mine – 22 March 2006 at Blackhill Public School

The meeting was chaired by Mr. Milton Morris.

Mr. Morris advised that he had received three nominations for the Abel Community Consultative Committee as follows:

- Mr. Allan Jennings
- Mr. John Feenan
- Mr. Brad Ure

Mr. Morris advised that he has written to the three people and welcomed them to the Committee. The first meeting is to be held next Tuesday 28/03/06 at 4pm at the Blackhill School.

Mr. Alick Osborne gave a brief introduction to the meeting and the purpose of the evening's meeting. Mr. Osborne introduced Professor Russell Frith.

Professor Frith gave a presentation to the meeting on subsidence.

Following the presentation Mr. Morris opened the floor for questions.

The following is a précis of questions asked:

- Q What structures ought to be taken into account? Are the ridge/cliff lines to be looked after/protected?
- RF They're not ignored; I focused on structures as I thought most are land owners. The company is looking at ridges with another consultant. The mining company will have to demonstrate how they have looked at them.
- Q How does that happen? Who stands up for the ridges?
- AO We have various consultants looking after them and an area of rainforest and Pambalong reserve will be looked at as well.
- Q What about aquifers
- RF Consultants already are looking at aquifers – where and what needs and impacts etc. If unacceptable, the mine layout will be changed until it's not an issue
- Q What stage are you upto with the Mine Subsidence Plans and integrating them into the mining plan? If it is existing hw can we look at it?
- MM Consultants are looking at the mine subsidence plan with respect to creek lines, cliff lines, rainforest etc. If there is unacceptable impact then the mine plan will be changed again. Time line? MSB – concept plan provides boundaries for future.....we need to do a mine subsidence plan at least every 7 years
- Q Still not answering the question. Under impression that a detailed mine plan with the Mine Subsidence plan is to go through the community assessment process?
- MM Project gets approved through Dept Planning then Mine Subsidence Plan is submitted.
- RF Section 138 is made and this is where the Mine Subsidence Plan is required for approval.

- Q So you're really saying that the Mine Subsidence Plan won't be available during the EIS process?
AO No – it is for different departments.
- Q This seam.....does it matter more what composition of strata is on either side of it?
RF Strength of pillar is the height and width ratio.10m the pillars are indestructible. Thinner the seam - the improved stability.
- Q Are you Taking other stuff out?
MM You don't take anything out except the coal.
- Q Ironbark Mine Subsidence Area?
MM It was removed in the late 90's and stopped at Blackhill Road. It didn't come south of Blackhill Road. For all intense and purposes it doesn't exist but for MSB to become involved in Mine Subsidence area has to instigated.
- Q Is there a sunset clause on duration of Mine Subsidence Board?
MM No – Coal and Allied walked away from deposit.
AO Some of the highest value properties in Newcastle and Maitland are over Mine Subsidence areas.
- Q Propensity for acid mine drainage
MM One of the things that ground water consultant looks at. We are at significant depth. The shallow groundwater aquifers probably wont be involved.
- Q But what about the Greta seam?
RF Different at Donaldson. The Donaldson seam has lower sulfur content than the Greta Seam.
- Q Angles of incidence – any guess?
RF Maximum 25 – 30 degrees from data I've seen. 26 ½ degrees generally taken on the limit.
- Q You didn't comment on accumulated affect with the old/new mine. What reliable maps exist for that mine.
RF Personally I haven't seen the mine tracings. I haven't seen them. A lot of records exist due to age and record.
- Q That does not take a lot of field work etc. You are basing calculations on something not very reliable? If this land has been undermined
RF Up to the engineers to review
- Q But unless you do the field work you can't assess?
RF Existing workings are in the South eastern corner and this it's the deepest area. I'm assuming dwellings are not going to be affected.
- Q I know areas where 1 acre of land fell in recently.
- Q That's why there is questions asked about ridgelines etc. Not a lot of residents vs. ridgeline. No one specific department looking after the ridgelines.
MM If the model shows that ridgeline will be affected unacceptably then we won't mine beneath them.

- Q Current review of mining act – will this process be caught up in it?
MM This is done under the Planning act. The mining Act would be to do with mine safety.
Morris Neville Warns investigations mostly due to safety in mines due to Gretley disaster.
- Q Seam drops deeper as you come away from Donaldson. How do you do the trade offs?
Shallow vs. deeper?
RF Shallower is safer to mine - there is greater subsidence, as you get deeper, the stresses increase, and mining gets harder.
- Q As an expert what density of structures (vs. depth) would need to be before mining's stir pie
1 acre lots or something.
RF Chicken / egg scenario. If there is no mining then MSB won't let development go ahead.
An example down the road. If mining then take into account subsidence e.g. Gretley.
Once subsidence has occurred then it makes it more easy to gain approval.
- Q 50 and 100m what sort of subsidence?
RF Same about 60% of height into the centre then levels out to the pillars. E.g. 2m would be
1.2m at the centre.
- Q Over what time frame?
RF Weeks to months.
- Q When you say shallow depth say 50 – 100m?
RF Yes
- Q 200m cover is cleared land at Blackhill
RF Yes
- Q So you expect subsidence to happen quickly
RF Yes
- Q Will it cost more for development e.g. increasing footings etc
RF Unsure
- Q You said mines here before
RF Would it increase?
AO If classified as Mine Subsidence Area then council then MSB for approval.
- Q If you're getting \$115 per tonne.....quite substantial monies.....40 – 50 years we are
adding additional costs for building for future generations.
Substantial dollars being made by the Company now. Why not have a fund?
MM \$115 is for Queensland mines. Semi soft coal is more like \$85 in today's market.
- Q Just concerned for future generations and the costs.
MM I don't disagree
- Q About time they got some money
MM Government gets taxes, royalties etc. It doesn't all go the mining companies.
- Q Hills and hollows with subsidence? Where does it start to go deep?

- MM Blackhill Road – 100 – 150m then 200m at the crest. But shallower near the swamp. Stays about 200m behind Blackhill.
- Q So we're looking at having hills and hollows between Blackhill and Buttai?
MM No
- Q We don't want major subsidence – which would lead to water loss etc.
MM Dams have to be looked after – considered infrastructure.
- Q I know up in the hill it won't hold water. Will we be able to build dams in the future?
MM That's why we are looking at creeks etc.
- Q Part of our 20 year plan would look at 20 years.
MM No we look at 7yr time frame.
- Q I can understand if all care taken but what happens if we get damage?
MM Mine Subsidence Board is funded by companies to provide for future fixes.
- Q Valuations are huge in the areas with Mine subsidence board. We will loose our valuations.
MM If we damage house then we will fix it.
Morris If there is indication that house could be affected by the mining then they will take photos etc.
- Q Russell mentioned movement in soils. How is the baseline made say 5 – 10 m +/- How do we determine that the variation due to mining?
AO If damage is there our Company would say we would fix it. We have a good 10 years track record where we have done what we said we would do.
- Q EA – does it need a subsidence management plan?
MM Mine plan will be in the EA but not the detailed mine subsidence. It is different departments.
MM You can request that there is no damage
- Q Normally technical reports are included in EIS but not the case here? Seems to be defective in the process.
AO We should answer at the next meeting. If general approval given then what right has the owner then with respect to the mins subsidence plan
- Q EIA process has been to community/individual response. Not really an opportunity to have a say at that point.
AO In the new process – there is a statement of commitment by the Company. Says what we are prepared to do maybe we can say/address this in the statement of commitment which will be included in the EA document.
That sounds great.
Morris A full answer will be given at the next meeting.
- Q Pillar size roadways. You could do the first working over all the area. Trying to get a sense of what you are going to do.
MM Roadways left underground
Q Buttai area – why didn't you go there?
MM Intrusions of hard rock that affected the coal. That's why the Buttai Creek is there.
- Q Assume one seam being mined.

- MM Talking about in the Abel Project. There are two seams until about Blackhill. Take the top seam and then down to the bottom seam.
- Q What impact on gravel quarry? And blasting?
- MM Woodberry's outside the lease and there will be no issues raised and no vibrations due to it.
- Q I know at my house I'm affect by blasting at Bloomfield.
- Q Explain the differing geology of overburden and the reactions.
- MM First workings generally take about 55%. Take the question on notice
- RF Subsidence – research done with respect to significant subsidence but not looked at it in detail.
- Q Modeling – subsidence with the UNSW model?
- RF There are two models. Pillar methods and subsidence predictions (propriety of Strata Engineering).
- Q Has the data from drilling been used in the modeling?
- RF Yes. Thickness and depth of cover on roadways.
Subsidence in areas where super critical. Subsidence not due to geology.
- Q What comment on Coal and Allied walking away from seams and not Donaldson want to mine there?
- RF Rio Tinto focus on open cut not underground. Could be due to the economics at the time.
All sorts of reasons.
- Morris J & A walked away from coalfields because it was easier and cheaper to mine where he did. Thank you for coming.

RF – Russell Frith
AO – Alick Osborne
MM – Mark McPherson
Morris- Milton Morris

The Chairman closed the meeting at 8.55 pm.

Next meeting 26 April, 2006 at 7 pm.

**SUBSIDENCE
INFORMATION SESSION**

AGENDA

- Welcome - M. Morris
- Community Liaison Committee- M. Morris
- Introduction of Professor R. Frith – A. Osborne
- Subsidence – R. Frith
- Question & Answer

Mining Subsidence and the Protection of Surface Structures

Proposed Abel Underground Mine

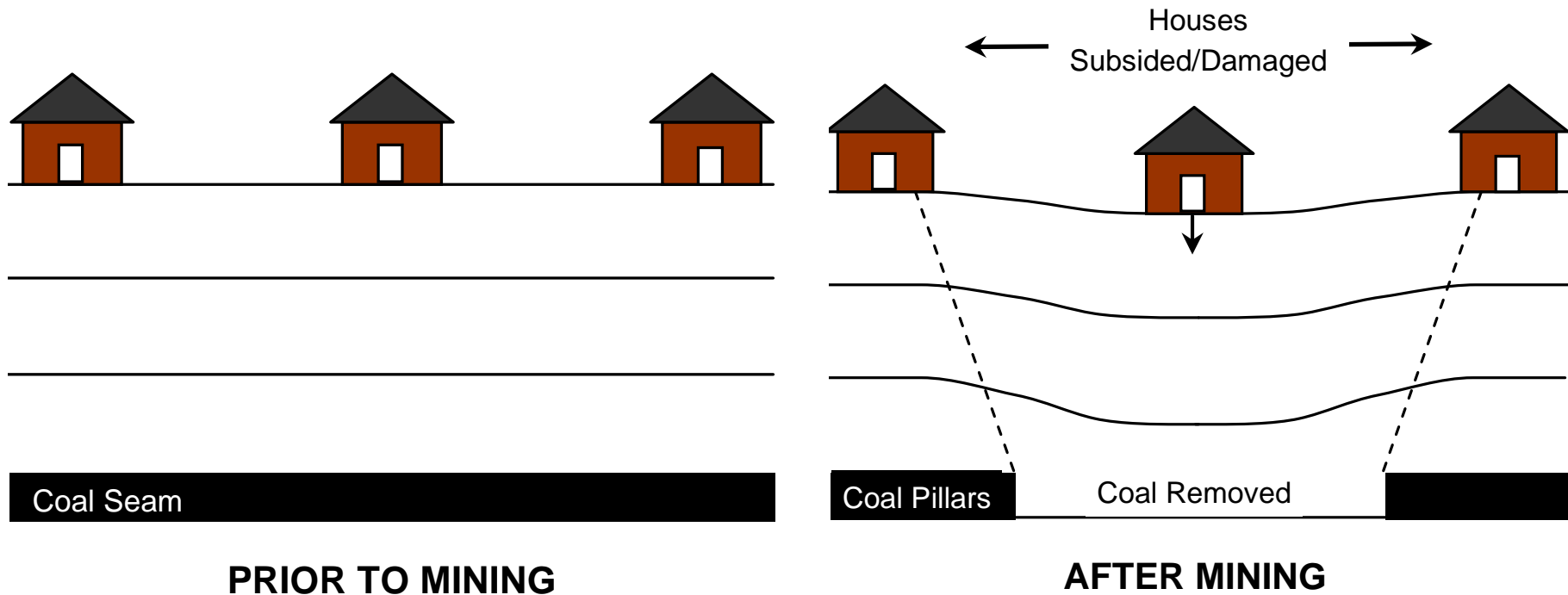
Content

- My role and terms of engagement for “experts”
- Basic subsidence mechanisms
- Mining methods and subsidence control
- Effect of seam thickness
- Effect of depth of cover
- Intended impact mitigation strategy
- Approval process
- Subsidence assessment and design process
- Response to issues raised at 2nd March meeting

Role of Independent Adviser ("Expert")

- guidelines given by Federal Court
- typically relates to giving evidence in court - applicable in this instance due to competing interests of parties
- designed to ensure that experts do not bias evidence in favour of engaging party (not cash for comment)
- answers to questions raised
- clear and not argumentative
- stay within area of expertise
- based on fact and personal experience/knowledge
- identify any relationships with parties (no commercial interest in Donaldson Coal or subsidiaries and do not own any property in the area)

Basic Mechanisms



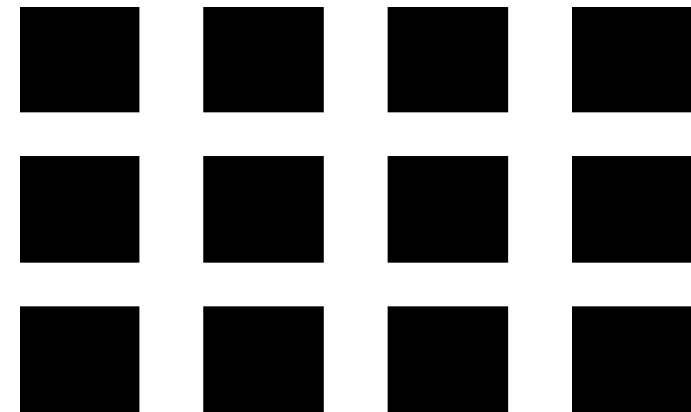
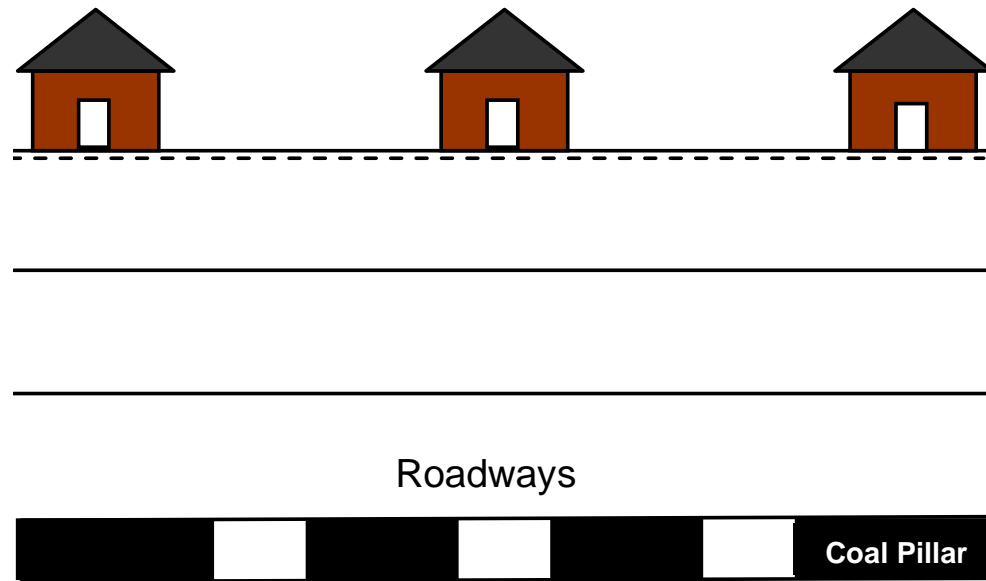
- movements can occur due to wet and dry periods (cracks open and close)
- slopes can be unstable
- houses are rarely constructed "level" (construction tolerance of up to 4 mm/m)
- damage related to ground movement
- structures above coal removal most affected
- structures above coal pillars largely unaffected by mining

Potholes/Chimney Failure

- large holes can appear at surface without warning and well after mining has finished
- shallow mining phenomenon (< 20 m typically) when weathered near surface material is destabilised by mining
- often associated with workings prior to use of effective reinforcement type roof support
- no mining planned at < 30 m depth of cover, even mine entries under John Renshaw Drive

Mining Methods (1)

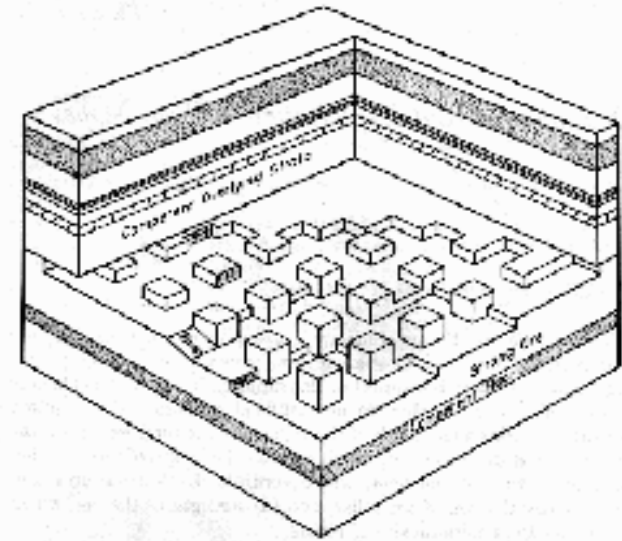
- **FIRST WORKINGS** - narrow roadways (around 5 m wide) are formed surrounded by stable coal pillars. Surface movements are generally insignificant



Typical Mine Plan

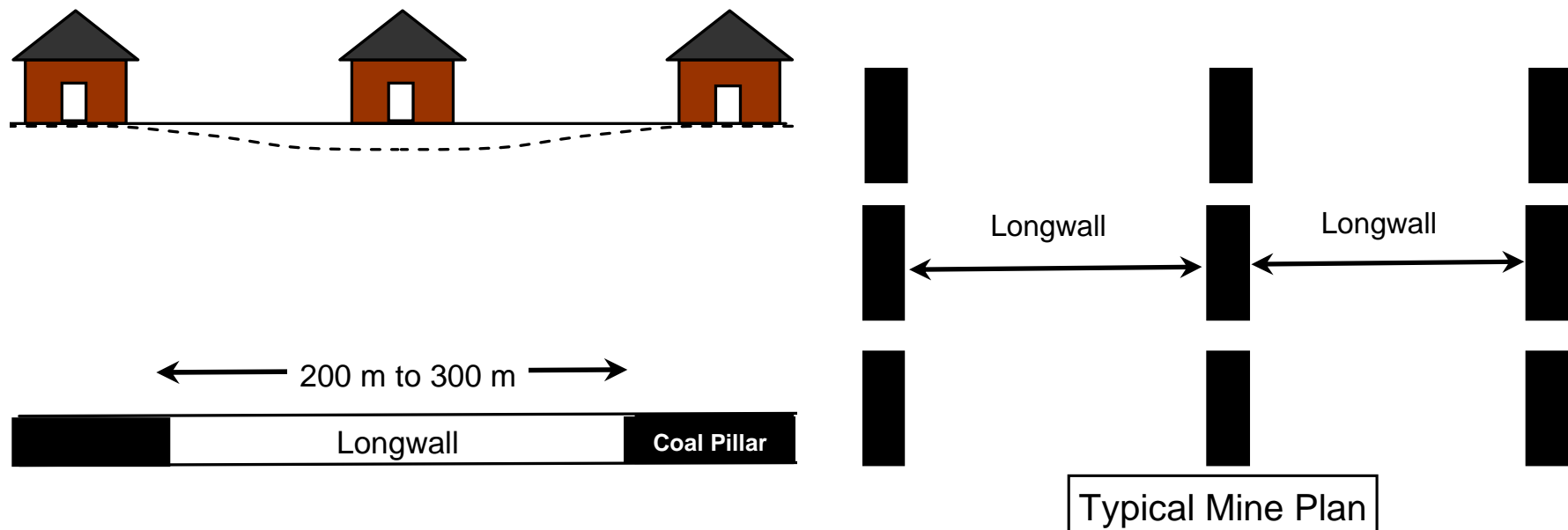
Mining Methods (2)

- First Workings or Bord/Room and Pillar Operations



Mining Methods (3)

- LONGWALL (e.g. Mandalong) - large rectangular blocks of coal are completely removed



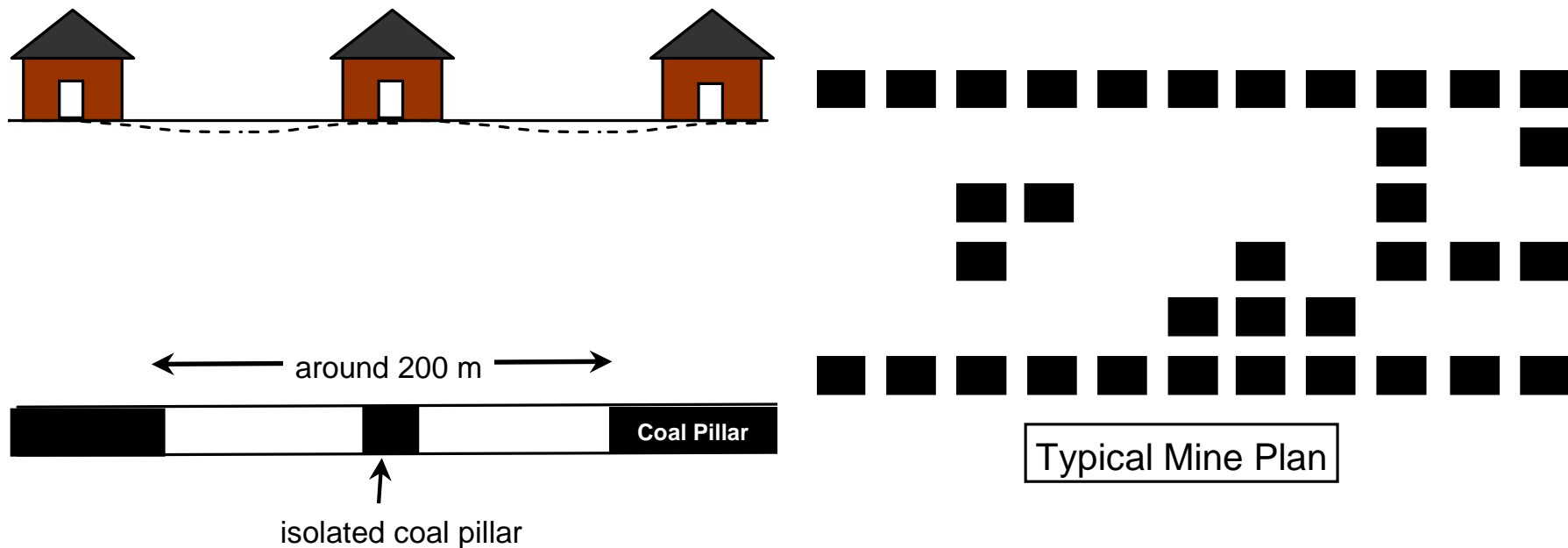
Mining Methods (4)

- Longwall Face in Operation

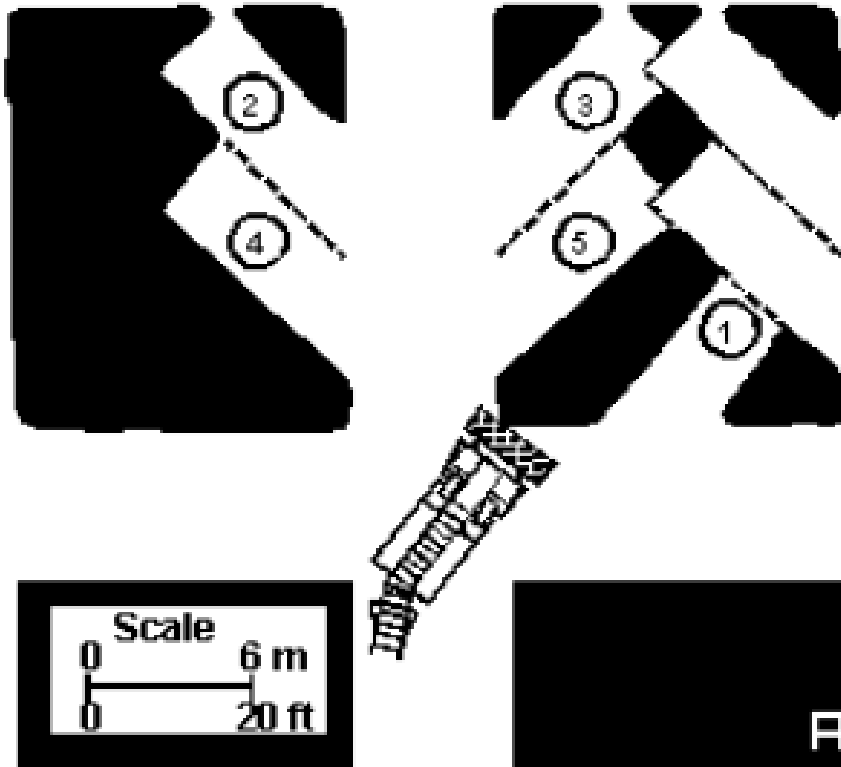


Mining Methods (5)

- PILLAR EXTRACTION - like longwall, large blocks of coal are often removed, but isolated coal pillars can be left if required and non-rectangular blocks extracted (subsidence control improved)



Mining Methods (6)



Pillar Extraction Operations

- continuous miner extracts the coal
- mobile roof supports protect operators

Effect of Seam Thickness

- the thicker the coal seam extracted, the greater the amount of surface subsidence
- Mandalong: > 4 m
- Newstan: 3.5 m to 4.5 m
- West Wallsend: up to 4.8 m
- Abel Mine: 1.8 m to 2.5 m

The lower seam thickness at Abel naturally reduces the likely near-surface impact of mining

Effect of Depth of Cover

- range at Abel: 50 m up to 400 m
- as the depth of cover increases, surface subsidence levels generally decrease
- for shallow workings (50-200 m) surface structures are likely to be damaged if all the coal beneath them is removed
- for deeper workings (> 250 m), surface structures may be largely unaffected by mining, even if coal is removed from beneath them (providing barrier pillars stable)

Intended Impact Mitigation Strategy

- generally leaving behind stable coal pillars to protect defined surface structures
- not exposing defined surface structures above shallow workings to high levels of subsidence by removing the coal beneath them
- ensuring that predicted mining impacts comply with relevant MSB guidelines
- using the Subsidence Management Plan process to deliver outcomes as per pre-mining predictions

How Will the Mine Layout be Designed and Approved ?

- all surface structures that are sensitive to mining subsidence will be identified
- effect of extracting coal beneath structures will firstly be evaluated and assessed
- other than first workings, mining layouts can be planned so as to avoid extraction beneath structures that would otherwise be damaged
- coal pillars designed for very-long term stability using industry accepted methods
- mine layouts will be submitted to DPI and Mine Subsidence Board for review and approval

Subsidence Assessment and Design Process

- Strata Engineering have been contracted to undertake specific subsidence analysis work (Steven Ditton - authority in the area)
- I was the founder of Strata Engineering in 1996 but have no current commercial interest
- my role is to overview and input into the design process so that the outcomes are credible and appropriate (realistic predictions of likely outcomes)
- independent reviewer will also ensure that the process, methods used and predictions are credible and that they can be relied upon when seeking and granting approval to mine

Issues Raised on 2nd March

- Land development

Rules for land development and construction are set by the LHV Regional Plan and by the Councils' LEP.

Issues Raised on 2nd March

- Vibration/Noise

(i) generally linked to the collapse of very thick (> 20 m) "concrete-like" strata units near to surface - this has not been assessed as of yet at Abel

(ii) residents of Fennell Bay and Blackhall Park experienced significant vibrations in 1995/6 due to longwall mining at Teralba

(iii) was due to subsiding of the near-surface Teralba Conglomerate above the Great Northern Seam, 300 m above the longwall panels

(iv) despite the concerns of residents, MSB measured peak vibration velocities were within acceptable damage potential limits for heritage listed buildings

Issues Raised on 2nd March

- Examples of impact mitigation by modifying mine layout
 - (i) protection of lake foreshore (Myuna)
 - (ii) railways (Teralba - GNR)
 - (iii) Gretley Colliery - narrow width and long-term stable pillars - few if any MSB claims due to minimal surface disturbance
 - (iv) transmission towers (Newstan recently)
 - (v) TV towers at Mt Sugarloaf (Tasman)
 - (vi) water courses/cliff lines/aqueducts/viaducts - Southern Coalfield longwall mines now required to leave barrier pillars in place to protect defined surface features
 - (vii) recent undermining of vineyards in the HV

PROTECTION OF SURFACE FEATURES BY MODIFYING THE MINE LAYOUT BY PRE-MINING DESIGN IS NOW AN INTRINSIC PART OF GAINING A MINING APPROVAL

Issues Raised on 2nd March

- Impact of previous mining activities
 - (i) area already has some mining in the Borehole/West Borehole Seam above the target Donaldson Seams
 - (ii) subsidence effects associated with the Donaldson Seams will need to account for pre-existing mine workings
 - (iii) each structure will be considered on its merits based on how it is located with respect to pre-existing mine workings - there are no hard and fast general rules - depends on previous mining and resultant subsidence
 - (iv) any structure adversely located with respect to existing workings that may not have subsided, is subjected to some level of future damage risk at the current time, regardless of Abel mine

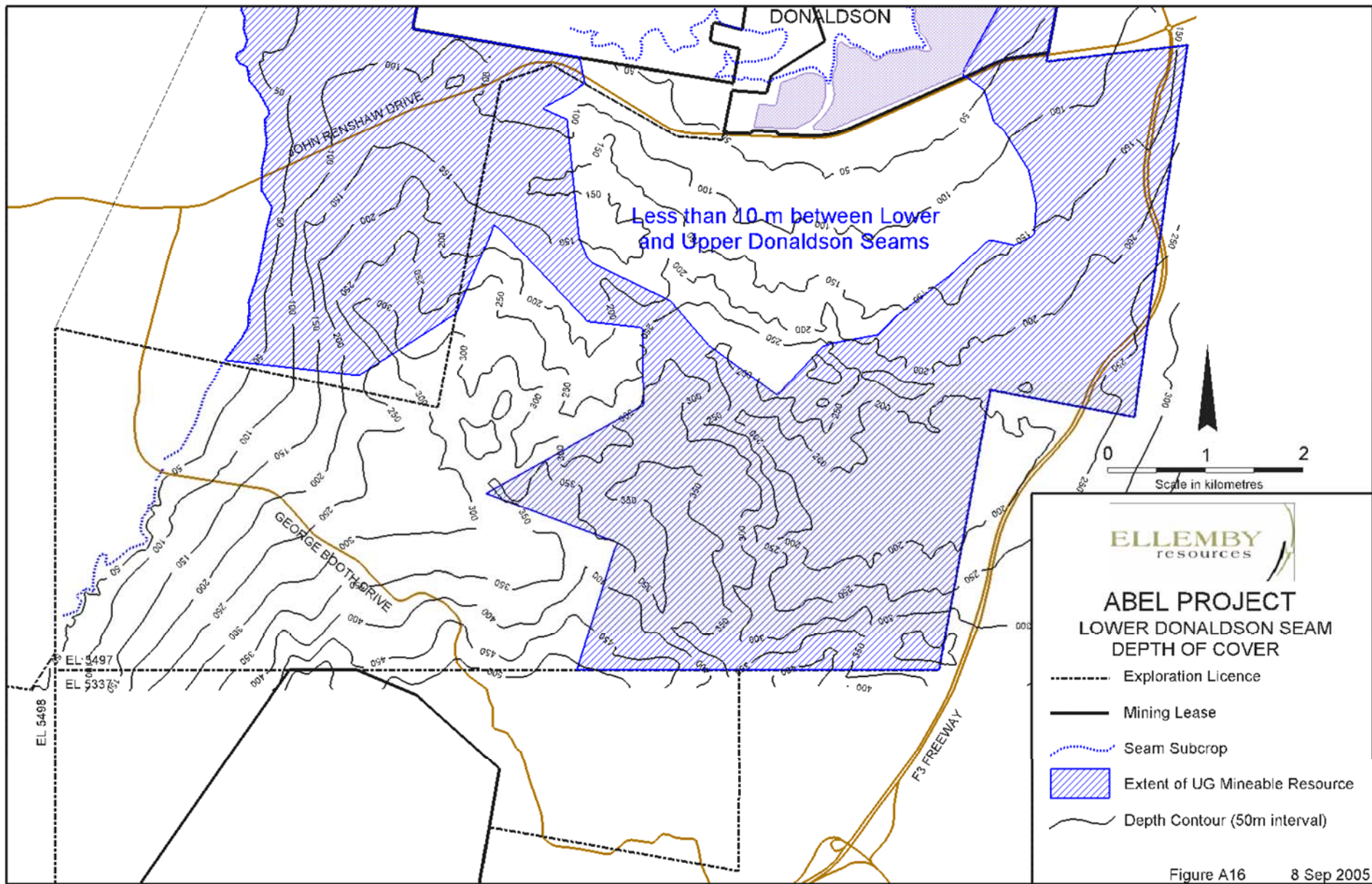
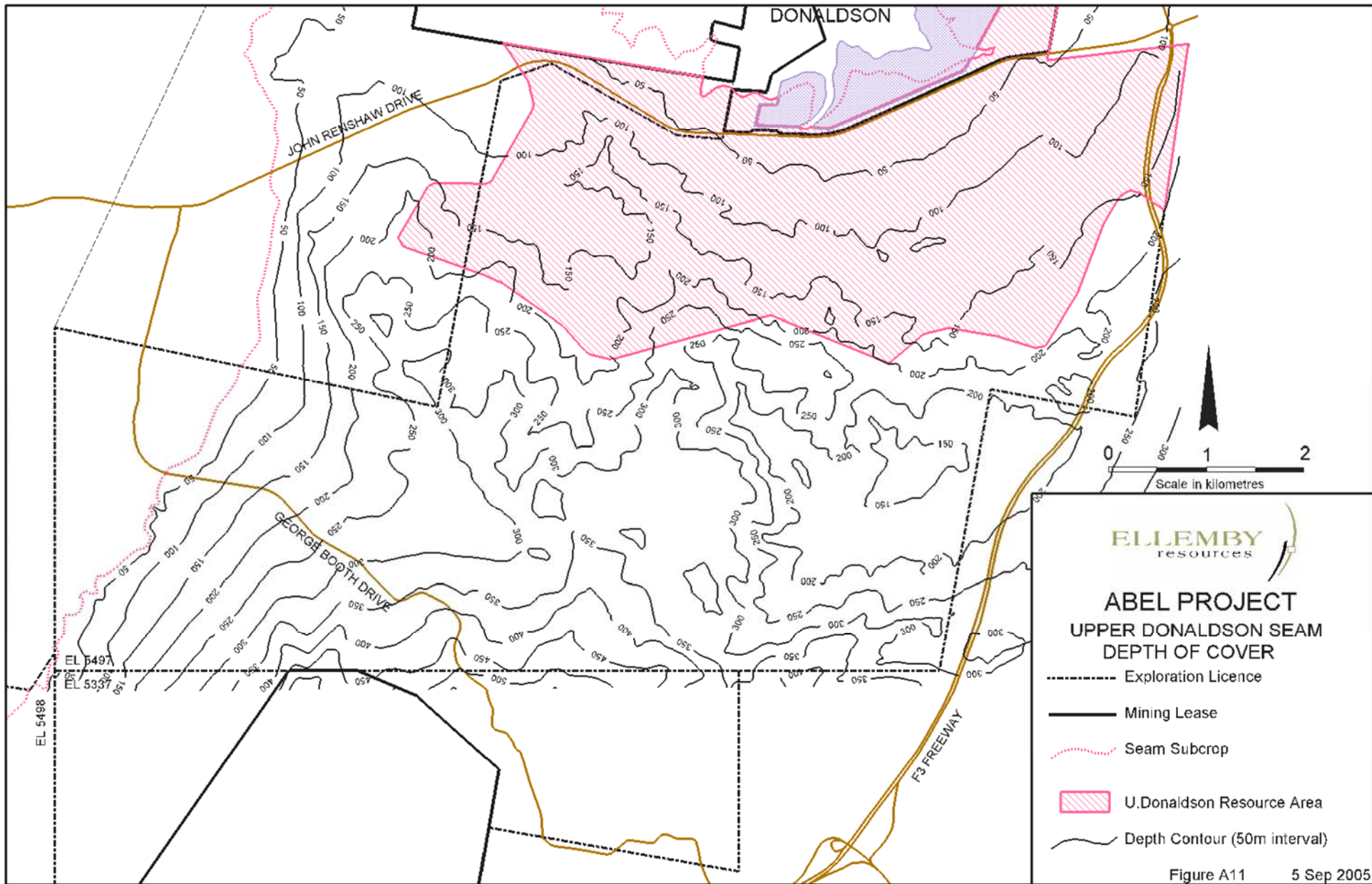
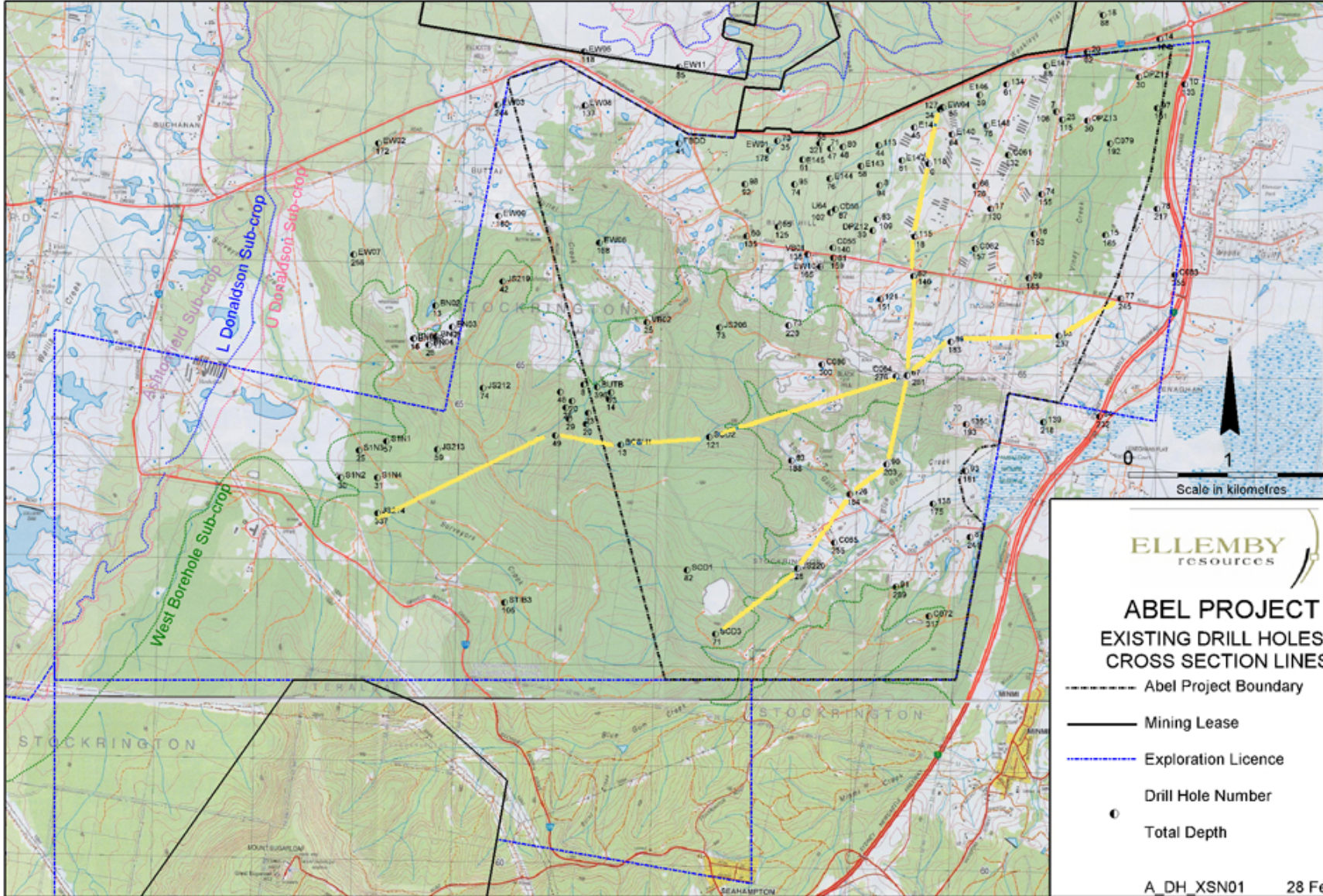


Figure A16 8 Sep 2005

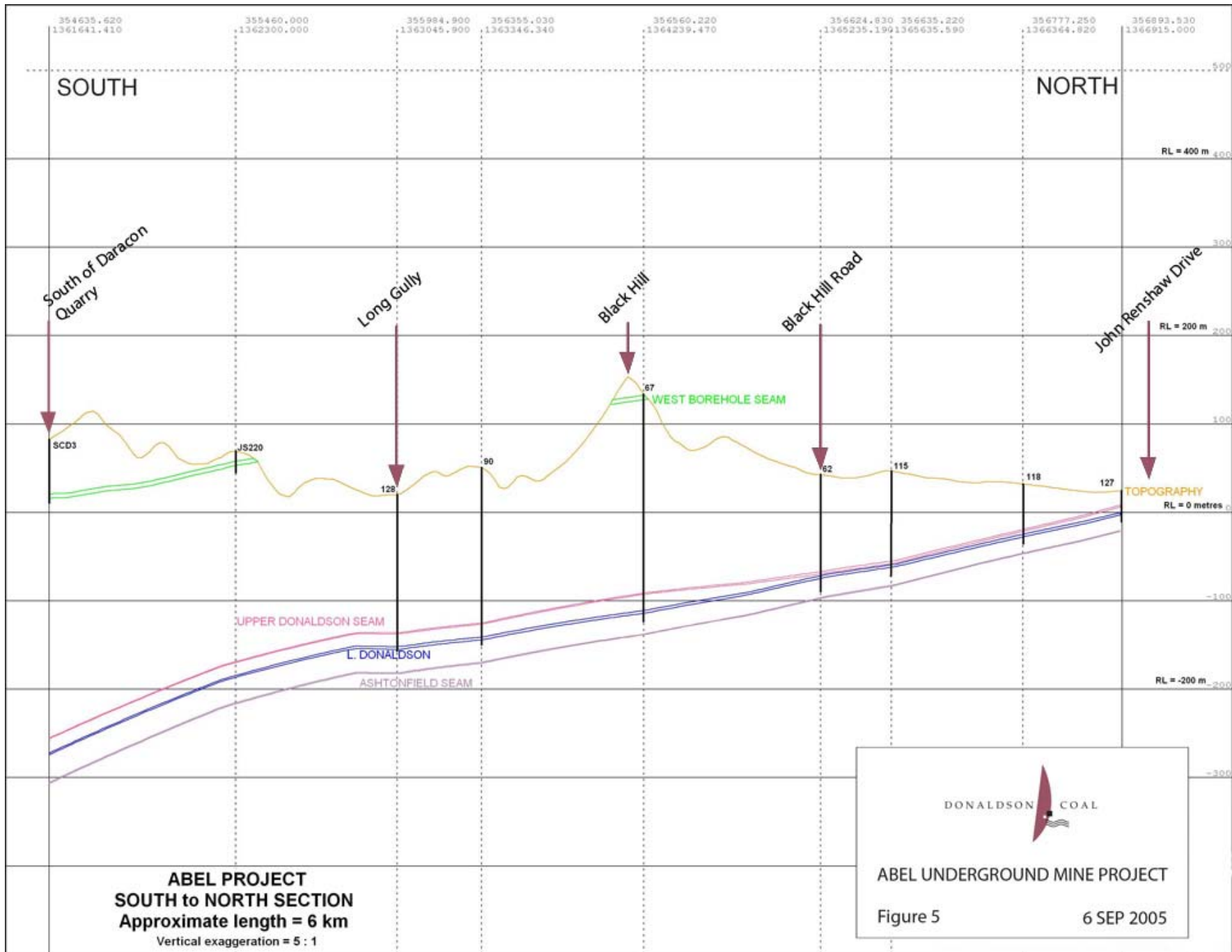


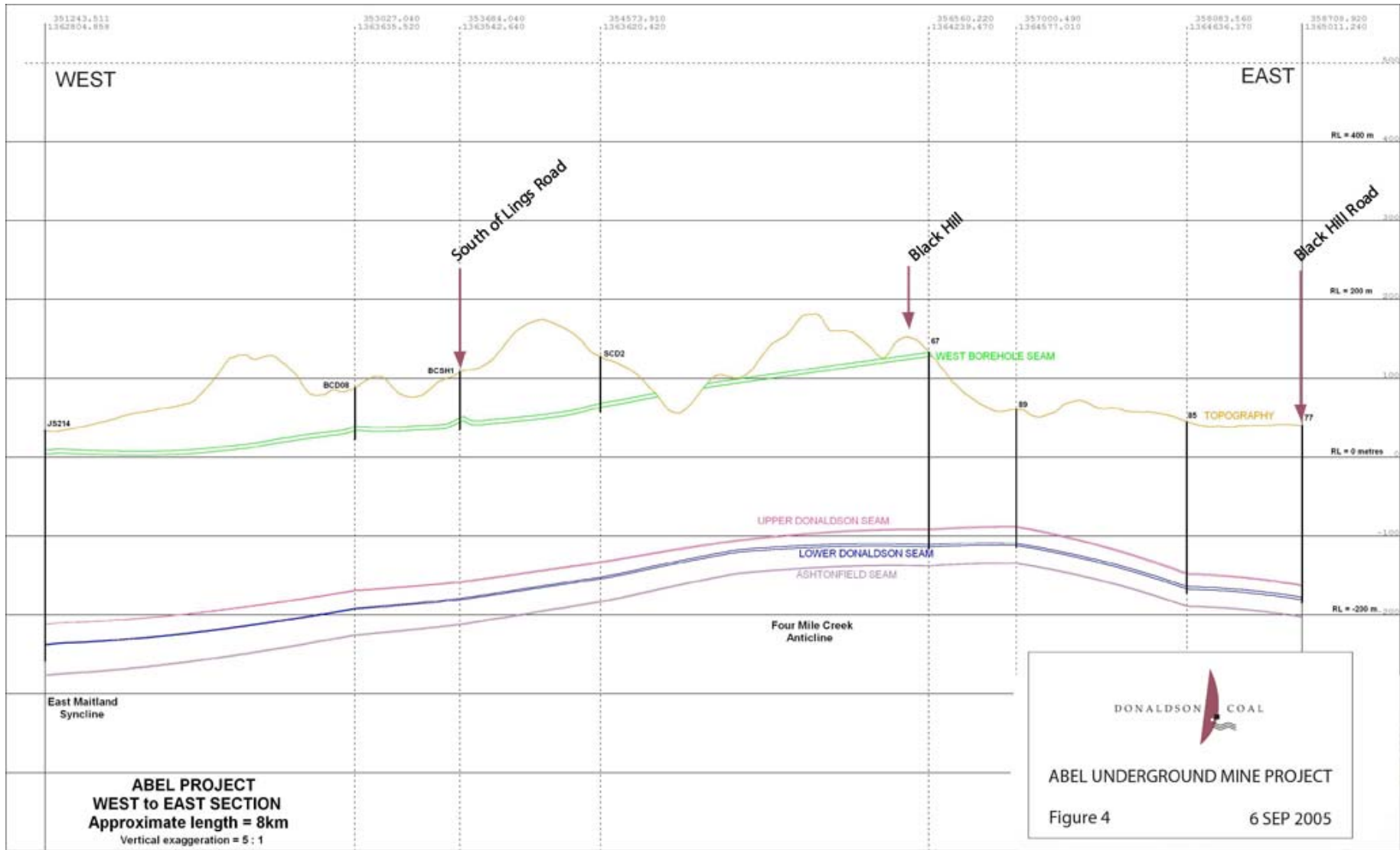


ELLEMBY
resources

**ABEL PROJECT
EXISTING DRILL HOLES &
CROSS SECTION LINES**

- Abel Project Boundary
- Mining Lease
- Exploration Licence
- Drill Hole Number
- Ⓢ Total Depth





Third Public Briefing for Abel Underground Mine – 26 April 2006 at Blackhill Public School

The meeting was chaired by Mr. Milton Morris with 33 people present.

Mr. Morris tendered an apology for Mr. Mark McPherson (Abel proponent).

The Chairman called on Mr. Allan Brown to address the meeting. Mr. Brown informed the meeting that he was a member of the Community Liaison Committee and asked those present to put their contact details on a sheet that was to be circulated. He would then pass on information received at the CLC meetings.

Mr. Morris then invited Mr. Alick Osborne to address the meeting.

Mr. Osborne welcomed those present to the third meeting with this evening's topic being Mine Subsidence. Mr. Osborne advised that the Environmental Assessment was progressing well with a submission to the Government expected in July. Mr. Osborne advised that the next Information Meeting would be held on the 31st May, 2006 and Mr. Greg Col Clarke (Chairman of the Mine Subsidence Board) has been invited to address the meeting. A further Information evening would be held on the 12th July, 2006.

Mr. Osborne introduced Mr. Sam Reich, a geologist with Donaldson Coal, who was standing in for Mr. McPherson.

Mr. Osborne then introduced Professor Russell Frith and invited him to address the meeting.

Prior to Professor Frith giving his presentation, a question was raised from the floor:

Q The person said that they were told that water issues would be addressed at these meetings.

AO We will be doing it but not tonight. The consultant has not finished the report.

Professor Frith then gave his presentation.

Following the presentation Mr. Morris opened the floor for questions.

The following is a précis of questions asked:

Q The area around the building that is not to be subsided? The perimeter...how big is it?

RF The pillars are on the 30m centers and therefore about 60 – 70 m out from the dwelling.

Q If you had a large number of properties and you need to leave the pillars, then why mine the coal?

RF No doubt that driving the roadways cost dollars. In this end they may not drive the roadways.

Q Why wouldn't that be the preferred method?

SR We may have to look at it.

Q When property is assessed can we get a copy of the assessment?

AO There would be an individual mine subsidence assessment for each property and the owner would get a copy.

Q Would it include erosion, dam walls etc?

AO We are talking about dwellings. The others may not be given the same comfort. We expect

dams to be subsided. With a tin shed like this, we expect if to be able to take more strain than a house.

Q If a road is subsided and the water levels increase would it be fixed?

AO Yes – straight away. We are already doing subsidence profiles under creeks.

Q I've always found with water it changes places on my property.

AO It must be happening already.

Q Are you saying that dams will be drained, subsided then fixed?

AO There are different types of dams: small, medium and large. We are picking them up from the aerials. Every property will have individual plans.

Q Damage to the underground services? Are they covered by MSB?

AO Yes

Q You indicated on the slide "proposed dwelling".

AO There are some properties where no dwelling are – we would talk to the land owner where they propose to build. But if a person was to build 500 houses we would say wait for the subsidence first.

Q The seven years plans for MSB?

SR Mr. Reich talked to the mine plan on the wall and indicated the areas that would be mined first. Mr. Reich indicated Blackhill Road on the plan and then showed that the mining would be undertaken in the north east corner then the north west corner.

AO When the EA goes on display we will have a plan showing the individual properties and the mine sequence.

Q After mining, a future land owner may want to submit an application of a new dwelling/building. What protection is offered for future developments?

AO Areas with dwellings won't be subsided. Other areas will be subsided and should then be OK for building afterwards.

Q Would the shape/contour of the land that is subsided be fixed?

AO No it stays - the shape following. We are talking about 1.5m over 200m. You wouldn't pick it up with the naked eye.

Q But it wouldn't all fall at once?

AO Generally it is difficult to pick.

Q Other meetings you said there wouldn't be subsidence. Now there is?

RF Where there are houses/fixtures - no subsidence. Where there are no house, there would be subsidence.

Q Doesn't sound satisfactory to the property owners!

Q It won't put dollars in my pocket but it would in yours!

AO If you are sitting over an Exploration Lease, then it may be mined at any time. But once it is mined, then nothing else can happen.

RF I was involved with a resident and because there was an EL over the property, the MSB stopped any development until the mine went through. The mining company finally said that the coal quality was poor and allowed the development to go ahead.

Q Mental picture – house will stay as is but the paddocks may fall 1 – 1.5m? What would you see between the subsidence and the house?

RF If it is soil profile, then when rain comes any cracks disappear. If you have exposed rocks then you will see cracks in exposed. Depends on what the near surface feature is. If rolling terrain you wouldn't see it.

Wakefield – nearly 3m subsidence and I find it hard to see it.

Q When would you expect subsidence to occur?

RF In Britain an example of a person who set up levels and within two weeks the subsidence occurred and he could tell when the subsidence was occurring.

MM Some of these questions could be asked at the next meeting with the Chairman of the MSB in attendance. I'm told that some of the mines in Newcastle came up to the roots of the grass.

- Q About Blackhill Cliffs?
- AO Yes we are looking at the cliffs and the rivers etc.
- RF I believe there is a guy looking at the creeks rivers etc now!
- Q Yes those areas have been mined under already.
- Q What investigations have been done of the creeks?
- AO They are being inspected, with profiles, longitudinal sections being done now. It is at the analysis side now.
- Q John Feenan. Brief of the independent reviewer? Is there a conflict of interest with the mine producing the brief?
- AO Part 3A approval process has peer review. There will be peer review for Surface Water, ground water and mine subsidence. There will be peer reviews on the three. There will be a study then a review to say if it is ok. If it isn't right, then we will fix it!
- Q John Feenan. If the peer review is paid by the Company could be seen as a conflict.
- AO That peer review will be on display.
- RF When you get to Jim Galvan's level at the top of the industry is set by guidelines and has to be independent. He isn't a hired gun of the Company.
- Q John Feenan. If the terms are defined in legislation then I'm comfortable but there could be a conflict. I will be looking that further.
- RF Jim Galvan is preferred by MS and that's why he was chosen. Very clearly sits as an independent.
Comment by Graham Holt - Fair to point out that there are only a few consultants. The company would have a hell of a job finding someone who is independent. I know him (Jim) well and he is a conservative reviewer.
- MM Thanks for that comment.
- Q I have met with Adam Heaney and he's ok.. I have a problem with representatives of Donaldson Coal trespassing on my property. They were there to looking at the creek when I told them to get off. There were a lot of questions I wanted to ask but they couldn't answer them. Why is it that we ask a lot of questions but nothing is being videotaped or recorded at these meetings?
- RF I went through the questions from the last session and answered what I was asked.
- AO Phil Brown is taking minutes and minutes of these meetings will be recorded in the EA. If you want copies then ask.
- If the company trespassed on your property then I apologise and if you don't want us there then we wont go.
We have very good detailed aerial photographs of the area.
- Q Everything is individual but you are looking at averages.
- AO No. There are 92 properties what will have individual assessments.
- SR What is being done at present is preliminary. There will be much more detail down.
- Q A Brown. The Department asked you to look that the Beltana example. I find it hard as it is a long wall? Why do you believe that the Department told you to look at it?
- AO They said it was a mine subsidence plan that had been well done. Beltana is recent – 2003. It was a good role model.
- Q A Brown. I'm talking about subsidence in paddock. Beltana was talking about gypsum, etc being added?
- AO Beltana was looking at 4m of subsidence. We are looking at something smaller.
- Q A Brown. Beltana says subsidence of about 1 – 1.8m
- AO Yes but only for one seam – there are four seams.
- Q With subsidence and fences around properties. If a dam falls down and we need water for stocks will the company provide it?
- MM Yes
- Q How will you manage the stock on the site? Would we know where you are mining?

- MM You need to keep the fences right.
- Q You would need to look that fences on the property as part of the assessment?
- MM Yes
- Q With the subsidence are we going to get gas problems? I know there are holes that you have dropped something in and not hear it hit the bottom. There was someone who drilled a hole and not covered it?
- SR All our holes will be capped. We are assessing drilling for gas levels and they are low. May not be deep enough or due to the rock structures, gas might be escaping. We seal the top and bottom when we don't do water sampling bores. I can't say what levels they are.
- Q Will it be flammable? Will it catch on fire with a bushfire?
- SR Yes the gas will burn.
- Q I want to know if I am sending firefighters into a bad situation.
- SR I can't picture where could be coming out of Blackhill mines. I would like to see them. Can you show me?
- Q Yes
- Q Comment – holes in Blackhill have been left open for months.
- Q Will the Company look at buildings in the future/proposed? SEPP 36 allows buildings to be built without approval. IF I want to build in the future?
- AO If it is a shed then it wont be damaged buy subsidence. We are looking getting all sheds off aerials for all the sites. We're not worried about the approvals.
- Q Mrs. Steele. Would we be told before people come on our property?
- SR Yes. The situation raised before...the people were instructed to door knock. They themselves in the creek and decide to walk up and were unprepared for the questions asked.
- Changes – Mr. Adam Heaney has been phoning before visiting.
- MM If you see me picking mushrooms you wont shoot?

RF – Russell Frith
AO – Alick Osborne
SR – Sam Reich
MM - Milton Morris

The Chairman closed the meeting at 8.30 pm.

Next meeting 31 May, 2006 at 7 pm and will have the Chairman of the Mine Subsidence Board here. If he cant make it then a brief would be issued.

Intended Process for Maintaining the Integrity of Surface Dwellings Following Mining

Proposed Abel Underground
Mine

Content

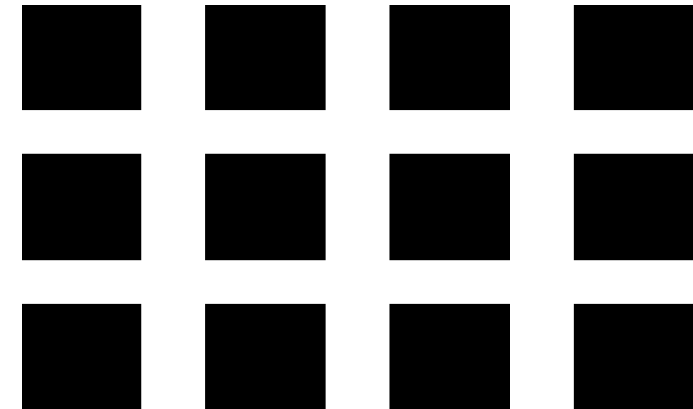
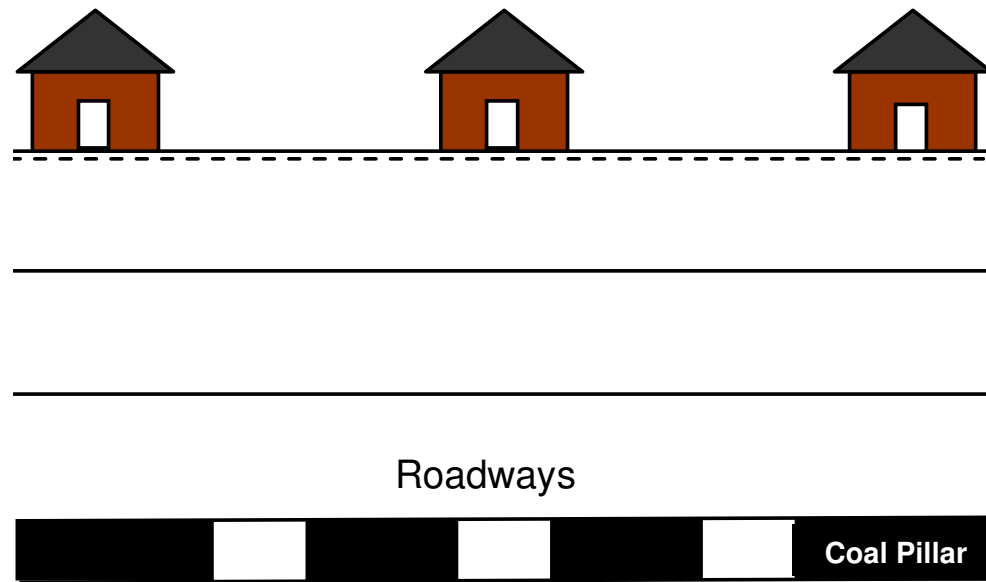
- brief review of March 22 presentation
- role of the Mine Subsidence Board
- independent reviewer
- discussion on significance of vertical subsidence, strain, tilt and curvature
- outline of the intended subsidence assessment and mine design process for individual dwellings
- worked example
- questions

March 22 Presentation

- role on an independent expert
- basic subsidence definitions and different mining methods
- effect of seam thickness - positive aspect of Abel Mine
- effect of cover depth - large range at Abel (50 m to 400 m) → varying control strategies required
- potential for chimney/pot hole subsidence inconsistent with minimum cover depth
- intended impact mitigation strategy (adapt mine plan and leave long-term stable coal pillars in place)
- mining approval process (DPI, MSB)
- subsidence prediction work (Strata Engineering)
- independent reviewer to be contracted
- answered questions on land development, vibration/noise, examples of successful subsidence control, pre-existing mine workings, financial aspects of the mine (why now?)

Mining Methods (1)

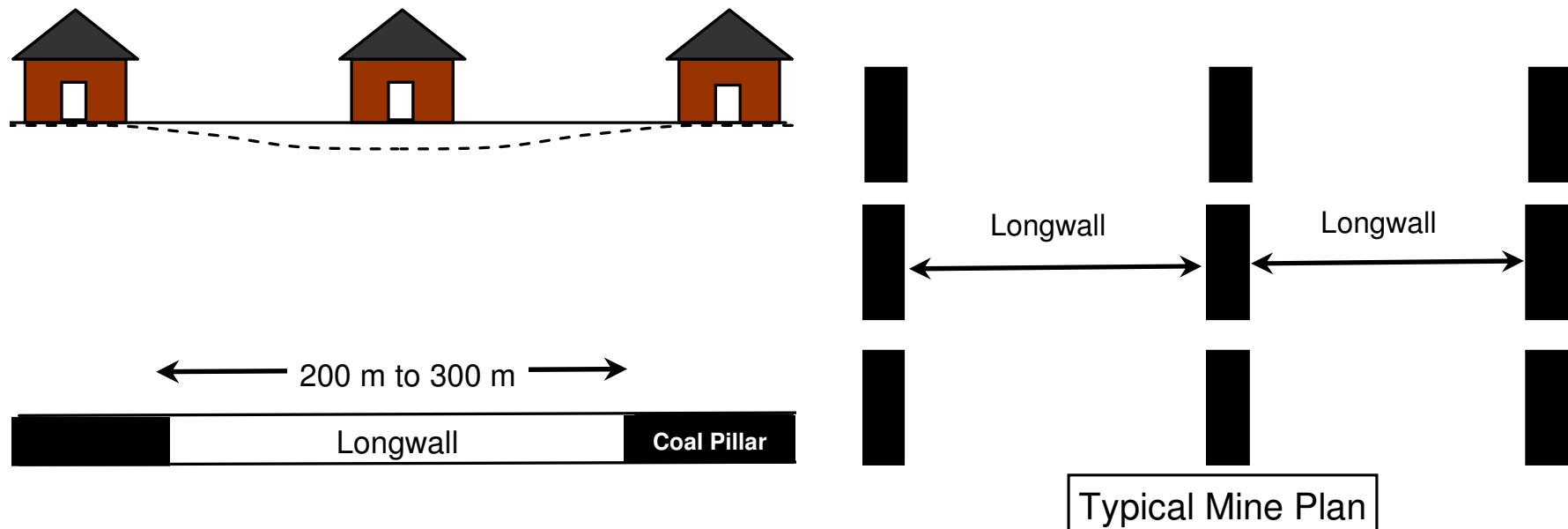
- **FIRST WORKINGS** - narrow roadways (around 5 m wide) are formed surrounded by stable coal pillars. Surface movements are generally insignificant



Typical Mine Plan

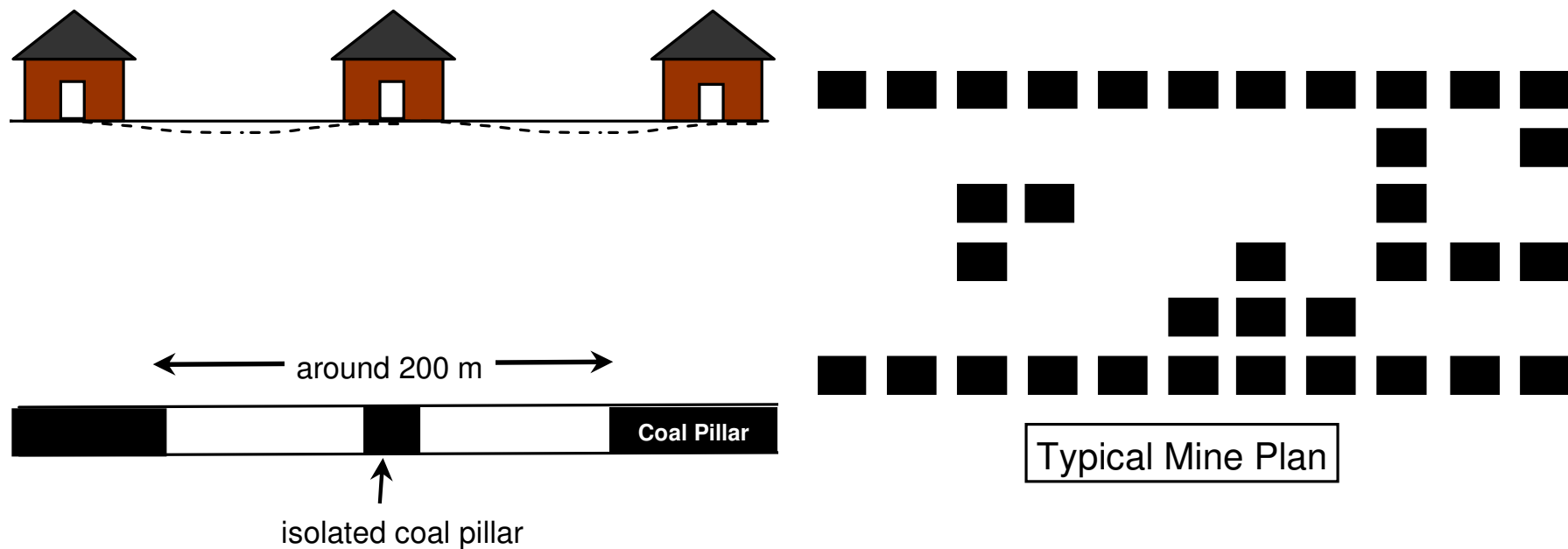
Mining Methods (2)

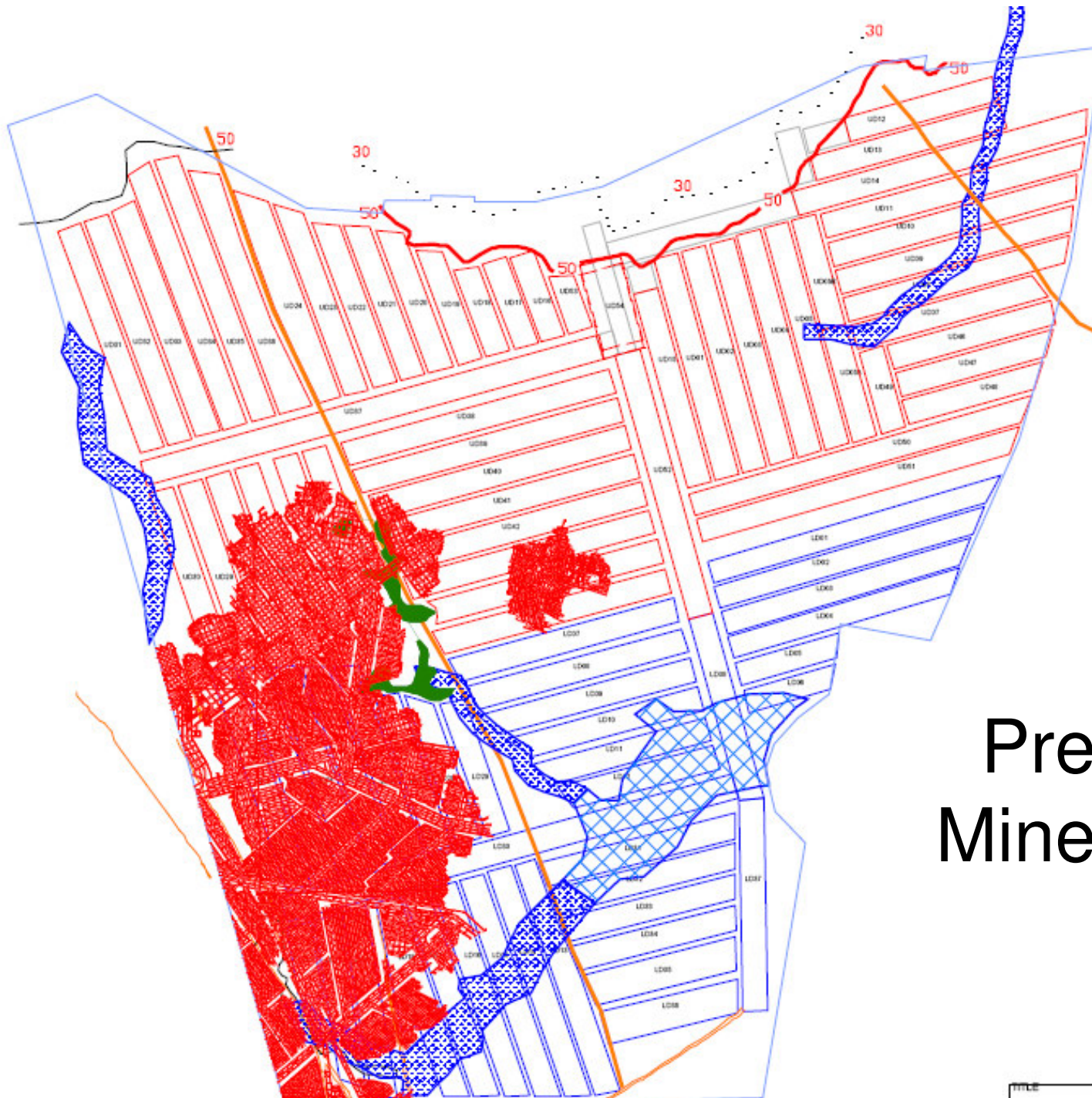
- LONGWALL (e.g. Mandalong) - large rectangular blocks of coal are completely removed



Mining Methods (3)

- PILLAR EXTRACTION - like longwall, large blocks of coal are often removed, but isolated coal pillars can be left if required and non-rectangular blocks extracted (subsidence control improved)





Pre-Existing
Mine Workings

Role of the MSB (from MSB website: www.minesub.nsw.gov.au)

- **Mission Statement:**

"To mitigate the effects of mine subsidence on the community by promoting compatibility between surface developments and underground mining, restoring damaged improvements and managing the compensation fund".

- **Corporate Philosophy:**

"... we have as our prime concern the welfare and security of the people of NSW coalfields and their properties..."

Role of the MSB

- Corporate Objectives:

To provide a prompt and efficient compensation and/or repair scheme...

To eliminate danger to the community from mine subsidence related events

Given that mining will take place, to promote compatibility between surface development and underground coal mining

To actively use risk management expertise to protect the community...

To provide a comprehensive and accessible advisory and technical resource...

To increase community knowledge...

To implement effective management systems which support operational objectives

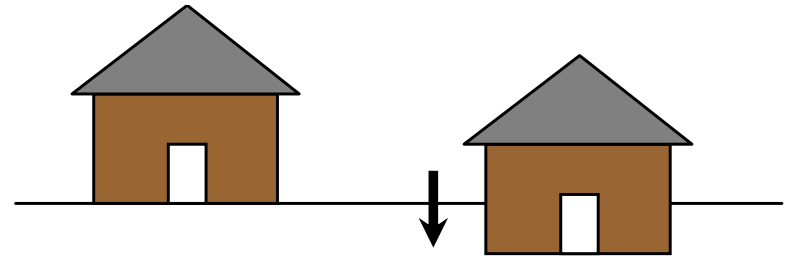
Independent Reviewer

- Professor Jim Galvin
- Ph.D in coal mine rock mechanics
- Mine Managers Certificate of Competency
- Professor of Mining Engineering - UNSW
- Head of Department, UNSW School of Mining
- HS and E Advisory Committee to the BHPBilliton Board
- Preferred MSB consultant
- Recognised coal mining, HSE and mine subsidence expert
- CURRENT BRIEF IS TO COMMENT ON THE SUBSIDENCE MANAGEMENT STRATEGY BEING PROPOSED BY ABEL AND WHETHER IT IS SUITABLE AND ROBUST

Subsidence Parameters

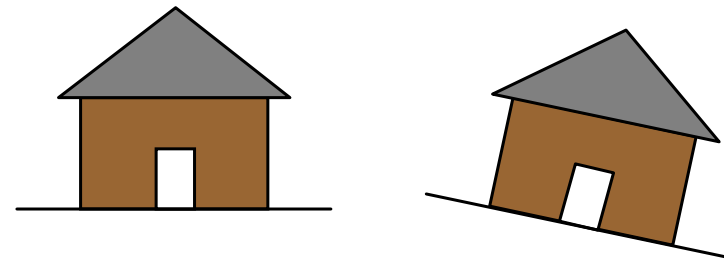
- vertical subsidence

rarely a direct concern,
except when adjacent to
water bodies



- tilt

does not commonly cause
structural damage
effects building usage

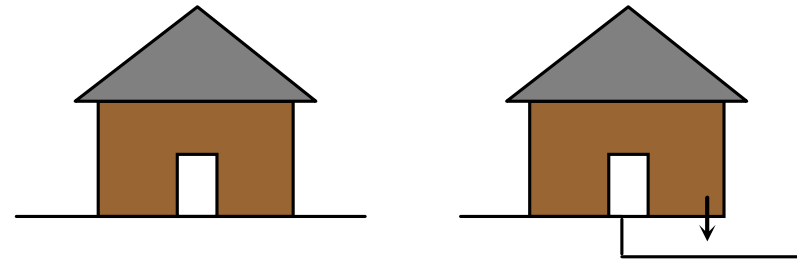


Subsidence Parameters

- vertical strain

major damage driver

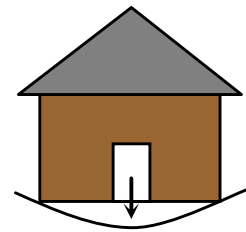
buildings likely to sag and crack



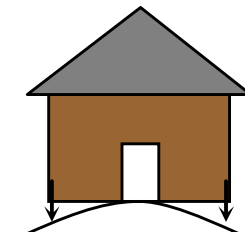
- curvature

major damage driver

buildings de-stabilised and can sag and crack



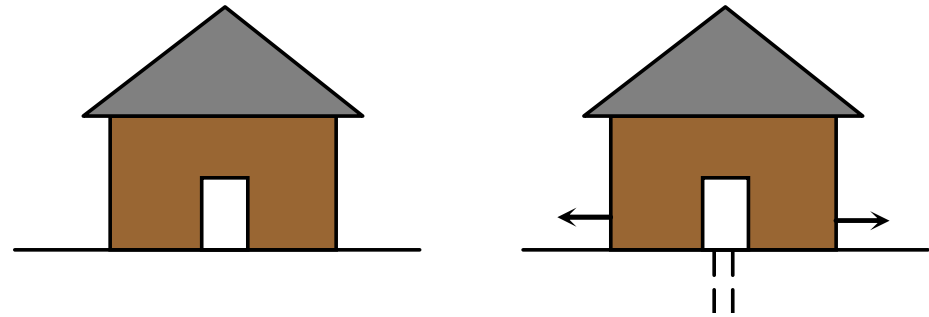
sagging



hogging

Subsidence Parameters

- horizontal strain
major damage driver
tensile or compressive
may cause buildings to crack, shear or buckle



Subsidence parameters occur in combination, with the greatest damage potential being over areas of either extracted coal or failed pillars

Outline of the Subsidence Assessment and Mine Design Process

- Quote from MSB - referring to new surface developments

"When details of existing mine workings are known and the stability of pillars etc. can be predicted, developments can be positioned so as to not be affected by anticipated movements"

- Abel is using the same approach in reverse in that dwellings are known so that mine workings will be located and designed to protect them

Outline of the Subsidence Assessment and Mine Design Process

1. Each dwelling/proposed dwelling to be individually assessed by MSB/structural engineer to set tolerable levels for individual subsidence parameters (strain, tilt etc.)
2. Each dwelling to have a pre-mining survey to identify and record pre-existing imperfections that will not be covered by the MSB
3. Such assessments to be done as and when the progression of the mining process dictates - i.e. mining may have commenced in other areas prior to individual dwelling assessments being undertaken

Outline of the Subsidence Assessment and Mine Design Process

4. Tolerable levels will be set according to such factors as dwelling construction (e.g. brick veneer, clad), type (single, double storey), size (length and width), footings (slab, strip footings, piers), surface conditions (sand, rock, clay, steep slope) etc. using MSB Graduated Guidelines (compatible with AS 2870 and Building Code of Australia)
5. The mine layout in proximity to each dwelling will be modified (using qualified designers) to maintain subsidence parameters within tolerable levels at each dwelling

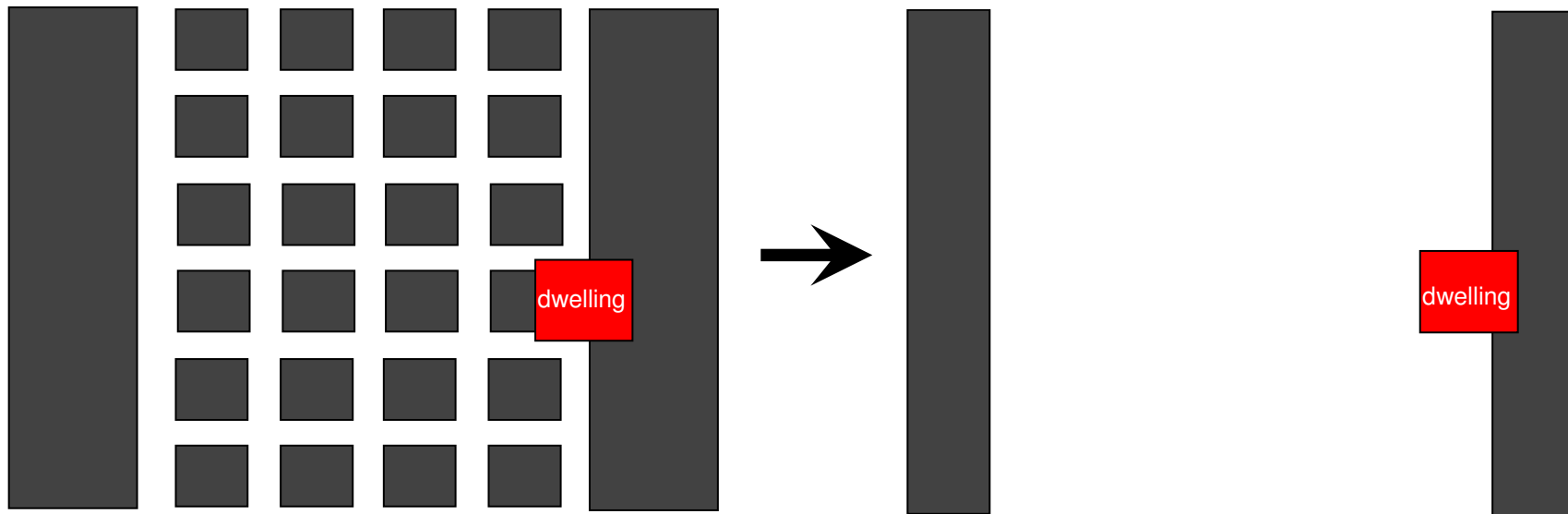
Outline of the Subsidence Assessment and Mine Design Process

6. Designs will be reviewed by the MSB and DPI prior to local mining approval being given
7. Each dwelling will have a Subsidence Management Plan to monitor subsidence development as mining approaches and ensure tolerable limits are achieved in practice
8. MSB has the responsibility to rectify any impacts that may occur as a result of mining
MINING COMPANY COMMITS TO THIS PROCESS WITHIN THE PART 3A APPLICATION FOR A MINING LEASE

Subsidence Design Features

- a subsidence prediction model founded on a comprehensive database of mining subsidence and associated parameters in the Newcastle Coalfield
- design being undertaken by the owners and developers of the prediction model (SEA)
- use of LAMODEL (world recognised modelling package to evaluate complex mine layout geometries)
- pillar stability requirements - UNSW Factor of Safety > 2.11 and a w/h ratio > 5 to give a pillar failure probability less than 1 in 1 million (no known precedent for pillar failure)

Worked Example (from SEA)



First Workings: 120 m deep and up to 3 m high

20 m x 20 m Full Masonry Building:

Tolerable Subsidence = 50 mm

Tolerable Tilt = $\pm 3\text{mm/m}$

Tolerable Curvature = $\pm 0.3\text{ km}^{-1}$

Tolerable Horizontal Strain = $\pm 2\text{mm/m}$

After Pillar Extraction

Subsidence Predictions after extraction:

Subsidence = 100 to 200 mm

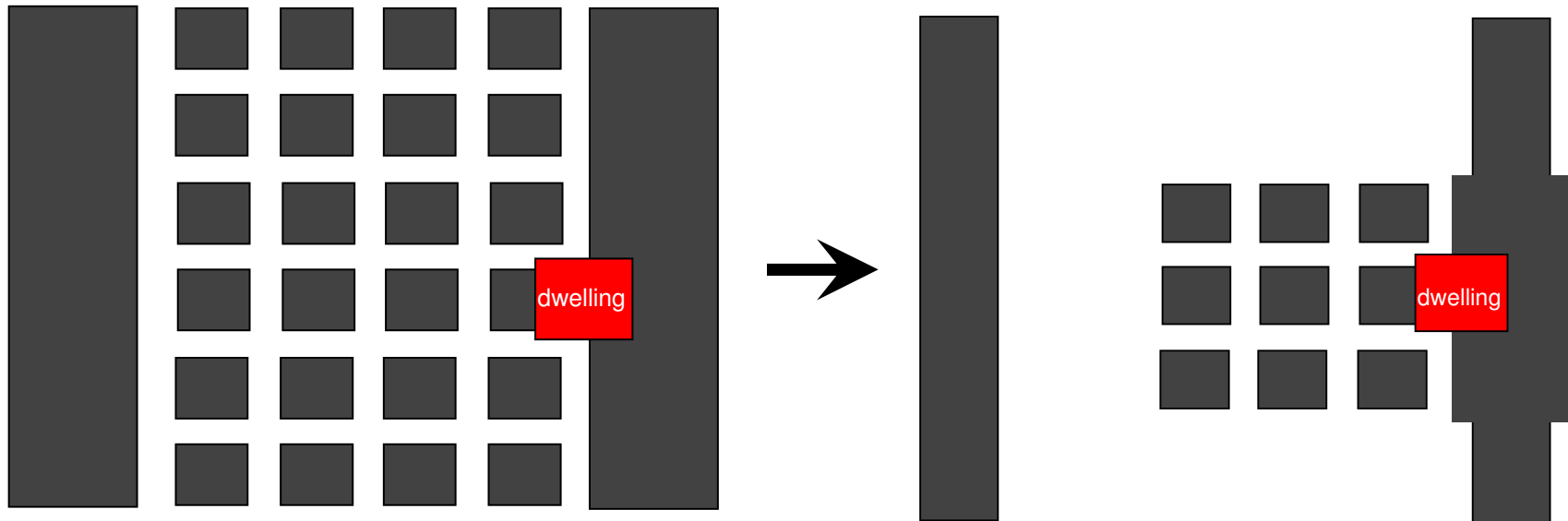
Tilt = $\pm 27\text{ mm/m}$

Curvature = 0.9 to -1.6 km^{-1}

Horizontal Strain = 5 to -8 mm/m

UNACCEPTABLE

Modification to Layout



First Workings: 120 m deep and up to 3 m high

20 m x 20 m Full Masonry Building:

Tolerable Subsidence = 50 mm

Tolerable Tilt = $\pm 3\text{mm/m}$

Tolerable Curvature = $\pm 0.3\text{ km}^{-1}$

Tolerable Horizontal Strain = $\pm 2\text{mm/m}$

After Pillar Extraction

Subsidence Predictions after extraction:

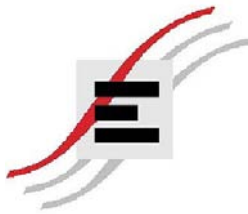
Subsidence = $< 50\text{ mm}$

Tilt = $< \pm 3\text{ mm/m}$

Curvature = $< \pm 0.3\text{ km}^{-1}$

Horizontal Strain = $< \pm 2\text{ mm/m}$

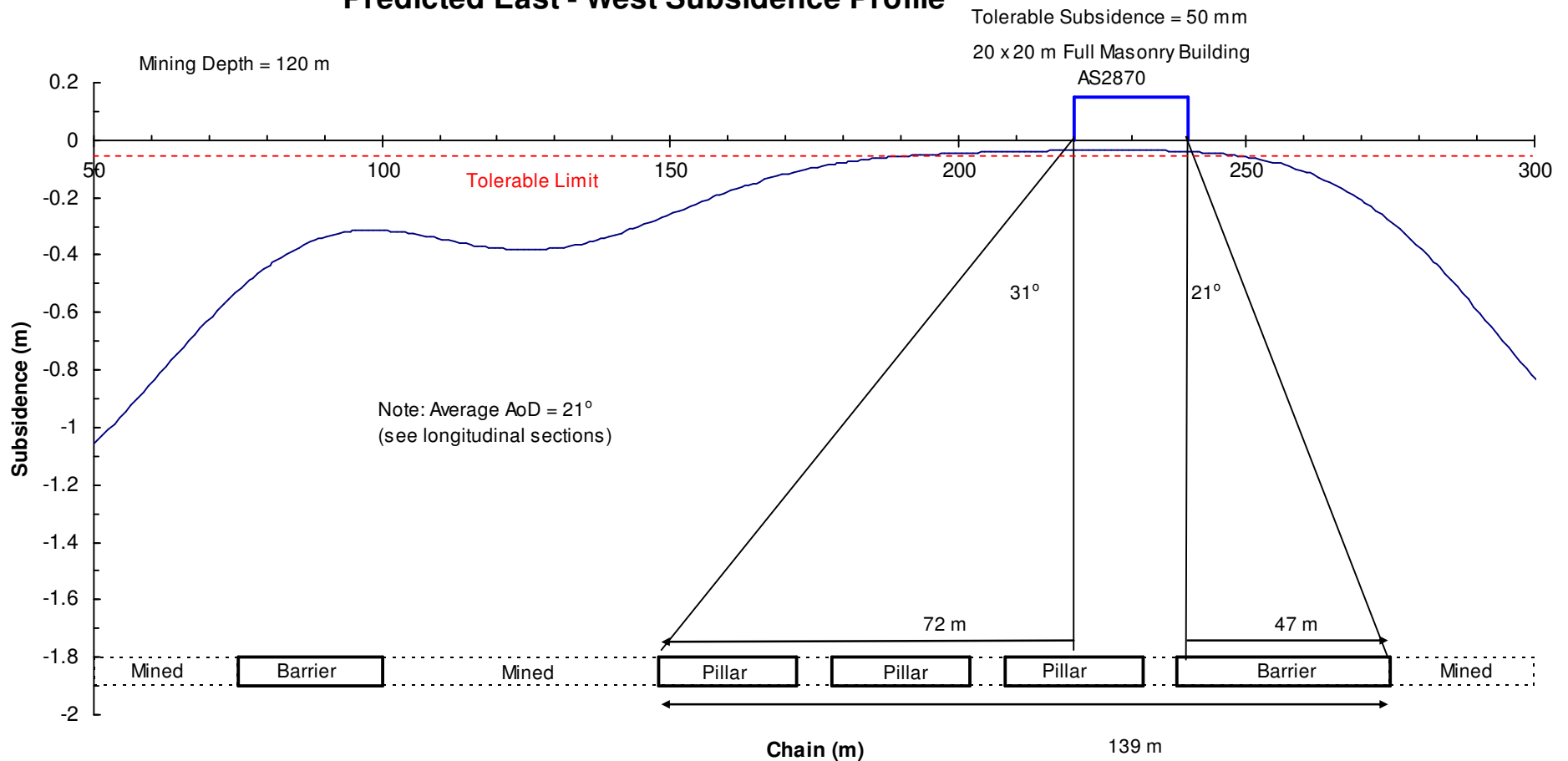
ACCEPTABLE

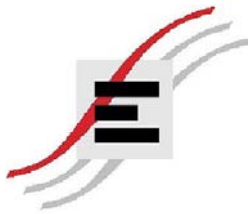


STRATA ENGINEERING

Example of Predicted Surface Effects of Impact Protection Pillars

Predicted East - West Subsidence Profile

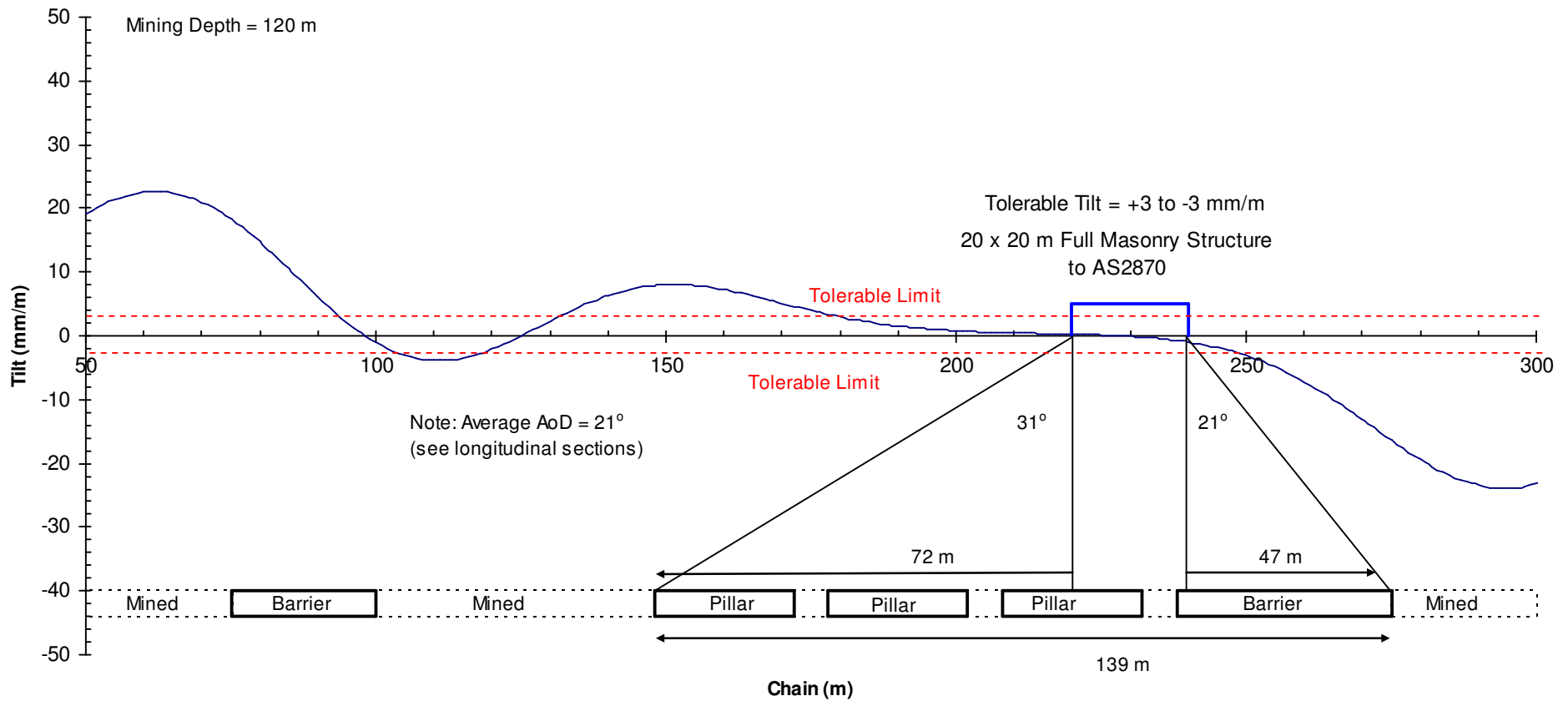


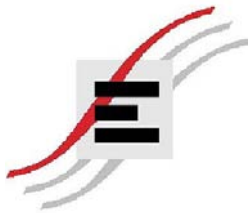


STRATA ENGINEERING

Example of Predicted Surface Effects of Impact Protection Pillars

Predicted East - West Tilt Profile

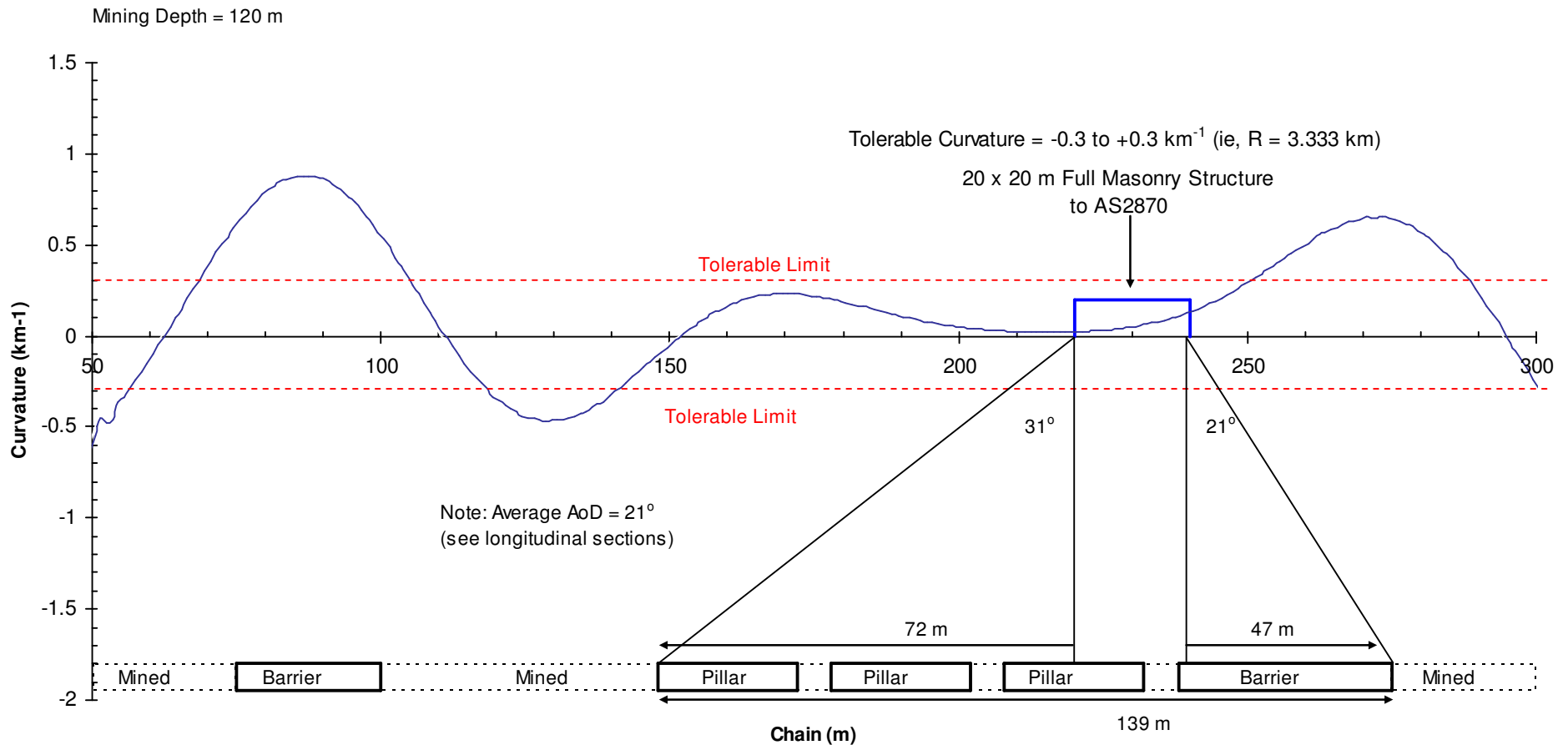


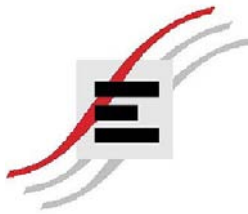


STRATA ENGINEERING

Example of Surface Effects of Impact Protection Pillars

Predicted East - West Curvature Profile



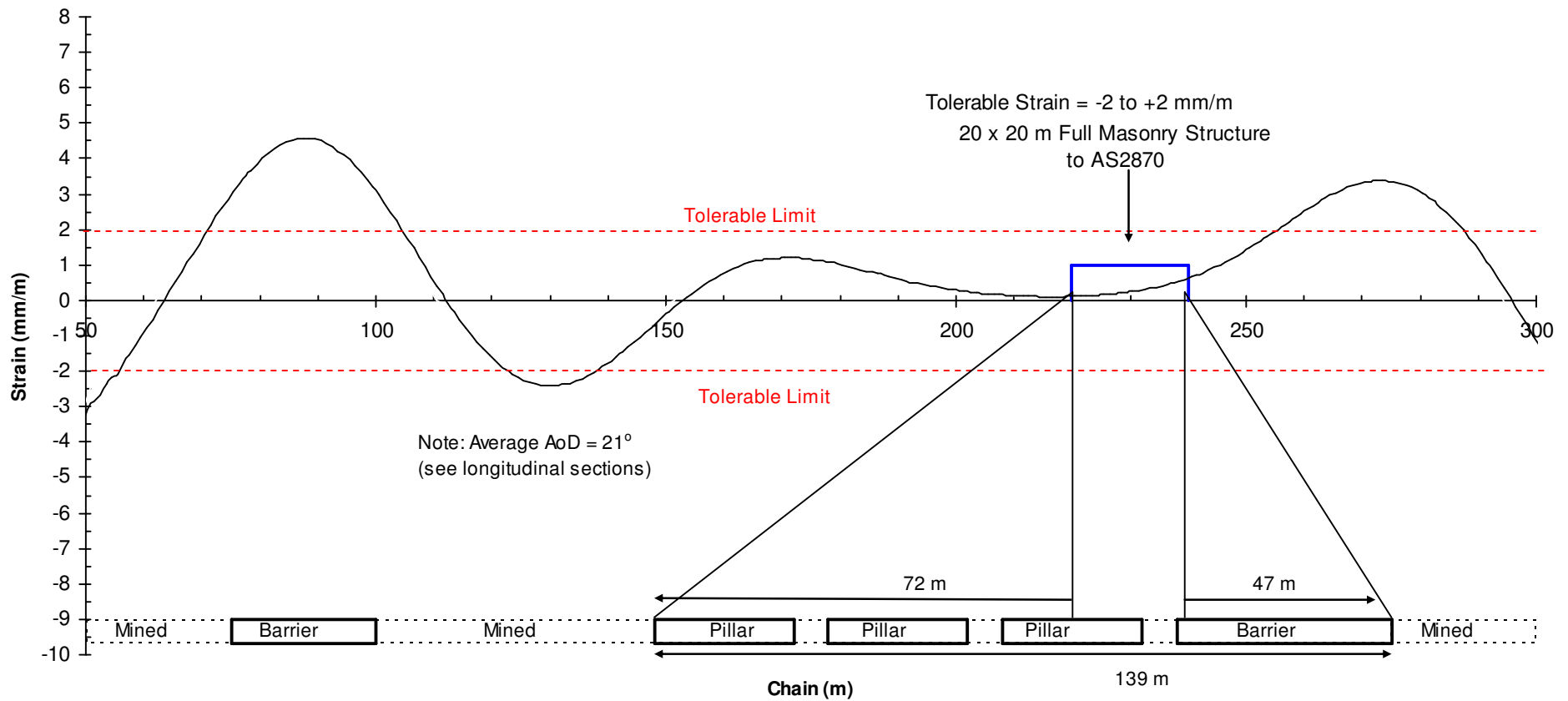


STRATA ENGINEERING

Example of Surface Effects of Impact Protection Pillars

Predicted East - West Strain Profile

Mining Depth = 120 m



Fourth Public Briefing for Abel Underground Mine – 31 May 2006 at Blackhill Public School

The meeting was chaired by Mr. Milton Morris with 49 people present.

The Chairman opened the meeting and welcomed all those present. He then recapped on the previous three meetings that have been held and advised that the next meeting would be on the 12th July and would be discussing water issues.

The Chairman then invited Mr. Greg Cole Clark (Chief Executive Officer with the Mine Subsidence Board) to address the meeting.

Through Mr. Cole Clark's presentation and following the presentation, the following is a précis of questions asked and statements made:

Q	What about improvements on land other than houses?
GCC	There is the Mining Act and Mine Subsidence Act. If you believe that mine subsidence damage then put a form in and we will investigate it.
Q	With approval of mine subsidence re building after proclamation – is there a fee?
GCC	No
Q	When is the mine subsidence district proclaimed?
GCC	When there is a need for one.
Q	Who pays extra costs for building that is the new guidelines?
GCC	Very little costs involved. If you want to build in a pot hole area then increased footings. You should build to the Australian Standards and the Building Code of Australia (BCA). Should then be ok.
Q	Who is responsible for cost?
GCC	The owner is....what I'm saying is that there is little increase in costs.
Q	Work at Rathluba – no concrete slabs but bearers and joists which had increased costs for them
GCC	If you build on concrete slabs and mining then you may get cracks and damage. It is shallow mine workings where damage occurs.
Q	What happens if potholes occur?
GCC	General rule of thumb potholes only occur if less than 5 times height of seam to the surface where you will get pot holes. If you have 40 m or 80m then you won't get potholes.
Q	Is there an insurance that the colliery can get to fix things and look after depreciation in values?
GCC	In Australia you can't buy insurance for mine subsidence. That's why the MSB came into affect and why the Company puts the dollars in.
Q	So there is no insurance for mine subsidence?
GCC	Not that I'm aware of in Australia
GCC	Pre mining inspections – MSB are quite happy to come to site and carry out premining inspections.
Q	We were given quite clear statement that they won't mine beneath any house. I want a guarantee that that won't happen.
GCC	That's up to the colliery. I'm here to talk about what MSB can do. We do look at dams, other improvements etc.
Q	What's the lead time on a request for an inspection?
GCC	Sometime within 12 months of mining. I will provide a copy of community guide to handout

	at future meeting.
Q	What happens with the trees when they are undermined? Do they still stand?
GCC	I'm not aware in my time of any damage being done to trees. The only risk would be in shallow mining.
Q	What about on slopes
GCC	No I haven't seen it. Russell probably explained to you with in the area that you would get tilt. 5% of total area mines.
Q	What subsidence are you expecting at 200mm deep?
RF	Can't give you a straight answer to it. You are correct in principle place of residence. Company is going to leave pillars of coal. If they don't you would get damage. At 300m deep width approx. 60% of height is extracted e.g. if seam is 2m then 1.2 – 1.3m and that's called supercritical subsidence. I think something less than that. The consultant is finalizing his report on subsidence in the area.
Q	Are you pulling Pillars?
RF	Yes
Q	Are you taking stoops?
RF	Can't take all the stoops. There are legal reasons. Will be leaving barriers behind. The company has gone with continuous miners rather than long wall for flexibility for surface structures.
Q	Is the fee paid by the mine subsidence board a set fee? Or total Coal taken out or damage caused by mines?
GCC	Cents per tonne and cost of damage around the state – also dollars go towards old mines workings.
Q	You said man made structures. Are they covered?
GCC	Yes.
Q	What about if dam is fed by underground spring?
GCC	Water is covered by mining act for crops and water and that comes back to the colliery. If you had water bore and got damaged – we'd fix it but not the supply of water that would be fixed by the colliery.
Q	Then we would have to litigate for it?
GCC	What's being discussed tonight is not new – happens all round the state. Mostly by long wall. They need to put plans in place.
Q	Its not the dam wall but the water supply in the dam
GCC	Yes – very important issue which would be looked in the environmental assessment. Colliery has to be aware of water users.
Q	Does that mean that individuals have to approach the company individually?
GCC	Yes. In past groups have used the consultative groups to deal with these issues.
Q	Article in Newcastle Herald re water loss. That person had approached the government departments. Were the MSB involved?
GCC	No. But after the other days article I asked the colliery. Seems to be that things were on track.
Q	Who is policing the police? How do we know they're taking coal and nothing else?
GCC	Principle surveying co provide plans monthly. Coal mine inspectors look underground. Colliery provides plans etc 6 monthly to Government. They do take it seriously what they look at.
Q	We've been told they can do it with out a subsidence plan?
GCC	The way I understand it that they put one in for each stage. You cant do mining if it may cause subsidence unless you put a plan in , Amounts of coal taken out goes in and the inspectors do look at it closely. There are serious repercussions....if you are mining and someone gets hurt.

Q	There are people here who are concerned for their land.
Q	If you are not looking after water and the mines department is then it sounds like a litigious thing that will be hard...
GCC	You need to raise those things now upfront so that they are considered up front in conditions. So you should talk now.
Q	So you put them in a contract to say if there is loss of water/loss of stock and they're not going to wait for time
GCC	Need to differentiate – issues with subsidence and houses Is MSB.
Q	Can we hear from the Company?
AO	With regard to water – at the next meeting we will have a consultant. As far as the issue, no one has mentioned the department of planning who are looking at this. We have to do 6 monthly and annual repots. I'm not too sure what the conditions are but we will comply with them
Q	But things go wrong out of our hands
AO	We're not going to turn around and walk away. We have to look at the economics and environment – all in balance. We need to look at all this.
Q	Who is benefiting?
MMc	There is 375 jobs
Q	But who with property
AO	With a multiplier if may be 1,000 jobs
Q	The guys working over the road wont be there
MMc	Mining is a temporary land use
AO	We made the decision long ago not to do long wall cause it gives us the ability to manage. We have the ability to change the mine plan if things happen. Not only not to go round houses
Q	But.....
RF	Subsidence does occur quickly after mining but once the area has been mined – when mining isn't being done.....
AO	Our plan is not to subsidize houses
Q	Risk assessment – MSB do you differentiate the risk associated with long wall and continuous miners?
GCC	No. They are markedly different
Q	So you don't view the risk differently?
GCC	No
Q	Direct question – do you have evidence that there is greater risk of subsidence with long wall than board and pillar...no
GCC	As long as the money is there they will fix it.
RF	If we wanted to we could do have the same impact as long wall but with pillar extraction we could minimize the damage that would occur.
Q	Has the mine already been approved?
MMc	No
Q	Who owns the mine?
AO	Donaldson coal a private registered company. An Australian company that operates under Australian law`
Q	Who is the major shareholder
AO	Noble energy who are listed in Singapore Stock exchange Noble is a commodity trader
Q	What percentage do they own?
AO	They own about 60%
Q	You were saying that this is an Australian company but it isn't.....Kraft was Australian.....
Q	Clarification on way MSB is funded. There is a levy on the company? Is it on land values?

GCC	Open cut pays 70% less.
Q	Valuation for land? Underground mine?
A	Rates from underground mine lease is complex and not to do with the land value but the value of the coal.
Q	I accept that the MSB doesn't have issue with license or lease. But have part in the development assessment. Do they have input to those that put the lease out? Can they have primary impact?
GCC	Lease – no involvement Time that they are looking at mining approval – we have a say in it when looking at things on surface etc. We are independent. If I thought that houses were being damaged then I would certainly have something to say.
Q	That's what I'm saying.....you should have a say in it.
Q	So it's the cart before the horse?
RF	So as custodian for funds, you would have input into the subsidence approvals?
GCC	Yes we do have input into that. There is now an interagency involved at looking at the subsidence plans.
Q	So it's not until the second workings
GCC	It's a matter of how workings are extracted that they determine subsidence.
RF	There is no point in sending out plans of secondary if there is going to be subsidence.
Q	How accurate are they being 300m down?
RF	Same degree as on surface
Q	Would they be down to a millimeters?
RF	Probably not that accurate
Q	There was a death when a guy was laying a charge and someone drilled in that was supposed to be 6 m away.
MMc	That's right in Olympic Dam.
Q	Since Gretley there has greater focus on accuracy. There are monthly plans submitted and you can see them at the DPI or at the Company. As to accuracy about 100mm.
Q	1. Fire in Stockrington – are they going to happen again? 2. There is a 1 meter gas pipeline through the property – are you concerned?
AO	Yes to question 2 – a plan is being put together with all surface structures inc houses etc.
Q	Will you be mining beneath the pipeline?
AO	It will be looked at to see what can be done
Q	Has the mine been approved?
AO	No
RF	Im not aware of any fires in Stockrington... MMc yes a few years ago.
Q	Will they look at fires in the area?
MMc	Yes completely different seam. Very low propensity for spontaneous combustion. If any change you design the mine so you can shut it off.
Q	Is there methane gas?
MMc	When you drill you test for methane. The coal seams in this part of the work are low in methane whereas at the south of the lake they are draining it for electricity generation. Here – very low levels and nil in some boreholes.
Q	Previous mining – how does the MSB distinguish between damage of old workings and or latest?
GCC	Claim is put in and we will look at it. There is a benefit of doubt clause that we can use.
Q	What is success rate of claims?
GCC	17% aren't undermined... of those left...50% of claims are accepted,

MM	33% then
Q	Im asking the MSB
GCC	The figures are approximate – we will look at it.
Q	Your initial statement sounded as if it is a trivial process?
GCC	No – it is serious and important to use. I have to say that in cases it isn't mine subsidence.
Q	Re earthquake in Tasmania. If weakened beneath ...does MSB say that damage is earthquake or mine subsidence?
GCC	Ellalong earthquake – covered by insurance. Subsidence was covered by us.
Q	Apart from agreement with Donaldson coal to look at outbuildings etc you would encourage people to come to you to have their property inspected? Is it a dilapidation report?
GCC	A visual inspection
Q	You would recommend that they ask for the inspection?
GCC	Yes – costs you nothing but your time. These guys will be doing structural. Ours look at tiles, etc under the house etc.
Q	Who would you go to for an overall property check fences and dams etc?
GCC	We have in past looked at those. Quite happy to especially in rural areas with dams, fences etc.
Q	So that would be independent report and mining goes ahead – you said MSB would look at dams but not water but your report would show that is valid but you said we'd have to talk to the company?
GCC	Yes I'd look at the next meeting with water consultants.
Q	What about construction of new dwellings? E.g. if someone wants to build two storey?
GCC	Depends on subsidence predicted. If strains 3m/m and tilts 4m/m then we have been approving two stories. I'd be saying to make sure the codes are adhered to when building
Q	There are areas where ground floor brick and top story something else
GCC	If you are talking about brick veneer and something else upstairs? But I've changed that so you now can have brick veneer upstairs. Now the real issue is length of the house – if it is less than 30 m then it is ok.
Q	Do you have pictures of examples what subsidence will look like.
GCC	Our website has pictures.....<1% ending up with damage that is normally cosmetic. Yes there would be photos on the website. May see if I can find them
Q	It would be helpful to look at photos of average case, best case, worst case etc.
GCC	I will see what I can find and talk to Milton
GCC	You have examples on freeway
Q	I don't know what im looking at
GCC	There is areas affected on the freeway and the MSB is involved.
Q	Can we say that spotted gum is not going to fall over?
Q	Requirement for envelope around the house?
GCC	No there isn't but I'm sure the colliery would look at is and a plan for each house and show where mining is going to occur
Q	I have a picture where a rock has a crack in it from mine subsidence from Mandalong.
GCC	We don't look after those things
Q	So we should ask the company to address these?
GCC	Yes there are a whole lot of the things the colliery has to look at
Q	Does the company have the distance away from houses yet?
AO	No as explained at the last meeting. We will look at depth of cover ...it's to be within acceptable limits. Look at individual properties.
RF	The area mined will be substantially more than 5 – 10 m

Q	My understanding was there was a 26 degree slope cone.....
RF	26 degrees we used safe for any ground. If you are on steep slope then it would come in to effect. On flat shallower it will be less
Q	Im saying that there is an envelope beneath the house that won't be mined?
RF	Yes
Q	So it will be Stockrington heights
Q	So you are saying that there will be a plan – will you arrive and table the plan or talk about it then do the plan?
MMc	No we would have to get a lot of detail on your property. Education process - then we would negotiate
Q	You haven't yet done survey of property but you have a mining plan. You would come up with property plan with respect to mining plan?
MMc	Yes
Q	If you plan to get to my property boundary when will talk to me?
MMc	Within 12 months of mining
Q	But can be seven years or two years?
MMc	We need to look at what the land will do in say 2 years. So the risks are looked at.
Q	How will this impact on catholic land? Is there a rep here?
JF	We are sitting here not wanting mining. We don't have enough information yet. NO mine plan no development application. This process is to inform us so that when the time comes we will know what to do. Reality – no one wants property undermined. Try to do the best we can to live with it. At this point in time we don't have enough information until they put their DA in we cant do anything. Until then we can put a school application in we are still looking at seeing where it will go We don't want a school to fall in The constraints that we have is the lower hunter strategy that wont let us do anything other than the school As I said to Adam we don't want you to mine under us. They're trying to do the right thing but....
Q	Is there coal under east Maitland?
Q	I don't have a problem with coal and it has to be mined. Our concern is affect on property values. The question is if we were to sell tomorrow what affect would this have on it? What I'm looking for – you say mine plan as you progress with work. Community – looking for a certificate to say that there wont be any damage to the property – their house
AO	We have said we will be protecting the houses
Q	I want something in writing – a certificate
AO	The new process – include a statement of commitment. The company could agree to put it as a certificate to each land holder
Q	If you view the certificate will that mean we then won't be able to complain about the mine?
AO	No – it is a statement
Q	You are saying that it is part of the process – we would like the commitment now.
AO	We will look at it and come back to you
Q	If the house is \$500,000 then \$525,000 in 10 years time due to the mine – we're the losers
MMc	That doesn't bear out – expensive parts are undermined in Newcastle
RF	Once the mining goes through the value would increase. The land is worth nothing until the mining goes forward
MMc	Land is covered by exploration licence. Department of mine will say that there is a deposit that needs to be taken out.
GCC	Milton has my contact numbers if any one wants to talk afterwards.
Q	Re agreement with individual land holder - is that negotiated and the company signs off?

	Does the mine then sign off on it?
MMc	Yes
Q	Is there an independent legal person to review it?
MMc	Im not aware of any solicitors that would look at it
Q	We haven't been through this process before. So there is no one independent?
MMC	You can run it by anyone. I'm not in a position to give it to you
Q	Two parts: Engineering advice and legal advice. Most lawyers look at legal but would want independent advice on the engineering.
Q	Housekeeping are there are notes taken here – were they to be circulated?
AB	Yes please sign the attendance and I'll make sure you get them
Q	Most discussion around piers and house and MSB. Companies have trend of going bad after years. You could get damage after if there is a drought. Could be a lot of weaknesses. We may not see any subsidence for years after when the company has closed etc and no contribution from companies. Could be a lot of damage caused by subsidence. Is the mine already have an open cut – are they going to mine under it as well?
MMc	Second part – coal seams in the open cut come together to form what we are going to mine. There are no mine able underground seams beneath the open cut.
RF	The first part – cant answer political issues as to what the MSB will be or the company in 100 years. Issue is to cause subsidence now. Happens relatively soon after mining. Once it gets to 60% of mining the subsidence will occur. Lots of examples around the world. Pillar base mining 100 years – good understanding what it is in 200 years I couldn't say but we can make it less chance...say 1 in a million.
Q	How and when is the information being collected by Mr. Heaney being used?
MMc	Forming part of a data base. People who have asked we have given it to them. We won't give them information on other peoples land. In Environmental Assessment we will list in a database of improvements on land and frequencies without giving names or details.
Q	With respect to Tasman and trucks from health and safety view – what plans are there for improving the intersection with Blackhill road?
MMc	None – the RTA said nothing needs to be done
AO	But we think that something needs to be done
Q	Only matter of time until there is an accident. From a health and safety view, advantage for your company to look at it
AO	We agree with you
Q	I appreciate Allan's work to get minutes out. These minutes seem to be some of questions asked but no statements. When you only record questions and not statements you are not recording the mood.
AO	What was sent out?
MMc	Dot points that I took
AO	We will be producing notes in the Environmental Assessment when it comes out
Q	I'm saying that it doesn't capture all things
MMc	Those things come from dot points. I'm not trying to create minutes but dot points of what was said
Q	Why are minutes not being taken
AO	Minutes are being taken by Mr. Brown and will be included in the Environmental assessment
Q	I thought it would be good for them to be sent around to see if there are any discrepancies.
Q	It would be good for the conduct of these meetings

Q	How did you make people aware of these meetings? Did you letter box?
MMc	Yes
Q	You missed Stockrington road
MMc	I can assure you that I didn't miss Stockrington road
MMc	We notified the first but not the others. We assumed word of mouth
Q	That why we're a bit.....
Q	The minutes would be good
Q	You have a detailed map with names – send them out in the mail
MMc	We don't have all the mail addresses
AO	We have said we will include them in the Environmental assessment
MM	The request is to have the minutes from the meeting
MMc	We don't have all the addresses
Q	I attended the first meeting but wasn't aware of further meetings
Q	They said at the first meeting that the dates would be for the second and third meeting cause I was there and its in my notes
MMc	There will be minutes circulated
AB	I can send them out to be circulated
Q	Do we understand that all minutes will be circulated?
MMc	Yes
Q	Can you bring hard copies to the next meeting?
MMc	Yes
MM	The next meeting will be on the 12 th July at 7.00 pm
Q	One for the road – a cross section of the strata – can we see it at the next time?
MMc	Yes
Q	If someone lives at the end of the mine say 15 years away – and wanted to subdivide that it would be rejected?
MMc	Council would look at all things

RF – Russell Frith

AO – Alick Osborne

MM - Milton Morris

MMc – Mark McPherson

AB – Alan Brown

GCC – Greg Cole Clarke

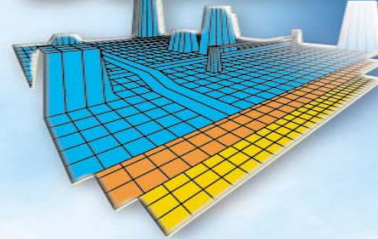
JF – John Feenan

Q – Question or Statement made by a community member

The Chairman closed the meeting at 9.00 pm.

Next meeting 12 July, 2006 at 7 pm and will be discussing water issues.

MINE SUBSIDENCE BOARD



Advisory Service

Technical Expertise

Building Guidelines

Compensation

Repair

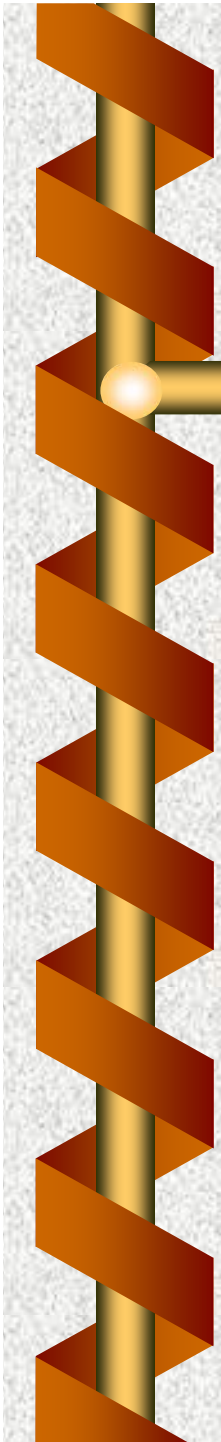
Research and Development

**Elimination of
Danger**

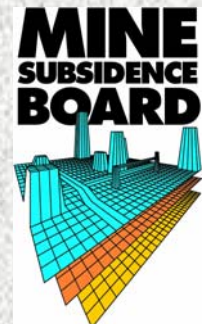
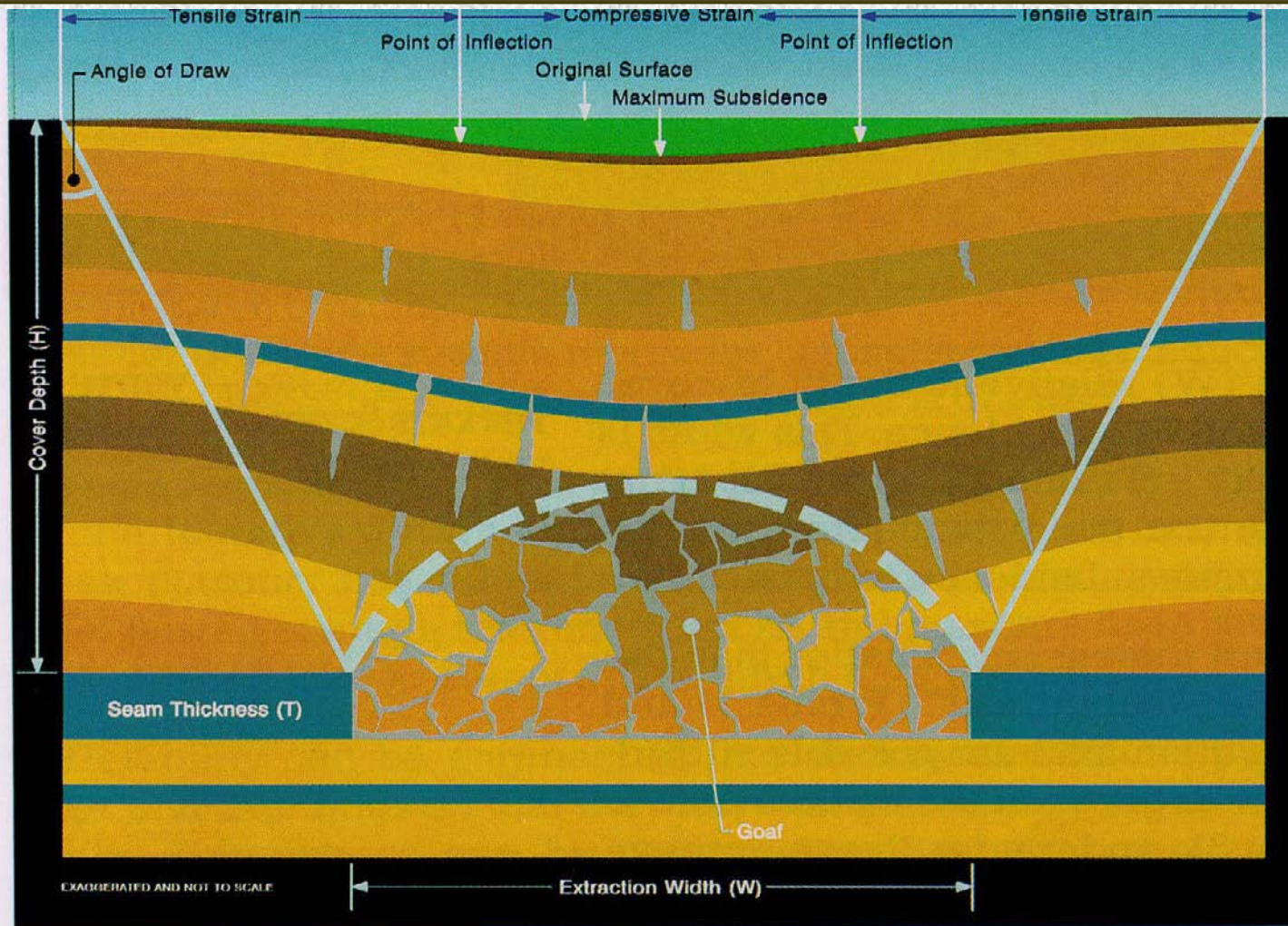
Community Meeting – 31 May 2005

Community Involvement

Putting Service and the needs of people first.

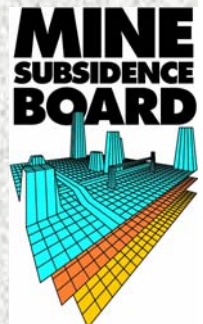


MINE SUBSIDENCE SECTION



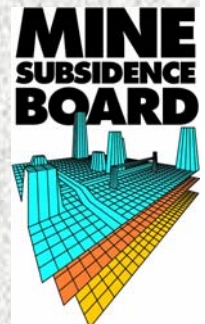
WHO IS THE MINE SUBSIDENCE BOARD?

- **Independent service organisation operating for the community in coal mining areas of NSW**
- **Responsible for administering the Mine Subsidence Compensation Act**
- **Act provides a compensation scheme where surface improvements or household effects are damaged by coal mine subsidence**
- **Provides compensation as a right, rather than litigation**
- **Funded by a levy on all colliery proprietors in NSW**



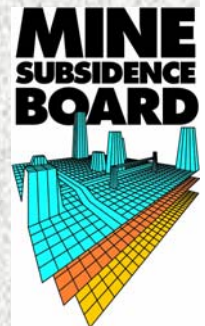
FUNCTIONS

- **Compensation for damage to improvements caused by coal mine subsidence**
- **Prevention of damage**
 - **Development controls**
 - **Mitigatory work**
- **Advisory and technical resources service on mine subsidence and surface development**
- **Elimination of danger**
- **Note: The Board does not issue mine leases or approve mining extraction**

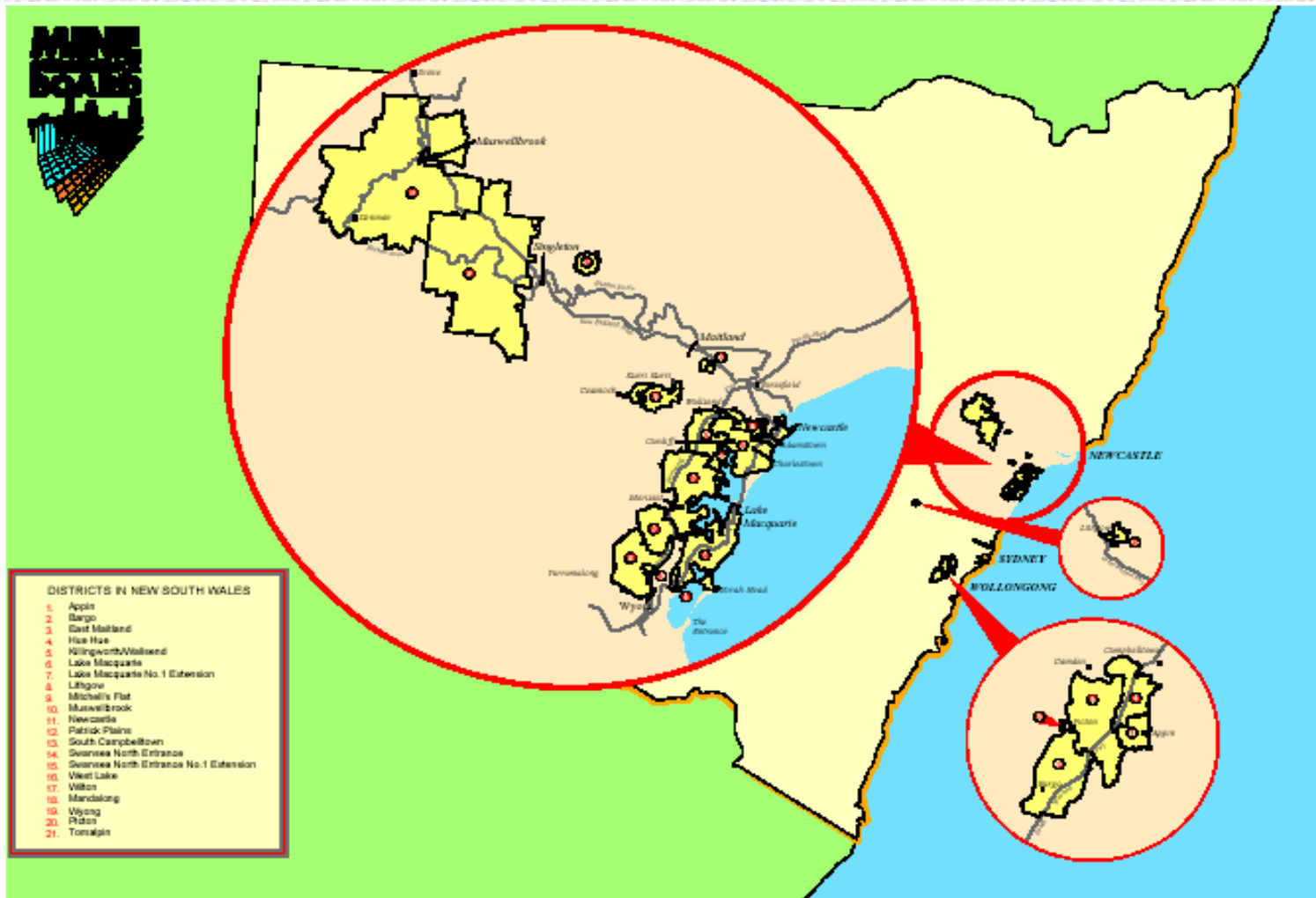


WHAT IS COVERED BY THE ACT?

- **Surface improvements:**
 - **Built before proclamation of a District**
 - **Construction approved by the Board in a District**
- **Household or other effects**

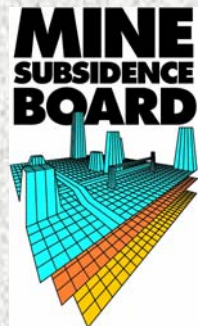


NSW Mine Subsidence Districts



WHAT IS A MINE SUBSIDENCE DISTRICT?

- ❁ **Identifies an area likely to be affected by subsidence from past, present or future coal mining**
- ❁ **Enables the Board to establish building guidelines to ensure structures remain safe, serviceable and repairable**
- ❁ **Damage to properties is reduced and social impact minimised**
- ❁ **Provides a focus for the Board's services**

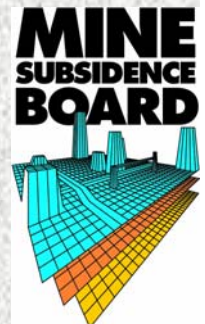


PRE-MINING INSPECTIONS (PMI's)



PRE-MINING INSPECTIONS

- ❁ **Assesses the general condition of a structure prior to mining**
- ❁ **Completed in the presence of the owner or their representative**
- ❁ **Inspection usually undertaken within 12 months of the improvement being undermined**
- ❁ **Inspection may include visual inspection, photographs, survey levels**
- ❁ **Written report made available to property owner**
- ❁ **There is no charge for this service**



CONCLUSION



- **Thank you for opportunity to address meeting**
- **Members are welcome to contact me if I can be of assistance in the future.**
- **24hr emergency hotline 1800 248 083**
- **www.minesub.nsw.gov.au**

Donaldson Coal Pty Limited

**ABEL UNDERGROUND MINE
PART 3A ENVIRONMENTAL
ASSESSMENT**

Appendix B2

Property Title Information



Map Ref	Lot	DP
1	94	755260
2	942	817442
3	1	858353
4	94	755260
5	11	804925
6	12	804925
7	1	583620
8	8	1048112
9	7	1048112
10	3	237431
11	210	833717
12	211	833717
13	5	237431
14	1	1003988
15	932	816814
16	1	189884
17	83	629112
18	3	1003988
19	2	1003988
20	223	841899
21	224	841899
22	84	629112
23	116	755260
23	121	755260
23	122	755260
24	113	755260
25	112	755260
26	110	755260
26	111	755260
27	2	449834
27	21	773883
27	22	1080823
28	23	1080823
28	24	1080823
29	220	836874
30	2	531623
31	219	836874
32	218	836874
33	107	755260
34	1061	855759
35	1062	855759
36	105	755260
37	118	755260
38	11	873821
39	8	873821
39	9	873821
40	5	873821
40	7	873821
41	6	873821
42	104	755260
43	103	755260
44	102	755260
45	14	1059212
46	120	755260
47	101	755260
48	100	755260
49	11	11875
49	13	11875
49	122	567150

Map Ref	Lot	DP
49	21	1019282
49	22	1019282
50	1	120851
51	A	418390
52	11	877937
52	12	877937
53	610	1035588
53	611	1035588
54	2	219167
55	A	181350
56	1	536570
56	1	957782
57	8110	867955
57	8111	867955
58	810	730001
58	1	951843
59	2	951843
59	1	119630
59	1	123945
59	1	505578
59	72	755260
59	79	755260
59	82	755260
59	83	755260
59	84	755260
59	89	755260
59	96	755260
59	125	755260
59	1	877416
59	2	877416
59	3	877416
59	4	877416
59	101	881099
59	13	1072499
60	2	503566
61	1	433355
61	21	801283
62	22	801283
63	2	285375
64	100	881099
65	1	285375
66	3	285375
67	4	285375
68	5	285375
69	6	285375
70	3	602610
71	1	34665
70	1	228477
71	1	986196
72	2	602610
73	91	828299
74	92	828299
75	951	600488
76	202	626192
77	2011	812939
78	2012	812939
79	952	600488
80	A	155698
81	101	837562

Map Ref	Lot	DP
82	100	837562
83	1	602610
84	1	179002
85	2	228477
86	3	228477
87	12	528093
88	21	1043285
88	22	1043285
89	111	1035921
90	1	174428
91	10	837813
92	1	910932
93	1	359638
92	680	545657
94	683	619758
94	686	619758
95	685	619758
96	3	214493
97	2	214493
98	1	214493
98	4	214493
99	684	619758
100	1	123949
100	2	123949
100	70	755260
101	82	627799
102	1131	1057179
103	1	811514
104	10	829154
105	11	829154
106	11	746684
107	41	811191
108	8	755232
109	7	850020
108	8	850020
108	4	1049753
109	43	811191
110	6	850020
111	101	860867
112	13	1072499