

TO Lynelle Briggs AO – Chairman other members of the Planning Assessment Commission  
Joe Woodward PSM , Jan Murrell , distinguished guests , ladies & Gentlemen

I produced a report for Liverpool Plains Shire Council after being invited to participate on a trip to China in August 2014. Part of that trip was to visit Shenhua’s mining operations in the province of Inner Mongolia, 200 Klms south of the major provincial town Hohhot. The report is self-explanatory and I will draw on several points within the report in my redress to Planning Assessment Commission today.

The MAJOR key element in this debate has to be protection of the area’s overland & Underground water reserves and sustainable use of both. Beit Agriculture or resource extraction without sustainable water management what is being debated is no longer debatable. Without Water there is no future for any.

I believe the only approach that can be taken in a decision to proceed with more or larger resource mining in the Liverpool plains has to be a bipartisan approach, as without development without change The New England North West cannot progress successfully as a region. We all have a responsibility to foster and culture sustainable development as any sort of future cannot be guaranteed by maintaining the status Quo, energy & food are both an integral part of the world as we know it today.

A great English Earl Francis Bacon – stated quite succinctly **“Things alter for the worse spontaneously, if they be not altered for the better designedly.** ~Francis Bacon.

With the priority being water management, managing and planning the physical and social change itself is the next most critical issue at hand and the management of change has to be linked with the monitoring of the outcomes of that change to ensure sustainability for all participants.

I don’t believe the debate is just about Mining OR Agriculture, as a region, the New England NorthWest have bigger issues! If we look at the latest report by “Regional Development Australia “for Northern Inland , Issues report #7, 2014-15, it has to be noted that as a region we have many challenges to address , In talking about the New England North West or Northern Inland NSW these regions encompasses the Liverpool plains and the identified Issues are :

- Lack of business growth initiatives in the region.
- Need to find new markets outside the region for our products/services.
- Fragmented and uncoordinated approaches to attracting new residents, businesses and tourists.
- High numbers and sustained out-migration of young people 20-30 years.
- Skilled workforce shortages and centralising of tertiary education.
- Erosion of transport services, and lack of infrastructure spending.
- Limited Access to integrated health and aged care services.
- Large and growing Indigenous population requiring particular education, employment and community services.
- Youth inclusion, education and skills pathways, employment opportunities.
- Over-reliance on volunteerism and ageing community leaders.

The suggestion here here is not that Mining or Shenhua can fix all these regional challenges BUT I do believe that they can be part of the solution. The solution to these challenges is going to have to take a lot of effort, compromise, and cooperation by all parties.

As a region I don’t think we can look to State or Federal parliament for a solution.

The hard cruel facts are that we live in a time when our governments are driven by opinion polls and statistics. With the fact that 85% of our population lives within 50 klms of the coast line, votes and polls don’t weigh in our favour in regional NSW. I am of the personal opinion that unless we as a region don’t help our self then our list of challenges will become greater and even more over bearing .

Aligning this fact with the other startling fact that “– the region is receiving more taxation dollars back in benefits than it actually pays in tax .The ratio of taxes paid (\$952M) to benefits received (\$1,103M) is 0.86 “

there has to be a stark realisation here that this debate is not really about Agriculture or mining BUT rather it is about a regional economy ! For all of those parties with a single focused interest, it is well worth contemplating over words of William H. Seward ~ **"The circumstances of the world are so variable that an irrevocable/single purpose or opinion is almost synonymous with a foolish one."** So my appeal to those present and within this debate is to think long and hard about what you really want as a future for this region, for your economy and your children. Because if we continue doing the same thing we will get the same result and right now that doesn't paint a bright future.

Change is inevitable how we manage that change is the challenge! To quote Socrates **" The secret of change is to focus all your energies not on fighting the old but building the new "**

This applies to all parties concerned and in particular mining companies such as Shenhua have to realise that their benefit to the region has to add value more than donations to local charity and community projects it's about development of supporting infrastructure and systems that will allow the region to become competitive in a global economy . As the risks for Australian farmers are its continued declining terms of trade , left unaddressed Australian Agriculture will not be competitive in a global economy that is seeing third world countries gaining productivity gains faster and more effectively than Australian farmers

Shenhua and other potential participants in the resource sector have to look at taking the lead in developing INTERNATIONAL regional AIRPORTS , modern rail infrastructure , Effective Ports and facilities that allow the movement of commodities , goods and people at a cost effective means in and out of regional Australia. Understand that development of Permanent local residency of workers is a key to developing the areas , as economies are people and to build an economy you need people localised . The Agricultural Sector need to realise that without major corporate capital into infrastructure in regional Australia the ability to capitalise on the Asian boom the opportunity to gain new and lasting market share in China isn't going to happen unless they are competitive, timely and aggressive. The opportunity is not going to come begging it will have to be earned !

Agriculture needs to pursue the Creation of strategic , regional bipartisan agreements with major corporate entities that deliver regional advantage and sustainable environments, to do that ALL parties have to be in involved in a lot of effort, compromise, and cooperation.

Zhang Yuzhuo – Chairman of Shenhua China at a formal dinner held on behalf Liverpool Plains Shire Council asked all of us to convey to the people of the Liverpool Plains what we saw in China in respect to Shenhua's operations .

What I saw was a very big operation and impressive development but what impressed me the most was three things

1. The reclamation of the country after the coal had been mined, it was not just a process of returning the landscape to its former state BUT it was a to a continuing state of superior development with drainage, water management, tree, plants and wildlife all in a far better position than the surrounding original countryside. There was an ongoing commitment over 9 years after mining .
2. The Urban development to cater for workers was also planned and considerate of the environment and long term sustainability.
3. The people we meet within Shenhua where at all times very conscience of their environmental and moral obligations. None more so than the Chairman himself Mr Zhang who during our conversation stated that as a person raised in Rural china he had a personal interest in ensuring whatever the company did it would pursue a course of sustainable long term development for without that none of us have a future !

These are my observations from my own personal experience of flying over and seeing Shenhua's operations physically and I am not asking you to adopt them ,but I would encourage you to go over and see yourself before making a decision on what is good or bad for your region.

I would close with the words of Theodore Roosevelt ~ **"The best thing you can do is the right thing; the next best thing you can do is the wrong thing; the worst thing you can do is nothing."** –

..... = short version

## 6 MINUTE VERSION

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1. Developing INTERNATIONAL regional AIRPORTS , modern regional rail infrastructure , Effective Ports and facilities that allow the movement of commodities , goods and people at a cost effective means in and out of regional Australia.
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2014

# Agriculture & Mining



Daryl W. Young

Australian Agricultural Investment Fund

10/04/2014

# Agriculture & Mining

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8. Statement of Independence

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### **1. Qualifications for Daryl William Young**

Certificate – Sustainable Agricultural Production – UNE

Degree in Agriculture Business Management – Tocal Agricultural College

Diploma in Agriculture – Yanco Agricultural Research Station and College

Certificate – Short Course Monash University on Commodity Futures

Certificate of attainment from Austrade on the Principles of Export Trading

Certificate – Monash University on Developing and Marketing Export Commodities

#### **Experience**

December 2012 to Present – Sold all business interests and worked for new Owners on a changeover to now consulting to Agricultural Companies and looking at new Opportunities to assist Agriculture and Agricultural Communities .

August 1986 to December 2012 – Established developed and was CEO of the group of companies listed below which together formed the Namoi Rural group.

Namoi Valley Grain and Grading Co Pty Ltd

Namoi Rural P/L

Young's Rural Services

Australian Agricultural Commodities

Agies Rural Retail

Australian Agricultural Crop Technologies

Collectively these Companies where involved in all aspects of the regions agriculture from paddock to plate. Interests include the sale of agriculture inputs, agronomy services, the accumulation and processing of agricultural products through to the packing and exporting of Agricultural Commodities. As the CEO of these companies, I have a very thorough understanding of all aspects of the farming industries of the region including leading edge farm technology and sustainability issues. At its peak, the group of companies employ up to 35 full

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time and part time employees. Of the full time employee's two are consulting agronomist that deliver best practice agronomy packages to growers throughout the Namoi Region.

Nov 1976 – Aug 1986 – Owned and managed a farming enterprise of 1545 hectares in Northern NSW.

During this, and the preceding decade, farming of cereal crops increased rapidly through the area. With this and the introduction of larger horsepower tractors and wider equipment, there was a change the focus of agriculture to high production at almost any cost, with little attention being paid to management of resources or sustainability practices.

A major focus of my farming was to change this by utilizing conservation theory learned at college. Understanding soil types, farm planning and introduction of new crop types became major issues in my farming career. Gradual change from a monoculture cropping to include legumes in rotation, better resource management of soils, attention to water use efficiencies and minimum till practices resulted in more sustainable and environmental friendly means of farming.

While this management technique improved my farming practices, it also lead into a desire to assist other growers in the introduction of new cropping choices through to input availability, agronomy advice and marketing options to growers. This eventually lead to the establishment of the Namoi Group of companies listed above that are primarily focused on the pulse crops.

Nov 1972 – Nov 1976 – Sharefarmed 2250 hectares in Northern NSW in conjunction with family members. I was responsible for book keeping and budgeting of the venture along with being part of a working team who handled the daily workload of an intensive large-scale dry land-farming program.

1964- 1972 – Worked on the family farm on weekends and holidays, learning and adopting family farming principles and practices at the time.

### **Skills**

A well-established knowledge in agricultural principals with nearly thirty years of first hand farming, which culminated in developing a well-managed broad acre farming enterprise from 1976- 1986.

The building of business skills and knowledge of staff management by establishing a new business (1986-2012) and building it into an enterprise with a \$20 million dollar annual turnover, based around servicing growers with competitive farm input costs and alternative marketing options.

Gaining international experience around the globe by developing and planning a network of international agents and interacting with those people in developing a commodity-exporting program. Regularly visiting 13 different countries to understand the uses and processing of the agricultural commodities being exported. Developing multicultural skills across a broad cross section of ethnic backgrounds to be able to negotiate and develop professional business relationships across these backgrounds.

Building a business from a small base through good tactical decisions and foresight into industry leaders. Together with several successful mergers of different facets of the business with other similar businesses in the region to enhance the existing business. Development of a secondary business for the tendering of seed lines for the commercialisation licence of these lines to develop them into commercial varieties. This has included pulses and alternative crops such as mustards and oil seeds from government breeding institutions. This was to augment the existing business to achieve the goal of introducing new seed lines and crop choices to enhance grower profitability

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The development of Quality Assurance programs within departments in the business to improve efficiencies and maintaining quality integrity.

The successful negotiation and tender of a breeding program to develop some unique opportunities in Agriculture around the alternatives of renewable sources of energy (oil seed production). Ongoing research and development into a sustainable environmentally friendly agricultural society.

The last 17 years have enabled a practical adoption of business principles that have delivered an ability to manage personnel, deliver real economical solutions and deliver new systems to the broader public, having the ability to be able to take an idea, test its functionality and mature it into a business plan that delivers goals and objectives is an attribute that I find truly rewarding.

### Career Summary

The development of sound business principals and a solid background in agriculture has been the dynamics for developing a network of businesses around agriculture.

Understanding the early principals of monoculture broad acre farming enterprises, being part of a declining farming system has allowed for an understanding of why the system is unsustainable and needing change. Change involves firstly a understanding, then measurement of key components and then education of the broader public. This challenge has been adopted when building a complex agricultural business offering its clients agricultural inputs, consultancy on cropping choices through to marketing choices for commodities grown. This vision has been the driving force to what is trying to be achieved by the group of companies under my direction.

## 2. Setting the Scene

Through the NSW Business Chamber Regional New England / North west representative , Mr Derek Tink, I was made aware of a pending delegation from the Liverpool Plains Shire Council travelling to China to investigate two particular items

- Visiting a town called Jimo in the Qingdao Area to look at potential Sister City Arrangements
- Travel to Inner Mongolia to inspect mining operations by the Shenhua Group

This progressed into a meeting with the Liverpool Shire Plains Council General manager – Robert Hunt and Mayor – Ian Lobsey in an informal meeting to discuss my background, credentials and availability to go as part of the delegation to China.

This meeting led into an approval that meant I was invited to go on the delegation with the express purposes of promoting the Liverpool Plains as a source of Agricultural Products for China and secondly providing an independent unbiased point of view on Shenhua's rehabilitation operations after coal mining in Inner Mongolia .

The delegation consisted of the following people :

1. Ian Lobsey - Mayor Liverpool Plains Shire Council
2. Robert Hunt – General Manager Liverpool Plain Shire Council
3. Jing Zhang – Interpreter and Employee Shenhua Watermark
4. Gordon Heath – Castle Mountain Zeolites and business owner Liverpool Plains Shire
5. Derek Tink – Digital IQ
6. Daryl Young – Representative for AAIF and an Agricultural Consultant





Delegation at Jimo

On Thursday Evening 7<sup>th</sup> August the delegation meet and dined with Liu Xiang - Chairman , Shenhua Australia Holdings Pty Limited , Shenhua Watermark Coal Pty Limited as well as delegates from the People's Republic of China Consul of Sydney Mr Gang Peng, Commercial Counsellor and Mr Wenglong Cui,.

The delegation left Sydney on the morning of Friday the 8<sup>th</sup> August 2014 and arrived Beijing approx. 12pm that evening.

On Monday 11<sup>th</sup> August the delegation departed Beijing to Qingdao Airport where we boarded a bus and travelled toward the Jimo area . The delegation was taken to the Aoshan Bay area which is in the Jimo area and just east of the city of Jimo . We meet up with the Vice mayor - Mr Sun and many other representatives of the Jimo Community . In the afternoon we were taken around this area and visited the Microsoft Research Centre , Qingdao ocean Science and Technology , shown the Shandong University Qingdao Campus ( Under construction – to house 40,000 students ) then it was a tour of the Aoshan Bay area and new constructions of town houses , holiday houses and golf course and hot springs ( a unique feature for the Aoshan Bay area ) . The day ended in a formal introduction to the Mayor of Jimo and an entourage of Officials including :

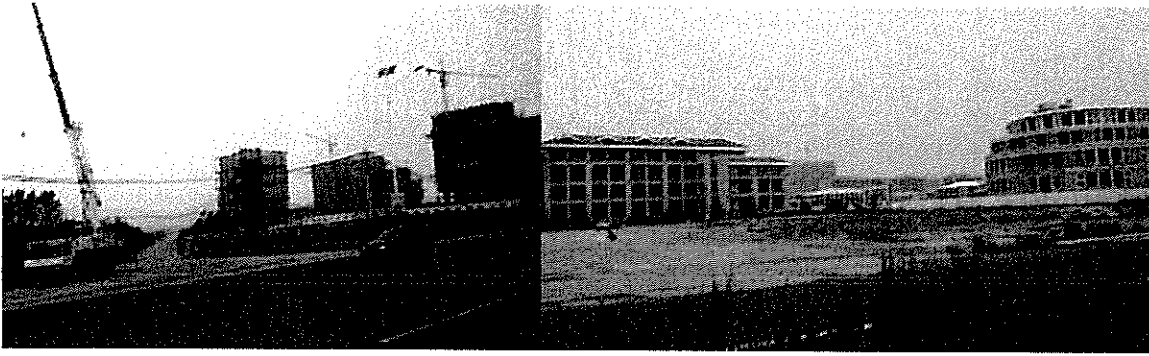
- Zheng Deyan – Mayor of Jimo City
- Xin Qixin – party Secretary and the first Deputy Director of the Standing Committee of the NPC of Jimo
- Chen Yulan – Chairperson of Jifa group
- Sun Mingming – Vice Mayor of Jimo City
- Li Kemin – Director of Jimo Agricultural Bureau
- Jiang liming – Director of Jimo Education Bureau
- Han Yongjun – Director of Foreign Affairs

Jimo is located in the Shandong province which is a coastal province of the People's Republic of China, and is part of the East China region.

Shandong has played a major role in Chinese history from the beginning of Chinese civilization along the lower reaches of the Yellow River and served as a pivotal cultural and religious site for Taoism, Chinese Buddhism, and Confucianism. Shandong's location at the intersection of ancient as well as modern north-south and east-west trading routes have helped to establish it as an economic centre. After a period of political instability and economic hardship that began in the late 19<sup>th</sup> century, Shandong has emerged as one of the most populous (95,793,065 inhabitants at the 2010 Census) and most affluent provinces in the People's Republic of China (GDP of in 2013, of USD892 billion, China's third wealthiest province).

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\*\*Construction on the New University

\*\* New technology Area – Aoshan Bay

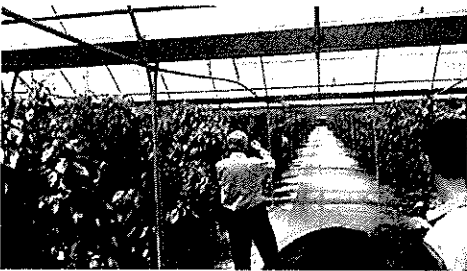
### Jimo

A lot of people from Qingdao are originally from Jimo. Jimo is a well known name in Qingdao – one of the largest markets in the city takes its name from Jimo Lu in old town. Jimo Lu market is a place to buy souvenirs, clothes, pearls, watches and more. The actual city of Jimo is about 45 minutes' drive from Qingdao. Jimo is famous for Jimo Lao Jiu, a kind of rice wine that is best served heated like Japanese sake. Jimo is home to the Red Collar clothes company headquarters, hot springs (and upscale real estate developments built around the springs such as Baden Village) and skiing.



Day two at Jimo saw the delegation travelling further through the Shandong province around Jimo visiting the Dagu River and the newly constructed weir facilitating water management in the area .

### \*\*\* Hot Springs & Golf Course



Then onto the Qindao Huanwan Baili Technology Centre which was a newly constructed intensive Agricultural centre with hot houses and management environmental facilities to grow small goods and vegetables for the local and Japanese markets.



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After Lunch the touring party went to Jifa Company one of the largest textile and clothing companies in the area with a total employment tally of over 40,000 workers . This company is one of the more established companies within the Qingdao area and Madame Chen is very influential within the community.



\*\* Microsoft Technology park

\*\*\* Jifa Enterprises

Then onto one of the largest Candle and Essence oils company in the area being Jinwang Company .

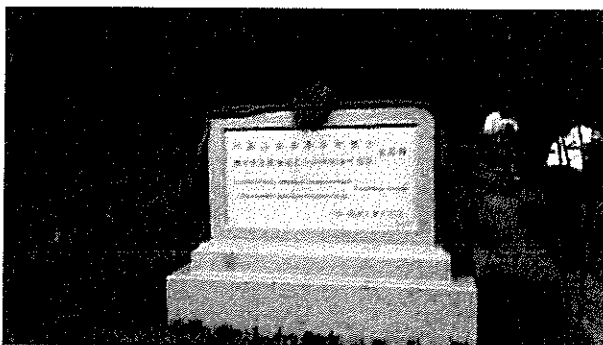


Day Three started with a visit to the Jimo markets and more so the Wholesale Clothing market , then onto Jimo High School and then to the Qingdao Customs and Cultural Centre for a historical look at the Shandong Province . These areas gave a great insight into the tourism potential in the area.



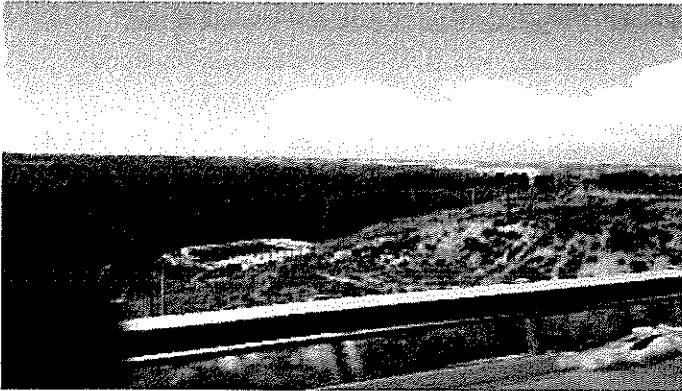
Lunch was held at the Yongchang International Cultural Exchange Centre where a tourer was conducted showing the development of the area and types of Agricultural & horticultural crops being grown, this led to a Tree planting ceremony conducted by The Mayors of Jimo and Liverpool Plains Shire Council and then a trip to Jimo City and the Council Chambers where an official signing ceremony took place .

After the evening meal the delegation departed for Beijing arriving at the Hotel after midnight.



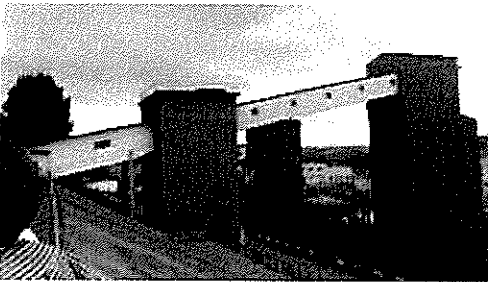
\*\* Plaque commemorating the friendship forest in honour of Liverpool Plains

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The next part of the trip was a morning departure to HohHot in Inner Mongolia . The delegation arrived at 11pm and departed by Bus to Xuejiawan . This was an interesting 2 hour trip south of HohHot across countryside that varied in cropping of corn , sorghum and sunflower to as we headed further south the land became more marginal country , that was either not in use or used for grazing .

In the Afternoon of the 14<sup>th</sup> we visited the Zhunneng Coal Mine which was one of the larger coal mines in the area Operated by Shenhua .



First of all the delegation visited the actual extraction site where we witnessed the open cut mining system where the overburden had been removed and stockpiled allowing access to the coal seam approx. 75 metres below ground level . The coal seam was approximately 25 metres deep and was being removed with large cable shovels and being deposited into coal dump trucks which transported it to local stockpiles .

The delegation then visited the rehabilitated areas after the coal had been extracted. We were shown how the areas were reconfigured with the land file process being placed in such a way that it provided large open plateaus where some form of agricultural production could take place . Witnessing the existing topography as being steep and undulating country very hilly and deep valleys was a stark comparison to the rehabilitated areas , which were well-designed and laid out area providing areas of open and less undulating country with drainage.

The Rehabilitated areas were taken through a process that was staged and strategic to develop as much natural biomass as possible, bearing in mind this was in an area that had an average 400mm rainfall it was very impressive.



\*\* - Typical Vegetation Inner Mongolia

\*\*\*\* Township development Xuejiawan

The staged process for developing these rehabilitated areas was :

1. Replace fill in a systematic process which left a design of less gradient on the hills and more open arable land.

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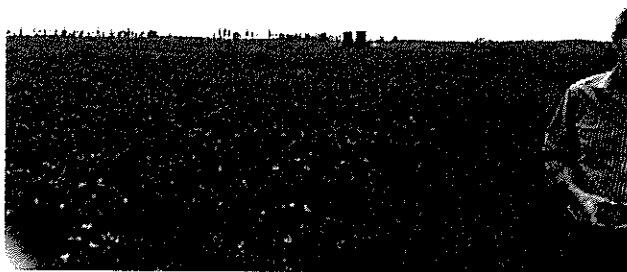
2. Massive vegetation planting programs where trees and shrubs were intermingled to allow as much organic matter production as possible. The types of trees and shrubs were balanced to ensure different species and types.
3. After 3-5 years the trees and shrubs were mulched into the soil to build up organic matter and start the build-up of a topsoil
4. Certain areas were left to develop natural areas of habitat and animal life .
5. Other areas were cleared and mulched and were growing potatoes and bean crops after 6- 7 years of being mined.



\*\*\* Vegetation repatriation



\*\*\*\*\* 5yrs crops being grown



\*\*\* Potato Crop

The delegation was then taken for a tour of the town that had been developed to cater for mine workers, this was done around a natural flowing creek that ran through the centre of the 250,000 populated town. The creek and systematic weirs where it could hold back water and provide a water supply for the town as well as a focal point of parks and green areas within the town. Other areas visited in the town were the Parks and Conservations areas that the mine had put aside and developed.

The next day 15<sup>th</sup> August the delegation travelled back to HohHot and flew on to Beijing to meet with the Hierarchy of Shenhua in Beijing at Shenhua's headquarters.

The delegation was shown through headquarters and the control room where all functions of Shenhua were controlled from. This control room was the centre piece of Operations where a large contingent of workers controlled the Shenhua operations. The extent of these operations were explained to the delegation and included:

- Movement of 500 million tonne of coal
- Management of 1765 Kilometres of Rail
- Management of 3 main loading Ports
- Distribution and Control of 30 Billion Kilowatts hrs of Power ( 5<sup>th</sup> largest Power supply in China )
- Management of a Coal to Chemical facility where the company produced

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- Gasification technology, which uses high temperatures and pressures to break the molecular bonds in coal to produce gases that can be recombined into a variety of fuels and chemicals, has existed for more than a century. Germany gasified coal to fuel its planes during World War II. China has made fertilizers through gasification for decades. But there had been little incentive for the global chemical industry to gasify coal until prices began soaring for natural gas and oil.
- In the early stages of development planning, the Shenhua / Dow Chemicals Yulin Coal-to-Chemicals Project is proposing to capture CO<sub>2</sub> at a new coal-to-chemicals (CTC) production facility in Yulin City, in the Shaanxi Province of China. The project would be built and operated as a joint-venture between the state-owned Shenhua Group and the United States-based Dow Chemical Company.
- Produces (methanol, PE, and PP) and coal-to-liquid products (diesel oil, liquefied gas, naphtha)

For a Group founded in 1995 the Shenhua Group has developed exponentially and has an estimated Revenue of \$368 Billion USD and a profit of 78.5 Billion USD . Bearing in mind that at current coal prices most coal companies in the world are in recession Shenhua with its ability to control the Logistics pathway is an exception.

The whole trip ended in China on the evening of the 15<sup>th</sup> September and all parties departed for various other destinations on the 16<sup>th</sup> September.

### **Appraisal of Shenhua Watermarks Liverpool Plains Operation**

***Extracted from Shenhua Watermark website*** :Shenhua Australia Holdings Pty Limited and Shenhua Watermark Coal Pty Limited were registered in Australia in October 2008 and are subsidiaries of Shenhua Overseas Development & Investment Co., Ltd, which serves as a global vehicle for outbound investment and project development on behalf of Shenhua Group Corporation Limited (Shenhua Group).

In October 2008, Shenhua Watermark Coal Pty Ltd (Shenhua Watermark) was granted Exploration Licence (EL) 7223 by the New South Wales (NSW) Minister for Mineral Resources. Since this time, Shenhua Watermark has operated in accordance with the terms of EL 7223, including the payment of \$300 M to the NSW Department of Primary Industries (now Department of Trade and Investment, Regional Infrastructure and Services).

Shenhua Watermark has since completed a comprehensive exploration program, feasibility study and EIS that focused on defining the elements of the Watermark Project.

Shenhua Watermark places great importance on its commitment to social responsibility and actively seeks avenues to benefit people within the local communities in which it operates by working in partnership with the local community, stakeholders and the Australian Government to, where possible, meet the requirements and interests of these parties.

The company demonstrates this commitment to social responsibility through local employment and contributions to the local economy, including funding for education, health services, training and infrastructure development. Over the past five years, Shenhua Watermark has invested \$5 million into the local community through the Shenhua Watermark Community Fund.

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On the 11<sup>th</sup> September I made a visit to Shenhua Watermark's office in Gunnedah and meet with a Grayson Wolfgang .

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On the Thursday /Friday preceding this meeting the PAC commission report was released, giving approval for the Shenhua Watermark project .

I was not able to gain approval to inspect the site even though I had rung ahead several weeks earlier . I was able to take a "roadside Inspection " via Dip road and Nea Siding .

I was told that The PAC approval was a step in the process and Shenahua Watermark had to now gain Federal Government approval on Water & Environment issues .

If that approval was gained in the last quarter of 2014 ( which was touted as being the earliest ) then there would be a 18 month construction period before any coal actually started being removed .

The 'mood" within Shenhua Watermark was very upright and professional . The conversation where guarded and protected by protocol .

### **Agriculture in the Gunnedah Basin & Liverpool Plains**

The Liverpool Plains were initially inhabited by Aborigines. John Oxley was the first European to visit the area while exploring the Macquarie River area in 1818. The Plains were subsequently named after the Prime Minister of the United Kingdom, the Earl of Liverpool. Nowlands Gap, a pass over the Liverpool Range, was discovered by William Nowland and has been described as the gateway to the Liverpool Plains. In the early 1830s, Henry Dangar surveyed and explored the area and made land claims in the name of the Australian Agricultural Company.

The Gunnedah Basin matches rich farming country with beautiful landscapes and outstanding remnants of native bushland. It is an area that extends from Quirindi, north through Gunnedah to Narrabri. These plains are a region bounded to the east by the Great Dividing Range, to the south by the Liverpool Range and on the west by the Warrumbungle Range. The area is drained by the Namoi River and its tributaries, the Mooki River and the Peel River.

Towns in the Liverpool Plains include Gunnedah, Narrabri, Quirindi, Werris Creek and Tamworth. Smaller villages include Breeza, Carroll, Mullaley and Willow Tree.

Most of the region nowadays comes under the jurisdiction of Liverpool Plains Shire Council. However substantial parts of the region also form part of the Gunnedah and Tamworth local government areas.

The Liverpool Plains boasts some of the best and most productive agricultural land in the country . The Plains are largely protected from drought by black vertosol soils with high water-holding capacity, high productivity aquifers that form part of the Murray-Darling Basin, and reliable summer and winter rainfall. As a result, the Plains generally produce winter and summer crops, yielding about 40% above the national average of food per hectare and contributing approximately \$332 million to GDP annually. The diverse crops and the skilful farming community which harvests them are part of the food production chain which brings bread, pasta, corn flakes, sunflowers, muesli and high quality Aussie beef to your family.

***"Extracted from shut the gate Website*** "The rich farming country of the Plains is flanked by some extraordinary bushland areas, including Pilliga and Leard State Forests. The Pilliga is a vast, intact landscape, a 'Noahs Ark' or refuge for birds and animals that are declining across the country, and a recharge area for the Great Artesian Basin. Leard State Forest is the largest patch of bushland left on the Liverpool Plains, a crucial link to Mt Kaputar and the stunning Nandewar Ranges and a bastion for one of the most endangered ecosystems in the country. Unique and cryptic wildlife abound - the Pilliga is home to the largest inland Koala population in NSW and is the only place in the world where the tiny Pilliga Mouse is found.

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All of this is now at risk from big coal and gas mining which are poised to expand aggressively across the region. Historical mining in the area has been limited in area, but coal exploration titles now cover 640,000 hectares and there are immediate plans for 6 new or expanded coal mines. Two large mines, one open-cut and one underground, are planned for some of the best country on the Liverpool Plains. Leard State Forest is to be converted into a mega-mine complex, with at least three open-cut coal mines producing 23MMt of coal per annum and clearing more than half of the forest. Coal seam gas exploration licences cover almost the entire north-west region, over 6 million hectares, with pilot production sites on the Liverpool Plains and in Pilliga State Forest. If the boom is allowed to proceed unchecked, the fabric and character of the Gunnedah Basin will change forever.

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The concerned Agricultural parties within the Liverpool plains are well supported and have many leaders within the farmer's community. These advocates include Fiona Simson, Andrew Pursehouse and Tim Duddy .

I have spoken to Andrew Pursehouse in an attempt to get a firsthand point of view, knowing Andrew and having the utmost respect for him and his agricultural heritage and common sense and pragmatic approach to most things , I rang and spoke to Andrew.

It became obvious through the ongoing discussion that there was an evident "passion" stemming far deeper than I thought from the Liverpool Plains Agricultural Sector. The following story in the local paper obviously portrays some of that feeling:

<http://www.northerndailyleader.com.au/story/2551549/farmers-ready-to-revolt-over-shenhua-mine/?cs=159>

Andrew gave a number of very good reasons for why Mining should not be undertaken in the Liverpool Plains some very legitimate concerns such as the underground water table. Ongoing Changes in environmental practices in existing mines, from unforeseen circumstances and developing competition for water as a commercial commodity.

I would postulate that the original indigenous population on the Liverpool Plain, if given the opportunity could have put some very strong arguments up against European settlement and development in the early 1800's. I don't make this statement as a form of disrespect but rather from a position of "refocussing "on a more holistic approach of whole communities and larger regions and a responsible nation for sustainable development. Bearing in mind that NO ONE can develop without a reliable water supply and if water is going to be lost or damaged beyond reasonable repair then there needs to be some accountable process of assessment in the first place.

I point out this assessment and process of managing change as a key issue and would stress the points that it should be independent, INCLUSIVE and not driven by time lines. I don't believe self-assessment or payment to consultants by parties with vested interests allows the correct sort of evaluation and independence.

### **Agriculture on the Liverpool Plains**

The Liverpool Plains are an extensive agricultural area covering approximately 1.2 million hectares of the north-western slopes of New South Wales in Australia. There are many depressions, across the plains, which remain as lakes for long periods after heavy rain. These plains are unusual in that many steep hills arise suddenly from the plains.

The Liverpool Plains area is typical of temperate woodland regions in south-east Australia. It has an elevation of approximately 270 metres above sea level. Most of the 620 mm of rainfall the area experiences each year is



high intensity and occurs in the warmer months, from October through March. Rivers run from the Liverpool Ranges in the south-east to the Namoi River valley in the north-east, where elevation falls to 264 metres above sea level. Soils in the area are distinctly black, have a high fertility rating and store a lot of water. They are well suited to growing winter crops such as wheat, but at risk of erosion when cultivated.

Agricultural settlement of the Liverpool Plains started in the late 1820s after the pass was discovered and since then it has been one of the prime agricultural regions of New South Wales. The major land uses of the Liverpool Plains are cropping and grazing. The main crops include barley, chickpeas, faba beans, sorghum, sunflowers, soybeans, maize, wheat and cotton while grazing comprises beef cattle and sheep mainly for prime lambs. The more fertile alluvial soils (native grassland and poplar box country) have been cleared, while larger areas of remnant vegetation (ironbark and Callitris pine) remain on poorer sandy and ridge top soils.

### ***Extracted Article by Hayman & Freebairn on Agricultural Practices Liverpool Plains***

<http://regional.org.au/au/asa/1996/contributed/293hayman.htm>

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Summary. Simulation modelling using long-term climate data is used to assess the risks associated with opportunity cropping. The simulated distributions are compared with farmers' subjective distributions. We discuss possible reasons for the different estimates and whether these differences might change decisions.

The Liverpool Plains are at the southern extremity of the north-eastern cropping belt. Unlike the rest of Australia, this region has no single cropping season. The lack of a defined winter cropping season led to the region being judged as a drought area suitable for sparse grazing until the 1920's. Seventy years later, wheat yield trends for the Quirindi shire ranked fourth in NSW. The Liverpool Plains are also the largest production area of sorghum and sunflower in the State. Improved management of fallows has made cropping possible on the Liverpool Plains, ***but ironically, fallow management may be contributing to dryland salinity that is threatening future production.***

Leaving a paddock for a long period of fallow is an effective but possibly wasteful means of coping with climate variability through storage of rain in the soil as a buffer for unreliable rain in the growing season. Following the introduction of strip farming and summer cropping, the most common rotation has been Wheat - 10 month fallow - Sorghum - 15 month fallow - Wheat. This sequence has been simple to implement, provided excellent disease and weed control, and minimised risk by ensuring crops were always sown on close to a full profile of water. However, in 36 months, there are less than 12 months when a crop is actively growing.

Opportunity cropping involves sowing a crop whenever soil water reserves are adequate. Since 1976, studies from Queensland have shown that opportunity cropping increases profit and reduces soil erosion. Recent rises in the water table have increased pressure for farmers to adopt a more flexible approach to fallow length. ***This has come from catchment hydrology studies, water balance modelling and economic studies Nevertheless, surveys indicate that many farmers perceive opportunity cropping as too risky to switch from their current fallowing practices.***

A risky decision such as opportunity cropping can be partitioned into decisions to be made, uncertain events and outcomes of varying value. Simulation modelling using long term climate data is potentially a powerful tool to assess the risks of different decisions. Farmers however, have their own risk assessment which can be elicited as a subjective probability distribution. This paper deals with the differences between these two

assessments of risks associated with opportunity cropping, and what is more important, do these difference change any decisions?

### Shenhua Operations in China

Shenhua Group (Chinese: 神华集团) is a leading state-owned mining and energy company in China. It is the largest coal-producing company in the world. It was founded in October 1995 under the auspices of the State Council of the People's Republic of China.

The Shenhua Group operates Shenfu Dongsheng coalfield as well as the affiliated railway assets, power plants, port facilities, shipping fleet, and coal liquefaction projects. In addition to the coal production in China, Shenhua is also looking at coal investments in Mongolia, Indonesia and Australia.

The coal-to-liquid (CTL) plant, based in coal-rich Inner Mongolia, has started production in 2008 and visited by PRC Premier Wen. The firm constructed the first coal-to-olefin plant. On November 2, 2010 Dow Chemical Company announced plans to apply for permission to build the Yulin Integrated Project a joint venture with Shenhua to build an integrated complex of coal, power and chemicals in Yulin, Shaanxi.

#### Subsidiaries

The company has more than 30 subsidiaries, including:

Shenhua Shenfu Coal Co.

Dongsheng Coal Co.

Shenhua Coal Trading

Shenhua Shendong Power Co.

Shenhua Railway Co.

Shenhua Huanghua Port Co.

Shenhua International Trading Co.

Shenhua International (Hong Kong) Co.

Shenhua Clean Coal Co.

Its subsidiary China Shenhua Energy Company is listed at the Hong Kong Stock Exchange and Shanghai Stock Exchange.

### Managing Change

What Shenhua Watermark (along with other mining groups) are proposing in the Liverpool Plains is Change and I thought it was interesting to reflect on what the word "Change" actual means and I thought the following note from a different era captured the essence of what is happening in the Liverpool Plains Shire and the affect and attitudes parties where taking where in all probability typical !

Introductory Note: Heraclitus was an ancient Greek philosopher who lived about 100 years before Plato. He wrote a book around 500 B.C. which has not survived, but over 100 fragments from his book are known today based on quotations found in the works of other ancient authors.)

*Upon those who step into the same rivers flow other and yet other waters. All things . . . are in flux like a river.*

The change that occurs in a river is vivid and unmistakable. By claiming that the change we see in a river is true of our world in general, Heraclitus challenges the idea that some things simply stay the same: we may not see the change so clearly, but change is occurring nonetheless.

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Heraclitus's insistence on the process of change as fundamental to the world poses a question to us when we are facing difficult changes that we might want to deny or resist. *By insisting that something or someone stay the same, could it be that we are destroying the very thing we wish to preserve? In any particular case, when we are resisting change, we might ask ourselves, is this like trying to stop a river's waters from flowing?*

The point of including this transcript of John Mansley Robinson, was to show that what 'Change is inevitable' and that it might be worth considering that all parties might need to focus on managing that change, and rate of change rather than thinking that the status quo can be maintained.

In fact it would be intriguing to bring back Oxley & Nowland and see what their opinion was about the changes that have taken place on the Liverpool Plains since the early 1900's and European Discovery of the plains.

My reason also for including the Hayman & Freebairn article on AGRICULTURE was to show that change is a hard thing to accept even when the best Science indicates that it could be beneficial (see highlighted areas in the article).

There will be always diverse opinion and there will also be difference of opinions and that is why it's important that there is a process that has to take place to investigate the factual Concerns and deliver a deliberation that holds firm the opinion that change is going to take place and it is going to affect people and physical parts of the topography AND its management of that change for the overall benefit of the whole community not just one part that is of paramount importance.

It was rather ironical that while on the trip through China I finished reading a rather intriguing book by Peter Fitzsimons called **EUREKA - The Unfinished revolution** and again this was a period of time in Australian History 1851-1854 that ended in dramatic change taking place in the way Australia was governed.

This change took place after great adversity, loss of many lives and changes to governance induced by suppressed miners.

I am not suggested that such drastic and tragic action should have to take place as what happened at the Eureka stockade what I am suggesting is that if we look at the END result where change was introduced and normal everyday people could get on; knowing with assurity that there was and is still a means of making change for the better, through a democratic process rather than violence or disruption.

So that a fair and reasonable outcome is to take place it is going to take concession and sacrifice from all sides which is going to be challenging for parties who all have emotional and emotive attachment.

### **Benefiting & Capitalising on the Opportunity**

There are two areas that I would like to make comment on that I think have reasonable merit and I will not to attempt to give an overall comprehensive report on these areas of opportunity , but rather give a summary view .

These areas are:

1. Social / cultural , Education & Tourism
2. Agriculture

#### **Social / cultural, Education & Tourism**

From the Visit to Jimo and associated Shandong province it was quite apparent that there was good opportunity to encourage and participate in developing exchange of people for tourism, students on AGRICULTURAL study trips, development of social & cultural exchange through organised programs etc.

I would be of the opinion that if some sort of 'Regional ' approach was taken for all shires within the NW of NSW to participate and have regional facilities there could be benefits for all shires .

Typically things such as

- An International Airport at Tamworth for both freight and passengers would boost the regions profile as a tourist destinations
- Setting up registers of " farm stay " Opportunities for tourists would be very appealing to the Chinese tourist
- Coordinating Agricultural tours to demonstrate Industries for example
  - Cotton
  - Beef
  - Local Dairy
  - Crops grown & Crop Harvesting
  - Local Industry
- Developing tourist destination and tours through the region
  - Spa baths Moree
  - Opal mines lightening Ridge
  - Chaffey , Keepit and other Dams
  - Mount Kaputar
  - Warrumbungles
  - Pilliga Forest

I am sure there are a lot of other features of the area that we might take for granted that would be appealing to tourist and Chinese school children. Gaining the Mining Industries support could be a key in helping these facilities and Industries develop

#### **Agriculture**

I see the Opportunity for Agriculture to engage and leverage of the mining Industry. I would also suggest that this is going to be more difficult to achieve given the sensitivity of both sides to each other. The current opinion of both sides is very guarded and I would see that some independent facilitation needs to take place to develop better ongoing relationships so BOTH sides might investigate Opportunities of co – existence.

Those Opportunities that I perceive could be developed are:

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- Co-existing Rail Siding for not only loading out of Coal but also containerised Agricultural goods. Australia exports over 85% of its agricultural goods, and development and usage of our rail system is a key in cost reduction processes.
- Port Facilities – Newcastle Port is an undeveloped facility especially for goods other than coal. Sydney is the main containerised port facility and the ability to gain shipping out of Sydney is congested as well as costly due to the rail corridor in. Freightng goods out of Newcastle would be more cost effective and timely
- One of Australian Agricultures biggest import and requirements is fertiliser and in particular nitrogen fertiliser. Shenhua through their coal to Chemicals program is manufacturing Nitrogen? Putting this fact aside for a minute the ability for Shenhua to import fertiliser for Australian Liverpool Plains Growers on bulk vessels is a real alternative that needs investigating.
- Labour facilitation – Agriculture struggles to gain access to labour resources at certain peak periods of operation and at times as periods where farmers themselves could benefit from off farm incomes. As the Mining Industry is going to be a large local employee , I would suggest that programs for managing labour high and lows could be beneficial to both parties.
- Specific Trade opportunities – The Liverpool Plains is a unique growing area of both summer and winter crops and within the statistic : that by 2050 the world will require 75% more food than it did in 2006 with 40 % of that being for China , the trade opportunity for food products is enormous. Development of this trade has to be undertaken on a regional basis.

I Reinterate: That these changes or advantages have to be weighed up against the “changes” and decisions need to be made not only for the short term but for the medium and long terms.

The process to investigate and audit this change, in my opinion, must be:

- INDEPENDENT
- INCLUSIVE
- SELFLESS

**By all the vested parties!**

### **Statement of Independence**

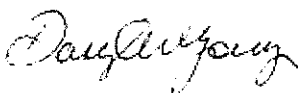
In finalising this report I would like to declare that I have not received any form of remuneration for preparing and writing this report.

I would further declare that I paid for my own passage and accommodation to be part of this delegation. I act independently and on behalf of no particular entity, individual or company.

I have no affiliation with any political party and in writing this report I do not represent any local, State or federal political party or organisation.

I would like to Thank Liverpool Shire Council for inviting me on this delegation and in particular Mayor Ian Lobsey and General Manager – Robert Hunt .

Yours Sincerely



Daryl W Young

