



## The Opportunity to convert a 'Declared Weed of National Significance' into a viable feedstock for new value added industries.

### Executive Summary

In 1997 Pioneer Corporation identified the potential for establishing hardwood plantations in the North Western Regions of Queensland.

During our forestry project assessments we became aware of the introduced species **Acacia (*nilotica*)** which **dominates the landscape** throughout the region.

Since this discovery we have devoted many years undertaking extensive research using the latest proven technologies, applied science and due diligence to verify, quantify the location and volume of the resource, along with industries well suited for this region. This will be demonstrated further in this document.

We have prepared the following summary to generate and **encourage Community and Landowner support** for an **Acacia based project** that has the potential **to create a number of significant new industries** across remote and regional Shires of Queensland, and at the same time **reduce the impact of Acacia across the landscape**.

### Acacia (*nilotica*) – Prickly Acacia

- 7.5 million hectares of rich grazing land or 20% lost to infestations, a conservative estimate of 100 million tons biomass and growing. (Source: Old Dept. Natural Resources. 1999)
- On December 2001 Pioneer Corporation secured Government approval and is permitted to remove acacia for processing and sale from the Shires of Richmond, Flinders, McKinlay, Winton and Barcardine.
- While acacia remains to be viewed as a 'Pest' instead as a 'Resource' it will remain underutilized and pose an ever-increasing problem to landowners throughout the region.
- A '**Right of Entry Agreement**' to access **Acacia** for removal will require the approval of landowners with an agreed appropriate legal framework.

Company Name	Pioneer Corporation Pty Ltd	Board & Management
Sector(S)	Biofuels & Forestry	
Year Established	1997	Peter Laksa – Managing Director
Project Location	Richmond, North West Queensland	Brad Carswell – Director
Seeking	Advanced Feasibility Funding	Corporate Structure Private Company

## The Opportunity

**This pioneering project reflects a novel utilization of a wasted resource enough to provide significant economic benefits and opportunities across the region.**

- Industry development and rural job creation;
- Improved community connections;
- Power generation and energy security;
- Export potential of a biofuel (wood pellets)
- Eradication of a Declared Weed of National Significance;
- Increased grazing capacity; stock-feed from pelletized acacia seed, leaf, & twigs.
- Wealth distribution coupled to
- Carbon Abatement through reforestation.

The development of a **'Cluster of Associated Industries'** based on acacia has the potential to generate;

- 132 full time direct jobs
- New capital investment for the region
- Building new infrastructure
- Sustainable ventures in regions where new projects are limited
- an additional income stream for landowners via a replacement improved grazing conditions.

## Project Interest & Support

This project has been offered to State & Federal Governments, Power Generation Authorities and Forestry Groups for scrutiny and more recently at the first International Biomass Conference 2013 held at the University of Newcastle, (Tom Farrell Institute). A positive response has been received from all of the aforementioned.

Pioneer Corporation is made up of a trans-disciplinary group of professionals offering economic, social, environmental, innovation and sustainability. Many within this group have given their services over a number of years in order to ensure that a viable outcome can be achieved for all. Key technical experts have praised the merits of this project, and encouraged the next phase of technical and financial feasibility.

## Key Activities & Milestones

Our activities in the short to medium term once funding for complete feasibility is secured, will involve;

- Quantified biomass mapping on each individual property
- Producing a quantity of wood / torrefied pellets from acacia for analysis to establish moisture, ash, volatile matter, net calorific value and BTU.
- Establishing the legal framework for **'Right of Entry Agreements'** with Landowners.
- Conducting feasibility study covering all four business areas; Energy, Wood/Torrefied Pellets, Sawmill and Forest Estates.
- Development of harvesting system, finalizing equipment, cost and streamlining methodology.

## The Team and our Partners comprise of the following;

- **Peter Laksa** – Accomplished Architect and visionary for sustainable businesses based on triple bottom line outcomes.
- **Brad Carswell** – Qualified Arborist, extensive experience in managing rural sector processing operations including forestry enterprises.
- **Scott Fairbairn** – turnkey energy & generation solutions including installations.
- **Rob Gourlay** – of Orbtek Pty Ltd, environmental scientist, 20+ years experience developed the Biological System underpinning our forestry program.
- **Mark Pawsey** – Australian Director, SST Software providing satellite based technology for agricultural developments.
- **Terry Dohnt** – harvesting system Designer & Manager, who will also oversee the establishment of the timber processing systems.
- **David Cork** – Mechanical & Chemical engineer, sustainable Energy, who has worked with companies such as Anglo-American, Smorgans Steel, Xstrata Coal, Nepean mining. David will oversee by-product conversion and utilization process. [www.thecorkysgroup.com.au](http://www.thecorkysgroup.com.au)
- **Neil Heaton** – AllAbout Pumps & Pipes, Neil has been a part of the Pioneer Team since its inception. specializing in water & irrigation systems.

## The Proposal

The project proponents for this venture are seeking Government financial support to assist with funding the preparation, by a reputable and well qualified third party, such as PricewaterhouseCoopers to prepare a comprehensive feasibility study and report inclusive of key technical signoffs.

The report is then intended to be in promoting the project to the wider Community to attract further investment, sufficient to fund all (or part) of planned project stages to harvesting and production.

**We are also seeking community endorsement for this project, and Landowners interested in receiving more detailed information about this project, or potentially being involved can register their interest by replying to [p.laksa@bigpond.com](mailto:p.laksa@bigpond.com)**

**Peter Laksa – Director.**

PIONEER CORPORATION PTY LTD

## **Biomass is the World's oldest & most efficient solar battery.**

The amount of sunlight that reaches the earth's surface during one hour is sufficient to power the entire world for a year. But the question is: How do we collect that energy? Sunlight disperses everywhere, shining all over the whole globe, making the energy very difficult to collect in a concentrated amount.

While a tiny bit of sunlight powers solar generators, a huge amount of this sunlight feeds trees and plants, then these trees and plants store energy in their cells and in effect become solar batteries.

By harvesting these solar batteries, **Acacia Biomass**, we are in fact, harnessing the power of the sun.

### **Wood Pellets**

As people realize both the ecological and economical importance of sustainability; wood pellets offer a completely sustainable alternative to other fuel sources. They burn clean and are carbon neutral with zero increase in greenhouse gas emissions. The pellet source material can be derived from both Prickly Acacia and from sustainably managed plantations.



### **One step further - Torrefied wood pellets. [www.zilkha.com](http://www.zilkha.com)**

Torrefaction is a thermo-chemical treatment of biomass. The process cost-effectively converts cellulosic biomass, like wood chips and wood pellets, into a substance which can be used as a coal substitute; as a superior feedstock from which to make stronger, more energy dense and water repellent pellets which can be used in coal fired power stations. Torrefied pellets eliminate the need for covered sheds at the plant and ports of departure & delivery.



### **Power Generation**

The image depicts V16 Syn-Gas engines each driving a 2 MW generator. Such engines are designed to run on Syn-Gas which is obtained by heating acacia wood chips then capturing the gas from that process. The benefit of such a system is that, should the demand for power increase, we simply increase the number of engines to meet the power requirement.

Alternatively generation units can be designed to meet the specific needs of industries such as mining operations within the region.



### **Timber processing**

We have identified an opportunity to process a furniture grade timber from acacia. The table depicted in this image was made of acacia built by Robert Dunlop a renowned Brisbane based, fine furniture craftsman.



## Forests Estates – Restoration of an Industry once prominent the region.

Integration of land use activities creates inputs, in such a way that optimizes the cash flow and profitability, in a manner that maintains or, preferably enhances the quality of the natural resources (e.g. soils).



This will enable farming to continue in a sustainable way, as part of that integrated way of thinking, a farmer would consider the issue of diversification and adaptation to climate change.

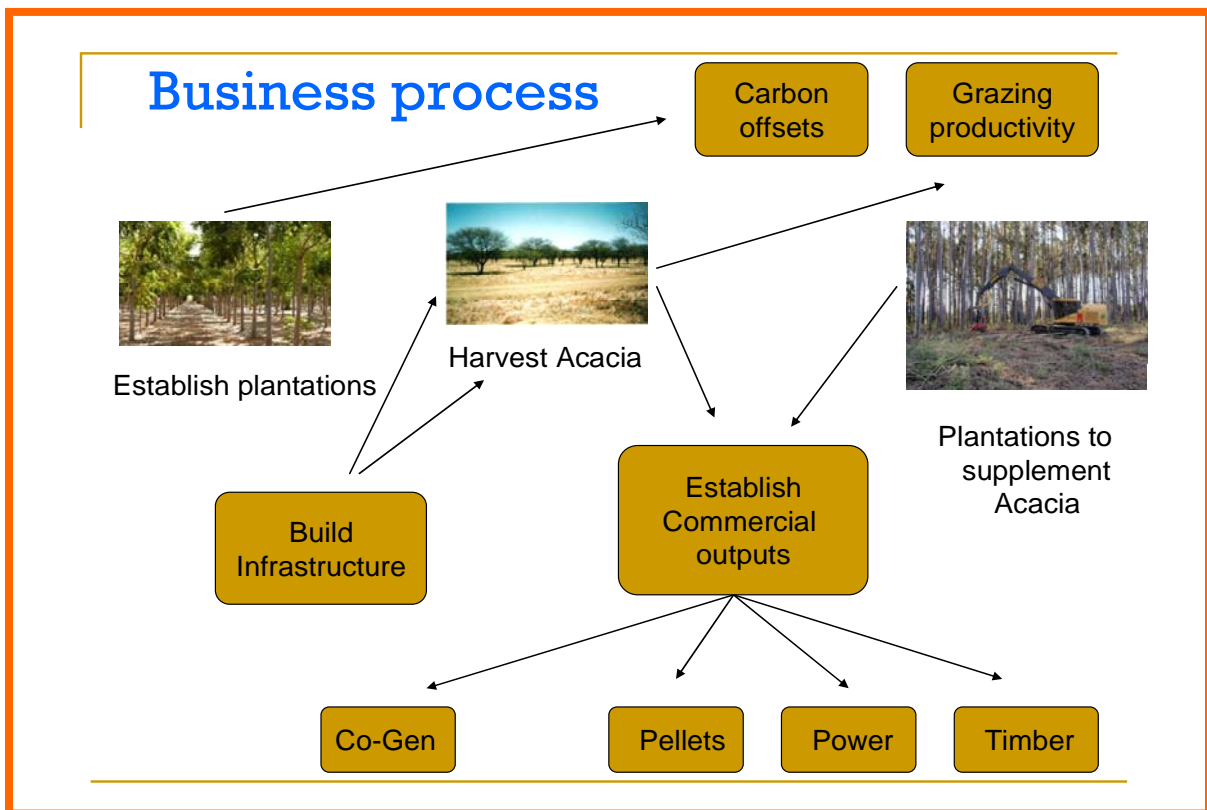
Above ground water interception and higher water use with the effect of reduction in water erosion.

Providing an additional means of generating cash flow (from saw logs and Co2 credits). This cash flow will be unaffected by short term fluctuations in both weather, meat and wool markets.

Forests have an important role to play in the carbon economy in terms of providing renewable and minimally disruptive resources for manufacturing, construction and energy. Scope for farm business and regional economic diversification will be enhanced by a strong local processing component.

This initiative also provides an option for management of farm carbon emissions and requires only a small proportion of farm area under plantation being integrated into grazing systems to contribute to long term sustainability.

All images depicted in this document are for illustration purposes.



## Utilizing Advancements in Technology

Establishing hardwood plantations West of the Great Divide, is quite achievable utilizing proven science and technology now available in the form of:

- **Biological Systems** - (creating healthy soils) on a broad acre scale. The capacity of farmers and graziers to move to biological farming and away from chemical farming is now achievable.
- The recent availability of balanced microbial formulations in the **Phi' on** products is based on Effective Micro-organisms (EM) has changed approaches to sustainable agriculture and enabled farmers to achieve significant results in soil health, increased plant nutrition and yields within one cropping season of microbial balancing. [www.phion.com.au](http://www.phion.com.au)
- **SST Software** - is precision agricultural software utilized by industry leaders for the processing of raw farm data into valuable information reports. [www.sstsoftware.com](http://www.sstsoftware.com)
- **PolyGenomX** – [www.polygenomx.com](http://www.polygenomx.com)
  - Provides us with the ability to grow trees faster, maturing in 1/3 less time than comparable diploid (possessing two matched sets of chromosomes in the cell nucleus, one set from each parent).
  - Can be propagated rapidly and consistently using PolyGenomX Accelerated Propagation System, put simply, provides undeniable performance and profit accelerator for our enterprise.
  - PolyGenomX does **not** use “hybrid DNA molecules or G M Os” in its processes.

## Our Proposal

Richmond offers the best starting point for the project by virtue of its central location, high levels of infestation along with easy road and rail access to the port of Townsville.

With respect to properties where the landowner provides access for the removal of **Prickly Acacia**, the first step will be to undertake a planting program in-conjunction with each individual landowner, utilizing proven science & technology. This will be undertaken prior to the removal of acacia, there-by compensating for shade lost.

We believe that trees should be planted where they will provide the greater benefit for the graziers, a whole of landscape approach where the Grazing & Forestry Industry becomes complimentary to each other.

It is intended to establish a **J V with landowners, supported by the appropriate legal framework, where-by a percentage of the timber harvest and Carbon Credits generated will provide an additional income stream for the farm.** We need to remain conscious of what is actually achievable and manageable; hence we anticipate a steady growth in the number of trees planted / annum; by year three, an ongoing comprehensive planting program will be in place.

Initially we are seeking input from Landowners in the form a commitment of portion of land over a ten year period. **(Example: 500 acres / year over 10 years, essential in achieving critical mass).**

## Selecting the correct Tree Species

We have a short list of tree species suitable for the region which include a variety of eucalypts, hybrids and exotics, all proven to perform in areas receiving 400-600 mm of rainfall. A mixed planting will avoid the pitfalls which can be created by monocultures.

## Our Role

- Secure the investment required to develop Stage 1, Forestry, Energy and Wood Pellet production.
- Provide the Team of professionals to undertake the planting, management and sale of the timber and carbon credits generated.
- To co-ordinate the processes required to undertake the primary business of growing trees for timber, we are not carbon farming; generating carbon credits is simply one of many outcomes of the project.
- Pioneer Corporation will bear the risk and be solely responsible to the investors.

The project also offers a wide range of permanent employment opportunities which will be offered in the first instance, to those residing within the region.

Our aim is to develop new industries within the region and assist in stimulating local economies; this can only be achieved with support from the broader community and landowners.

## Conclusion

**Finalizing matters relating to any formal agreements and financial returns will be undertaken in the presence of all potential stakeholders there-by ensuring a fair and equitable outcome for all.**

