

Dorset Integrated Timber Processing Facility

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In 2012 a small committee from Dorset was established to consider if a Biofuels plant along with other processing opportunities might be viable at Scottsdale which would utilize available local resources, create jobs and community wealth again.

The Dorset Biofuels Committee's objectives are simple:

- *A new enterprise is established in the region to make the best use of existing resources.*
- *The opportunity delivers social, economic and environmental outcomes to the community.*
- *The enterprise uses feedstocks that can be produced on an ongoing and reliable basis.*
- *There is a significant community involvement in areas such as provision of feedstocks and ability to purchase product*
- *Long term jobs are created and skills developed.*

State Government Assistance is welcomed

The State Government is undertaking two pieces of work which will be of assistance to the Dorset and Huon Groups.

- A comprehensive resource Review
- An analysis of possible market opportunities for ethanol and/or the sugars

It is envisaged that these two studies will dovetail into the work that the local Dorset Community is undertaking and can be provided to future consultants or potential investors as required.

Mr David Hurburgh, Senior Consultant at the Department of Resources & Minerals, is assisting the Dorset group.

Next steps for the Dorset Research Group

After undertaking a site visit to the pilot test plant in NSW the group commissioned a resource study to determine if a 25 year supply of resources was available within a close radius of Scottsdale. This study was preliminary and suggested that the required stocks of 150,000 green tonnes of cellulose material is available in Dorset or neighboring areas within a cartable distance. This work will now be further refined with a view to providing a potential investor with confidence the feedstock's required for the life of the plant is available.

With these resources appearing available the next step for the local group is on the development of the proposal to undertake a pre-feasibility study. Among other things this would ground truth the assumptions and provide the impetus to further progress the study to feasibility and later to a prospectus. It is envisaged that this will cost around \$30,000.

A pre-feasibility study may include consideration of the following;

- The important MOU between Ethtec Pty Ltd and the local Dorset group the Dorset Renewable Industries;
- The use of intellectual property;
- Engineering parameters;
- Site study analysis, possible locations and utility requirements, footprint, scale and options;
- An analysis of capital costs;
- Licensing requirements together with environmental approvals;
- Supply chain and resource availability;
- Pricing modeling and markets;
- Structures and capital raising;
- Competition, risks and SWOT analysis;
- Other markets for other plant products including the sugars;
- Preparation towards a feasibility study and prospectus



The Ethtec Process of turning cellulose (the woody components of plants) into Sugars which have a variety of uses.

What can the sugars be used for?

The sugars can be used to make ethanol or other manufacturing uses, such as using for bio plastics and bio detergents.

Given coal, oil and gas are not only used for energy but also as the feedstock for a myriad of other products, and given these source feedstock are after all only stored plants, there appears to be the opportunity for similar uses to be found for the sugars produced from plants, in this case, in a real time frame, John Lord.

What the Ethtec process is now recognized to enable is the production of very large quantities of cheap sugars from feedstock that are **not** foodstuffs, but may be the stalks of the plants from which the foodstuffs have been harvested.



What would a plant offer Scottsdale?

- The opportunity of a plant located in Dorset
- The opportunity to value add the feedstock in the region
- The opportunity for significant community participation, not only in the provision of feedstock but also in the ownership and governance of such plants as well as using the products made
- The opportunity for Tasmania to potentially play a role in ensuring some measure of national liquid energy security
- For the state's farmers to be able to grow food on a sustainable basis, using a renewable source
- The opportunity for potential other value adding manufacturing industries to establish in the regions, based on the sustainable renewable source of feedstock from such plants. For example pellets
- A development that meet a triple bottom line test

What about the physical and environmental footprints of such plants?

- Ethtec advises small plant sites of probably 2 hectares would be needed.
- Plants will be water positive, meaning they will also produce usable water, with this water being the water recovered from the feedstock.
- Plants will produce their own power and may be energy positive, meaning they may also produce surplus energy in the form of surplus lignin or electricity.
- Plants will not have waste streams apart from foreign materials brought in with the feedstock, such as pieces of metal and the flue gases and ash from the boiler where the lignin and any other material not dissolved by the acid would be burned to produce energy.

What useful bi products would be available?

- Cold Water (for industrial use in the industrial estate)
- Hot Water (for potential hospital use)
- CO₂ (for agricultural hothouse application)
- Waste products that could be used in a biofuels plant

What can ethanol be used for?

It is well known that ethanol can be used as a blend with petrol - E10, or even as 100% ethanol (e100) to power suitable cars as "octane" or spark ignition fuels. This use is widespread in Brazil, where large quantities of ethanol are now made from sugar with such use rising in the US where about one third of the mid west's soy and corn crops are grown to supply ethanol plants.

Ethanol can be blended easily up to 15% with diesel and used in current diesel, or cetane or compression ignition engines.

Ethanol can be blended with diesel up to 30% if an ignition enhancer is added and used in current engines.

Ethtec also advises that in the 1980's a number of the northern hemisphere diesel engine makers designed and built diesel engines that ran on 100% alcohol, i.e. made 100% ethanol or e100 diesels, John Lord.

What other industries could be co-located.

Sawmills and treatment plants

Specialty timber markets

Veneer

CLT and CLL

Structured timbers

Pellet plant

Agricultural applications (hot houses – utilizing CO₂, heat and water)

DORSET INTEGRATED TIMBER PROCESSING CENTRE

RESOURCES

VEOLIA SAWMILLS DOMESTIC GREEN (PUTRESCIBLE) WASTE AGRICULTURAL WASTE (STRAW)
 PLANTATION (HARDWOOD & SOFTWOOD) AGRICULTURAL CROPS

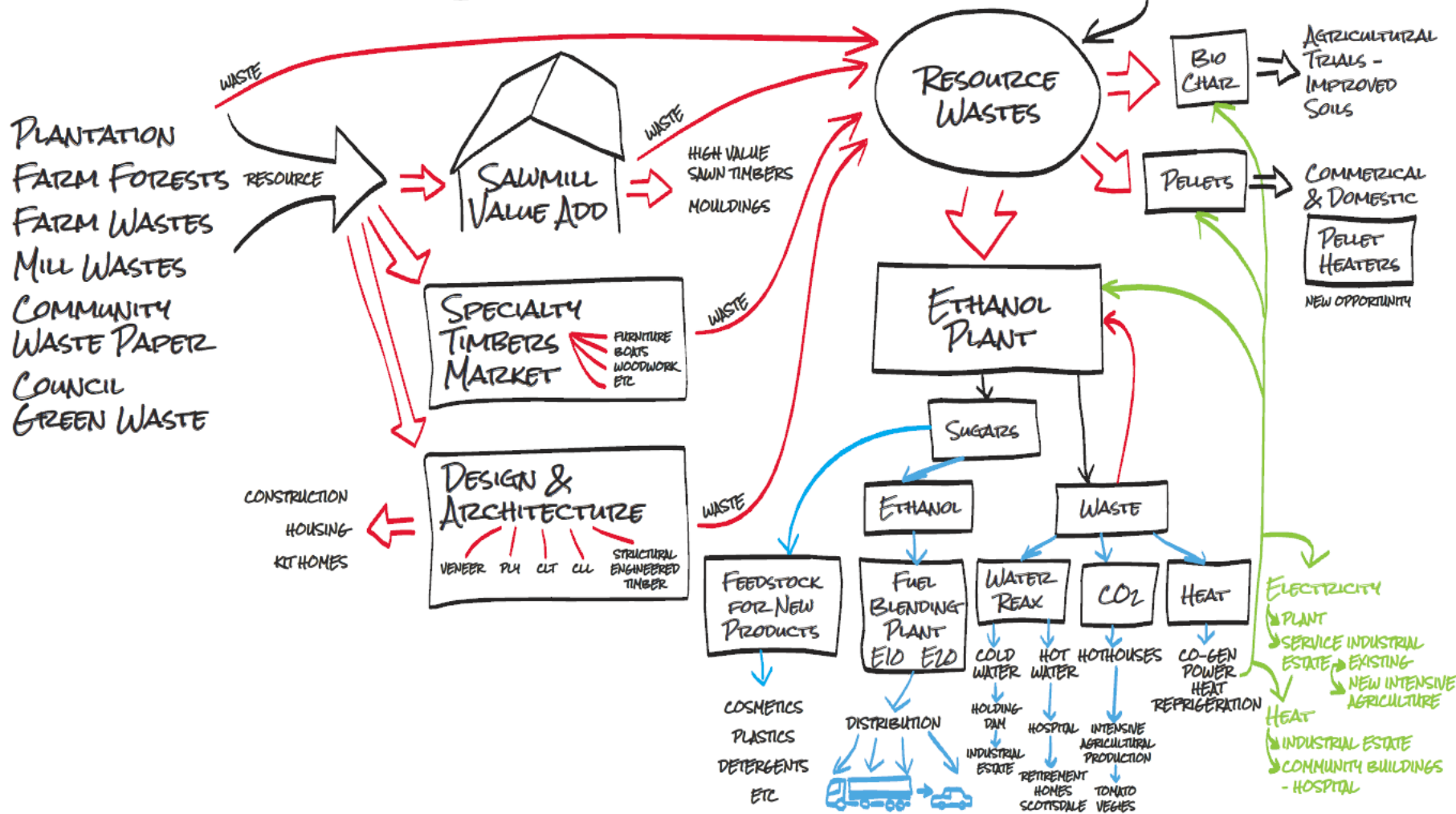


Diagram showing the relationship between the farm and community resources and the industrial application of those resources to bring jobs, skills and wealth creation back to the Scottsdale and Dorset Communities

Potential Benefits to the community

Jobs, skills and community opportunities

Potential jobs	Number New jobs created	Dollar value per estimated job	Total value of direct new jobs	Using a multiplier of 3	Total value to the community including multiplier effect
growing, pruning, harvesting, cartage jobs	20	\$50,000	1 million	3	\$3 million
Expansion or new sawmill	10	\$50,000	500,000	3	\$1.5 million
Specialty timbers	5	\$50,000	250,000	3	\$750,000
New tech timbers	?				
Ethanol plant – construction phase	100	\$50,000	5 million	3	15 million
Ethanol Plant operational phase	20 3	\$50,000 \$100,000	1 million 300,000	3	\$3 million \$900,000
Pellet plant and or bio char	2	\$50,000	100,000	3	\$300,000
Sugars – chemicals, bio plastics, cosmetics	?				
Blending plant and distribution	5	\$50,000	250,000	3	\$750,000
Associated and supporting industries	10	\$50,000	500,000	3	\$1.5 million
TOTAL –	75		8.9	3	\$26.7 million

The requirements of an integrated timber processing facility

- Sufficient land which will allow for expansion and other compatible industries to co-locate as they came on line
- Suitable access for receivable of resources, and for service providers, parking for labour
- Sufficient hard stand space for storage of resources – timber, waste paper, farm straw, sawdust and other council or community cellulose wastes. In a manner that allows for resources to be allocated to their highest value user
- 3phase power
- Water storage capacity
- Space for holding, blending and distribution of finished products – ethanol, sugars, water, heat, CO2
- Appropriate legislative requirements, correct zoning, EPA licenses
- Willing community
- Labour force



Next Steps for the Group

Pre-feasibility study to test assumptions for a local Scottsdale context

For further information contact

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About the Dorset Research Group –Members of the Dorset Research Group are committed local community members who have and continue to display their commitment to their local community by many years of community service, the committee includes:

John Beattie – Retired, previously Plant Manager of Simplot potato processing facility at Scottsdale. Has been an active member of the Scottsdale community for over 50 years. Life member of the Apex Clubs of Tasmania and the Scottsdale Fire Brigade currently an active member of the local Rotary Club also an inaugural member of the Dorset Community Economic Group. Participated as a committee member on two occasions for AusIndustry. Tertiary qualifications in Food Technology, Management and Computing.

Karen Hall – Community member with 40 years' experience, she is a past member of Business and Professional Women; is the current Timber Communities of Australia, Branch President, is a past President of North East Tasmania Chamber of Commerce Inc; Current Chairperson of the Tasmanian Forest Contractors Association, is a farmer and tree grower, a local business owner who owns a Scottsdale hair dressing salon along with the local newspaper the North Eastern Advertiser. Karen was a 2011 Dorset Council Citizen of the year award recipient and in 2011 was inducted on the Tasmanian Women Honour Roll for services to business. Karen believes that this biofuels plant represents a real opportunity for the Dorset municipality to embark on a new and sustainable future.

Alan Davenport – is a farmer from Derby, with a dairy, beef and mixed cropping operation. He is a Director of Tasmanian Farmers and Graziers Association (TFGA) Cascade Renewable Energy Ltd and Managing Director of Winnaleah Irrigation Scheme Ltd. Past Director of Australian Dairy Farmers Ltd. and current member of TFGA dairy and meat councils.

Ken Hall – Ken is a harvesting contractor, farmer and tree grower, is the business owner of the local newspaper the North Eastern Advertiser. Ken has been a board member of Tasmanian Forests Contractors Association for the past 10 years, and is a past President of the Scottsdale Football Club and a past player, coach and president and is now honoured with a life membership of the Scottsdale Football Club. Ken was inducted into the Australian Forest Contractors Association Hall of Fame in 2010. Ken is committed to his local community and the supply of regional skills and jobs.

Wendy Mitchell – Wendy is the Manager of Development Services at Dorset Council, and has a long history in working with regional communities. She holds among other qualifications in land use planning a Masters of Environmental Management. She is a Director of Tasmanian Farmers and Graziers Association. More information about Wendy can be obtained from [LinkedIn](#). Wendy has been working with regions for over 20 years and has never seen an opportunity present itself like the biofuels opportunity. A project that ticks all the boxes, regional development, skills, jobs, and honest and ethical sustainability

Heath Blair – Heath has 20 years' experience in the forest Industry in Tasmania and Australia. He is a well-respected resource manager with a high level of experience in marketing and harvesting industrial sized plantations and native forest estates down to small individual landholdings. Heath has a wide range of experience, from establishing new forests through to large scale industrial processing of forest resource. He is a Forest Practices Officer (planning) under the Forest Practices Act of Tasmania.

David Hamilton is a physicist who worked in occupational health for about 30 years; more than half of that time being in the oil and gas industries. He has been growing trees outside Lilydale for almost 15 years, and moved to Tasmania at the end of 2008. David now runs an energy consulting business and is the Convenor of the Tasmania North Branch of the Alternative Technology Association. The International Energy Agency has advised that if we wish to avoid dangerous climate change we cannot afford to burn the reserves of coal, oil and gas we already know about, and David takes this advice seriously.

Dale Jessup – General Manager of the Branxholm Sawmill, he has worked in the plantation softwood and hardwood sawmill industry in Tasmania and Victoria for 29 years, 17 years at management level. Life Member of the Scottsdale Fire brigade where he served as a volunteer fire fighter for 25 years, awarded the national medal for service to the Tasmania Fire Service. Has represented industry on several quality and safety committees at both state and federal levels. Holds two diplomas, 1 in management and the other in entrepreneurial management. Project team member on the \$75M FEA Bell Bay sawmill build project, project managed several large industrial installations. Extensive experience in log procurement, residue sales and environmental management. Dale sees the proposed Bio-fuel plant a fantastic new industry opportunity for Dorset in creating development and jobs, the proposal will also provide additional security to several existing business in Dorset that currently produce biomass as a residue from their operation.

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