# An Assessment of Forest Production Potential within Glen Rock Regional Park

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- Ron Larson, Queensland Department of Natural Resources;
- Gus Cheratzu, Queensland Department of Natural Resources;
- Russell Turkington, Glen Rock Management Advisory Committee;
- Ken Morris, Queensland Department of Natural Resources;
- David Nalder, Queensland Department of Natural Resources;

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### ABBREVIATIONS

PUID:	Planning Unit Identifier
FP-RAT:	Forest Production Resource Assessment Team
FPAM:	Forest Production Assessment Model
ESFM:	Ecologically Sustainable Forest Management
CoP – NFTP:	Code of Practice - Native Forest Timber Production
DNR:	Department of Natural Resources
DPI-F:	Department of Primary Industries - Forestry

### SUMMARY

The nature of the landscape within Glen Rock is such that it poses significant limitations upon the overall viability and sustainability of potential commercial Forest Production activities. Individually, selected products such as *Melaleuca bracteata* seeds do occur in significant quantities and may be commercially viable.

As an outcome of previous patterns of human use, areas where slope and access considerations do not pose significant limitations exhibit low standing volumes of potential wood products.

Locally viable volumes of fence and landscape materials exist within Glen Rock that may provide some opportunity to source products to support maintenance activities within the property and potentially some other local area niches.

Sawlog and Pole products exist either in limited locations, in non-commercially viable volumes or do not exist at present. However, they have in the past and may again at some point in the future beyond this and subsequent planning periods (eg Cookes Tableland).

Some potential exists for the establishment of Farm Forestry Plantations/Woodlots.

A collective rating encompassing the potential relative to the range of forest products for each of the 77 planning units (PUIDs) delineated within Glen Rock Regional Park is presented within Map 1. This rating is referred to as Forest Production Potential.

Generally, where moderate Forest Production Potential ratings have been assigned to PUIDs (eg ratings around 6.0 out of a possible 10), the bulk of the value can be attributed to the presence of commercially viable quantities of *Melaleuca bracteata*.



## 1. INTRODUCTION AND METHODOLOGY

## **1.1 INTRODUCTION**

This document presents a spatially referenced assessment of the Forest Production potential within Glen Rock Regional Park. This assessment has been conducted to contribute to the Glen Rock Management Planning process.

The outcomes of the assessment are a logically derived evaluation in sufficient detail to guide planning decisions and have visible credibility and accountability.

In general, the acquisition of substantial new data has not been required, rather, existing resource data sets in combination with relevant professional, technical and local knowledge have been applied to the application of a consistent evaluative framework that has and is being utilised to inform sub-regional forest management planning initiatives across the state.

### 1.2 METHODOLOGY

The Forest Production Assessment Model developed by Forest Planning and Sustainable Use of the Queensland Department of Natural Resources (DNR) has been applied to this assessment process (see Appendix 1).

The assessment model has been developed in consultation with DNR district personnel across the state and relevant personnel from the Department of Primary Industries – Forestry (DPI-F).

Succinctly, the assessment model evaluates and rates elements of the landscape relative to their potential to provide commercially viable quantities of a range of forest product types within Ecologically Sustainable Forest Management (ESFM) Frameworks.

These product types include:-

- Sawlogs;
- Poles;
- Fencing and Landscape Materials;
- Foliage and Seeds;
- Farm Forestry Plantations.

For each product type a range of criteria are considered. These include:-

- Inherent Site Productivity;
- Product Quantity per Hectare;
- Product Market Price;
- Access Considerations (including notions of ESFM);
- Slope and Resource Management Considerations (including notions of ESFM).

An evaluation was conducted for each of the Seventy-seven (77) Master Planning Units (PUIDs) delineated within Glen Rock Regional Park (see Figure 2).



A Forest Production Resource Assessment Team (FP-RAT) was formed to drive and contribute to application of the assessment model in a process based on functional participation.

The collective attributes (knowledge, skills and experiences) of the team included:-

- A historical awareness of forest production activities having occurred at Glen Rock;
- An expert knowledge of opportunities for access within and between planning units;
- An expert knowledge of commercial forest resources and their viable utilisation relevant to the sub-region;
- An expert knowledge of current environmental management system elements as they relate to Forest Production;
- An applied knowledge of the Forest Production Assessment Model and associated data needs.

The participants of the FP-RAT included:-

- Ken Morris, Property Manager, Glen Rock Regional Park, DNR;
- Russel Turkington, Local Landholder;
- Neil Gourley, Forest Ranger in Charge, DPI-F;
- Ron Larson, Vegetation Extension Officer, DNR;
- Gus Cheratzu, Resource Management Officer, Forests, DNR;
- David Nalder, Project Officer (Coordination & Liaison), DNR.

To support the collective evaluation of specific sites relative to each of the criteria a range of data sets and reference materials were utilised. These included:-

- Slope Map based of a Digital elevation model slope analysis by (DCILGPS);
- Topography, Roads and Tracks (DNR);
- Product Pricing Schedules (DPI-F);
- Regional Ecosystem Type analysis and mapping (QPWS);
- Mean annual rainfall isohyets (Water Resources Commission).

Within the FPAM the effect of the criteria for "Slope" and "Access" are such that as sites become steeper and less accessible the overall value of the site in terms of its capacity to produce forest products is detracted from. For example, a site which exhibits outstanding timber products that is inaccessible or too steep is attains a rating approaching zero. Hence it is possible to rationalise the level of effort directed towards the analysis of three of the five criteria (i.e. those relating to sites' capacity to produce forest products) if they are either too steep or inaccessible.

## 2. RESULTS

## 2.1 SLOPE AND ACCESS

At a PUID level, specifications within Queensland's ESFM frameworks (particularly the Code of Practice for Native Forest Timber Production (CoP-NFTP)) provide guidance in relation to how harvesting activities can be integrated within the physical landscape whist being mindful of the requirements of statutory instruments such as the *Environmental Protection Act 1994*.

The principal physical landscape factors incorporated within the schedules of the CoP-NFTP relate to watercourse protection and the protection of erodible steep slopes.

The nature of the physical landscape within Glen Rock Regional Park is such that the steep and variable topography in many PUIDs (on average) exceeds the harvesting limits of ESFM frameworks and the oft presence of multiple watercourses has a further compounding influence by providing barriers to the passage of equipment and the harvestability (commercial viability) of products. Figure 1 below displays an example of the topographic variation and nature of the drainage patterns within many of the PUIDs.



Taking cognisance of the schedules within the CoP-NFTP (dependent on variation in soil erodibility) PUIDs with an Average Slope greater than 24 Degrees were given a slope rating of Zero. PUIDs that had no access to or within the PUID were also afforded a similar rating. Map 3 below presents average slope in degrees between the PUIDs and existing access tracks.

Map 3



Map 4 and Map 5 present the ratings for Slope and Access considerations between the PUIDs where access was deemed practical and where ESFM considerations did not impose significant limitations upon potential harvesting operations. The ratings were derived through group discussion and consideration.

Of the seventy-seven (77) PUIDs, forty-seven (47) we're evaluated as being either on average too steep or inaccessible. Ratings for slope and access were derived for thirty (30) PUIDs.





## 2.2 SITE PRODUCTIVITY

Through the consideration of soil and water factors inherent within each of the PUIDs the Site Productivity ratings displayed in Map 6 below were derived through group discussion and consideration.



## 2.3 PRODUCT QUANTITY PER HECTARE AND PRICE

The rating of product quantity and the rating of price are based on the potentially available volume of each forest product per unit area and the market price for each product type. Through the combination of Quantity and Price considerations it is possible to derive a "value per hectare" for each of the product types in the "practical: PUIDs. These are displayed in Table 1.

Within Glen Rock Regional Park limited volumes of "wood products" exist due to the inherent nature of the landscape and previous patterns of human use and disturbance. Pertaining to commercial viability, the quantities of "wood products" (i.e. Sawlogs, Poles and Fencing and Landscaping Materials) presently occurring within Glen Rock are generally insufficient to warrant utilisation within the conventional forest product market.

PUID	Sawlog	Pole	Fence & Landscape	Foliage and Seeds
	Value/ha	Value/ha	Value/ha	Value/ha
1	0	0	0.4	0
3	0	0	0.4	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0.4	0
13	0	0	0.4	0
14	0	0	0.4	0
15	0	0	0.4	0
20	0	0	0	0
21	0	0	0	0
28	0	0	0	0
37	0	0	0	6.4
41	0	0	0	6.4
43	0	0	0	1.2
45	0	0	1.2	0
46	0	0	1.2	0
48	0	0	0	6.4
49	0	0	1.2	0.3
50	0	0	0	6.4
51	0	0	0	6.4
52	1.2	0	1.4	0
53	1.2	0	1.4	6.4
55	0	0	0	6.4
59	2.4	0	1.6	0
60	3	0	2.0	1.2
64	0	0	0	6.4
67	1.8	0	1.2	0
70	0	0	0	0
77	1.8	0	1.6	1.2

#### **Table 1 Product Value Per Hectare within the Practical PUIDs**

## 2.4 SAWLOG PRODUCTION POTENTIAL

Ratings for Sawlog Production Potential were derived as a function of product value per hectare, slope and access considerations. Outcomes are presented in Map 7.



## 2.5 POLE PRODUCTION POTENTIAL

Ratings for Pole Production Potential were derived as a function of product value per hectare, slope and access considerations. Outcomes are presented in Map 8.



## 2.6 FENCE AND LANDSCAPE PRODUCTION POTENTIAL

Ratings for Fence and Landscape Production Potential were derived as a function of product value per hectare, slope and access considerations. Outcomes are presented in Map 9.



## 2.7 SEED PRODUCTION POTENTIAL

Ratings for Seed Production Potential were derived as a function of product value per hectare, slope and access considerations. Outcomes are presented in Map 9.



## 2.8 FARM FORESTRY PLANTATION PRODUCTION POTENTIAL

In the absence of standing volumes it is possible to derive a rating of Farm Forestry Plantation Potential based on site productivity, slope and access considerations. Ratings of Plantation are presented in Map 10.



## 2.9 FOREST PRODUCTION POTENTIAL

A collective Forest Production Potential Rating encompassing the potential relative to the range of forest products for each of the 77 planning units (PUIDs) delineated within Glen Rock Regional Park is presented within Map 1.



## 3. **DISCUSSION**

The outcomes of the assessment on balance indicate that Glen Rock is a less than average forest production site when considered in the context of Queensland's forest resources.

However, some commercial potential may exist for individual products. Particularly, seed material from *Melaleuca bracteata*, which on site has the capacity to yield good commercial volumes of seeds in a location, that is relatively close to major markets.

Outcomes of the Sawlog and Poles assessment indicate that the site is on balance well below average. Isolated pockets of good occurrences of these product types do exist however slope and or access considerations prohibit their commercial utilisation due to factors associated with either ecological sustainability or commercial viability.

There may however be sufficient sawlog materials to supply some potential capital investment and maintenance activities on the property but not at a large scale.

Simmilarly, whilst the outcomes of the assessment indicate that Fencing and Landscaping Materials are below average the extent of their occurrence is such that it may provide a source of materials for some capital investment and maintenance activities on the property. Further, possibilities may exist to supply such materials commercially at a local scale.

Some potential may exist to establish farm forestry plantations in already cleared areas within the property.

## APPENDIX 1:FOREST PRODUCTION ASSESSMENT MODEL

The term "Forest Production" encompasses a range of direct use values most suitably categorised as individual product types. These include:-

- Sawlogs;
- Poles;
- Fencing and Landscape Materials; and
- Foliage.

Each product type is assessed using a consistent set of criteria. These criteria include:-

- Site Productivity;
- Quantity per hectare;
- Price;
- Slope; and
- Access.

The criteria, their application and relevant relationships within the model are discussed in greater detail within this section.

The application of the model is supported by a Forest Production Master Sheet (Figure 1) and individual product sheets (Figure 2) within the FES.

### **Figure 1 Forest Production Master Sheet within the FES**

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	A	B	C	D	E .	+	G	Н		AL
E	orest Pr	oduction							SELECT STADT	
PI	лDs	PUID Name	Wood Products	Other Forest Products	Enter Site Productivity Rating (0 - 10)	Slope	Access	Total	SELECT START	
20:	rp901090.001	Bron's NLI/SPG cleared flats (Cleared (	3.7	0.1	3.5	7.0	8.1	3.5		
20:	rp901090.002	Bron's SPG/NLI ridges (Upland)	3.4	0.1	3.0	7.0	8.2	3.2	DATA	
161	nt342.001	Lohse GTI & SPG/NLI timbered	2.7	0.1	4.0	6.5	5.5	3.1	ENTRY	
16:	nt342.002	Lohse cleared	1.4	0.1	3.0	7.0	5.5	2.0		
30:	rp224849.001	Hawkwood SBA/NLI/QPM grassland (1	0.1	0.1	1.0	7.0	7.0	0.6	SAWLOGS	
301	rp224849.002	Hawkwood SPG/NLI ridges (11.10.1)	1.4	0.1	2.0	7.4	7.4	1.7		
30:	rp224849.003	Hawkwood GBX flats (11.3.18)	0.2	0.1	1.0	7.4	7.4	0.6	POLES	
) 8nt	1344.001	Robbie1 SBA/RYJ lower hills (outwash	0.8	0.1	1.0	7.5	3.5	0.8		
1 8nt	t344.002	Robbie1 SPG, BLI, GMS ridges	1.1	0.1	4.0	4.5	3.5	2.1	FENCING -	
2 8ni	1344.003	Robbie1 GBX Flats	0.5	0.1	1.0	7.5	3.5	0.7	LANDSCAPE	
3 26:	nt36.001	Smith's GTI/SPG/NLI ridges	3.9	0.1	6.5	7.5	7.5	5.0	FOLINGE	
4 26:	nt36.002	Smith's SPG Regrowth	0.9	0.1	5.5	7.5	7.5	3.1	FULIAGE	
5 26:	nt36.003	Smith's Cleared GBX (GBX flats)	0.9	0.1	2.0	7.5	7.5	1.4		
5 132	2.001	PUID 1	3.8		6.0	9.0	8.0	4.8		
7 132	2.002	PUID 2	2.9		6.0	9.0	8.0	4.4		
3 132	2.003	PUID 3	0.1		6.0	10.0	9.0	3.0		
3 132	2.004	PUID 4 (Brigalow)	0.6		5.0	8.0	8.0	2.7		
132	2.005	PUID 5	4.0		6.5	8.0	8.0	5.1		
1 132	2.006	PUID 6 (BBQ Bird)								
2 132	2.007	PUID 7 (Bottom)	0.8		4.0	8.5	10.0	2.3		

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	J	K	L	М	N	0	Ρ	Q AT	AU
1	Saw Log	s		RETU	JRN TO FO	REST PROD	UCTION		
2	PUIDs	PUIDs Name	Enter Quantity/ha Rating (0-10)	Enter Price Rating (0-10)	Total x Product Weight (1.0)	Enter Slope Rating (0-10)	Enter Access Rating (0-10)	Value/ha	
3	20rp901090.001	Bron's NLI/SPG cleared flats (Cleared (no	2	6	1.1	7	8.5	1.2	
4	20rp901090.002	Bron's SPG/NLI ridges (Upland)	2	7	1.3	7	8.5	1.4	
5	16nt342.001	Lohse GTI & SPG/NLI timbered	3.5	5	1.6	6.5	5.5	1.75	
6	16nt342.002	Lohse cleared	2	5	0.9	7	5.5	1	
7	30rp224849.001	Hawkwood SBA/NLI/QPM grassland (11.5	1	1	0.1	7	7	0.1	
8	30rp224849.002	Hawkwood SPG/NLI ridges (11.10.1)	2	6.5	1.2	7.5	7.5	1.3	
9	30rp224849.003	Hawkwood GBX flats (11.3.18)	1	1	0.1	7.5	7.5	0.1	
10	8nt344.001	Robbie1 SBA/RYJ lower hills (outwash to	2	4	0.7	7.5	3.5	0.8	
11	8nt344.002	Robbie1 SPG, BLI, GMS ridges	1.5	6.5	0.8	4.5	3.5	0.975	
12	8nt344.003	Robbie1 GBX Flats	1	5	0.4	7.5	3.5	0.5	
13	26nt36.001	Smith's GTI/SPG/NLI ridges	2.5	7.5	1.8	7.5	7.5	1.875	
14	26nt36.002	Smith's SPG Regrowth	1	7.5	0.7	7.5	7.5	0.75	
15	26nt36.003	Smith's Cleared GBX (GBX flats)	1	7.5	0.7	7.5	7.5	0.75	
16	132.001	PUID 1	6.5	6	3.8	9	8	3.9	
17	132.002	PUID 2	5	6	2.9	9	8	3	
18	132.003	PUID 3	1	1	0.1	10	9	0.1	
19	132.004	PUID 4 (Brigalow)	1	6	0.6	8	8	0.6	
20	132.005	PUID 5	7	6	4.0	8	8	4.2	
21	132.006	PUID 6 (BBQ Bird)							
22	132.007	PUID 7 (Bottom)	1	6	<b>ð.</b> 0	8	10	0.6	
23									

### **Figure 2 Example of Individual Forest Product Sheet within the FES**

## SITE PRODUCTIVITY

Site Productivity is rated on a scale between zero (0) and ten (10). A single site productivity score is representative of all product types. The rating process for site productivity is supported by the following rationale which form either end of the rating continuum:-

- The highest productivity sites are those which have the potential to support the highest total standing volumes. Such sites would normally be characterised by deep and richly fertile soils, and average annual rainfalls above 1200mm. Vegetation types would usually be either rainforest or wet sclerophyll forest. Predominant height of the dominant species would normally be in excess of 40 metres.
- The lowest productivity sites typically support very low total standing volumes. Such sites may be characterised by shallow soils and/or soils of very low fertility. Average annual rainfall may be below 500mm, and the vegetation type would typically be dry sclerophyll forest or woodland. These sites are generally not capable of producing sawlog material, and may be useful only as a source of minor forest products (fencing and landscape materials, etc).

Note - the assessment of site productivity should always be made based on the estimated *optimum long term* site productivity. Short term influences that may have an impact on site productivity (such as logging, wildfire, etc) should be discounted.

Note - for cleared sites an assessment of the likely vegetation type that would have existed prior to clearing, and/or a reference to the agricultural productivity of the land if applicable, may be beneficial in determining site productivity.

## SLOPE CONSIDERATIONS

Slope considerations must be assessed separately for each product type. The rating process for slope is supported by the following rationale which form either end of the rating continuum:-

### Product: SAWLOG, POLES

The rating process for slope consideration for sawlogs and poles is supported by the following rationale which form either end of the rating continuum:-

- The highest rated sites are those where slopes on average are negligible and commonly range between horizontal and 3 degrees. Access roads within the unit have little or no benching and the need for cut and fill during road construction was/is absent or negligible. Similarly, snig track drainage escarpment would be the maximum as recommended under current harvesting and marketing guidelines. Snigging is normally possible in many directions. Overall, slope has no noticeable adverse impact on the extraction of wood products from the unit.
- The lowest rated sites are those where slopes on average are extremely steep and are at the limit of acceptability for conventional ground based harvesting systems. Commonly, slopes would be in the range of 25-30 degrees. Access roads within the unit have significant benching and cut and fill areas. Snig track drainage escarpment would be the minimum as recommended under current harvesting and marketing guidelines. Snigging in normally only possible in one direction. Overall, slope has a considerable adverse impact and is a major limiting factor in the extraction of wood products.

Note - areas that are classified as inaccessible due to slope have a zero slope value.

### Product: FENCING/LANDSCAPE MATERIAL

- The highest rated sites are those where slopes on average are negligible and commonly range between horizontal and 3 degrees. Typically, access roads within the unit have little or no benching and the need for cut and fill during road construction is absent or negligible Overall, slope has no noticeable adverse impact on the extraction of wood products from the unit.
- The lowest rated sites are those where slopes on average are extremely steep and are at the limit of acceptability for conventional ground based harvesting systems. Commonly, slopes would be in the range of 25-30 degrees. Typically, access roads within the unit have significant benching and cut and fill areas. Overall, slope has a considerable adverse impact and is a major limiting factor in the extraction of weed products.

Note - areas that are classified due to slope have a zero slope value.

### Product: FOLIAGE

- The highest rated sites are those where slopes on average are negligible and commonly range between horizontal and 3 degrees. Overall, slope has no noticeable adverse impact on the extraction of wood products from the unit.
- The lowest rated sites are those where slopes on average are extremely steep and are at the limit of acceptability. Commonly, slopes would be in the range of 25-30 degrees. Overall, slope has a considerable adverse impact and is a major limiting factor in the harvesting and extraction of this product.

Note - areas that are classified as inaccessible due to slope have a zero slope value.

### ACCESSIBILITY CONSIDERATIONS

Accessibility considerations must be assessed separately for each product type. The rating process for access is supported by the following rationale which form either end of the rating continuum:-

### Product: SAWLOG, POLES, FENCING/LANDSCAPE MATERIAL

- The highest rated sites are those where access to and within the unit for harvesting personnel and equipment is on average excellent with no impediments. Road quality may be high and haulage distances relatively short. Access to and within the unit presents little or no financial impost on extraction.
- The lowest rated sites are those where access for harvesting personnel and equipment is at the limit of acceptability. Predominant haulage distances are excessive and form a major financial constraint on the cost of extraction. Quality of roading may also be extremely poor, so poor that access for certain haulage vehicles may be difficult or impossible.

Note - slope is considered separately and should therefore not be reconsidered as a component of accessibility.

### Product: FOLIAGE

- The highest rated sites are those where access to and within the unit for harvesting personnel and equipment is on average excellent with no impediments. Road quality may be high and distances to market short. Access to and within the unit presents little or no financial impost on harvesting and extraction.
- The lowest rated sites are those where access for harvesting personnel and equipment is at the limit of acceptability. Distances to market are excessive and form a major financial constraint on the cost of extraction. Quality of roading may also be extremely poor, so poor that access for vehicles may be difficult or impossible.

Note - slope is considered separately and should therefore not be reconsidered as a component of accessibility.

## QUANTITY PER HECTARE

Quantity per hectare considerations must be assessed separately for each product type. The rating process for quantity per hectare is supported by the following rationale which form either end of the rating continuum:-

### Product: ALL PRODUCTS

- The highest rated sites are those where the product quantity per hectare (cubic metres, lineal metres, number of pieces, etc) available for the product or range of products is high for that product type or range of product types. Generally harvesting personnel and equipment can obtain maximum product quantity with minimum levels of movement within any sale area.
- The lowest rated sites are those where the product quantity per hectare (cubic metres, lineal metres, number of pieces, etc) available for the product or range of products is low for that product type or range of product types. Generally harvesting personnel and equipment need to travel significant distances to obtain viable product quantities. The costs of harvesting and extraction can be prohibitive.

Note: - if product type is absent from the site or is unlikely to become available during the planning period, the quantity score for that product is zero

### PRICE

Price considerations must be assessed separately for each product type. The rating process for price is supported by the following rationale which form either end of the rating continuum:-

### Product: ALL PRODUCTS

- The highest rated sites are those where if the product or range of products available were offered competitively in the market place they would commonly attract very high prices for that product category or range of product categories. Such product types would normally be associated with a very high demand, would be of the best quality, and would be in either low, medium or high supply. Demand is such a dominating factor here that the purchaser could be classified as price insensitive.
- The lowest rated sites are those where products or range of products would attract the lowest prices possible if they were offered competitively in the marketplace. Such product types or range of products would normally be associated with a very low demand, however both quality and supply could range anywhere between high and low.

Note - Where no market exists for a particular product or is unlikely to be developed within the planning period, the price score for that product will be zero.

### CALCULATION OF FOREST PRODUCTION RATING

$$FPR = \frac{(((WP + (10 - WP)OFP/10) + SP(S/(S+1)1.1)(A/(A+1)1.1)))}{2}$$

Where : -

 $FPR = Forest \operatorname{Pr} oduction Rating$   $WP = Wood \operatorname{Pr} oducts = Saw \log s + Poles + Fencing / Landscape Totals$   $OFP = Other Forest \operatorname{Pr} oducts = Foliage Total$   $SP = Site \operatorname{Pr} oductivity$   $S = Slope = Average slope for Saw \log s, Poles, Fencing / Landscape, Foliage$   $A = Access = Average access for Saw \log s, Poles, Fencing / Landscape, Foliage$ 

## FOREST PRODUCTION PROFORMA

Planning	Unit	No.	
	Prepared by:		

SITE PRODUCTIVITY SCORE		
	10	1
	high value	low value

	SCORE			
PRODUCT	SLOPE	ACCESS	QUANTITY/Ha	PRICE
SAWLOG				
POLES				
FENCE/ L'SCAPE				
FOLIAGE				

## COMMENTS:

## **APPENDIX 2 QUANTITY AND PRICE CONSIDERATIONS**

PRICE / VOL	UME ASSUM	PTIONS		
Product	Site Description	Assumptions	\$ / ha	Comments
Sawlog	Good	80m3/ha@\$40/m3	\$3200	BBT stand Mapleton State forest
	Average	7m3/ha @ \$25/m3	\$175	Cypress stand Barakula State forest
Poles	Good	25 poles/ha @ \$93/pole	\$2325	BBT pole stand average length 12-15m lengths, assuming an average strength rating of 8kN and average price for this category as per H&M price list for >8m hardwood poles intended for VPI treatment.
	Average	5 poles/ha @ \$60/pole	\$300	BBT pole stand average length 12-15m, assuming an average strength rating of 7kN and average price for this category as per H&M price list for >8m hardwood poles intended for VPI treatment.
Fence/L'Scape • Splits/Sawn	Good	500 pieces/ha @ \$56 / 100	\$280	Assuming 10 trees per hectare at 50 pieces per tree, based on ave. price for this product category as per H&M price list
• Splits/ Sawn	Average	150 pieces / ha @ \$56 / 100	\$84	Assuming 10 trees per hectare at 15 pieces per tree, based on ave. price for this product category as per H&M price list
Rounds	Good	100 lineal metres/ha @ \$2/ lin.metre	\$200	Assuming 10 trees at 10 lineal metres per tree
Rounds	Average	50 lineal metres/ha @ \$2/ lin.metre	\$100	Assuming 10 trees at 5 lineal metres per tree
• F'wood	Good	50 ton / ha @ \$6 / ton	\$300	Assuming 10 trees at 5 ton per tree
F'wood	Average	20 ton / ha @ \$6 / ton		
Seeds • Salvage	Outstanding	10kg /ha @ \$235/kg	\$2350	Assuming excellent seed bearing site with 5 trees per hectare bearing 2kg of seed per tree, total removal of all viable seed from crown, premium price for this product category as per H&M price list
• Salvage	Good	5kg /ha @ \$235/kg	\$1175	Assuming good seed bearing site with 5 trees per hectare bearing 1kg of seed per tree, total removal of all viable seed from crown, premium price for this product category as per H&M price list
• Salvage	Average	2.5kg/ha @ \$65/kg	\$163	Assuming average seed bearing site with 5 trees bearing 500g of seed per tree, total removal of all viable seed from crown, average price for this product category as per H&M price list
• In-situ	Outstanding	3kg/ha @ \$235/kg	\$705	Assuming excellent seed bearing site with 5 trees per hectare bearing 2kg of seed per tree with a maximum removal of 1/3 of seed crop at any one time, premium price for this product category as per H&M price list
• In-situ	Good	1.5kg/ha @ \$235/kg	\$353	Assuming good seed bearing site with 5 trees per hectare bearing 1kg of seed per tree with a maximum removal of 1/3 of seed crop at any one time, premium price for this product category as per H&M price list
• In-situ	Average	0.75kg/ha @ \$65/kg	\$49	Assuming average seed bearing site with 5 trees per hectare bearing 500g of seed per tree with a maximum removal of 1/3 of seed crop at any one time, average price for this product category as per H&M price list
Foliage	Standard	@ \$0.05/kg	?	As required with a maximum of 20% of the green crown removed within one growing season
• Foliage	Good	115kg/ha @ \$1.86(ave)/kg	\$214	Based on average foliage sales for the 97/98 financial year at Beerburrum forest district – 60ha yielding 6900kg of mixed products at a total cost of \$12 880.



How to Calculate Score:

1. Estimate the product quantity per hectare for each product category;

2. Read off the corresponding score.



#### How to Calculate Score:

1.Using the examples provided as a guide, estimate the average quantity per hectare of each listed product.

2.Determine the price per unit (refer to HM&RM Manual) and estimate the average product price per hectare.

3.Using the estimated product price per hectare, calculate the average score.

Note: See attached for further details:

Pricebackg.doc



### REFERENCES

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