



# **ABOUT**THIS REPORT

YOUR GUIDE

These icons serve as a guide as to where further information on key areas can be found:



This icon indicates information that appears on our website: www.york.co.za



We are pleased to present to stakeholders our integrated annual report for the year ended 30 June 2015.

### SCOPE

The scope of this report covers the performance of the Group in the period under review. We are confident that our integrated annual report will provide the basis for meaningful engagement with our stakeholders in the year ahead. This is our principal communication to stakeholders and is aimed primarily at providers of financial capital, being both our current and potential shareholders. In addition, we aim to inform all stakeholders interested in our ability to create value over time.

This report contains comprehensive information on our financial performance, stakeholders, governance, material issues, risks and opportunities and how these influence our strategic objectives. We show how we create value and how we will ensure that our value creation is sustainable.



See the section "About York Timbers", which starts on page 2.



See the section "Governance and sustainability", which starts on page 74.

# RESPONSIBILITY FOR THIS INTEGRATED ANNUAL REPORT

This report was prepared under the supervision of the Company Secretary, Sue Hsieh LLB, and Chief Financial Officer, Pieter van Buuren BCom Hons CMA CA(SA).

The Board is ultimately responsible for ensuring the integrity of the integrated annual report, assisted by the Audit Committee and further supported by management, which convened and contracted the relevant skills and experience to undertake the reporting process and provided management oversight. The Board, after applying its collective mind to the preparation and presentation of the report, concluded that it was presented in accordance with the <IR> Framework and approved it for publication on 28 September 2015.

We are committed to improving our reporting further and would appreciate your constructive feedback. Please use our contact details, which can be found on the back cover or by email to: shsieh@york.co.za.



### FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements about York's operations and financial condition. The Company has prepared this report based on information available to it at the time of writing, including information derived from public sources. No representation or warranty, express or implied, is provided in relation to the fairness, accuracy, correctness, completeness or reliability of the information, opinions or conclusions expressed herein.

This report is not intended to be relied upon as advice to investors, potential investors or funders and does not take into account the investment objectives, financial situation or needs of any investor. All investors should consider such factors in consultation with a professional adviser of their choosing when deciding if an investment is appropriate.

The Company undertakes no obligation to update or revise these forward-looking statements to reflect events or circumstances that arise after the date made or to reflect the occurrence of unanticipated events. Inevitably, some assumptions will not materialise, and unanticipated events and circumstances may affect the ultimate financial results

Projections are inherently subject to substantial and numerous uncertainties and to a wide variety of significant business, economic and competitive risks, and the assumptions underlying the projections may be inaccurate in any material respect. Therefore, the actual results achieved may vary significantly from the forecasts, and the variations may be material.

### **CURRENT-YEAR ENHANCEMENTS**

We have refined the structure and flow of the information with a clear picture of the **BUSINESS MODEL** and value creation. We also provide more details of our **STRATEGY**.

We have again examined our disclosure on **GOVERNANCE** and given attention to detailing the efforts of each of the Board committees.



The performance and future outlook section, which starts on page 32, provides a more detailed outlook of future plans and expectations, in addition to a critical evaluation of our performance over the past year.

### **ESTABLISHING MATERIALITY**

We define material issues as those which have the potential to substantially impact our ability to create and sustain value for our stakeholders.

The process we adopted to determine the issues material to our business and our stakeholders is aligned with our organisational decision-making processes and our strategies. By applying the principle of materiality, we determined which issues could influence the decisions, actions and performance of the Group.



Material matters and focus areas are discussed on pages 26 and 27 of this report.

We describe the circumstances in which we operate, the key resources and relationships on which we depend, the key risks and opportunities we face and how our key priorities can affect our ability to create and sustain value over time.

### REPORTING PRINCIPLES AND ASSURANCE

The information included in the integrated annual report is provided in accordance with International Financial Reporting Standards (IFRS), the South African Companies Act 2008 (Companies Act), the JSE Listings Requirements, as well as the King Code of Governance Principles 2009 (King III) and the International Integrated Reporting Council's (IIRC) International Integrated Reporting Framework (<IR> Framework).

We have implemented the Framework as far as practicable and our approach to integrated reporting will continue to evolve over time, in line with the <IR> Framework.

Our external auditor, KPMG Inc., audited the annual financial statements. The Group's broad-based black economic empowerment (BBBEE) rating and scorecard have been verified by an accredited rating agency, Premier Verification Proprietary Limited.

The Audit Committee had oversight of the preparation of the integrated annual report and recommended it for Board approval, which was obtained on 28 September 2015.

# York's

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York Timber Holdings Limited (York or York Timbers) is listed on the JSE in the Forestry and Paper Index sector under the share code YRK. The Company was incorporated in 1916 and has been listed on the JSE since 1946.

York is an integrated forestry company, operating through its wholly owned subsidiaries, York Timbers Proprietary Limited that owns plantations, processing plants and Agentimber Proprietary Limited runs a wholesale distribution network.

### YORK HAS THE LARGEST MARKET SHARE OF THE SOUTH AFRICAN TIMBER AND PLYWOOD MARKET.

This share in the market is a result of York's sustainable biological assets, integrated with both primary and value-added processes.

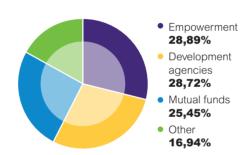


### **SHARES**

**AUTHORISED: 600 MILLION** 

ISSUED: 331 240 597

### **SHAREHOLDING**



### **BOARD COMPOSITION**



Executive directors

1916

York was incorporated

TIMELINE

Listed on

the JSE

Sold to Blackstar after being managed by the Tucker family

2006

2007

York acquired Global Forest Products, making it the largest vertically integrated solid wood processor in Southern Africa

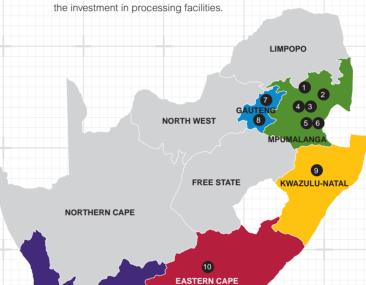
2009

Embarked on a comprehensive re-engineering of the business Rights issue

of R552 million Restructuring of debt

### YORK'S OPERATIONAL FOOTPRINT

- Sabje and Jessjevale sawmills are ideally situated next to timber supply from York as well as from external resources.
- Processing plants are well positioned to service the Southern African market.
- Sustainable raw material supply underpins



### MPUMALANGA

- DRIEKOP Sawmill (Pine timber products)
- NICOLSON & MULLIN
- SABIE MILL
- PLYWOOD
- JESSIEVALE Sawmill and treatment plant
- GOLDEN RHINO

### GAUTENG

- PRETORIA WAREHOUSE
- Narehouse and distribution facility ROODEKOP, JOHANNESBURG

### KWAZULU-NATAL

DURBAN Sales office

### **EASTERN CAPE**

PORT ELIZABETH Sales office

### **WESTERN CAPE**

**EPPING WAREHOUSE, CAPE TOWN** 



**WESTERN CAPE** 

**COUNCIL CERTIFIED** FSC PLANTATIONS OF WHICH .54 136HA OF PINE AND 2 906HA OF **EUCALYPTUS** WERE PLANTED AT YEAR-END

2012

Business was returned to profitability, coupled with successful refinancing of debt

First York Enduro Mountain Rike Rally

2014

Implementation of growth strategy, with focus on EBITDA generation

Environmental authorisation obtained for biomass power plant project

2015

Strong cash generation and commencement of plywood expansion project

Wholesale division returned to profitability

TNAV per share: 739 cents

2016

Development of new product ranges and targeted export markets

Commission plywood expansion project

Participate in REIPPPP

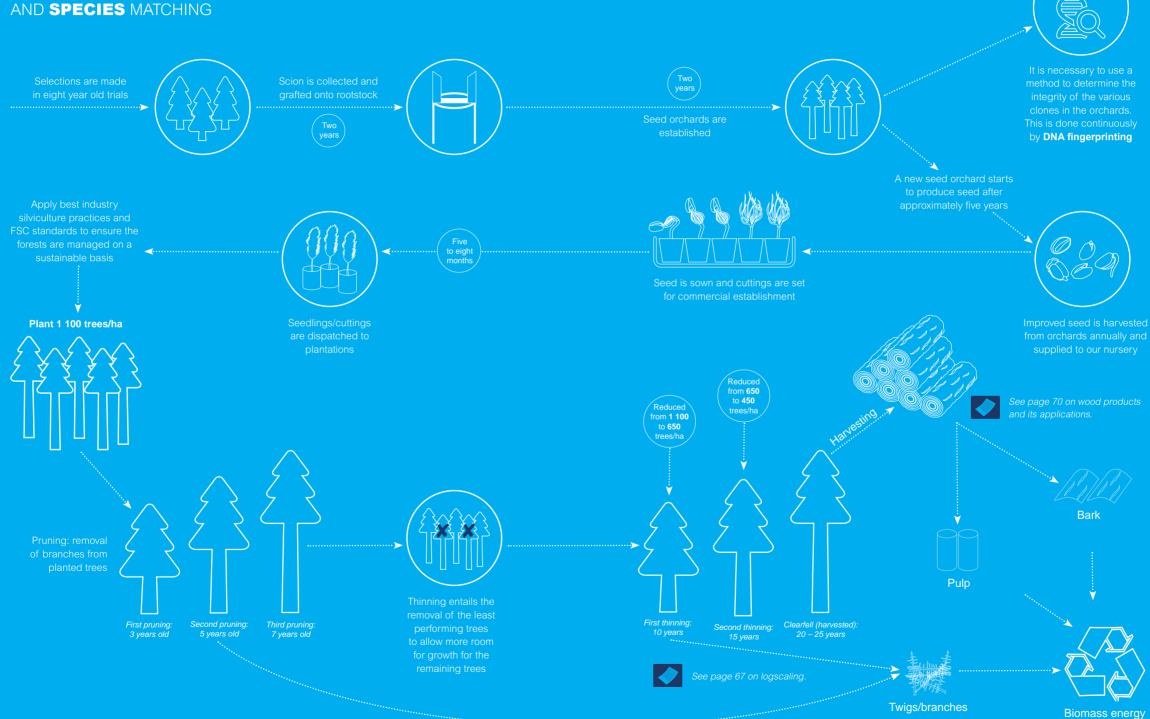
Further investment in remanufacturing facilities

TNAV per share: 658 cents

TNAV per share: 707 cents

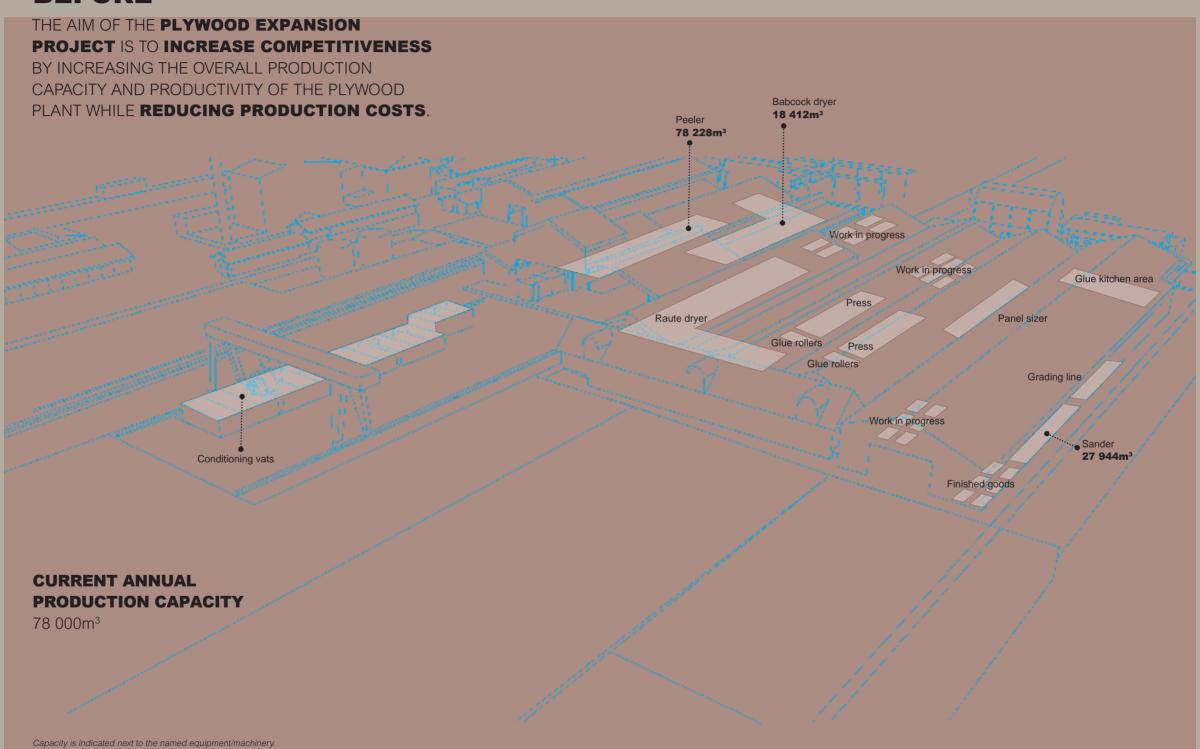
ABOUT YORK TIMBERS ABOUT YORK TIMBERS From seeds to sales

# BREEDING DEPARTMENT DEVELOPING **HIGH YIELDING TREE SPECIES**, INCLUDING **HYBRIDS**, TO ALLOW **OPTIMAL SITE** AND **SPECIES** MATCHING

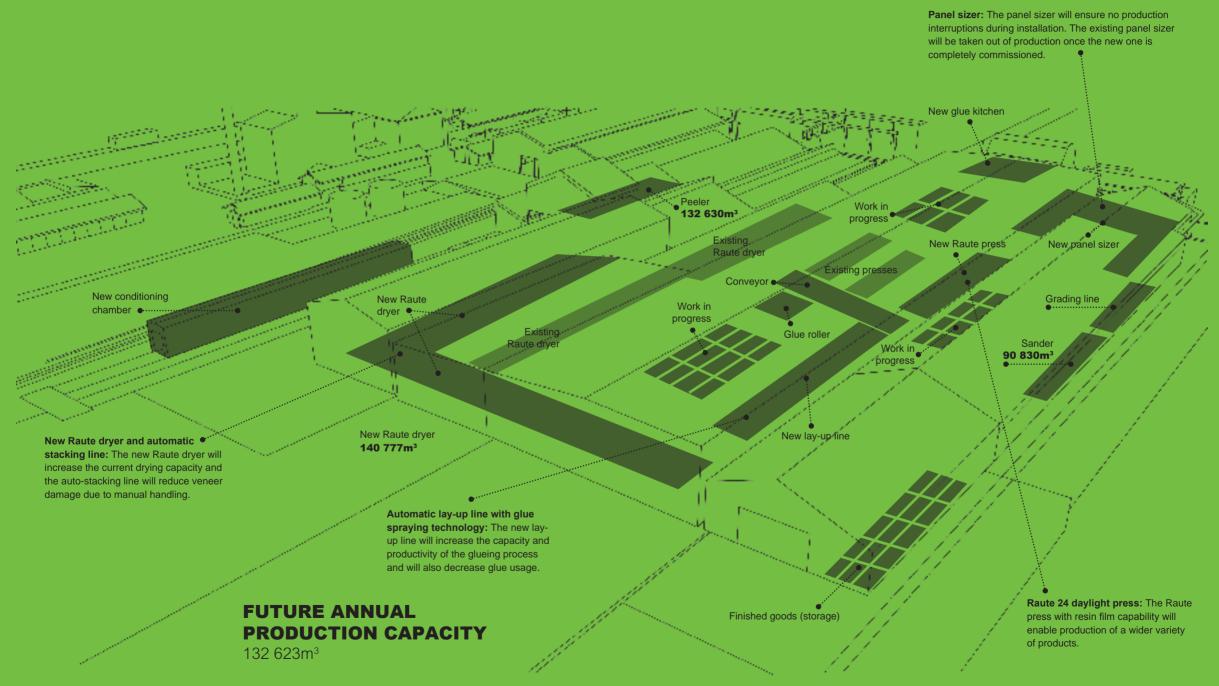


ABOUT YORK TIMBERS ABOUT YORK TIMBERS

### **BEFORE**



### **AFTER**



Capacity is indicated next to the named equipment/machinery.

ABOUT YORK TIMBERS ABOUT YORK TIMBERS



IN SOUTHERN AFRICA. PROFICIENTLY **DELIVERING PRODUCTS AND SERVICES** OF THE HIGHEST QUALITY.

In order to achieve this vision, we constantly refine our business model, which is depicted.

The effects of the process on the capitals we employed are outlined alongside, together with references for more detailed information.



### **NATURAL CAPITAL**



See page 18 for more information

**MANUFACTURED** 

We have five sawmills and

are operated to ensure

the optimum usage of the harvested wood products.

CAPITAL







### **HUMAN** CAPITAL

developing and retaining a wide variety of skills.



See page 21 for more







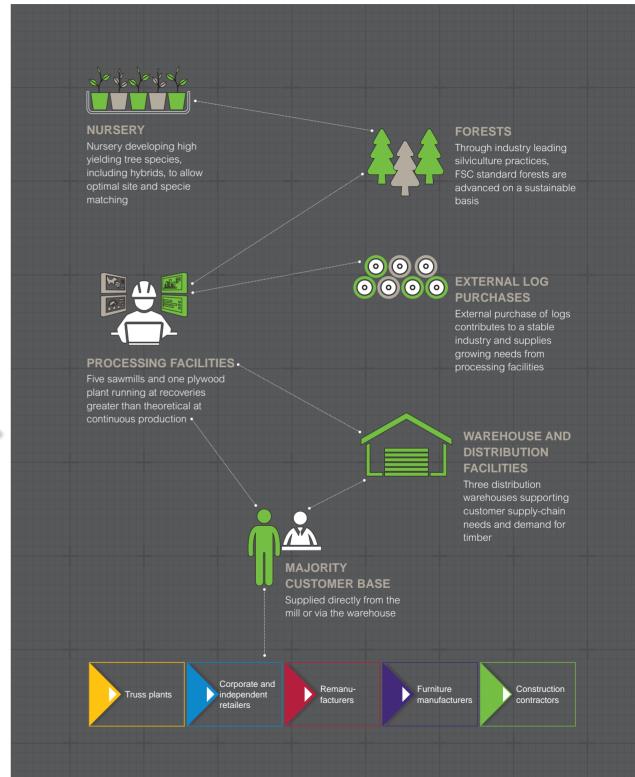


### **FINANCIAL CAPITAL**

York is listed on the JSE and is responsible for the effective utilisation of and return on shareholder funds, which are







INTELLECTUAL

In order to ensure that our forests are safe,

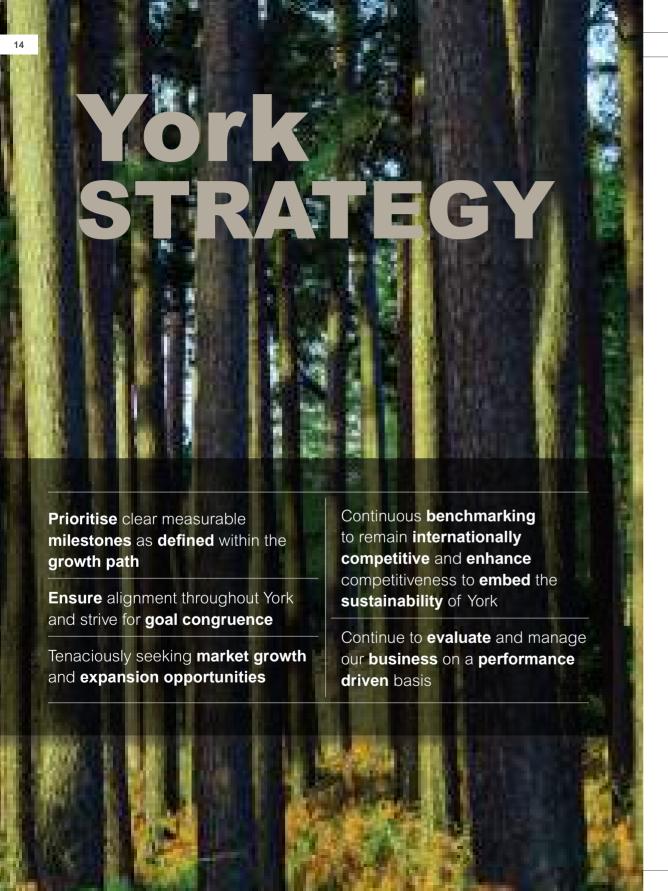
healthy and sustainable and harvested optimally we continually strive to improve methods and ultimately the yield from

See page 20 for more

information

**CAPITAL** 





Capitals	Strategic objectives	Material issues	Strategic response	Key performance indicators (KPIs)*	Stakeholders**				
NATURAL	Protect and grow the biological asset in order to extract optimal use on a sustainable basis	Fire     Animals     Stock control     Locality     Quality     Log mix	Fire protection     Site optimisation     Species     Hybrids     Yield/fibre optimisation     Value-added products     External log purchases	Value of biological asset Yields Total forestry area under control Temporary unplanted area (TUP)	Investors     Community				
MANUFACTURED	Expand and utilise facilities optimally, both in function and in location	Load shedding     Strikes     Locality	Capital expenditure     Single site     Plywood plant upgrade     Biomass power plant     Distribution channels     Service levels     Locality	Capital expenditure     Average selling price     Market share     Energy and other utility utilisation	<ul><li>Investors</li><li>Customers</li><li>Suppliers</li><li>Staff</li></ul>				
INTELLECTUAL	Deliver the best products as efficiently as possible	Fibre optimisation     Efficiency	Hybridisation     Digitisation     Mechanisation     Diversify     earnings base	Value of biological asset     New products launched     Diversified product mix	Investors     Staff				
HUMAN	Attract, develop and stimulate the right minds	Unions     Political activity     New skills	Skills in line with manufacturing     Environment	Staff turnover     People trained     Safety statistics     Clinic statistics	• Staff				
SOCIAL	Mindful of the greater community affected by our operations	Community involvement     Upliftment     BBBEE	Community     Social club	CSI spend     Training     programmes	Staff     Community     Media				
FINANCIAL	Deliver a sustainable return to shareholders	Return on investment     Sustainability	Expansion     Dividend policy     Cost efficiency/     optimisation	Cash profits     EBITDA     Total     shareholder     return	Investors     Financial institutions     Government				
	* For a review of the Group's performance against these key performance indicators (KPIs), see page 34.								



\*\*For more information on the Group's stakeholder engagement, see page 24.

.,...

continue



# NATURAL

Protect and grow the biological asset in order to extract optimal use on a sustainable basis.



AND QUALITY OF RAW MATERIAL ARE A KEY PART OF THE YORK STRATEGY

Continuous improvement and optimisation of our biological asset is being strengthened with closer relationships and partnerships forged with various research institutes and expert bodies such as Forestry and Agricultural Biotechnology Institute (FABI), Tree Protection Co-operative Programme (TPCP), Institute for Commercial Forestry Research (ICFR), Camcore and various others. This adds substantial value towards York's programme of tree improvement via selective breeding, hybridisation and genetic optimisation, which is starting to generate substantially improved yields.

### **YIELDS**

In a recent optimisation exercise by industry expert Martin Herbert, it was indicated that the annual pine offtake in the Escarpment area could increase from the current normalised value of 556 987m³ per annum to 856 099m³ per annum. This represents a 54% increase, of which 27,8% can be ascribed to using better genetic material and by planting the right material on the right site. A further 25,9% volume gain is possible through better site utilisation (the regime impact) and this is realised through

THE MAIN OBJECTIVE OF THE BIOMASS POWER PLANT
PROJECT IS TO **ACHIEVE OPTIMAL VALUE EXTRACTION**OF BIOMASS. THIS WILL BE DONE BY CONVERTING THE
BIOMASS INTO USABLE OR SELLABLE ELECTRIC ENERGY.

planting more (an optimised number of) trees per unit area and thinning optimally in terms of timing and intensity.

### **OPTIMISATION**

A biomass power plant is proposed for the Sabie site, utilising forest biomass (pulp logs, tree tops and branches/ foliage) and processing by-products as fuel. Forest biomass comes from pulp logs, tree tops, branches and foliage, whilst processing by-products include rejected logs, bark, chips and sawdust.

The main objective of the project is to achieve optimal value extraction of York biomass. This will be done by converting the biomass into usable or sellable electric energy.

The biomass power plant will furthermore reduce the risk of fires by dramatically reducing fuel loads in the plantations, whilst also creating opportunities through the value created for biomass, thereby allowing for alternative forestry regimes, which will lead to a substantial increase in the biological value.

### **FIRE PROTECTION**

Following the unusual losses suffered by the whole of the South African forestry industry during 2007 and 2008, the forestry industry in Mpumalanga again experienced severe losses during the 2014 fire season when 10 144 hectares of plantations were burnt. York had 61 fires over the reporting period. Total area burnt was 2 072 hectares of which 1 406 was planted to trees. York's annual fire protection expense amounts to

# UNCONTROLLED WILDFIRES REMAIN THE BIGGEST RISK TO THE SUSTAINABILITY OF YORK'S PLANTATIONS.



See page 59 for more information on York's efforts to increase tree optimisation. R22 million, aimed at minimising the effect of these inevitable events.

The greatest amount of time spent on veld and forest fire protection takes place prior to the fire season on fire prevention (identifying hazards and risks, fuel load management, constructing and burning of fire breaks, awareness campaigns), planning, training and other fire suppression activities.

The probability of large fires is related to fuel hazard, topography, fire weather and the initial attack (IA) fire size when first resources arrive at a fire. One of the measures to minimise the IA fire size and response times is through efficient fire detection and by deploying appropriate suppression resources rapidly from bases in locations that provide optimised geographical spread and coverage.



See page 100 for more information on York's fire prevention efforts. The key focus areas of fire protection are fire detection, construction of fire breaks, fuel load management and fire standby. Of the total fire protection budget for the current financial year of R22 million, 16% (R3,6 million) is allocated to detection, 28% (R6,1 million) to firebreaks and controlled burning and 56% (R12,3 million) to fire standby, which covers fire crews, fire trucks and aerial resources.



ABOUT YORK TIMBERS
ABOUT YORK TIMBERS

continued



### **MANUFACTURED**

CAPITAL

Expand and utilise facilities optimally, both in function and in location.

YORK'S STRATEGY IS TO CONTINUOUSLY IMPROVE VALUE EXTRACTION FROM ITS RAW MATERIAL



serving a broader portion of the market whilst also creating the basis for York's strategy of moving up the value chain by adding value-added products to its product offering. The upgrade of the plywood plant will increase throughput of the plant whilst increasing automation and mechanisation, leading to improved productivity.

Based on the increasing production capacity, as well as improved yield from its plantations, York is planning to enter the biomass electricity production area as part of the Department of Energy's renewable energy programme. York expects to submit a bid under the REIPPPP programme during the first half of the next financial year for a **biomass power plant**, which will be the next phase of optimal value extraction from its assets.

Submitting a bid under the REIPPPP programme presents a unique opportunity to diversify York's income streams, thereby

To this end York embarked on its course of investment in processing technology to extract maximum value. This is starting to take shape with the first part on the route of execution being the plywood expansion project. After an initial delay from the Moumalanga Department of Economic Development, Environment and Tourism to provide the necessary authorisations the project is now in full swing and progressing well without any interruptions, to current operations. This project will be completed in the next financial year with full production expected to come on line during the fourth quarter.

### **CAPITAL EXPENDITURE**

The initial capital expenditure as part of the overall integrated site project, being in respect of the upgraded plywood plant, will allow York the flexibility of THE INITIAL CAPITAL

EXPENDITURE AS PART OF

THE OVERALL INTEGRATED SITE

PROJECT, BEING IN RESPECT OF

THE UPGRADED PLYWOOD

PLANT, WILL ALLOW YORK THE

FLEXIBILITY OF SERVING A

BROADER PORTION OF THE

MARKET WHILST ALSO CREATING

THE BASIS FOR YORK'S STRATEGY

OF MOVING UP THE VALUE CHAIN

BY ADDING VALUE-ADDED

PRODUCTS TO ITS PRODUCT

OFFFRING.

establishing an additional market for its raw material. This project will provide York with viable solution for its by-products and substantially improve York's raw material optimisation capability. At the same time the risk presented by **load shedding will be minimised** since York will be a key customer feeding into the national grid.

York's processing strategy will continue focusing on **cost optimisation** and, with



See page 60 for more information on York's Processing division. load shedding unfortunately becoming a reality, efficiency is currently high on the agenda.

The addition of value-added products through remanufacturing will be strengthened via a focus on manufacturing and **value addition close to the market** on a continuous basis – deviating from the traditional interrupted stop-start process, thereby reducing cost and delivering according to market requirements.

It is also aligned with York Timbers' processing strategy, which entails the development of a new integrated sawmill. The new sawmill will generate a large amount of residue and the biomass power plant will ensure optimal value is extracted from all available fibre once the plant is operational.

# IS A STRATEGIC PROJECT IN TERMS OF **YORK'S** GROWTH PLAN. WHICH **INCLUDES THE**

OPTIMAL UTILISATION OF THE AVAILABLE BIOMASS FIBRE.

THE BIOMASS POWER PLANT

### ENERGY AND OTHER UTILITY UTILISATION

In light of the ever increasing cost of utilities throughout the York operations, significant attention is being paid to reducing usage and cost. Apart from various small energy efficiency projects, York has already implemented the following, which resulted in substantial cost savings:

- The dust extraction lines at Driekop sawmill were consolidated to reduce the number of extraction fans, which resulted in significant savings at the sawmill.
- Sabie and Jessievale sawmills were transferred from Eskom's Nightsave Rural tariff to Ruraflex tariff. This not only resulted in immediate savings, but allowed York the opportunity to further reduce cost by transferring load from peak periods to off-peak (cheaper tariff) periods via better planning and scheduling. This has had a significant impact on York's operating utility costs, with various options for further improvement being investigated.
- The new plywood expansion project required the installation of new roofs to house the various machines. These roofs will be fitted with LED lighting, replacing the conventional lighting used in the older buildings, which will be much more energy efficient.

ABOUT YORK TIMBERS
ABOUT YORK TIMBERS



### INTELLECTUAL CAPITAL

Deliver the best products as efficiently as possible.

**Digitisation** of the value chain in order to extract maximum value is becoming of strategic importance. This means the capability of being able to model characteristics of the timber as it moves through the production process to ensure optimal value is extracted based on customer needs being matched to raw material characteristics.

By utilising various parts of raw material inputs optimally, this will also allow for the improved capability to increase product development to better serve market needs and diversify products and markets served.

The forward-looking outlook on intellectual capital is to shift the mind-set of traditional application for lumber

in Southern Africa. York is positioning itself to provide design solutions and manufacture specialised building material for commercial buildings made entirely from wood.

Wood is a renewable resource and responsible choice as it reduces the environmental impact of buildings When selecting building materials, wood should be considered as it has lower costs to the environment and delivers more

**IMPROVEMENTS IN** 

TECHNOLOGY AND PRODUCT DEVELOPMENT

HELP MAKE WOOD PRODUCT MANUFACTURING A ZERO-**WASTE INDUSTRY.** 

NORMAL CONSTRUCTION entails 7 MILLION TONNES of greenhouse **GASES AND TOXIC EMISSIONS.** 

water pollutants and some forms of waste. Wood products have a lighter footprint since they produce lower greenhouse gas emissions, less air pollution and lower volumes of waste.



**15% LESS ENERGY** 

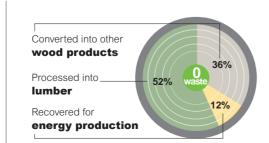
to build houses when using wood

### **BENEFITS OF USING WOOD:**



### **WOOD SEQUESTRATES CARBON**

making it the ideal input material to a real green building



# HUMAN

### CAPITAL

The main enabler for the execution of strategy is people and to this end York has implemented Project Evolve. in conjunction with strategy partners. Alexander Proudfoot, to evaluate and effect resource balancing throughout all operational business units. This project is expected to start contributing to the

The Human Resources (HR) environment in York is driven by the need to attract and develop talent appropriate to the growth strategy while maintaining an engaged and productive workforce that can deliver on present business requirements.

bottom line early in the new financial year.

Initiatives to develop both leadership and technical skills in various divisions continue. Remuneration benchmarks on the wage staff pay rates at each site and for the artisans were conducted to evaluate York's position in the industry.

The HR team has centralised many activities and adopted a shared service approach to improve controls and compliance as well as to improve the business partner relationship between HR and its internal customers. All recruitment has been centralised as well as induction, on-boarding, exit analysis and employee transfers.

Critical positions and talent pools for each role have been identified and the professional development pathways of these talent pool employees are monitored monthly. Stretch assignments and external training as well as industry exposure and business coaching are included in this development.

York's BBBEE score was verified as Level 4 in March 2015. A strategy to ensure the Company's BBBEE score under the new BEE codes is optimal, without excessive expenditure, is being addressed by the Finance and HR teams jointly.

Attract, develop and

stimulate the right minds.

There is an agitated climate around worker rights nationally, which is impacted by union and political rivalry. A number of matters will be addressed with the relevant trade unions, including the large differences between wage demands and what is sustainable, equal pay for equal work legislation and finalisation of the provident fund agreements.

The need to ensure talent pipelines for key roles and relevant training that engages high performers is critical. A solid labour relations climate and focused control on employee costs will be key factors in York's success in the next financial year.

Production costs, affordable wage rates as well as productivity and a smooth industrial relations climate where employees are focused on quality and efficiency in achieving throughput will be focal areas for HR to support.

The need to build cross-functional alliances and deepen inter-departmental co-operation, thus eliminating silos, will contribute positively to York. This will be achieved through ensuring departmental evaluations are included in the performance management system.

The revision of the performance management system is in process to address shortcomings in its usefulness as a motivation and remediation tool.



information on York's care for the upliftment, training and health of its employees.



YORK'S

**CHALLENGES** 

Labour relations

challenges remain

a priority.

### TRADE UNION ACTIVITIES

Although the year under review has seen a rise in industrial action, this has not caused any disruptions to York's business. While there has been some inter-union rivalry and York has felt the pressure of national social political issues, this has not interfered with business.

ABOUT YORK TIMBERS



# SOCIAL

CAPITAL

Mindful of the greater community affected by our operations.



In its role as a good neighbour, true participation and involvement is intrinsic to the way York sees corporate social investment (CSI).

The principles of York's CSI programmes are aimed at delivering an internal, economic and social benefit aligned with the human capital strategies of continually:

- Leading and developing:
- · Attracting and engaging; and
- Reinventing and improving.

York's social upliftment activities are aimed at redressing past inequalities by empowering previously disadvantaged individuals and being involved with projects aimed at alleviating poverty. These efforts are focused on ensuring the growth and social development of the communities in which York operates.

York is involved with major events such as the York Long Tom Marathon and the York Enduro Mountain Bike Rally which. other than for direct CSI projects such as with Sasol, also bring people from all over the country to visit the community and experience York's people and its environment. These exciting events, organised by the York Adventure Club, bring much needed visitors and accompanying spending and investments to the region.



For more information on York's activities in uplifting the community, refer to page 113.

For more

page 122.



YORK IS PASSIONATE ABOUT ITS ROLF AS A **SOCIAL SUPPORTER AND PROMOTER OF VARIOUS COMMUNITIES** AND FAMILY VALUES IN BOTH THE LOWVELD AND THE HIGHVELD REGIONS.



# FINANCIAL

See page 35

for more

information

on York's

financial

highlights.

CAPITAL



Deliver a sustainable return to shareholders.

Once the plywood expansion project has been completed, a volume of 132 623m3 per annum will be available from own production against the current production of 78 000m3 at York's plywood plant. Sales into the market by York, including imported plywood via the Wholesale division, is currently at 100 000m³ per annum. Total SA market size is estimated at between 132 000m<sup>3</sup> and 161 000m<sup>3</sup>. This is made up mainly of shutter ply. The volumes currently sold include sales to South Africa, Mozambique, Namibia, Botswana and Zambia. Competitors currently import approximately 17 000m³ per annum. New and alternative markets will be serviced for the additional 45 131m<sup>3</sup> per annum that will be available to York, which include:

- · Replacement of imported plywood from competing overseas markets;
- · Production of resin film board, with the target market being "form work specialists":
- An introduction of a combi board. This is a board that is either made up of a hardwood core and pine faces for increased strength properties, or it can be produced with a pine core and hardwood faces for decorative use:
- Export opportunities into the UK and Europe. With York already having the CE mark, which is the standard required in the UK and Europe, as well as FSC certification, the barrier to entry is reduced;
- Decorative products that can be used in flooring and panelling; and
- · Dedicated focus to develop the plywood market extensively to ensure access to international markets.

# **PLYWOOD**

CURRENT PRODUCTION CAPACITY PER ANNUM

 $78\,\,000 \mathrm{m}^3$ 

PRODUCTION CAPACITY PER ANNUM ONCE PROJECT COMPLETED

132 623m<sup>3</sup>

York's strategy of consolidating various distribution channels is starting to bear fruit with its Wholesale division now well established and ready to increase its footprint in the market while focusing on the addition of value-added products. This also creates the opportunity of improved service delivery thereby strengthening alliances with key customers.

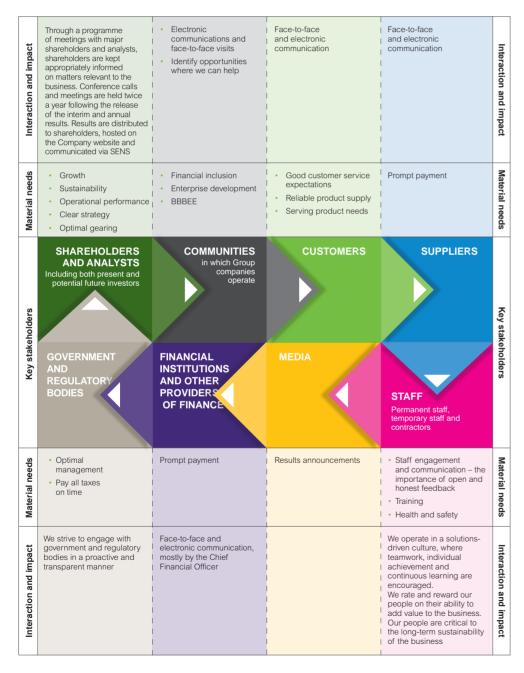


ABOUT YORK TIMBERS **ABOUT YORK TIMBERS** 

### Stakeholder engagement

We believe that the strength of our relationships with all our key stakeholders is critical in the achievement of our strategic objectives and creating sustainable long-term value for the Company and its stakeholders. Stakeholder engagement involves gaining a thorough understanding of key stakeholder groups and assessing the issues that are material to them in order to respond appropriately. The Board of Directors oversees the process, while management is responsible for the implementation and monitoring thereof.

The table below provides an overview of our stakeholder engagement activities and how they impacted the formulation and delivery of our strategy:



# value to our stakeholders



RATION PACKS R3 MILLION per annum



**EMPLOYEES' TAX R33 MILLION** 





R10 MILLION



### Material matters and focus areas

The top 10 risks that York faces, together with the probability of these events occurring and the impact thereof (high/medium and low), are listed below. The mitigating strategies, together with opportunities arising therefrom are listed alongside each risk.

Key risks	Probability	Impact	Mitigating strategies and opportunities arising
ELECTRICITY SUPPLY/LOAD SHEDDING  • Eskom short supply of electricity demand • Eskom not keeping to load shedding schedule and/or short notice of load shedding changes			Negotiated for certain site to be treated as load curtailment, not load shedding, customer     Power generators at remaining mills to keep servers operational     Biomass electricity plant prioritised
FIRE  Plantation fire – loss of juvenile timber  Fire at processing plants – physical loss and business interruption  Fire risks at warehouse operations  Skew age distribution in escarpment due to 2007 fires, resulting in increased pruning and thinning operations leading to higher fuel load			New fire trucks ordered (capacity and response improve) Fire risk management system improved Insurance cover including business interruption. Reduce fuel load prior to new planting Improved water refilling capacity at airstrips (quicker turnaround of aircraft and reduction in costs) Fire plans in place for all processing plants – audited and approved Implementing fire audits and plans for warehouse sites Enhanced resource coverage on aerial resources Focus on identification of high risk areas, fuel load reduction, early detection and rapid initial attack of fires Annual review by independent risk engineer
EXTERNAL LOG SUPPLY AND PRICES  • Limit in log supply has the effect of increase in log prices			Pursuing alternative log supply options     Sourcing veneer logs from York's Highveld plantations
HIGH/ESCALATING LABOUR COST  • Further increase to minimum wage proposed with continued pressure on wage rates  • Ripple impact of minimum wage increases on semiskilled and skilled rates  • No commensurate productivity/efficiency increases			In-sourcing of contract labour with increased efficiencies     Increased mechanisation     Sabie integrated site to be less labour intensive     Continuous consultation and communication with unions
PLYWOOD PROJECT  • Execution of plywood project in full swing whilst keeping existing plant operational			Dedicated project manager and project engineer Daily co-ordination between operations and project team to ensure continuous operations Continuous monitoring against project plan

						High Medium Low	

Key risks	Probability	Impact	Mitigating strategies and opportunities arising
PLYWOOD DEMAND  Increased imports by competitors  Competing alternative products			Expanding market penetration to Southern Africa     Development Community (SADC) and other African     countries     Investigating other export markets     Production shift to higher value, lower volume products
INDUSTRIAL ACTION  Direct impact largely addressed through agreements  Increased politicisation  New rival union impacting existing union behaviour and relationships  Indirect cost impact of industrial action on wages and input costs  Industrial action impacting the economy, reducing disposable income and spending in the building sector			York has functional relationship with unions and York staff Favourable outcomes in past wage negotiations led to fair settlements due to skilled and experienced negotiators Implemented training and direct communication for labou on ethics and basic business understanding (implications and damage of industrial action to the business and individual employees)
LOG MIX AND QUALITY  Impact of decisions made in-field on type of logs to be cut from each tree  Reduced tree size in the escarpment due to 2007 fires			Implemented improved log quality measurements/checks at roadside     Reports made available for managers to evaluate log production against targets and implement corrective action where and when needed     Planned merchandising log yard in order to optimise bucking operations
ANIMAL DAMAGE     Animal damage to trees resulting in poor growth or early mortality     Damage to trees results in lower recoveries when processed due to defects     Baboon population exploded far higher than area can support     Existing measures becoming less effective			New large cage concept implemented and now being expanded significantly Developing increased contractor capacities (shared by York and Komatiland Forest) Existing initiatives ongoing but expanded Research project underway, funded and driven by Forestr South Africa to investigate alternative sustainable solutions York is fully participating in study Agreement reached to "custom cut" reject sawlogs (anima damage), resulting in higher value extraction
FAILURE OF ERP SYSTEM  Capacity constraints emerging Limited resources available for support			Constant monitoring – system stable     Project implemented to specify replacement system

ABOUT YORK TIMBERS ABOUT YORK TIMBERS York Timbers integrated annual report 2015

**Board of Directors** 







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Independent





Non-executive director

Independent



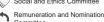
Chief Financial Officer

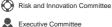
Independent











DR JIM MYERS (75) US citizen

Appointed: 26 February 2007

Qualifications: BA Mathematics (Texas A&M); MA Mathematical Physics (Arizona): PhD Industrial Engineering/Operations Research (Texas Tech)

Skills and experience: Jim has over 30 years' international business experience, specialising in the telecommunications industry. Jim's wide ranging experience includes the definition. development and implementation of management systems for the finance, engineering and production disciplines. He first came to prominence in Africa when he led the team that acquired MTN South Africa in the early 1990s on behalf of the giant American company before it later sold it. He was the principal driver behind the establishment and promotion of the consortium that acquired the SBC/Telekom Malaysia equity stake in Telkom SA. Jim's vast international dealmaking experience is both inspiring and valuable in the next phase of York's growth.

### PIETER VAN ZYL (52)

Chief Executive Officer Appointed: 8 April 2009

Qualifications: BSc Agric (Pretoria); BSc Agric Economics Hons (Pretoria); MBL (Unisa)

Skills and experience: Pieter has considerable experience in the manufacturing and the solid wood processing industry. He has a successful track record in delivering complex change and returning companies to profitability. His leadership in cost optimisation and knowledge of market dynamics distinguishes him in the industry. His vision and ability to inspire teams are significant in executing growth strategies. This, coupled with his skill in identifying strategic investment opportunities, provides a solid platform for York's success. Piet brings a wealth of timber and sawmilling industry knowledge and expertise to York. His diverse skills cover manufacturing, marketing, change management, investment banking, people and strategy development. Pieter's executive management style is completely hands-on, ensuring an accurately executed strategy.

### **DINGA MNCUBE (55)**

Independent non-executive director Appointed: 6 March 2014

Qualifications: BSc Forestry (Washington State); MSc Forestry Business (Idaho); MCom Business Management (Johannesburg)

Skills and experience: Dinga has 20 years' executive experience in forestry, timber processing, paper and pulp businesses. He is a leading figure in the forestry transformation process. Amongst other achievements, Dinga played a prominent part in the revival of Project Grow, an award-winning enterprise development programme at Sappi. He played a key role in driving Sappi's R814 million black economic empowerment transaction in 2010. Dinga is a vital figure in York's transformation efforts, backed up by his solid industry experience.

### PAUL BOTHA (52)

Non-executive director Appointed: 4 September 2007

Qualifications: BA LLB (Wits); HDip Company Law (Wits);

HDip Tax (RAU, now known as UJ)

Skills and experience: Paul has an outstanding record in executing many transactions involving private-equity transactions, stock exchange related transactions, mergers and acquisitions and entrepreneurial multi-disciplinary transactions. He also carried out a substantial amount of cross-border mergers and acquisition work across a number of industries throughout Africa. Paul is a committed and effective deal-maker and Board member with a reputation for getting things done to the highest standards of professionalism.

### **GAVIN TIPPER** (50)

Independent non-executive director

Appointed: 12 May 2010

Qualifications: BCom (Wits); BAcc (Wits); MBA (UCT)

Gavin is a chartered accountant and has been involved in the financial services industry for more than 21 years. He completed his articles with KPMG and went on to hold the position of Technical Partner. He holds directorships in a number of listed South African companies.

### SHAKEEL MEER (53)

Non-executive director Appointed: 4 September 2007

Qualifications: BSc Engineering (KwaZulu-Natal): Advanced Management Programme (Insead); Developing Strategy for Value Creation (London Business School); Senior Management Development Programme (Euromoney); MBL (Unisa)

Skills and experience: Shakeel is an executive at the Industrial Development Corporation (IDC) with overall responsibility for corporate strategy, management of listed equities, marketing and communications, assets and liabilities management, procurement, information technology and research as well as overall responsibility for managing off-balance sheet and ring-fenced funds. He has previous experience in investments in various sectors of the economy, including mechanical engineering - design and maintenance of systems. Shakeel's experience and familiarity with the workings and people in the South African financial markets arena are important to York.

### **PIETER VAN BUUREN** (45)

Chief Financial Officer Appointed: 1 October 2013

Qualifications: BCom Hons (RAU, now known as UJ); CMA; CA(SA)

Skills and experience: Pieter is qualified as a chartered accountant and chartered management accountant. He has more than 20 years' professional experience, with 14 years in senior financial management roles, mostly in the construction, manufacturing and related industries. He also has extensive regulatory compliance experience. Pieter has proven a real asset in the effective delivery of timeous and actionable management information.

### **MASERAME MOUYEME** (49)

Independent non-executive director

Appointed: 22 May 2015

Qualifications: BSocSci (UCT); MBA (Thames Valley

University, UK)

Skills and experience: Maserame is a senior business executive with widespread management and operations experience of 24 years in multi-disciplinary roles with some of the world's leading corporates. She has commercial, customer and consumer marketing experience gained from the FMCG and advertising industries. Maserame has led multi-functional teams across different geographies. She is passionate about community affairs and sustainability and has partnered with NGOs and governments across Africa to drive corporate initiatives. York welcomes Maserame on board, especially for her experience in dealing with marketing, people and social objectives.

### **THABO MOKGATLHA** (41)

Independent non-executive director

Appointed: 6 March 2014

Qualifications: BCom Accounting (North-West); BCompt/

CTA Honours (Unisa)

Skills and experience: Thabo has many years experience and expertise in serving in board and leadership positions in various sectors such as mining, telecommunications, finance and manufacturing. He also has extensive experience in mergers and acquisitions and is qualified as a chartered accountant. Thabo complements the Board's financial and deal-making skills.

### **DR AZAR JAMMINE** (66)

Independent non-executive director Appointed: 5 October 2010

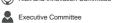
Qualifications: BSc Hons Mathematical Statistics (Wits); BA Hons Economics cum laude (Wits): MSc Economics (London School of Economics); PhD Economics (London Business School); Post-Doctoral Fellowship Centre for Business Strategy (London Business School)

Skills and experience: Azar started his career as an investment analyst and has more than 30 years' experience in economics. He specialises in macroeconomics and financial markets and is co-author of the books McGregor's Economic Alternatives, Trends Transforming South Africa and Mindset for the new generation in South Africa. York is fortunate to have Azar with his distinguished reputation guiding its approach to its economic challenges.

ABOUT YORK TIMBERS



Remuneration and Nomination Committee



ABOUT YORK TIMBERS

Pieter van der Merwe Africa White General Manager: Forestry

**People of York** 

### YORK BELIEVES THAT A COMPANY IS ONLY AS **GOOD AS ITS PEOPLE.**



York held a strategy session with its employees during November 2014. All quotes below were given by York's employees who participated in the strategy session.





"York is a timber company with the technical depth and know-how to solve your ideas innovatively by using renewable and sustainable product in construction and lifestyle products."



"York takes care of its employees and families... it feels like you are part of something great."







"Be responsible in all your actions and let the core values of York guide your behaviour."

Office Caretake



"The success of York depends on the contribution of every single employee in all levels through the organisation."



"York recognises people's potential and gives them the opportunity to grow and develop."



"York sees the light in others."









Cyril Motha







"York is a forwardthinking company led by exceptional leadership.



"The culture of the Company is such that you will reap the benefits of the effort you

have put into it."









ABOUT YORK TIMBERS ABOUT YORK TIMBERS

			Year-on-			
0.41	<b>a.</b>	2045	CAGR	year	2214	2010
Capitals	Strategic objectives	2015	%	%	2014	2013
	Value of biological asset	2.440	1	0	0.400	0.404
	(R'million)	2 140	1	2	2 103	2 101
	Yields (%)	12,14	(1)	(2)	12,34	12,44
	Total forestry area under control (hectares)	93 988	0	0	94 098	94 028
NATURAL	Conservancy areas (hectares)	28 938	0	0	28 938	28 938
	TUP – hectares	3 428	(2)	25	2 739	3 629
	Purchase of property, plant and					
	equipment (R'million)	203	58	207	66	52
	Average selling price (R/m³)	2 958	4	7	2 776	2 653
<b>W</b>	Market share					
MANUFACTURED	- Lumber	22,1	2	8	20,5	21,2
	– Plywood	56,0	0	0	56,0	55,3
	Electricity consumption (kWh)	49 062 334	(1)	(1)	49 651 483	51 047 771
	New products launched	36	125	17	30	3
	(R'million)  LogTrace accounting system	30	123	17	30	3
	(R'million)	3	7	13	2	2
	FSC certification	Yes			Yes	Yes
INTELLECTUAL	Diversified product mix –					
	Lumber:plywood (%)	81.6:18.4			80.7:19.3	80.7:19.3
	Staff turnover (%)	2,57	(23)	(61)	6,67	5,60
	People trained – number of people	1 835	(6)	7	1 719	2 218
	Safety – lost time injury	1 033	(0)	,	1719	2 2 10
	frequency rate (factor)	1,75	10	43	1,22	1,33
HUMAN	Clinics – number of people seen	·				
	at York clinics	15 568	(2)	(8)	16 985	16 416
	- primary health care	12 959	(3)	(9)	14 242	14 018
	<ul> <li>occupational health care</li> </ul>	2 609	3	(5)	2 743	2 398
	CSI spend in community					
	programmes (R'million)	9,5	9	0	9,5	7,3
	Training programmes spending (R'million)	3,5	7	(25)	4,7	2,8
2-2	(K IIIIIIOII)	3,3	1	(20)	4,1	۷,0
SOCIAL						
	Profitability – EBITDA/revenue					
	(%)	13	(8)	9	12	17
	Gearing (%)	19	6	19	16	16
	Total cost excluding external	77	0	(4)	77	70
FINANCIAL	log purchases (%)	77	2	(1)	77	73
· IIIAIIAE	Net cash from operating activities (R'million)	121	28	20	101	58
	Market capitalisation (R'million)	894	(9)	(23)	1 159	1 192





Industry lumber sales volume grew 3,0% year-on-year whereas YORK SALES VOLUME GREW 13,6% OVER THE SAME PERIOD

REPAID R29 MILLION IN CAPITAL and SERVICED R54 MILLION INTEREST on the Land Bank loan

TANGIBLE NET
ASSET VALUE
PER SHARE
R7,31



CONTINUED CAPITAL INVESTMENT OF R203 MILLION



Strategy implemented to **INCREASE INDEPENDENT CUSTOMERS** 

in all regions has shown to be very successful



8% ADDITIONAL external logs purchased totalling R384 MILLION

impacted EBITDA by R37,5 million





BIOLOGICAL ASSETS INCREASED IN VALUE BY R37 MILLION



PERFORMANCE AND FUTURE OUTLOOK PERFORMANCE AND FUTURE OUTLOOK

continue

			V				
	2015	CAGR	Year-on- year	2014	2013	2012	2011
	R'm	%	%	R'm	R'm	R'm	R'm
FINANCIAL							
PERFORMANCE							
Revenue	1 543	10	17	1 324	1 132	1 113	959
Revenue growth (%)	17	23	-	17	2	16	6
EBITDA	199	_	28	156	187	194	195
EBITDA margin (%)	13	(8)	8	12	17	17	20
Net profit	102	22	100	51	107	138	38
Net profit margin (%)	7	12	75	4	9	12	4
Headline earnings per							
share (cents)	29	13	107	14	33	42	16
FINANCIAL							
POSITION							
Total equity	2 420	4	4	2 327	2 277	2 170	2 026
Return on equity (%)	4	16	111	2	5	6	2
Total assets	4 071	4	9	3 720	3 658	3 504	3 316
Return on assets (%)	3	20	151	1	3	4	1
Total debt	743	4	32	563	597	558	614
Cash	192	13	75	110	159	145	103
Operational cost							
per annum	1 188	9	16	1 025	824	825	766

### FINANCIAL GOALS AND OUTCOMES

Some of York's financial goals and the outcomes during the year include:

Financial goal	Outcome
Maintain productive levels of working capital	Cash cycle days (length of time between buying and selling) improved from 42 to 31 days year-on-year, a strong indication of improved working capital management
Ensure sufficient capital is available to fund capital expansion projects	Exceeded all loan covenants; continued to service current-term loan agreement to agreed terms; entered into a new R280 million bridge and term loans to fund the plywood plant expansion project
Productive cash-generating assets	Closed the Golden Rhino sawmill due to loss-making contribution; continue to realise value from York sawlogs through a new custom cut arrangement
Reduce cost of debt and banking	Project initiated to refinance current debt; alternative transactional bankers engaged
Effective and real BBBEE structure	Initiated project to revisit and potentially amend BBBEE structure
Expense management and control	Reduced fixed costs on a real basis year-on-year by 3%; initiated Project Evolve to drive continued improvement of processes, people and productivity
Industry leading management information systems	Improved LogTrace log accounting system controls; initiated a project to upgrade management information systems
Improved internal control environment	Fraud schemes identified and eradicated before value could be destroyed
Staff development, retention and succession	Rewarding career paths mapped for high performing individuals with focused training to ensure skills contribution; new project initiated to review short, medium and long-term incentives

### **EARNINGS**

Strong growth in Group revenue of 17% year-onyear and 10% CAGR (2015 to 2011) is testimony to growth in MARKET SHARE DRIVEN BY FOCUSED SELLING EFFORTS, also coming through from the Wholesale division where external sales grew by 44%. Gross profit however reduced due to the mix of sales with a larger contribution coming from the wholesale business.

Operating profit improved year-on-year by 23% driven by improved processing plant performance (including successful turnaround efforts at loss making sawmills and warehouse operations), also supported BY A RECOVERY IN THE AVERAGE SELLING PRICES year-on-year. The operating margin of 9% however is testimony to the impact the lower margin wholesale business has on the overall Group, but is in line with prior year performance.

NET CASH FINANCE COST INCREASED year-onyear driven by the utilisation of surplus cash in the early part of the plywood expansion project. Cash flow from operations however increased by 21% year-on-year, and on the same basis as per 2011 base, reflecting continued STRONG CASH GENERATING ABILITY of the underlying operational businesses.

### **BALANCE SHEET**

**Total assets increased by 9%** year-on-year, and **4% CAGR** on the 2011 base driven predominantly by the **plywood plant expansion project** investment.

The **biological asset increased by 2%** year-onyear, and also per CAGR on the 2011 base indicating continued progression in the underlying asset value where **GROWTH STILL EXCEEDED HARVESTING** as well as external log procurement.

With the receipt of the plywood project term loan during the year, **interest bearing borrowings increased by 32%** year-on-year, and **3,9% on the CAGR** 2011 base. The productive use of leverage through the plywood expansion project investment is achieved via a term loan receipt from the Land Bank

Although **net working capital** only **increased 3%** year-on-year, this is off a high base of the comparable year ended on **HIGH LEVELS OF LUMBER INVENTORY**. Plywood inventory ended higher at June 2015 as market demand for especially imported plywood softened.

### **CASH FLOW**

Marked improvement in **cash generated from operations** demonstrated by the **INCREASE BY R31 MILLION** year-on-year.

Actual **cash tax payment** made of R7,2 million during the year is indicative of the utilisation of assessed tax losses and a **RETURN TO IMPROVED PROFITABILITY**. Purchase of property, plant and equipment includes the plywood expansion project investment as well as **FOCUSED OPPORTUNITIES** in **capital equipment** to increase profitability.

Acquisition of subsidiary relates to the purchase of Mbulwa Lodge (including **increased firefighting facilities** through the associated Maggsleigh Dam's portion) at a 50% share from Mondi.

The purchase of financial asset includes additional contribution to the newly established assets and vehicles insurance excess self-insurance fund of R3,75 million, as well as a R14 million contribution to the existing plantation fire risk self-insurance fund.

Sale of financial asset includes recovery from the self-insurance fund for firefighting costs, In De Diepte fire and for the Roodekop warehouse fire.

### CORPORATE ACTION

During the year York launched **PROJECT EVOLVE** in partnership with **Alexander Proudfoot** (a consultancy) focusing on efficiency, processes and productivity. Initial indications are that a successful implementation of project deliverables continue to **drive improved utilisation of people** and **equipment**.

YORK CONTINUES TO EVALUATE VARIOUS OPPORTUNITIES TO CONSOLIDATE THE INDUSTRY THAT WILL ENHANCE STAKEHOLDER RETURNS.

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### **TECHNOLOGY** IS CRUCIAL FOR **COMPETITIVE EDGE**

### **OPERATING ENVIRONMENT**

The general economic environment in which York will operate during the second half of 2015 and first half of 2016 will challenge management to continue unlocking growth opportunities.

### Slow economic growth in South Africa

Investment in the private sector, which accounts for nearly 66% of overall fixed capital formation, has sustained marginally positive growth of just below 2% year-on-year. Fortunately, government itself carried on investing in infrastructure, but as a proportion of overall capital formation, this is relatively small. To the extent that timber production is correlated with building plans passed, the outlook for the year ahead seems in line with GDP expectations. Year-on-year growth in residential building plans passed weakened year-on-year from 21,1% in 2014 to 15,6% (in Rand terms) and nonresidential building plans passed have risen year-on-year from 1,4% in 2014 to 21,2% (in Rand terms).

A key economic measurement applied by York when considering the environment in which it trades, is to consider the trend of manufacturing production of timber and compare it with the trends in building plans passed. There is a correlation between the timber production and building plans passed. The growth in timber production can be seen to be less volatile than that of building plans passed. This is geared towards a number of different industries whose business cycles vary.

The loss of confidence by property developers to keep investing in the face

Approximately 73% of timber sales from structural mills are destined or the local building industry, with the remainder going to remanufacturing. packaging and export.

of perceptions of deteriorating longerterm economic prospects has, however, brought down the growth rate of building plans passed in line with building plans completed. Year-on-year growth in residential building plans completed improved from 7,8% in 2014 to 23,2% (in Rand terms) and non-residential building plans completed deteriorated from 9,9% in 2014 to -7,3% (in Rand terms). Production (in volume) of timber could therefore see continued growth in lumber sales by around 2% to 5% during 2016.

### **Timber production**

Plantations in South Africa are a limited resource, facing the challenge of the continual change in land claim policies and this impacts the perception of the industry's sustainability. York has a warehousing community trust that will address any successful land claims. Fragmentation of sawmills and the industry supply chain kept margins under pressure. The pricing peg lies with the wholesaler and retail customers are taking advantage of the fragmentation, often eliminating the benefits of volume sales. South African sawmillers have thus far not been able to capitalise on international market opportunities given our weak currency. Consolidation represents an opportunity for capital-invested returns to enhance the industry, ultimately resulting in the same ideal situation of having a smaller number of strong, sustainable suppliers. Fewer suppliers of a reduced finite resource will assist in the balancing of market forces, which will result in improved price and quality. This will lead to a more equitable share of value from the forest to the customer.

The increased cost of capital equipment as a result of the continued weakening of the Rand remains a challenge. Future capital expansion will have to be balanced against the weakening of the Rand and achieving sufficient returns.

### Energy

Eskom, which supplies 95% of South Africa's electricity, has a net generating capacity of 41 995MW. As a result of the ageing infrastructure of its generating plants, Eskom has had to shed the generating capacity by between 1 000MW and 2 000MW per interval. Disruptions in the production process as a result of load shedding have not only impacted York's ability to meet market demand in 2015, but have also increased cost of production throughout the value chain. South Africa's generation capacity is expected to increase to 80 000MW by 2030 to meet the projected demand growth. The South African government has therefore defined strategies to increase power generation capacity through the Integrated Resource Plan in 2013 and has launched "The Green Agenda". This plan advocates the government's aspiration for a sustainable future by changing the country's electricity generation mix from high coal dominance (85%) to a moderate one (48%). That will include a high level of renewable energy and also nuclear power plants in order to reduce its carbon footprint. York is well positioned to participate in the Renewable Energy Independent Power Producer Procurement Programme.

### Labour

Plans to counter the energy and labour risks include the construction of a technologically advanced integrated

THE BIOMASS PLANT WILL FNABLE YORK TO DIVERSIFY ITS REVENUE CHANNEL UTILISE ALL OF ITS FIBRE AND MORF EFFECTIVELY MANAGE **INFLATION** 

site, including a biomass power plant that will supply renewable energy into the South African electricity grid. To this end. York will be able to enhance overall competitiveness of its solid wood processing facilities on a global scale.

### Social and other issues

York plays a leading role, working together with Sector Education Training Authority (SETA) in developing skills in local communities that counter levels of unemployment in the Moumalanga region.

Limited infrastructure maintenance and development in the local communities in which York operates, remains a challenge. York and local government continue to work together to address matters of combined interest.

### **APPRECIATION**

Timber processing

requires intensive

technology to

optimise sawlog

recovery and

throughput at the

lowest unit cost of

production.

Maserame's

abbreviated

curriculum vitae.

together with

those of the rest

of the Board

members.

can be found on

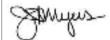
pages 28 and 29.

capital investment in

I wish to thank our outstanding Board of Directors for their continued dedication in the past year. We welcome Maserame Mouyeme as the newest member to the Board and look forward to working with her.

York has a vibrant management team. led by a strong Chief Executive Officer in Pieter van Zvl. capable of delivering on our strategy.

I thank them for their efforts in the last year and wish them every success in facing the challenges ahead.



Dr Jim Myers Chairman

28 September 2015



PERFORMANCE AND FUTURE OUTLOOK



# CEO's **REVIEW**

### **PERFORMANCE IN 2015**

York Timbers is a well-established organisation with a growth plan for optimisation, focusing on six income generating streams: forestry, lumber, plywood, wholesale, remanufacturing and now energy production.

We achieved an increase of 17% in turnover and 99% improvement in profit for the year ending 30 June 2015. Cash at year-end was R192 million, which is R81 million (74%) better than the prior year. As at 30 June 2015, York traded at a 63% discount compared to the tangible net asset value (TNAV), which had improved from 707 cents to 739 cents per share. York has repurchased 3,7 million of its issued shares at yearend. Given this large discount, York will continue its repurchase programme.

The volume of lumber sold by York increased by 13,6% yearon-year, with the lumber market growing year-on-year by 3%. A portion of additional volumes sold is attributable to imports and external purchases by the Wholesale division. The average selling price for lumber increased by 5% year-on-year. Plywood volume sold by York increased by 7% year-on-year and the average selling price increased by 14% year-on-year. Production at our processing plants increased by 3% from the previous year, in spite of the August 2014 industrial action by wage earners. Load shedding further reduced production by 1.34%.

The Forestry division EBITDA decreased year-on-year by 29%, in line with York's sustainable forestry management practices and outside procurement strategy. Industry log prices for solid wood processing continue to increase for larger diameter logs, at the same time the number of hectares managed for pine long saw log rotation continues to reduce. The York biological asset increased with fair value adjustments of R37 million. The net movement of additional volume due to growth, price increases and costs added R59 million, but was negatively impacted by the change in the discount rate to the value of R22 million.

The Forestry division division delivered 1 134 358m<sup>3</sup> of own and purchased volumes, 7,2% more than the previous year. York experienced a fire at its Taurus plantation that resulted in a higher temporary unplanted area of 3 428 hectares. Targeted

temporary unplanted area for the 2016 financial year is 2 238 hectares. York will continue to procure external raw material to conserve our own plantations to obtain a sustainable age class distribution in our plantations. In line with this strategy, the Forestry division purchased 8% more external logs than the previous year. External purchases represented 35% (previous year 35%) of total available processed volumes. These external purchases have a negative impact of R28,8 million on the Forestry division's EBITDA. The standing volume of trees increased by 4%, enhancing the longterm value of the biological asset.

The insourcing of various forestry activities has and will continue to deliver benefits to York. The pursuit of more cost-effective operational procedures will remain a priority. The investments made in the current and previous years to increase efficiencies and production flow are already evident in this year's results.

Improved supply chain functionality and traceability were key outcomes of the LogTrace system, resulting in more efficient log inventory control.

### **INVESTMENT IN FUTURE GROWTH**

We embarked on a R300 million upgrade of the plywood plant, which is the first step towards the expansion of the Sabie integrated site and enhancing York's EBITDA generating ability. This project will be completed in the last quarter of 2016. Plywood, apart from diversifying earnings, is an attractive income source with few local manufacturers, and is

sold in a different commodity cycle to the rest of York's products. The plywood upgrade will be commissioned during the last quarter of 2016 and its full EBITDA benefit is to be expected in 2017.

The project is funded by a R280 million term loan of seven years from Land Bank. The funding rate is similar to the existing term loan, interest is capitalised over the first 12 months and no capital repayments are required for the first 24 months of the project. This will allow sufficient time for completion of the capital investment before servicing of the loan commences.

In a cyclical industry it is of utmost importance to find ways to manage this cyclicality. York is committed to develop a more diversified earnings base.

As a result. York will participate in the Department of Energy's Renewable Energy Independent Power Producer Procurement Programme (REIPPPP) in the expedited window bid that closes on 11 November 2015. A bid for a twenty five megawatt electrical biomass power plant will be submitted. This project will strengthen York's EBITDA generating capability and extract increased value from available biomass in the Group. This presents a unique opportunity with a 20-year annuity income stream, backed by a government guarantee. This project will provide York with a viable solution for its by-products and substantially improve York's raw material optimisation capability. At the same time, York will be a contributor into the national power grid and provide stability to the electrical network in Mpumalanga.

### PROJECT EVOLVE

York embarked on Project Evolve to improve planning and scheduling, contractor engagement, management and supervisory effectiveness, problem solving as well as improve reaction times to variations in performance achieved by the implementation of management operating systems. Benefits of this project create a dynamic platform to build York's growth strategy. Attention to the quality of training, as a key component for change, was used to drive

THROUGH THE INNOVATIVE **APPLICATION OF TECHNOLOGY ENABLERS. IMPROVED INVENTORY CONTROL** OF LOGS FROM INFIFI D HARVESTING TO TRANSPORT TO LOG YARD **STOCK MANAGEMENT HAS** BFFN ACHIEVED.

> a continuous improvement philosophy that is embraced by the organisation.

### **VALUES**

We are fortunate

to have a strong

and dynamic

creating a vibrant

organisation.

York is an organisation that thrives on commitment, innovation, connectivity, integrity and responsibility. These values are driven by our passion for our country, business environment and colleagues. This year our staff were truly tested and for this reason have matured as an organisation that equipped us to embark on the next growth phase. Thank you for your commitment and lovalty towards York. The drive and determination of our team with its combined skillset will ensure the execution of York's growth strategy.

I thank our Chairman and the directors for their support and governance of the organisation.

Board of Directors that have guided and assisted us in

Pieter van Zvl Chief Executive Officer

28 September 2015

PERFORMANCE AND FUTURE OUTLOOK PERFORMANCE AND FUTURE OUTLOOK continued

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### **FUTURE OUTLOOK**

York's focus over the short to medium term will be on the following:

Capitals	Strategic objectives	Strategic initiatives (to be) undertaken
NATURAL	Protect and enhance the biological asset in order to extract optimal value on a sustainable basis Increase plantation landholdings in Southern Africa	Improvement on tree breeding Conduct research in association with universities and research centres Improved silviculture practices and regimes Pests and disease resistant species Weather fluctuation tolerant species Development of forestry health index
MANUFACTURED	Expand and utilise facilities optimally, both in function and in location	Execution of the plywood expansion project     Consolidation of sawmilling operations in the Escarpment     Expanding sawmilling operations in the Highveld     Diversify earnings base with the biomass power plant project     Investment in remanufacturing capabilities
INTELLECTUAL	Deliver the best products as efficiently as possible	Product development, including value-added wood products to increase product offering Focus on service levels with initiative, versatility and adaptive to market developments Improvements in controls in systems
HUMAN	Attract, develop and stimulate the right minds	Establishment of CEO forum – internal stakeholder engagement     York Action System with focus on key performance areas     Establishing Training Academy with main focus on technical skills     Growth of talent and succession plans     Leadership development     Development of organisational health index
SOCIAL	Mindful of the greater community affected by our operations	York Adventure Club, Sasol Rally, York Long Tom Marathon, York Enduro and various other adventure activities Community forums and projects. Upgrade of the Sabie Country Club facilities Healthcare, infrastructure and education
FINANCIAL	Deliver a sustainable return to shareholders	Improve total shareholder return     Continual growth of TNAV     Compounded growth in EBITDA     Optimal use of capital structures

### **BIOLOGICAL ASSET RECONCILIATION**

	2015 R'000	2014 R'000
Prior year value	2 103 092	2 100 870
Change in value	42 452	2 222
Purchased plantations	-	4 206
Growth	67 584	131 897
Revenue and price	152 217	53 659
Operating costs	(155 413)	(35 314)
Discount rate	(21 936)	(152 226)
Closing value	2 140 067	2 103 092

### INTRODUCTION

The area under commercial forestry in South Africa has declined by 249 695 hectares because of the exit strategy implemented by the Department of Agriculture, Forestry and Fisheries (DAFF), which resulted in the removal of state-owned plantations in ecologically sensitive and marginal forestry areas that are being returned to their natural state, as well as the removal of forest around designated streams and wetlands. Furthermore. a number of private growers have converted from forestry to other crops. All primary catchments in Mpumalanga are closed for new afforestation.

### Factors impacting tree growth

The success of commercial forestry is dependent on matching the correct commercial tree species with the growing conditions and other factors such as markets, logistics and infrastructure.

The main criteria for consideration when investigating a site's ability to support tree growth are climate and soils/lithology. Mean annual rainfall is one of the most limiting factors in South Africa and needs to be considered in conjunction with ambient air temperature and altitude when selecting a species for commercial production. Each specie has a particular optimum range of physiological activity for fast and continuous growth. Frost tolerance, therefore, is an important consideration to ensure tree survival post-planting at higher elevations. Certain plantation areas are prone to hail.

MOST PESTS HAVE BEEN

### SUCCESSFULLY MANAGED BIOLOGICALLY WHILE DISEASES ARE MANAGED THROUGH BREEDING PROGRAMMES.

19
MILLION TONS
SUSTAINABLE
annual cut from
plantations



MILLION

**TONNES** 

all species and is important, especially in areas that receive less rain and/or extended periods of drought.

Fires, if not controlled, can be a threat to plantation forestry, but over the years the forestry growers have developed a sophisticated network of electronic

Edaphic factors for consideration include

soil effective rooting depth, texture,

structure, drainage, fertility, stones and

lithology. Soil depth is a limiting factor for

with access to dedicated firefighting helicopters and fixed-wing aircraft, thus reducing the risk.

York has been experiencing baboon damage for a number of years, which

fire towers and central control centres

Silviculture systems and

negatively impacts on lumber recovery.

### Silviculture systems and regimes

Directly after planting, young seedlings are unaffected by other vegetation and grow as free standing trees. This growth, however, depends on the necessary weed control. As trees continue growing, they start competing with each other for space and other essential resources. Initially, this competition could be advantageous

PERFORMANCE AND FUTURE OUTLOOK

continued

as it could stimulate growth, but it does become negative when the resources are over-utilised. Tree spacing that is too tight will suppress diameter growth and lead to tall slender trees, whereas more open tree spacing will provide room for the trees to add girth. The above principle is used by forestry companies to optimise volume and log dimensions to suit their specific needs.

When trees are grown for bulk volume. as in the case of the pulp growers, the clearfell age would be planned to coincide with the switch over point from a positive to negative growth rate, whilst when trees are grown for saw timber, this switch over could indicate the optimal timing for the removal of some trees through a thinning. Forestry companies also investigate the intensity and number of thinnings in order to achieve the desired tree dimensions in the shortest possible time. Clearly the rate of growth afforded by the forest site impacts heavily on the time required to reach these optimal tree dimensions.

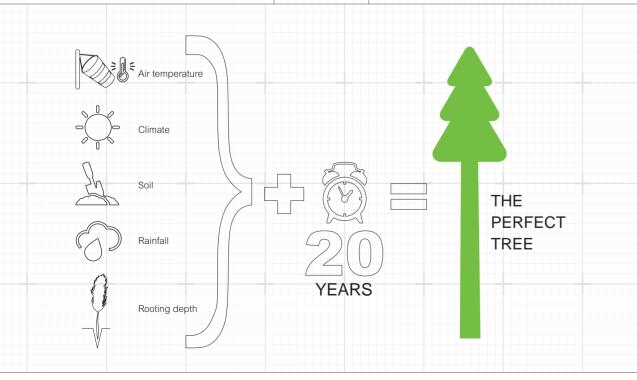
The growth potential of a site as well as the actual growth rate is referred to



as the site index (SI), referenced to a specific base age (York uses a base age of 10 years for Eucalyptus and 20 for Pinus species). The SI in York for pine is typically in the range 20 to 35 metres high at age 20 years. This classification is at the higher end of suitability for the growth of commercial plantations.

The optimised recipe for growing trees is site/specie matching and that determines the number of trees planted per hectare, the timing and intensity of thinnings and the optimal age for clearfelling the forest stand. This practice is referred to as a regime. If pruning is conducted, the timing and height of pruning would also form part of this regime.

Pruning is done primarily to avoid the formation of loose knots, which lead to holes and weaknesses in the lumber products, but is also performed to give easy access to a forest stand and to reduce the fire risk by raising the tree crown from the ground. Loose knots are formed when the bole of a tree increases in diameter around a dead branch with the newly deposited wood of the bole not fusing with the branch.



### Planning and management of typical compartment

The life cycle of a sawlog regime is 1,5 to 2 times longer than that for pulp in order to yield logs suitable for solid wood processing. This is in contrast to pulp growers that plant more trees per hectare over a shorter rotation period. In order to optimise value of logs for solid wood processing, longer growth periods are required to transform trees into higher value logs. Log diameter translates into higher value logs, in that the greater the diameter, the better potential solid wood processors have in extracting value.

# The importance of tree breeding in the forestry value chain

Tree breeding directly and indirectly impacts the forestry value, due to the heterogeneous characteristics of biological stocks and the diverse growing conditions to which plantation forests are subjected. These attributes can be directly related to the tree health, stand development, productive growth and wood quality characteristics. In addition, physical tree characteristics will indirectly impact operational productivity and costs.

### Nursery

Tree breeding has a direct impact on the survival, productivity and physical development of seedlings and cuttings produced in the nursery. Different pine species vary in their susceptibility to pests, disease and frost damage. Therefore the hybridisation of commercially planted pine species with more resistant variants will have a direct impact on the survival and quality of reproductive stocks. Hybrids produced from cuttings might be more resistant to pest and disease. However, the rooting network will be less developed than that of seedlings, warranting careful site specie matching and planning prior to establishment.

### Silviculture

Silviculture refers to the establishment and management of a plantation to ensure that biological stocks are healthy and producing high quality timber. This will include the establishment



method to ensure high seedling survival rates, the application of herbicides and pesticides to reduce seedling/cutting growth strain, pruning of branches to improve timber quality and the thinning of trees to remove inferior quality trees, manipulate tree form and promote higher growth rates.

Tree breeding promotes the production of trees with superior wood quality, growth and resistance to biotic risks (pest and diseases) and abiotic risks (frost, wind and fire). By selectively breeding and hybridising more resistant pine species, trees with superior wood quality can be established at previously growth limiting and high-risk sites, leading to improved growth rates of up to 30% (site species matching).

Low seedling mortality will also reduce establishment costs and therefore lead to higher productivity during establishment, as the re-establishment of seedlings/cuttings will be reduced. In addition, physical characteristics such as branch angle, frequency and size vary between pine species. By selectively breeding and hybridising trees with smaller branches, pruning productivity could also be improved.

Frequency and intensity of silviculture regimes will also be influenced by the breeding of trees with greater growth rates. Canopy closure will be reached earlier in the compartment's life cycle, reducing weeding frequency. Pruning



and thinning of trees are also dependent on tree size. Therefore, faster growing trees will reduce the time lapse before pruning and thinning is initiated.

### Harvesting

Harvesting productivity is a function of tree size. With increasing tree size, harvesting productivity increases and cost decreases. The breeding of faster growing trees will ensure that trees are larger at the time of felling and therefore will reduce harvesting costs.

When harvesting trees with a harvesting head, poor form will cause feed roller slippage due to irregular feed roller traction. De-limbing knives could also potentially cut into the log surfaces when trees with poor form are encountered.



TREE BREEDING CAN REDUCE RESIDUAL **DAMAGE** TO LOGS DURING MECHANICAL CUT TO LENGTH HARVESTING BY

**IMPROVING** TREE FORM

Wood quality characteristics vary throughout individual trees. Wood density increases from the central pith outwards and with tree height. Clear wood proportions decrease with tree height due to branches located in the canopy giving rise to live knots. Branch frequency, size and distributions also vary between different pine species (branch whorls versus distributed). When breeding trees, it is always important to keep the end product in mind, as product specifications vary according to different production lines and are often influenced by wood quality. Therefore, tree breeding has an impact on tree optimisation as it is closely related to product quality.

Mortality of mature trees due to biotic and abiotic risks will also lead to waste, as these entities will often not meet the desired quality specifications. In addition, these trees will still be harvested, as the compartment block will need to be clearfelled for reestablishment of seedlings after harvesting, leading to additional harvesting costs.

Tree breeding impacts tree growth, tree form and wood quality in relation to wood density, the amount of compression wood produced and knot characteristics. Log recovery and product quality are directly influenced by physical log properties such as log size, form and wood quality.

Larger base and middle section logs are often suited for more diverse production lines, which could potentially lead to greater recovery rates due to more homogeneous wood characteristics and higher levels of clear wood.

Log shape in relation to log taper and form will influence recovery as it will impact the available homogeneous cutting plane along the log length and the wood stability as log shape reflects the homogeneity of grain distributions (wood stability) throughout the tree. Wood modulus of elasticity (MOE) or wood stiffness also decreases with increasing log taper. Irregular grain distributions lead to irregular wood drying rates, therefore leading to cracking, twisting, warping, crook and sweep of structural timber during drying.

Tree growth rates, form and wood quality vary across pine species. Therefore pine species with superior wood quality and form will always receive highest priority in the breeding programme.

### **Tree improvement**

There are various tree improvement methods available, including selective breeding, hybridisation

and genetic modification. Currently only selective breeding and hybridisation are implemented at York. Genetic modification is excluded due to FSC

### Selective breeding

Tree breeding by artificial selection of a specific individual in a tree population to produce offspring, with the aim to develop specific phenotypic traits in relation to tree growth rates, form and wood quality, is referred to as selective breeding. Selective breeding is an interspecies breeding process and produces the largest quantities of reproductive stock in the York breeding programme.

### Hybridisation

York Timbers currently implements interspecific hybridisation between different pine species. Pine species with desired characteristics in relation to growth, tree form, wood quality, biotic and abiotic resistance are hybridised to improve tree growth, timber quality, biotic and abiotic resistance.

### Genetic modification

Genetic modification refers to the engineering of a tree's DNA to include genes into the tree's DNA which do not occur in its natural state. Genetic engineering has previously been implemented to improve:

- · Tree growth;
- Wood quality;
- · Disease resistance;
- Pest resistance:
- Drought and salt resistance; and
- · Conservation efforts of endangered species.

### Selective breeding

In 2011, York took over the Mondi pine breeding programme. Improvement of P. patula, P. elliottii and P. taeda stocks via selective breeding was included in the programme. However, York is continuously looking for new species to incorporate into the selective breeding programme. From the first introduced P. patula stock, growth performance was improved by up to 45%.

### **Hybridisation**

York is continuously producing new pine hybrids, with the aim to improve tree growth, wood quality, biotic and abiotic resistance. Hybrids produced are also planted and regulated in diverse growing conditions in the form of progeny trials. Hybrid pines outperform pure pine species by up to 30%



due to growth vigour and therefore hybrids are of utmost importance for the future of quantitative and qualitative mill timber stocks. The two most important hybrids identified were P .patula × P. tecunumanii and P. elliottii × P. caribaea hybrids. P. elliottii × P. caribaea outperforms P. patula × P. tecunumanii hybrids on warmer sites in terms of growth. However, the timber quality of P. elliottii × P. caribaea trees is inferior to that of P. patula × P. tecunumanii trees. P. patula × P. tecunumanii trees, on the other hand. produce high quality timber, which is comparable in quality to timber produced from P. patula, as P. tecunumanii trees also produce high quality timber. In addition. P. tecunumanii trees are more resistant to Fusarium circinatum, giving the P. patula × P. tecunumanii hybrid the added benefit of disease resistance. P. tecunumanii trees from low and high elevation ecotypes are currently used in the hybrid programme for more effective site species matching in relation to frost resistance.

### **VALUE ADDING FACTOR TO THE BIOLOGICAL ASSET: GENETIC BREEDING**

### **Breeding methods**

Before starting a breeding programme to improve a particular species, it is important to thoroughly study the species. An understanding of the variation within and between individuals, as well as the causes of variation, will aid in deciding which breeding methods will be successful. Furthermore, the success of breeding efforts to improve a particular trait depends on the heritability of that trait. Heritability can be defined as the "measure of the relative degree to

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**Biological assets** 

continued

which a character (or characteristic) is influenced by heredity as compared to the environment".

### Classical breeding

Classical breeding methods include mass selection, interspecific (between species) hybridisation and intraspecific (within species) hybridisation. York's *Pinus patula* breeding programme was started using mass selection. This method involves selecting outstanding individuals in native forests and then establishing first generation provenance trials. After eight years, selections can be made. Seed of these trees are then used to establish second generation progeny trials. The first generation selections can also be grafted into a seed orchard that will provide improved seed. This cycle of selection, testing and seed orchard establishment is repeated for each successive generation.

Good performing individuals within a species (intraspecific) can also be crossed through controlled pollination. This process is currently being used in our pure species programmes. New traits such as disease resistance or cold tolerance can be introduced by crossing two different species (interspecific hybridisation). York has an extensive hybrid programme, which is elaborated on below.

### New possibilities: modern breeding

With the development of molecular technologies such as genome sequencing, marker assisted selection and transgenic technologies, improvements can be made over a much shorter period of time. Once the genome has been sequenced, markers are developed that can identify certain genes that influence a particular trait. Individuals can then be selected based on their genetic make-up without having to wait to evaluate their performance in-field.

Through genetic modification, genes that improve yield and/or disease resistance can be taken from a different species and inserted into the species desired to be improved. This then produces a transgenic plant.

Through York's association with the Forest Molecular Group (FMG), we may have access to these technologies in the future.

### VALUATION PRINCIPLES Valuation methods

International Financial Reporting Standards (IFRS) require a biological asset to be measured in accordance with International Accounting Standard (IAS) 41 Agriculture, and valued according to IFRS 13 Fair Value Measurement. A valuation model is used

to determine the value of the biological asset. A discounted cash flow model is used based on the expected revenue and costs to sell the plantation forests. These values are then discounted into today's value using an appropriate discount rate.

Annually the assumptions included in the model are reconsidered for their appropriateness and application, given current and anticipated market conditions. Price assumptions, such as expected price movements and cost inflation over the 25-year valuation period, need careful scrutiny as a small percentage change in the assumptions could have a big impact. A discounted cash flow model most accurately results in fair value, as required by accounting standards. It is a widely accepted approach and provides consistent information about the true value of the plantation. York's Board approves the assumptions included in the model.

Biological assets are measured at fair value less costs to sell. IAS 41 defines fair value as the amount for which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's length transaction. In measuring the fair value of biological assets, IAS 41 prescribes a hierarchy of methods with increasing levels of subjectivity.

Most preferable is the most recent market transaction price of the asset (mark-to-market). Secondly, prices of similar assets or sector benchmarks should be used. Thirdly, if market prices are not available, the standard prescribes the use of a discounted cash flow model (mark-to-model). The hierarchy is set out below. York has chosen the mark-to-model method on a discounted cash flow model as the best way of estimating the fair value of the forestry asset.

Valuation approaches and techniques allowed are:

### Market approach

If there is no active market, then an entity could measure fair value, using techniques such as prices of recent market transactions, market prices for similar assets or section benchmarks. In using such prices, an entity makes adjustments to reflect differences in characteristics and/or stages of growth of the assets. These methods would be appropriate if there are recent transactions or if markets exist for similar assets.

The **market approach** values the asset at current market prices. The difficulty with this approach is that recent transactions and details are generally not public information. The ages of trees, regime planted, enumeration data, species and distance to market are all variables that impact value.

### Income approach

The fair value of a biological asset is likely to include not only the asset's current harvest value, but also a value for potential additional future biological transformation that a market participant would include in the valuation. This requires a number of factors to be considered, such as:

- Risks associated with the asset e.g. weather and disease;
- · Estimated yields; and
- Estimated costs of bringing the asset to its intended condition.

These uncertainties related to future cash flows are reflected in either the discount rate and/or the estimate of expected cash flows.

In estimating future selling prices, the assumptions used should be consistent with those of market participants. These will depend on the characteristics of the biological assets, including their stage of development, the markets in which they are sold and the sources of possible pricing information. The assumptions that market participants would make about future selling prices will depend on a number of factors including: the expected time to sell the asset; events or conditions between measurement date and the expected date of sale; and effects of seasonal changes in pricing.

The **income approach** represents the cash flow generation ability of the asset against an appropriate rate. This method represents the discounted future value of trees at maturity age.

The net standing value principle previously applied took a snapshot of the current volume and log class distribution of the trees at current roadside values. The advantage of this method is that the value is based on current information and assumptions are limited. The disadvantage of this approach is that the growth potential is not presented to the user of the financial statements. The value will also change from year to year as the asset matures.

A method to measure fair value requires a certain level of stability and consistency over time to create measurements that are comparable from year to year. To this end, long-term trends are carefully considered when applying assumptions.

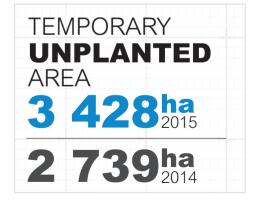
### Cost as an approximation of fair value

IAS 41 acknowledges that in some cases cost may approximate fair value, and provides the following examples:

- Little biological transformation has taken place since initial recognition; or
- The impact of biological transformation is not material – e.g. the initial growth in a 25-year pine plantation production cycle.

Cost as an approximation of fair value cannot be applied to value trees after the first three years due to the extent of biological transformation that occurs. The cost accrual basis used in the industry to determine value is not a recognised valuation method for accounting purposes. This method aims to attach value based on costs and the return on those costs expected by investors over the life of the asset.

There are various factors that can affect biological assets. As previously mentioned, genetic breeding is a value-added factor to the biological asset as it improves the yield of our plantations. Temporary unplanted area (TUP) is also a factor influencing the biological asset. Additional gum clearfelling during the past year and fires contributed to the yearend TUP being higher than planned and ended at 3 428 hectares. The increased TUP had a negative impact on the biological asset valuation. We plan to achieve the target TUP of 1 720 hectares by the end of 2016. These areas will all be planted according to the right site species matching that will contribute to improve the biological asset.



PERFORMANCE AND FUTURE OUTLOOK PERFORMANCE AND FUTURE OUTLOOK



# **HYBRIDS**

### **ARE THE FUTURE**

**2 737 HECTARES PLANTED** DURING THE PAST YEAR. OF WHICH **1 016 HECTARES WAS PLANTED** WITH PINE HYBRIDS THAT COULD YIFI D 20% TO 30% MORE GROWTH THAN PURE PINE SPECIES PLANTED.

### 2015 HIGHLIGHTS

- · The in-field surveys to update the forestry site data base have been completed on the Highveld. The initial surveys started in 2012 and all of York's landholdings have now been completed. Refinement of the project is ongoing and the current focus is to complete detailed frost maps for all the landholdings.
- Increase in aum pulp prices continued. which led to higher gum pulp sales from our Highveld plantations, with a positive impact on EBITDA.
- Substantial improvement on control measures of animals and insects causing damage to trees was implemented over the past year. We are continuously monitoring damage and implementing mitigating measures.
- Improved planning and efficiencies in weed control of especially young plantings continued, which led to better stocking and growth and reduced weed infestation of the plantations.
- · The water loading facilities of all airstrips in the Escarpment have been upgraded. This will lead to reduction



### **WATER** loading facilities at

air strip = improved firefighting ability



- in time to refill aircraft with water during firefighting operations, with improved turnaround time and better utilisation of aircraft.
- The Forestry business unit successfully passed its annual FSC audit during November 2015. This was the third audit in a second five-year cycle at York and is very encouraging as we look towards the future, striving for continuous improvement and efficiency in all our operations.
- · Procured sufficient volume of timber from external timber growers to fill the shortfall that could not be supplied from own landholdings, and therefore met the demand of the York processing plants. Will continue to secure timber standing from private growers and in negotiations for multiyear contracts.
- Over the financial period, had a 0.5% stock gain of timber logs at roadside or on depot due to improved control measures through the LogTrace system that was developed in-house.
- As part of the modernisation project York procured equipment for road maintenance and construction as well as a forwarder to short haul pulp logs to depots.
- · Completed a detailed soil survey of the Goedgeloof plantations that was outstanding.
- · Filled some vacancies with postgraduate students from the University of Stellenbosch. Their specific skills will be enhancing the research and modernisation initiatives in the Forestry division.

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**Forestry division** 

continued

### **CHALLENGES IN 2015**

- Drier than normal conditions were experienced over the past year. The actual 12-month moving average rainfall was significantly down on the long-term average and was at 65% for the Escarpment and 80% for the Highveld. These dry conditions have hampered our fuel reduction programme and had an impact on our planting programme.
- Incidences of theft of especially diesel, chainsaws and batteries/hydraulic pipes of equipment continue to show a rising trend in all the forestry areas. York is participating in the Mpumalanga timber theft forum, where land owners, the SAPS and security companies are working together to reduce incidences of theft in the timber industry. York has also secured the services of a security company with mobile units and foot patrols deployed in the plantations to reduce impacts of theft and illegal trespassing.
- The Forestry department had five lost time injuries during the past year and a constant focus will remain to ensure all hazards are identified and mitigated and all staff apply the concept of SAFETY FIRST.
- Fires remain one of the main threats to plantations. Although all the necessary fire precautionary measures were taken, York had 61 fires over the reporting period. Total area burnt was 2 072 hectares, of which 1 406 hectares was planted with trees. Of these, two mayor fires contributed most to the area burnt.
- Highveld fire on 28 August 2014. When the fire ignited (cause unknown) at approximately 13h13 the wind was gusting at 70km/h; and over the following day increased to gusts of 90km/h. Aircraft was grounded due to the strong winds. The fire spread very rapidly under low fuel load conditions due to the strong winds and low RH. Total area burnt on York land was 359ha, of which 309ha is

# OVER SUPPLY OF PINE PULP LET TO INCREASED PINE PULP STOCK LEVELS.



- commercial area, including 104ha temporary unplanted. Area lost was 205ha.
- The second fire occurred on 7 October 2014 at the Taurus plantation. The cause of the fire was due to lightning. Difficult terrain and adverse weather conditions made fire suppression activities very difficult. Total commercial area burnt was 1 392ha. Area lost was approximately 1 000ha, of which 80% is salvageable.
- · York will continue to improve fire prevention measures that include identifying hazards and risks, fuel load management, constructing and burning of fire breaks, awareness campaigns, planning, training and other fire suppression activities. Special emphasis will be on developing improved fuel load indexes for total York landholdings to determine hazards and plan appropriate mitigating measures. Firefighting capacity will also be increased with the order of five 3 000 litre strike units that will be delivered by the end of August 2015.
- Low pine pulp prices and an oversupply of pine pulp in the market continued and led to increased pine pulp stock levels. York is exploring alternative markets for the pine pulp that includes use as shavings, sell to small sawmillers for mainly wet off saw and pallet market and to particle board and thermal energy producers.

### KEY PROJECT DEVELOPMENTS

The following key project developments are planned over the next two years:

### Develop methodology via a pilot study of topographic position and shape analysis for site-based yield estimations

Together with effective precipitation and equivalent soil depth, slope shape and steepness and topographic position have been shown in transect studies to strongly influence tree yield on the Escarpment; similar findings also

apply on the Highveld. By meaningfully mapping these topographic effects, yield potential can be more accurately determined and used to optimally manage natural resources for delineating uniform production compartments, comparing actual yields with the site's potential to identify under-performing stands and plan research programmes.

### Define and construct estimates per PLU for quarterly maximum and minimum temperature limits for the pine genotypes currently used by York

The critical temperature factors for optimum tree growth, i.e. the summer maximum (especially for disease, but also tree form) and winter minimum (ability of the tree to grow under cool conditions). Elevation and mean annual temperature (MAT) are relatively coarse measures or approximations of defining the optimum temperature conditions for pines, due to the effects of aspect, exposure to hot valleys and/or plains/Lowveld, and cold air drainage. It is therefore more accurate to define limits for the mean maximum temperature over the three warmest summer months and coolest winter months. These limits also allow for ease of extrapolation of genotype suitability to sites outside of current York holdings.

### Site-specific forest management

In order to optimise yields, it is necessary not only to plant the best genotypes available, but also to allow these to perform optimally by employing the optimal establishment silviculture and working circle for the specific site conditions. Where these are correctly selected and applied, optimum yields and timber quality will result, with the best returns on compartment expenditure.

### **MODERNISATION PROJECT**

All York's forestry employees are paid above the minimum wage and the implementation of this legislation impacted York's contractors rather than York's own employees. All York's forestry contractors are compliant with the minimum wage requirements.

As wages are expected to increase substantially in the future, it is an imperative that new innovative solutions be introduced to manage and absorb future wage increases.

In order to mitigate all of the above, York has embarked on a modernisation project during the past financial year. The project included a review of all current systems and the introduction of new technology in the forestry operations.

The objective of this project is to improve the quality of operations and to be more cost-effective. It will also position York better for future cost escalations. Some of the outcomes of the project will be implemented during the new financial year.



### FIRST MODERNISATION PROJECT

With the new planting tool applied in the Highveld, one person plants 940 seedlings, one hectare per day.

### THE PINE HYBRID PROGRAMME

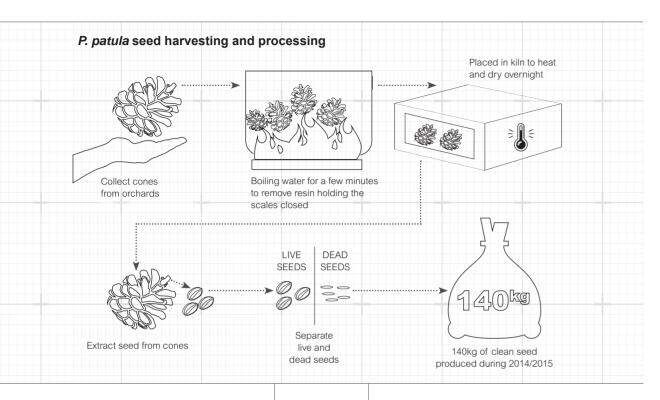
### It all starts with a seed...

York has seed orchards of various species. Currently, our most productive seed orchards are those of our main pure species, Pinus patula. Seed from these orchards supplies Klipkraal nursery with improved seed for our plantations and the remainder is used to generate income from sales to other companies. With the development of our pine hybrid programme, the need was identified to establish seed orchards of alternative pine species as well. These seed orchards will serve mainly as sources of pollen, which will be used in our controlled pollination programme for the production of hybrid seed. Alternative species were chosen based on the improvement in growth and/or disease tolerance that they could potentially bring into the programme. Alternative species for which new seed orchards have been established over the last few years include Pinus tecunumanii. P. maximinoi. P. oocarpa, P. leiophylla, P. herrerrae, P. elliottii and P. taeda. In addition, new seed orchards of our top performing P. patula families are also being established.

Our annual *P. patula* seed harvest commences in July and lasts for about three months. Cones are collected from the various orchards and taken to the seed extraction site. Here the cones are placed

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### **Forestry division**



DNA

FINGERPRINTING

A method

to determine the

integrity of the

various clones in

the orchards.

in boiling water for a few minutes to remove the resin holding the scales closed. They are then placed in a kiln to heat and dry the cones overnight, after which they open and release the seed. Once the seed is separated from the cones, they are manually de-winged and put into a blower to separate live and empty seeds. During the 2014/15 season about 140 kilograms of clean seed was produced.

### Orchard establishment

In order to establish a clonal seed orchard. copies (or clones) need to be made of the selections that have been made in trials. This is done through grafting. Scion is collected from selections and grafted onto rootstock using the cleft grafting method. After a few months, the grafts are ready to be established into a new clonal seed orchard. When compared to a seedling seed orchard, the grafting process significantly reduces the time it takes to produce seed. This is due to the fact that the scion material that is grafted onto the rootstock is genetically older and therefore the genes for flower and pollen development are already switched on. In the last year, numerous grafts have been made of P. patula and alternative species for new orchard establishment.

### Quality control: DNA fingerprinting

The establishment of new seed orchards requires a significant investment of time and costs, and plays a vital role in the future of our breeding programme. It is therefore necessary to ensure that the identity of the material included in these orchards is correct. Human error may cause mistakes during scion collection, grafting and labelling, and therefore a method is needed to verify the identity of individual trees. This can be done through DNA fingerprinting.

Needles are collected from trees in our trials and orchards and sent to the FMG (Forest Molecular Group) laboratory at the University of Pretoria. DNA is extracted from the needles and an allelic profile (or fingerprint) is generated for each sample. This is then compared to a reference sample which is known to be correct. Should the sample profile not match the reference profile, it is either kept as a new genotype or it may match an alternative genotype that has been previously fingerprinted.

To date, 400 samples have been submitted for fingerprinting. Eventually the Group aims to submit samples for all the clones in our orchards in order to ensure the integrity of our breeding programme. With the development of the fingerprinting programme it is now also possible to use fingerprinting to distinguish between pure species and hybrid seedlings of some species. This will be used to ensure the integrity of our hybrid programme in future.

### **Testing in trials**

Trials form an integral part of any breeding programme as the results offer valuable information regarding the performance of species and families being tested for various traits. Through past breeding efforts, we now have third generation selections in our Pinus patula orchards. Genetic gains trials have shown that this has resulted in just more than 50% gains in volume over unimproved material.

Every year we continue to establish new trials, testing P. patula families as well as families of alternative species that will contribute to our hybrid programme. The access we have to the majority of alternative species seed is mainly as a result of our collaboration with Camcore and the ICFR. In the last year, three P. patula trials have been established (one Camcore and two York) as well as one Camcore P. maximinoi trial.

Considerable effort has also gone into a site-species matching project over the last couple of years. The results will also help us to improve trial design, layout and data analysis.

### Hybrids are the future

Hybrid seed can be produced artificially through the process of controlled pollination. This involves isolating the female flower on the mother tree with a paper bag just before it emerges from the bud. Approximately two weeks later, pollen from a different species is applied through the bag by a hypodermic needle. This process is





million spent in forestry research.



**HYBRID** COMBINATIONS

Several hybrid trials have been planted over the last five years, testing in excess of 40 hybrid combinations.



repeated two or three times over two weeks and after another three weeks the bags are removed. The female flowers develop into cones and, after two years from pollination, the cones are ready to be harvested. Numerous controlled crosses are made every year, producing seed that will bring greater diversity to the breeding programme.

Due to the fact that two different species are being crossed, there are certain reproductive barriers that cause hybrid cones to yield less seed than a pure species would. It is therefore necessary to convert hybrid seedlings into hedges, from which many cuttings can be set. Cuttings are then used to establish field trials, from which selections are made after eight years. A total period

PERFORMANCE AND FUTURE OUTLOOK

continue

of 12 years is needed to identify promising new hybrids and after another five years, these hybrids can be deployed commercially.

A cross between two different species often results in hybrid vigour. In other words the hybrid offspring will outperform both parents on the same site. Further gains can be made by identifying specific families within the hybrid that perform better than the mean of the hybrid as a whole. In addition, hybridising sub-temperate and tropical species (such as *P. patula* and *P. oocarpa*) will allow us to extend the planting range of each, making them adapt more readily to climate change.

York has made a significant number of family crosses within those hybrid species that are being commercially deployed or show good potential. In addition, through our association with outside parties such as Camcore and the CSIR, we have also been able to access various hybrids to test and include in our breeding programme. York is also participating in a collaborative project, where approximately 300 *P. patula x P. tecunumanii* families are being produced by Sappi using Camcore material. We have made good progress in grafting the trees used to make these crosses, which will put us in a position to reproduce these families on our own land without delay.

### Fighting *Fusarium*

Fusarium circinatum is a fungus that causes significant mortality in Pinus patula seedlings in the nursery and in the field after establishment. There are, however, families that show tolerance to this pathogen. As P. patula remains an important species for further breeding, it is important that we are able to identify these families. One method that can be used to do this is through the artificial screening of seedlings.

In March and November every year, we send seedlings of various *P. patula* families to the screening facility at the University of Pretoria. Here seedlings are artificially inoculated with *Fusarium* spores and then assessed for tolerance after a few weeks. The fungus causes the development of a lesion on the stem of the seedling, and the length of this lesion can be measured. Seedlings of susceptible families will develop long lesions and those of tolerant families will only develop short lesions or no lesions at all.

From results to date, we have been able to identify 21 tolerant families. Cuttings of these families will be used to establish a *Fusarium* tolerant orchard at the Klipkraal nursery. This orchard will be used in the controlled pollination programme.



# 546 400m<sup>3</sup> VOLUME OF THE CHRYSLER BUILDING



### Reducing frost risk

York is currently testing various hybrid combinations in our trials. As many of these hybrids have at least one tropical parent, some of them may be susceptible to frost. Many of York's sites experience frost during winter and it is therefore important to develop quick and accurate methods to determine which specific hybrids, and families within hybrids, are able to tolerate sub-zero temperatures.

At present, we are using three methods to determine the frost tolerance of seedlings and cuttings of nine hybrids and nine pure species important to York. From this study, we will be able to determine which method gives the most reliable results. We will also be able to rank the different species and hybrids in terms of frost tolerance and use this to improve site species matching.

Ultimately York aims to determine the relative frost tolerance, not only of families of its tropical species like *P. tecunumanii* and *P. oocarpa*, but of each of its pine hybrid families before they are commercially deployed. This will ensure that the risk of crop failure due to a severe frost is reduced.

### New technical studies

Currently, the Technical Research division is exploring various new possibilities which could potentially benefit future forestry operations. A brief description of each is given below:

**Biochar trials:** Biochar is a charcoal-like substance formed by pyrolysis. Studies

have found that Biochar amendments to soil could potentially improve tree growth. Three trials have been established to test four different Biochar application rates in relation to seedling growth and survival.

Organic fertilizer trials (Micromix): Micromix is an organic fertilizer derived from sewage plants. Three seedling trials have been established to test two different Micromix application methods at two different rates of application. Seedling survival and growth will be monitored.

Long-term fire retardants: Long-term retardants stay active after the evaporation of water is completed, making it a very versatile fire combatant. Long-term fire retardants are extremely robust and could withstand up to 20 litres of rain per square metre. This makes early application possible in strategically significant fire risk areas.

Forest health software application: A prototype software application is being developed to monitor forest health. When data is entered, GPS co-ordinates are logged. The data is currently compatible with Windows Excel and Google Maps. This software could potentially be used in the future to do silviculture evaluations, harvest tracking, incident reports and risk management.

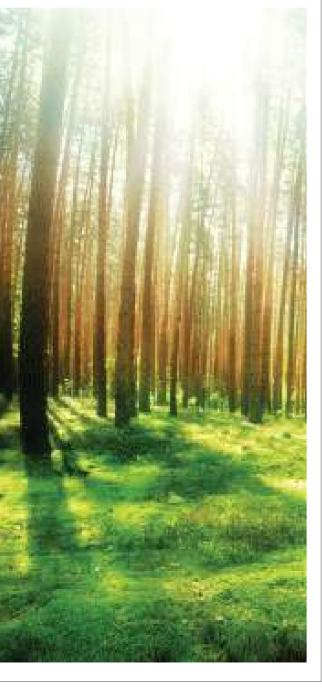
**Silviculture mechanisation:** We are currently evaluating the mechanisation of two key silviculture operations: seedling establishment and tree pruning. The possibility of using mechanical planters in future forestry operations is currently



PERFORMANCE AND FUTURE OUTLOOK

being explored. York will also be testing different pruning technologies available in the market.

**Forest health:** We are currently investigating the use of remote sensing technologies to evaluate forest health in relation to net difference vegetation indices (NDVI). NDVI are obtained from spectral infrared



and near infrared images of the forest canopy, obtained from sensors mounted on planes and/or unmanned aerial vehicles (UAVs). NDVI reflects the forest canopy health as healthy leaves or needles have a higher rate of photosynthesis and therefore plant chlorophyll will absorb greater amounts of infrared. The visual imagery can therefore also potentially detect prescribed anomalies in relation to weed distributions, pest and disease spread or any other spread of forest stresses.

### LOGISTICS

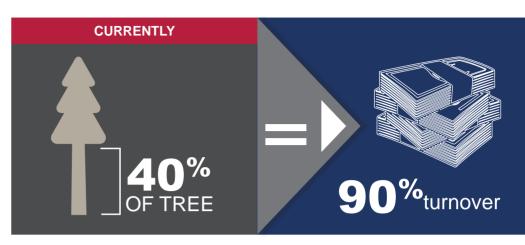
The main factors affecting timber logistic costs are the distance that the logs are located from the mill, tree form and log moisture content. By improving tree resistance to biotic and abiotic risks, trees with favourable wood characteristics for specific production lines could be established at marginal growth sites located closer to mills. By reducing the amount of trees produced with poor form and high taper, better stacking on truck loads will be achieved, allowing for higher payloads. Log drying rate is also a function of tree size and wood density and plays an important part in timber logistics as log moisture content could contribute to more than 50% of a log's total weight. Log drying rates will increase with decreasing log size and at lower wood densities.

LogTrace is a system developed in-house by York and involves harvesting, stocktake and inbound transport activities by:

- Measuring in-field product (dimensions, volume, type);
- Indicating geographical locations (distinguishable compartments):
- Capturing information electronically (mobile handheld devices scanning barcoded tags);
- Having traceability throughout the inbound process (stock age, teams, suppliers); and
- Showing transport movement (from sourcing sites to delivery destinations).

LogTrace also provides information analysis of scanning loads:

- Daily reports are sent out, indicating current stock on hand at roadside locations according to LogTrace information. This detailed report serves as an indicator of current volume available infield and assists the transport contractor as well as processing facilities to plan forecast intake accordingly.
- Transport Planning Model is in progress (demanddriven approach to allocate the correct daily rateable delivery to specific processing plant by product mix request).



### BIOMASS ELECTRICITY GENERATION

York is preparing an 28MW (gross) and 25MW (net) power generation facility bid response for the Expedited Bid Window. The facility will be located within the existing Sabie processing facility and fuel will be sourced from York's plantations and processing facilities. The facility will be connected to the national grid via a 132kV line situated next to the Sabie processing facility. The technology utilised will be three steam boilers with a full condensing turbine. This technology is suitable for the REIPPPP or the Cogen IPP. However, the maximum rate within the REIPPPP for biomass power generation is greater than the Cogen IPP. For this reason, the REIPPPP is the preferred programme.

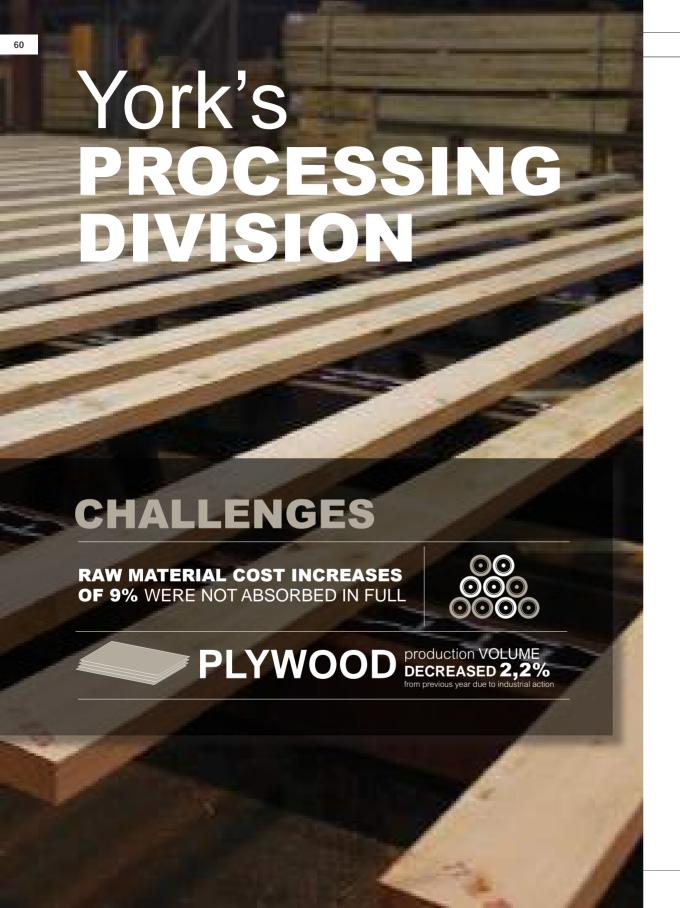
York operates plantations, sawmills and a plywood plant. All these processes generate woody biomass, from which a limited amount of value is generated. By installing a biomass power plant, these residues can be used to generate value in terms of the full value chain. Apart from this, it will also generate the following benefits:

- · Reduce fire fuel load in the forests; and
- Promote denser planting regimes, which will have the following benefits:
  - Increase volume harvested over the lifetime of a compartment;
  - Increase the wood density, which will increase the structural properties of the wood and thus the value of the final products; and
  - Earlier canopy closure, which will reduce the amount of weeds growing under the trees and thus reduce the maintenance costs of a compartment.



The biomass power plant is a strategic project in terms of York's growth plan, which includes the optimal utilisation of the available biomass fibre.

It is also aligned with York's processing strategy, which entails the development of a new integrated sawmill. The new sawmill will generate a large amount of residue and the biomass electricity plant will ensure optimal value is extracted from all available fibre once the plant is operational.



## **HIGHLIGHTS**

York's Processing division continues to work on the business vision of finding optimal processing solutions for trees.







### **LUMBER SELLING** PRICES HAVE **RECOVERED**

FROM PREVIOUS YEAR BY 5%



**LUMBER** improvement on previous PRODUCT MIX year's product mix

### **CAPITAL EXPENDITURE**

ON PLYWOOD to increase drying capacity, delivering 25%

capacity improvement

AT JESSIEVALE SAWMILL. installing finger joint capacity and increasing drving capacity

### RESOURCE OPTIMISATION

Opportunities still exist to optimise the fibre resource even further. This will increase the value generated from the trees to the benefit of York, its shareholders and stakeholders. Once final environmental approval for the Sabie integrated site is obtained, this opportunity will realise its full potential.

Tree lengths and logs will then be processed in the integrated site log merchandising yard. It is here that advanced scanning and cutting technology will be used to unlock full tree value. York mills will benefit even further by receiving log products which are correctly matched for the production of specific product ranges. A decision was also taken in the reporting period to recommission the previously mothballed Golden Rhino sawmill as an alternate customer for York's Forestry division. This means that log products with a limited market will be processed at the mill, and timber products will be delivered

### **EXTRACTING THE VALUE**

FROM TREES IN-FIELD ENSURES THAT THE BEST **LOG PRODUCTS ARE** PRODUCED FOR EACH OF THE PROCESSING PLANTS. to York remanufacturing at Roodekop, in line with aetting the most out of its trees.

### From timber to user

With a vision to provide timber solutions to end-users, York's Processing division offers a basket of timber products that service its customers' requirements.

- York products can be further treated with timber preservatives for external applications.
- · Structural or load-bearing products carry the necessary certification marks.
- · Stringent quality and process controls are in place and audited by external certification bodies to ensure products comply consistently.
- · York is now making use of available mechanical grading techniques to ensure structural timber meets required strength targets. This technology is a combination of X-ray and acoustic that determines board strength.
- · Products are branded to ensure traceability, particularly for the end-user.

Footprint on the environment: York mills sell residue streams, generated from the manufacturing process and not utilised in the mill process, to board mills, pulp mills and the composting and agricultural sectors.

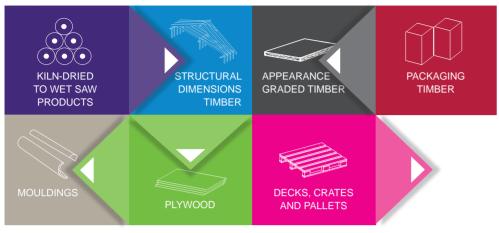
Historically, these residue streams were discarded, potentially resulting in environmental challenges.

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**Processing division** 62

### **PRODUCTS**

York's product basket:



YORK CONTINUES TO TAKE A PROACTIVE **APPROACH** WITH REGARD TO THE ENVIRONMENT. FRADICATING THE NEFD FOR DUMP SITES

### COST OPTIMISING

The Processing division continues the drive towards being a cost optimiser in the timber processing industry. Various efficiency programmes are in place and delivering results that allow mills to produce fair financial results in turbulent market conditions. Management's energy is constantly channelled into a cost control environment, and current leadership has ensured that mill constraints are understood and cost is balanced or allocated accordingly. In the period under review, mills have benefited from an extensive mill vehicle replacement programme, reducing running costs to operations.

In addition to sustained levels of demand for external logs, the ability to pre-plan when demand from the processing plants will be required enables York to negotiate fairly on prices it will be willing to pay for external logs. Packaged deals, where additional volume is made available on the open market, further assist York in negotiating prices which defer the impact of increasing log inflation. Innovative deals to lower the net purchase acquisition costs through bulk purchasing over a nine-month period,

which ran over the previous and current financial years, is evidence of management's commitment to utilise its position as a major purchaser of external logs in the open market.

A factor applied by York in determining the optimal volume which can be generated from logs, is called a log paying capability factor. Log paying capability reflects the ability of a sawmill to pay for the raw material (logs) based on the average value of the lumber produced. It is calculated as: Average Selling Price (ASP) for lumber/Delivered log price adjusted for recovery. If the mill recovery, for example, is 49,5% and the delivered log cost is R678/m3, then the raw material cost would be R678/49,5% = R1 370/m<sup>3</sup>. If the average ASP per m<sup>3</sup> is R2 382, then the log paying capability factor would be R2 382/ R1 370 = 1.74 times.

Processing plants in York are evaluated by reference to the ability of the technology employed to pay for the logs utilised in the process. The current financial year has seen a slight improvement at most processing sites, but in York's view optimal value will only be demonstrated once the Sabie integrated site, which will include a large sawmill and automated log merchandising yard, is in place.

### **VOLUME RECOVERY**

Volume recovery is one of the most widely used efficiency measures in primary log processing worldwide. It is simply the volume percentage of a log that is turned into final product volume (excluding by-products like chips and sawdust). In South Africa the final product is considered to be the seasoned

timber which has not been planed. Volume recovery is stated as follows:

Volume recovery = (Product volume/Log volume) x 100

Another variable having a large effect on the profitability of a primary log processor, is the log volume throughput. The main reason is that fixed costs stay fixed with an increase in log volume throughput. The income will thus increase due to higher product outputs, but one of the cost components (fixed costs) will remain constant. Variable costs (mainly log costs) will increase proportionately with volume throughput.

### **VALUE MARGIN**

Value margin represents the value added through the production process. The calculation is based on the log costs as described above, together with the other variable costs per m<sup>3</sup>. Log costs for example of R1 370 plus R48/m3 would result in variable costs of R1 418/m<sup>3</sup>. The value margin is then R2 382 – R1 418 = R964/m<sup>3</sup>. The value margin is used to determine the break-even volume required to pay for fixed costs.

### **VALUE RECOVERY**

A measure that is not as commonly used as volume recovery, but is a more comprehensive efficiency measure, is value recovery. It reflects the value created by every m³ of logs processed. Value recovery is measured in R/m³ and is calculated as follows:

Value recovery = (Product value/Log volume) = (Product volume x Product price)/Log volume.

The big difference between value recovery and volume recovery is that value recovery also takes product pricing into account. If the value of your products can be increased by better marketing practices or increasing the product grade yields, this will be captured in the value recovery measure but not by the volume recovery measure. An increase in volume recovery will also be reflected by an increase in value recovery.

Optimised recovery at sawmills is also dependent on achieving the correct sawing pattern from the available log presented for recovery. The South African sawmilling industry returns below par international recoveries due to the utilisation of older installed technology and consequently has lower recovery rates from available raw material. This results in an excess sawdust and chips volume from production processes, and due to local market dynamics where sales prices are offered far below the inherent economic value which remains in the chips (especially when benchmarked



internationally), presents an urgent need to look for alternative ways to optimise fibre value. This necessitates the evaluation of alternative products and technologies where chips can be used, and results in value-added products or processes such as application in generating thermal and electrical energy from use in a cogeneration plant, to producing wood engineered products such as MDF (medium-density fibreboard), chipboard or OSB (oriented strand board) manufacturing.

### SABIE INTEGRATED SITE

The purpose of the Sabie integrated site is to extract maximum value from the available fibre in the Escarpment area while increasing productivity. This will be achieved by integrating the following processing facilities into one:

The first phase entails the upgrade of the plywood facility. This project will be completed during the first guarter of 2016. The project includes, among other, the following technology upgrades:

- Log conditioning chamber;
- · Chipper;
- Veneer dryer;
- · Automatic veneer grading and stacking;
- Layup line;
- Plywood press;
- · Panel sizer;
- · Glue kitchen: and
- · Steam boilers.

A variety of local and international suppliers are involved in the project and the project is managed by York's Engineering division. The project aims to achieve the following:

- Increase throughput;
- · Improve process flow within the facility;
- Improve veneer quality through improved log conditioning;

PERFORMANCE AND FUTURE OUTLOOK PERFORMANCE AND FUTURE OUTLOOK

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continue



- Reduce production costs;
- Diversify product mix;
- Improve grading through automation;
- Reduce environmental impact through for example:
  - Thermal energy recovery;
  - Natural lighting;
  - LED lighting.
  - Variable speed control of motors;
  - Electrostatic precipitators at boilers; and
  - Sound attenuation on boiler fans; and
- Improve ergonomics.

The next phase of the Sabie integrated site will be a biomass power plant. The biomass power plant

will utilise wood residues from the Sabie sawmill, the plywood facility and local forests and convert it into electrical energy. Electricity generation from biomass is considered as renewable energy since it is part of the natural carbon cycle (it is considered to be carbon neutral). The purpose of this facility will be to:

- Diversify York's earnings base;
- Supply renewable electricity into the national grid;
- Increase the value recovered from the available wood resource:
- Reduce the amount of wood residues left in-field after harvesting, which will reduce the risk of fires; and
- Enable York to optimise its planting and silviculture regimes for a diverse product offering.

The biomass power plant will utilise some of the latest technology offerings in the wood biomass boiler environment. It will include, among others, the following:

- · Walking floor for fuel handling;
- Hydraulic push bar for fuel control;
- Moving step grate furnace;
- Multi-unit vaporiser optimised for biomass burning;
- Full condensing turbine and generator;
- Vacuum condenser: and
- Multi-cyclone and electrostatic precipitators.

Once the biomass power plant has been completed, the following phases of the Sabie integrated site development will follow.

During 2014 the first phase of the Sabie integrated site development commenced, being the plywood expansion project. The Sabie integrated site will include the following projects:



### INTEGRATION

By integrating the various processing facilities, fibre from the plantations will be utilised to produce the optimal final product, while the energy efficiency of the plant will be significantly improved. Since various functions will be integrated, the production costs for the various processing facilities will also be reduced considerably.

The integration of the various processes will also, from a systems-thinking point of view, be optimised in such a way that the whole system is geared to ensure optimal value creation.

This process will start in the log merchandising yard, where logs will be optimised, taking into consideration the potential value that can be created at the various processing facilities.

### ENVIRONMENTAL IMPACT

The Sabie integrated site is developed in such a manner as to ensure and improve environmental sustainability.

The various potential impacts on the environment were determined during the environmental impact assessment (EIA) and, with the assistance of environmental specialists, an environmental management plan (EMP) was developed. Implementation of this plan will ensure sustainability. During this process the community was also involved and their concerns were considered during the development of the EMP.

Apart from the management plan, new technologies, for example air emission abatement equipment, will be installed, which will comply with minimum national standards and, in many cases, minimum international standards.

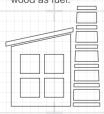
### **CREDIBLE COMPLIANCE**

- York's structural and load-bearing products comply with required South African National Standards and are regulated by South African Technical Auditing Services.
- Its mills carry FSC accreditation for chain of custody and are regulated by SGS, an accreditation body.
- The mills also carry a NOSA star-grading to measure safety and health performance at an operational level. This supports York's commitment towards its employees and stakeholders in making sure that the work environment is safe.



### Biomass power plant

Electrical energy will be generated using wood as fuel.



# 0000

### Log merchandising yard

Full tree stems will be transported to the facility where it will be measured and bucked into the optimal log dimensions.

### Sawmill

A new sawmill will be constructed and the latest sawmilling technology will be installed.





### New infrastructure

New infrastructure for example roads, substations, offices, workshops etc. will be constructed.

PERFORMANCE AND FUTURE OUTLOOK

THE INTEGRATION WILL SUBSEQUENTLY NOT ONLY MAXIMISE THE VALUE EXTRACTION FROM THE AVAILABLE FIBRE, BUT ALSO INCREASE ENERGY EFFICIENCY AND **COST COMPETITIVENESS.** 

### CHANGING PROCESSING **TECHNOLOGY AND PRODUCT DEVELOPMENT**

The Processing division has continued to respond to a range of changing conditions involving environmental, economic and market concerns, and changes in technology. X-ray scanning and acoustic strength determining technology is being applied in the production of structural timber. Mills have further benefited from new boiler installations as well as new kiln-drying technology. Increased capacity was achieved through improvements made in technology.

The industry has made significant advances in the past

### YORK'S MILLS CARRY VIL **FSC ACCREDITATION**

few years in developing more environmentally friendly processing technologies, achieving higher recovery rates, improving product quality and diversifying the use of raw materials. The industry is adjusting to changes in the supply of wood size, species and quality. Changes in the supply, characteristics and sources of raw materials, and in the processed products themselves, have created new markets and resulted in new marketing strategies.

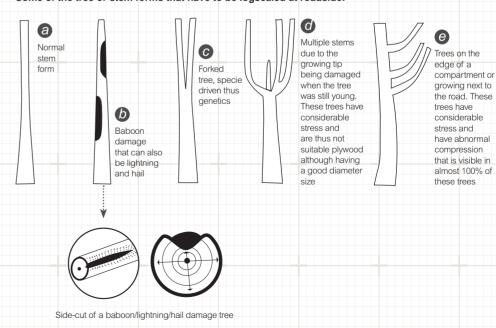
### There are a number of combinations with utilisable and product lengths when logscaling a tree length. External and inherent log quality are also factors that need to be considered when logscaling. Pulp . Pulp • Hewsaw ... Pulp • Hewsaw • Hewsaw . Sawlogs ... Sawlogs ... Hewsaw • Plywood .... 1st thinning 2nd thinning Clearfell

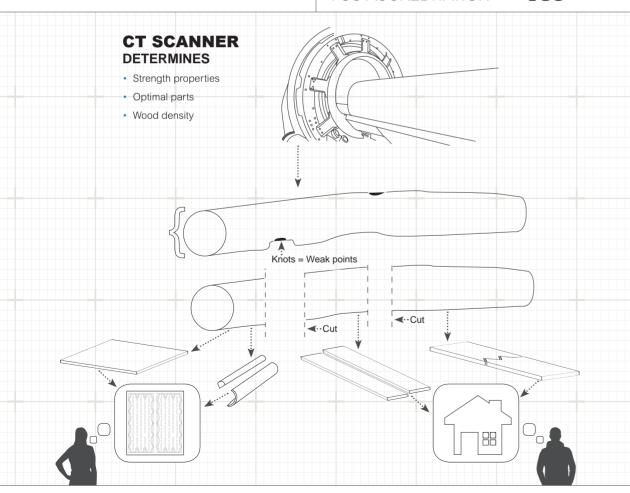
WHAT HAPPENS TO THE TREES THAT ARE REMOVED

The forester needs to determine which portion of the log to cut. These logs are logscaled in-field to determine the optimal use of the logs for them to be processed at the sawmills.

DURING THE FIRST AND SECOND THINNING?

### Some of the tree or stem forms that have to be logscaled at roadside:





PERFORMANCE AND FUTURE OUTLOOK

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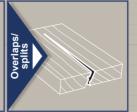
### Plywood grading

### **Mechanical grading properties**









Blue stain

Sap stain producing a bluish discolouration

### **Tight knot**

Measured across the width of the face

### Delamination

Occurs where there is no bond between laminates in panels usually identifiable by lack of fibre breakage

### Splits/overlaps

Split is a separation in the fibre along the grain. Overlap is caused by a piece of veneer leaving an indentation on the face of the veneer









### Resin streaks

Resin infiltration

32 mm

### Blister

Caused by moisture/ pressure build-up inside the panels that forces the layers apart (fibre pull will be visible)

### Open defects/ wane

Defect where the glue line is exposed or where bark is visible

### **Flatness**

Measured with cupping toward the ground on a flat surface

Appearance grades	Struc
A & B	C+/C
Primary uses being panelling and furniture (face grade)	Most brick
Appearance grade thicknesses	Struc
6 mm	18 m
9 mm	21 m
12 mm	25 m
16 mm	28 m
18 mm	32 m
25 mm	
28 mm	

### ctural grades

commonly used in shuttering applications, pallets and flooring

### ctural thicknesses

nm (on request)

nm (on request)

nm (on request)





### **MECHANICAL GRADING** PROPERTIES AND CERTIFICATION

Commercial strength grading of timber is performed by visual grading or machine strength grading and, in this regard, York complies with the requirements contained in SANS 1783:2009 part 1, SANS 1783:2012 parts 2 and 4 and SANS 10096:2012. In the case of plywood, material is graded on the same principles in accordance with SANS 929 requirements and, in the case of CE-marked material, EN 13986, EN 636 and EN 314-1.

Visual strength grading only takes into account the macroscopic character of wood, i.e. the number and location of knots, wane and dimensional distortions. Knots are, however, poor predictors of strength and lead to more conservative predictions of the actual mechanical strength properties of the timber and, in most instances, visual grading underestimates the actual strength of the timber. Machine strength grading is used at Sabie sawmill for optimised grade sawing to facilitate finger-jointing. During the past two years, the viability of utilising machine strength grading instead of visual grading was investigated to further improve the quality of our timber.

The grading methodology on the 38mm x 114mm boards was adjusted throughout the production process at Sabie sawmill to increase the production of S5 grade boards. This was accomplished by measuring the concomitant board properties with the Microtec Goldeneye Scanner. To predict the board strength, the scanner accurately measures the Modulus of Elasticity (MOE), density, knot properties and the grain angle through a combination of acoustic methods, X-ray scanning and laser scanning. Various scanner parameters have been adjusted consistent with the required standards and confirmed by frequent sample tests to measure the MOE and Modulus of Rupture (MOR).

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At the beginning of June 2015, the grading rules were adjusted to exclusively utilise machine grading at Sabie sawmill and visual grading was restricted to grade only for manufacturing defects such as dimensional discrepancies and defective fingerjoints. SATAS has been auditing this process from the beginning to uphold the product quality. The grading methodology will be further adjusted to accommodate the other timber dimensions and similar grading rules will be implemented at the other York sawmills to further improve the timber quality and yield.

PERFORMANCE AND FUTURE OUTLOOK PERFORMANCE AND FUTURE OUTLOOK **Application of graded material** 

## STRUCTURAL LUMBER AND PLYWOOD

GROSS MARGINS WERE
MAINTAINED THROUGH STRONG
GROWTH IN THE HIGH MARGIN
REMANUFACTURING SECTION
AND COST CONTROL.

### **BACKGROUND**

The Wholesale division consists of three business units:

- Roodekop in Germiston: wholesale with a remanufacturing facility:
- Pretoria West: wholesale only; and
- Epping in Cape Town: wholesale with a treating facility that does CCA & VACSOL treating.

### PRODUCTS AND SERVICES

Wholesale products include the following:

- Structural lumber, which consists of brandering, battens and S5P lumber:
- Plywood, which consists of shutter ply, appearance grade ply and resin film ply;
- Other board products including Masonite, softboard, particle board and medium-density fibreboard;
- · Laminated shelving;
- Utility grade timber for utility use;
- Clear, furniture, industrial and crating grade lumber for furniture manufacturing; and
- Scaffolding, sole plates and dunnage bearers.

The above lumber and plywood trading stock is sourced mainly from York's sawmills, but is also supplemented from other sawmills. The other products not manufactured by York's sawmills are sourced from local and international suppliers.

Remanufactured products are manufactured from both pine and hardwoods and include the following:

· Exterior mouldings e.g. decking and fascia;



- Interior mouldings e.g. flooring, skirting, cornice and ceiling:
- Carpentry mouldings e.g. half rounds, quarter rounds, cover strips and cleats;
- DIY mouldings: an extensive range of products planed all-round (PAR);
- Construction mouldings in different dimension corner fillets;
- Component mouldings like floating shelves, corner shelves and furniture components; and
- Pallets, decks and crates as well as a diverse range of components:
  - Pallets: two and four-way entry pallets and bale boards;
  - Decks: solid and slatted decks for the use of racking and shelving; and
  - Crates: solid timber and plywood crates.

All moulding products are graded to the York in-house specification and specialised products are manufactured to customer specification.

The treating facility at Epping offers H2 – H4 CCA and H2 VACSOL treating (building legislation requires all timber used in structural applications along the coast to be treated).

Wholesale division



### **PERFORMANCE IN 2015**

- The division's turnaround continued and contributed to the EBITDA profit line for the first
- · This was achieved on the back of significant growth in turnover (44%) and gross profit (43%).
- In early 2015, a fire destroyed part of the Roodekop warehouse. Apart from the stock losses (mainly plywood), business interruption was limited as customers were serviced from the Pretoria warehouse. The division's results include an insurance excess payment of R5,25 million.

### **FUTURE OUTLOOK**

The main focus now is to bring the EBITDA margin in line with industry norms.

Margins will be increased through the following:

- Higher margin products through the optimisation of the remanufacturing facility in Roodekop:
  - The remanufacturing plant in Roodekop is geared to manufacture the whole range of moulding products. These are products like ceiling, flooring and other specialised mouldings that generally sell at higher margins than traditional structural lumber:
  - It is also geared to manufacture a whole range of specialised products specific to each customer's need. These products include pallets, decks, boxes and crates as well as a diverse range of components; significant growth opportunities have been identified and are being pursued;
- Increased presence in the higher margin market segments in which York currently operates:
  - The Wholesale division sells into a wide range of market segments from the smaller walk-in customer to construction companies and the large corporate retailers; and
  - Margins vary significantly and the focus is to increase the Wholesale division's exposure to those higher margin segments: and
- Focused procurement strategy;
  - The margin is determined by both selling price and cost – therefore the purchase price of raw material is as crucial as the selling price.

# **UTILISING PREDICTIVE ANALYTICS**



THE FORESTRY BUSINESS IS BECOMING MORE **RELIANT** ON INFORMATION TECHNOLOGY.

All businesses are becoming more reliant on information technology and the forestry industry is not excluded from this trend. Information technology is used in the forestry industry throughout the value chain - from genetic research into best biological material, site-specie matching, planning and monitoring the forestry operations (silviculture, harvesting, firefighting, road maintenance, etc) to the delivery and processing of the logs and finally into market analysis and predictions.

An important part of the IT strategy is to provide a framework that will deliver information to decision makers to optimise variables in real time. Substantial improvement has been achieved in this area and this is still an ongoing focus. York is now investigating the most appropriate technology to mine this information utilising predictive analytics in order to add more value to the organisation.

### INTEGRATING INFORMATION

After evaluating our system needs, York established that, in order to implement a fully integrated information management system, it has to standardise its processes throughout the organisation and in the process implement best-of-breed practices. For this reason, Alexander Proudfoot was commissioned to assist York in this process. The Management Operating Systems (MOS) as output from the Alexander Proudfoot project will be used in aiding the creation of the Information Management System (IMS) requirements analysis documents. This, together with previous work done on "as-is" processes, will be reviewed to determine where the gaps are to create a Business Blueprint across the entire organisation.

A finalised Blueprint will be used in the RFP (tendering) process and will support software matching as well as implementation decisions.

### **ENHANCED COMMUNICATION**

In the information age, communication is the backbone on which all information management rests. York has set itself a goal to establish a 100MBps backbone between its various sites and to have a 1GBps local area network within each site. In order to accomplish this in the rural areas in which we operate, York is evaluating new wireless communication technology and equipment. The inter-site network will be based on wireless communication due to the problems frequently experienced with land-based telephone infrastructure such as cable theft.

### **GOING FORWARD**

York's in-house developed supply chain system has been in operation for the past year and further enhancements are being made, such as the automated scheduling of inbound loads. This system allows York to monitor and manage all inbound logistics (delivering logs to the mill) and stock in-field in real-time, reducing truck standing times and enabling better road utilisation.

With York moving in the direction of mechanised harvesting operations in certain areas, the state of the art equipment which will be used will integrate with the forestry management and supply chain system in near real-time, further enhancing the ability of the foresters to plan and monitor the in-field operations.

Foresters require up-to-date information on the state of the plantations, such as stem count, growth rate and damage due to animals or natural elements. Drone technology can provide this information in a manner that was previously very expensive. It can be another tool in the foresters' arsenal in firefighting operations and naturally York is investigating this technology.

PERFORMANCE AND FUTURE OUTLOOK