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## Transportation of Biomass:

### Truck Configurations

*In the South African Context*





## Vision

Timber24 will be the most respected complete forestry solutions provider in Southern Africa

## Critical Success Factors

### People

Proud, Smart, Passionate

### Service

Consistent excellence

### Operations/Systems

Effective and efficient operating practices executed with flexibility and accountability

### Financial Planning

The provision of accurate and real time accounting and financial information

### Fleet Management

To maximize uptime at the right cost

### SHREQ (*Safety, Health, Risk, Environment, Quality*)

A total and uncompromising commitment to the social, environmental and safety aspects of the business



OPERATIONS















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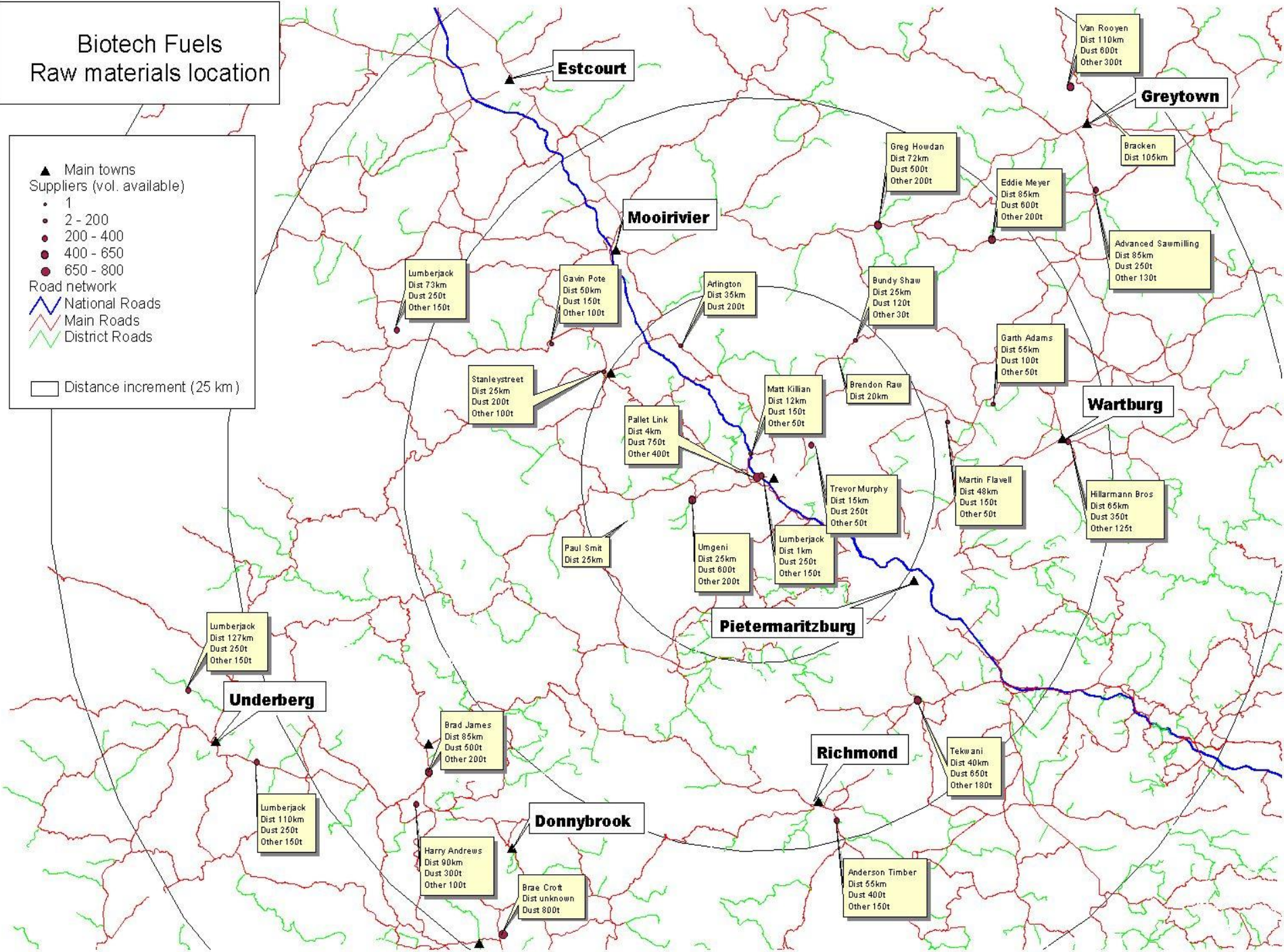


# Biotech Fuels Raw materials location

- ▲ Main towns  
Suppliers (vol. available)
- 1
  - 2 - 200
  - 200 - 400
  - 400 - 650
  - 650 - 800

Road network  
 National Roads  
 Main Roads  
 District Roads

 Distance increment (25 km)





## Challenges

- 3 Biomass Products
  - Slat waste
  - Chips
  - Sawdust
- Cost of Transport dependant on the Ash, Moisture and Lead
- Timing (Operating Hours and Weather)
- Configuration Allowances
- Supply and Cost of Raw Material
- Multiple Leads and Accessibility







### Logistical Solutions:

To achieve the objectives, Timber24 operate the following;

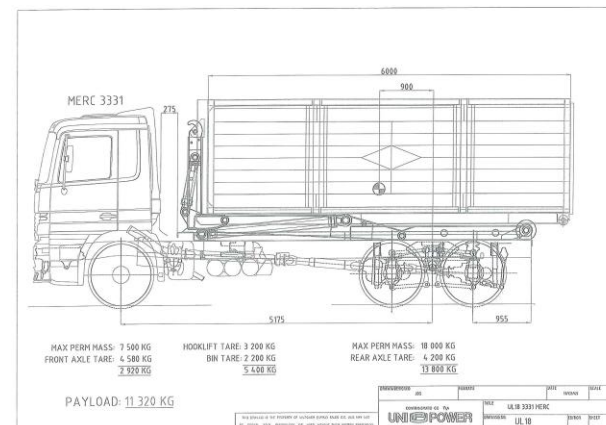
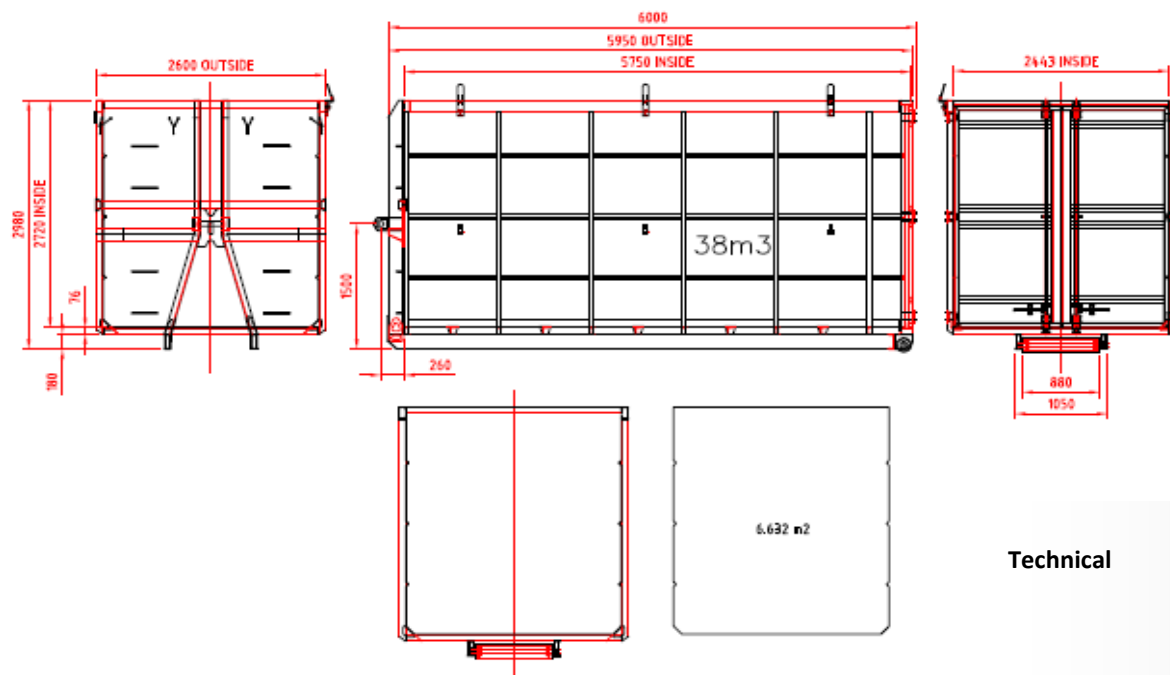
- 4 truck draw-bar combinations working on an Unipower hook-lift principle.
- Converted drawbar timber trailers pulled by Actros 3344 freight carriers
- Together with these trucks, Timber24 have 48 tarped bins (40 cubic meter).
- Designed for lowest bulk density product (slats)
- Legal GVM of 56.5 tons = 28.5 ton payload





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## Technical

- Tare Weight – 2 Tons
- Hook lift – 2.3 Tons
- 38m<sup>3</sup> bin
- 3 bin payload = 28.5 Tons (GVM = 56.5 Tons)
- Combination length = 22m







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### Learning Experience

- Height of the configuration (Bin Design)
- Tarps for finished product
- Tare weights
- Tracking bins
- Raw material and end product transported by same configuration
- Constant availability of raw material
  - Sawmill time constraints
  - Weather
  - Accessibility
- Collecting loaded bins (Payload Management)







### Optimising Efficiencies

- Biomass product ratio = 1 slats : 2 sawdust
- Slats transported by round-log trucks
- On-board weighing systems to maximise payloads
- Relationships with suppliers
- Logistical planning (weather, route & configuration)





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**The future  
Inbound**

- Smaller, specialised bins per raw material product
- Biomass bailing and bundling
- On site chipper

**Outbound**

- Side tippers / Walking floor trailers for finished product transport



Biomass transportation and delivery, 2007





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[www.deere.com/en\\_US](http://www.deere.com/en_US)



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[www.ponsse.com](http://www.ponsse.com)







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[www.banditchippers.com](http://www.banditchippers.com)







## References

*Biomass Transportation and delivery. Fact sheet 4.5.* 2007. Edited by Sustainable Forestry for Bioenergy and Bio-based Products, 143-146.

Energy Wood Harvester, 2010.

Available :

[http://www.deere.com/en\\_US/cfd/forestry/deere\\_forestry/media/flash/photogallery/energy\\_wood\\_harvestor/1490d/index.html](http://www.deere.com/en_US/cfd/forestry/deere_forestry/media/flash/photogallery/energy_wood_harvestor/1490d/index.html) (accessed November 2010)

Ponsse forwarder, 2010.

Available:

[http://www.ponsse.com/gallery/view\\_photo.php?set\\_albumName=vla&id=PONSSE\\_Elk\\_VLA\\_2](http://www.ponsse.com/gallery/view_photo.php?set_albumName=vla&id=PONSSE_Elk_VLA_2).  
(accessed November 2010)

Bandit chippers, the beast, 2010.

Available

[http://www.banditchippers.com/index.php?option=com\\_models&task=view&itemId=15&linelId=1&modelId=27](http://www.banditchippers.com/index.php?option=com_models&task=view&itemId=15&linelId=1&modelId=27).

(accessed November 2010)





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