Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

NEW ZEALAND'S NUYARN MONIQUE BOWERS

MDes Exegesis Textile Design 197.800 08147752 Word Count: 8246 Massey University New Zealand 2015

New Zealand's Nuyarn

Monique Bowers

MDes Exegesis

- 4 Disclaimer
- 5 Originality Declaration

7 Acknowledgements

10 Abstract

12 Context

- 12 Wool Industry
- 15 Market
- 18 Nuyarn Spinning Technology
- 20 Alpaca Fibre

24 Design Structure

- 24 Design Process
- 25 Methodology

28 Tooling and Technology

30 Helly Hansen

- 32 Trend Prediction | Pattern Research
- 34 Design | Development

44 Alpaca and Merino Blended Yarn

- 46 Design | Development
- 52 Knitted Fabric Samples
- 55 Final Knitted Design
- 60 Conclusion
- 62 References
- 64 Bibliography
- 66 Image List
- 76 Glossary of Terms
- 78 Appendix

DISCLAIMER

To Whom it May Concern:

The information in this document is privileged and confidential, and intended for restricted viewing. If you are not the intended viewer, you are asked to respect that confidentiality and not disclose, copy or make use of its contents. If received in error, you are asked to destroy this document and contact the sender immediately.

Alternatively you can return to the stated address below.

Your assistance is appreciated.

Kind Regards,

Monique Bowers

Massey University College of Creative Arts PO Box 756, Wellington 6140, New Zealand

e. moniquebowers1@gmail.com m. +64 27 631 7618

ORIGINALITY DECLARATION

Student ID: 08147752

Surname: Bowers

First Name: Monique

Paper Number: 197.800

Paper Title: Design Thesis

Assignment Title: Master of Design Exegesis

New Zealand's Nuyarn

Declaration,

I declare that this is an original document and is entirely my own work.

M. Bruen

Where I have made use of the ideas of other writers, I have acknowledged (referenced) the sources in every instance.

The assignment has been prepared exclusively for this paper and has not been and will not be submitted as assessed work in any other academic courses.

I am aware of the penalties for plagiarism as laid down by Massey University. A copy of the Assessment and Examination Regulations can be found under the Statutes and Regulations (http://calender.massey.ac.nz/)

Signed.

Date. 23 | 02 | 15

ACKNOWLEDGEMENTS

Special Thanks To:

Sandy Heffernan

Julieanna Preston

Thomas Rutledge

Brooke Bowers

Linda Bowers

Erin Bowers

Kate Bowers

Bruce Bowers

Leighton Upson

Levana Textiles Ltd

Andy Wynne

Ismail Moffit

Reidewann Petersen

Amy Field

Malcolm Maclachlan

Jeff Gunn

Waimarie Alpacas

Layout and Graphic Design

Thomas Rutledge







10 | 11 Fig 2

ABSTRACT

New Zealand's Nuyarn

The purpose of this research is to develop and refine new yarn and knit textile combinations using Nuyarn technology for a selected niche market. New Zealand's Nuyarn is an industry-connected project with Massey University and Levana Textiles. Levana Textiles is a woolen mill based in Levin with over 50 years industry experience. Through the exploration of trend forecasting, iterative design process, market research as well as finding a gap in the market, this result in unique New Zealand products that can demand a premium price.

Nuyarn technology is a new and innovative way of spinning yarn. The technology enhances the yarn performance by taking the twist out, and instead it lays the fibres along the same orientation as the rest of the yarn. Levana Textiles have purchased Nuyarn spinning technology. Through the use of this technology, Levana is producing and introducing innovative and newly improved products into the textile market. This technology is paramount in setting them apart from other textile mills as well as bringing a point of difference in the market.

There is a need to achieve smarter performance in blended yarns for circular knitwear apparel. The wool industry endured hard times in previous years due to the rise in demand for synthetic fibres in the 1960s. Wool is now re-emerging with companies focusing on new developments and innovation with the fibre.

As a result of intensive research and development, cutting-edge design process and contemporary insight into the industry have enabled Levana to lead the way in the development of new yarn combinations and improved yarn performance through the use of new spinning technology. Resulting in specialty blended yarn and circular knitted fabrics that provide opportunity to target niche markets, high profitability, and increased brand awareness for Levana Textiles.