

LIRO Project Reports (1977 – 2000)

No.	Year	Title	Author(s)
1	1977	Chainsaws - A Criteria for Selection	VF Donovan
2	1977	Tree Shears and Feller Bunchers	RD Gordon
3	1977	The Business of Logging and Log Transportation Seminar Proceedings	JJK Spiers
4	1978	Delimiting Studies	LIRA
5	1978	Report on Study Tour to North America & Europe	JJK Spiers
6	1978	Proceedings Cable Logging Seminar Vol. 1 & 2	VK Donovan
7	1978	Log Trucking Studies - Identification of Suitable Research Areas	RD Gordon
8	1979	Log Transport and Loading Seminar Proceedings	RD Gordon
9	1979	Pacific Northwest - North American Study Tour	VK Donovan
10	1980	Log Truck Axle Layouts - (An Economic Comparison of 5-axle and 6-axle Layouts)	RD Gordon
11	1980	Survey of New Zealand Logging Work Force	GC Wells
12	1980	On Modelling the NZ Logging Industry to Study Factors Affecting its Operational Efficiency	H McCallion
13	1980	Smallwood Harvesting Seminar Proceedings	GC Wells
14	1980	Development of Safe Felling and Delimiting Techniques with Chainsaws	LIRA
15	1981	Log Loaders - Criteria for Machine Selection and Application	RD Gordon
16	1981	Tactical Planning Seminar Proceedings	VF Donovan
17	1982	Helicopter Logging Review	JC Halkett
18	1982	David Henry Scholarship Report - Study Tour to Scandinavia and Britain 1982	JE Gaskin
19	1982	Report on Study Tours to North America and Europe 1981-82	JJK Spiers
20	1982	Lotus Series II Hauler Trial Report	JW Simpson / RL Prebble
21	1983	Smallwood Harvesting - Notes on an European Study Tour 1982	L Vaughan
22	1984	An International Project Investigating the Felling & Bunching of Small Trees on Easy Terrain	RL Prebble
23	1985	Safety in Log Transport An Investigation into Load Securing Devices and Methods	PA Baas / JA Stulen
24	1985	Log Truck Axle Layouts 1985 - An Economic Comparison of Log Transport Layouts	JA Stulen
25	1985	Hydraulic Excavators as Log Loaders A Review of the New Zealand Situation	JF Langsford
26	1985	Clambunk Skidders: Do They Have a Place in the New Zealand Logging Industry?	AP Gleason
27	1986	Ergonomics and Logging	RL Prebble
28	1986	Organised Felling	JE Gaskin
29	1986	FIME '86 and Associated Visits	JE Galbraith / RL Prebble
30	1986	Ergonomics - A Science to Improve the Safety and Productivity of Logging Workers	JE Gaskin
31	1987	A Preliminary Description of Logging Road Construction Practises for Unstable Soils used in the U.S. Northwest	DC Hemphill
32	1987	Small Landing Operation: A Study with a Mobile Hauler & Knuckle boom Loader	L Kellogg
33	1987	Felling Techniques to Minimise Butt Damage	L Vaughan / B Biddle
34	1988	A Study of Log Length and Tree Length Extraction Using a Washington 88 Hauler	RL Prebble
35	1988	Preliminary Trials with the Harricana Stroke Delimber	KA Raymond
36	1988	Jubilee Scholarship – A Study Tour to the 4th International Low Volume Roads Conference	D Robinson
37	1988	Mechanised Harvesting Developments in Australia	K Raymond
38	1988	Log Truck Gradeability on Corners and Grades	R Goldsack

39	1988	1988/89 Research Programme of the Forest Engineering Research Institute of Canada	K Raymond
40	1989	South-East U.S.A. Tour Notes - June 1998	L Vaughan
41	1989	System Evaluation - Waratah Processor in Steep Country Thinnings	M Duggan
42	1989	Mechanised Shortwood Thinning with Forwarder Extraction	KA Raymond
43	1989	The Pacific Northwest – Forest Practice Legislation, Harvesting Operations on Sensitive Terrain	L Vaughan
44	1989	The New Zealand Logging Worker - A Profile	JE Gaskin / B Smith
45	1989	A Project to Investigate the Use of Wide Tyres on a Skidder in New Zealand	RL Prebble / W Blundell
46	1989	The Cost of Landing Formation in Pumice and Clay Soils	P Richardson
47	1989	An Evaluation of a Hydraulic Knuckle boom Loader in a High Production/Multiple Log Sort Operation	M Williams
48	1989	The Relative Fuel Efficiency of Super Single Low Profile and Standard Tyres on Logging Trailers	P Taylor
49	1990	A Study Tour of Cable Logging Operations in the Pacific Northwest	RL Prebble
50	1990	Construction Cost Estimation for Forest Roads	D Robinson
51	1990	Mechanised Thinning Trials in Kinleith Forest	L Vaughan
52	1993	1992 Stihl Research Grant – An Investigation of Techniques to Reduce Chainsaw Injuries to the Hand	P Kirk
53	1995	Attitudes Towards Safety in the New Zealand Forest Industry	R Gibson
54	1995	A Survey Method for Assessing Site Disturbance	S McMahon
55	1995	An Ergonomic Investigation of Hauler Breakerouts	P Kirk / M Sullman
56	1995	Truck Despatching Case Study	T Robinson
57	1995	New Zealand Forest Owners' Association - Forestry Workforce Census 1994	J Byers
58	1995	Otago/Southland Forestry Workforce 1993 - Five Years Later	J Byers / D Adams
59	1996	A Slip Erosion Risk Model of Two Coastal Hill Country Catchments Central Hawkes Bay	P Fransen
60	1996	Cutover Waste Assessment – A Comparison of Sampling Techniques and Intensities	P Hall
61	1996	Politician's Opinions about the New Zealand Forest Industry 1996	S Kilvert
62	1997	Minimising Sapstain in Harvesting Operations	A Riddle / T Evanson
63	1997	Breakage in Manually-Felled Clearfell Radiata Pine	D Fraser / D Palmer
64	1997	East Coast Silviculture Workforce 1996	T Cummins / J Byers
65	1997	A Survey of North Island Woodlot Logging Contractors	T Cummins / J Byers
66	1998	Effect of Fluid Intake on the Physical and Mental Performance of Forest Workers	T Paterson
67	1998	Erosion and Revegetation of Haul Paths in Cable Logged Settings – North Island, New Zealand	P Fransen
68	1998	Forestry Sector University Degrees: Their Impact on Graduate Employment (1994-1998)	T Cummins
69	1998	Polytechnic Forestry Students (1989-1998) - Their Workforce Experience	T Cummins / J Byers
70	1998	Factors Affecting Logmaking from the Cab: A Study of Mechanised Logmakers	T Cummins
71	1998	Harvesting Practices - Effects on Woody Debris in Streams and Channel Bank Disturbance	B Baille / T Cummins
72	1998	A Study of the Psychological Climate of the Logging Industry	K Rothwell
73	1998	Slips and Sedimentation in Mature Plantation Forest and Pastoral Hill Country - Hawkes Bay	P Fransen
74	1998	A Differential Contractor Payment System	A Riddle
75	1998	Log Tagging Systems	T Evanson
76	1998	Physical Damage to Logs	T Evanson
77	1998	Nodal Swelling as an Indicator of Knot Size	T Evanson / M Kimberly
78	1998	Log Supply Chain Audit	T Evanson

79	1999	Improved Log Trailer Design	G Walsh / H Bennett
80	1999	Log Sorting Using Acoustics Technology - Applications and Limitations	R Visser / R Parker
81	1999	High Frequency Radar for Detection of Stem Attributes	R Parker
82	1999	The Application of Individual Log Identification (ILID)	T Evanson
83	1999	International Benchmarking Transport	G Manners
84	1999	Linking Log Caliper Information to a Sawing Simulator	C Todoroki / G West
85	1999	Management of Logging Slash in Streams	B Baille
86	2000	An Evaluation of the Human Computer Interface in the Waratah 234 Harvesting Machine	M Smith / T O'Rourke
87	2000	A Task Analysis of Mechanical Tree Harvesting to Identify Aptitudes Necessary to do the Job	M Smith / T O'Rourke
88	2000	Investigation into the Effects of Using a Harness during Manual Pruning Operations	L Wright
89	2000	Causal Factors in Heavy Vehicle Accidents: A Review	H Metcalfe / T Evanson
90	2000	Effectiveness of Vegetation and Riparian Buffers in Reducing Sediment Transport – A Review	P Fransen
91	2000	A Selection Procedure for Operators of the Waratah 234 Harvesting Machine	M Smith / T O'Rourke
92	2000	An Extended Evaluation of the Computer Interface in the Waratah 234 Harvesting Machine	M Smith / T O'Rourke