

CURRICULUM VITAE: ROBERT THORBURN MCCUTCHEON

1. **Family name:** McCutcheon
2. **First names:** Robert Thorburn
3. **Date of birth:** 22nd August 1942
4. **Nationality:** South African
5. **Education:**

Institution	Degree(s) or Diploma(s)
University of the Witwatersrand Johannesburg South Africa 1960 - 1963	BSc (Eng) Civil
University of the Witwatersrand 1964	Graduate Diploma in Engineering
University of Sussex UK 1972	MSc
University of Sussex UK 1980	D Phil

6. **Language skills:** English and Afrikaans; very limited Setswana, French, Spanish and Farsi.
7. **Membership of professional bodies:** FSAAE; FSAICE, Pr Eng; FICE, C Eng; SHOT; PMISA.
8. **Other skills:** General computer literacy on Apple Macintosh and Windows based operating systems and software suites such as Microsoft Office
9. **Present positions:** Professor Emeritus & Honorary Professor, School of Civil and Environmental Engineering, University of the Witwatersrand, South Africa.
Employment Creation and Skills Development Specialist. Malani Padayachee and Associates (Pty) Ltd, Consulting Civil and Structural Engineers, Randburg
Research Associate: Centre of Full Employment and Equity, University of Newcastle, Australia (2009 to date)
SAICE Panel of Mediators and Adjudicators: Member

10. Specific Country Experience:

Years: Country Experience
1965 to 1968: Civil Engineer in South Africa
1968 to 1971: Set up and implemented various school / clinic building projects in South Africa, Swaziland, Lesotho and Botswana
1974 and 1979: UK
1975 to 1978: Iran
1980 to 1985: Botswana (ILO)
1985 to 1987: Kenya (ILO)
1980-1987: During employment by the ILO country missions included: Zambia, Tanzania, Zimbabwe, Swaziland, Lesotho, Ethiopia
1987 to present: Professor and Consultant in SA
1987 to present: Since return to South Africa missions in: Namibia, Cote d'Ivoire, Democratic Republic of the Congo, Burundi, Rwanda, Egypt, Zambia.

11. Professional Experience in some Detail

2018	Member of the Provisional Steering Committee for the DPW EPWP Kroonstad Labour-Intensive Training College March 2018: No meetings to date!
2008 to date	Professor Emeritus, University of the Witwatersrand, School of Civil and Environmental Engineering
2017 to date	Honorary Professor, School of Civil and Environmental Engineering
2011 to 2018	Malani Padayachee & Associates (Pty) Ltd: Head: Employment Creation and Development Unit (2011-2017); Since Jan 2018: Specialist
2009 to date	Research Fellow, Centre of Full Employment & Equity, University of Newcastle, Australia
2014 to Feb 2016	Council for the Built Environment: Member of the Panel on Labour-intensive

2013 & 2014	<p>EPWP: Member of the 7 person Expert Panel, advising the EPWP Unit, National Department of Public Works on the third five-year phase of the Expanded Public Works Programme 2014 to 2019.</p> <p>From 1994 to 2016: McCutcheon has contributed to the formulation, implementation and evaluation of South Africa's National Public Works Programme and the Expanded Public Works Programme; also in the preparation of the DPW, EPWP Unit's "<i>Expanded Public Works Programme Unit's High Level Proposal for Phase 3,</i>" November 2013.</p>
2008	<p>Consultancies related to EPWP and labour-intensive construction in SA and the Great Lakes Region (see reports below)</p>
1987 to 2007	<p>Professor of Civil and Environmental Engineering (Chair: Project and Construction Management), Department of Civil Engineering / School of Civil and Environmental Engineering, University of the Witwatersrand.</p> <p>Head of Department/School: April 1994 to December 2000</p>
1995 to 2011	<p>Founder and Director, Employment Intensive Engineering Consultants (EIEC) (Pty) Ltd. Specialising in providing engineering advice and management support to South African and African public works programmes, with a special emphasis on job creation, skills development and labour-intensive construction methods.</p>
2002 to 2006	<p>Co-founder, LITE (Labour-intensive Training and Engineering).</p> <p>LITE was a Section 21 Not for Profit Organisation/ NGO responsible for implementing Youth Service Programmes with a strong focus on delivering labour-intensive construction methods in rural areas. LITE was appointed as the lead agent for Infrastructure Provision for the Umsobomvu Youth Fund. LITE was an accredited training provider with the Construction SETA (CETA).</p>
1992 to 2007	<p>Founder and Director, WORK Research Centre for Employment Creation in Construction, University of the Witwatersrand</p>
2002 to 2006	<p>Visiting Professor, Loughborough University Department of Civil and Building Engineering.</p> <p>Member of the editorial panel Municipal Engineer, Proceedings of the Institution of Civil Engineers</p>
1988 to date	<p>Independent Consultant. Various consultancies for national and international agencies including: DBSA, SANRAL, Gauteng DPTR&W, World Bank (Cote d'Ivoire), Aurecon (Namibia), Development Fund of Norway (Malawi), Gauteng</p>
1979 to 1987	<p>Independent Consultant / ILO Advisor. Various consultancies and missions for the ILO, the World Bank and UNCTAD (Botswana, Ethiopia, Kenya, Lesotho, Swaziland, Switzerland, Tanzania, Zambia, Zimbabwe).</p>
1985(09) to 1987 (08)	<p>ILO, World Employment Programme Employment and Technology Branch: Advisor, Eastern and Southern Africa. Stationed in Nairobi, Kenya. Responsible for co-ordination of the work on appropriate road construction and maintenance technology in Eastern and South Africa</p>
1982(07) to 1985(07)	<p>ILO, World Employment Programme Employment and Technology Branch: Chief Technical Advisor/Project Manager. Stationed in Serowe, Botswana. Responsible for the expansion, throughout Botswana, of the District Roads labour-intensive improvement and maintenance programme; altogether over 3 000 people were employed.</p>
1980(01) to 1982(06)	<p>ILO World Employment Programme Employment and Technology Branch: Chief Technical Advisor / Project manager. Stationed in Serowe, Botswana. Responsible for the initiation and implementation of the District Pilot Project of labour-intensive road construction and maintenance.</p>

- 1978(10) to 1979(12) UK: University College London, Research Fellow.
Building Economics Research Unit, Bartlett School of Architecture, University College London: Construction Industry Labour Mobility Study.
- 1978(05-09) UK: University of Sussex, Research Fellow, Nuffield Foundation Science in its Social Context.
- 1976(08) to 1978(04) Iran: Bu-Ali Sina University, Hamadan.
Co-ordinator, Construction Section, Environmental Sciences and Natural Resources (Vice-Chancellor: Dr M T Farvar). Responsible for curricula development, research and field projects related to construction in developing countries.
- 1975(04) to 1976(07) Iran: Sozman Shahanshahi, Selseleh Integrated Development Project, Lorestan, (Director: Dr M T Farvar). Project Engineer.
Responsible for the development and implementation of a labour-intensive road construction programme.
- 1974 UK: University of Sussex, Research Fellow, Nuffield Foundation Science in its Social Context.
- 1970(09) to 1971(08) South Africa: Saunderson, Levoy and Partners (Civil Engineers)
Design Engineer. Site Engineer during sliding of brewery silos. Design and supervision of various buildings: blocks of shops and flats, factories, a nuclear accelerator, houses.
- 1969(01) to 1970(08) South Africa: South African Voluntary Service (SAVS) Chairman
During the 20 months of my chairmanship SAVS was involved in 22 projects related to schooling, health and agriculture including the construction of 14 buildings (schools, health clinics, storerooms) in rural areas of Botswana, Lesotho, Swaziland and South Africa.
- 1965 to 1968 South Africa: Assistant Resident Engineer (Civil) Power Stations; Design Engineer for Consultants; Programmer for Leo Computer Bureau.

12: Publications

Summarised Publication Output: 6 books; 34 articles in peer-reviewed, accredited journals; 40 papers in refereed conference proceedings; at least 29 reports for national and international agencies; founder and co-editor of an accredited journal *Urban Forum* (1990 – 2005). Publication details can be provided for the above from my complete CV. Here attention is drawn to the following:

Books

McCutcheon, R.T. 1979. *Limits of a Modern World - A Study of the 'Limits to Growth' Debate*. London: Butterworths, pp112.

McCutcheon, R.T. (editor). 1993. *Interim guidelines for labour-based construction projects*, Construction and Development Series Number 2. Midrand: Development Bank of Southern Africa (DBSA), February: pp154.

McCutcheon, R.T., and Marshall, J. 1996. *Labour-intensive construction and maintenance of rural roads: Guidelines for the training of road builders*, Construction and Development Series Number 14. Midrand: Development Bank of Southern Africa, November: pp138.

McCutcheon, R.T., and Marshall, J. 1998. *Institution, organisation and management for large-scale, employment-intensive road construction and maintenance programmes*, Construction and Development Series Number 15. Midrand: Development Bank of Southern Africa, February: pp238.

McCutcheon, R.T. and Taylor Parkins, F.L.M. (editors). 2001. *WORK 2001 First International Conference on Employment Creation and Development 2-5 April 2001 Conference Proceedings*. Johannesburg: University of the Witwatersrand, Research Centre for Employment Creation in Construction, 2001: pp654.

McCutcheon, R.T., and Taylor Parkins, F.L.M. (editors). 2003. *Employment and High Standard Infrastructure*. Johannesburg: University of the Witwatersrand, Research Centre for Employment Creation in Construction, 2003: pp423.

McCutcheon, R.T., and Fitchett, A. (convenors and editors). 2005. *Proceedings of WORK 2005 Second International Conference on Employment Creation in Development: Skills, Training and Education for Employment and Development*. University of the Witwatersrand. Proceedings and Background Papers in digital format. 5th to 8th September 2005.

Recent Publications

F Muzondo and R McCutcheon

The relationship between project performance of emerging contractors in government infrastructure projects and their experience and technical qualifications: an analysis of 30 projects conducted in Mpumalanga Province over the 2011 to 2013 period.

Submitted to the *Journal of South African Institution of Civil Engineers* in 2016. Accepted for publication in May 2018

McCutcheon R. “*Modern Labour-intensive Construction in South African Public Works Programmes: A Context and Framework leading to a Critique of the Infrastructure Sector of the Expanded Public Works Programme 2004/05 to 2013/14.*” (November 2017 Mimeo 58 pages)

Published in three parts by the South African Institution of Civil Engineers as;

A Critique of the EPWP Infrastructure Sector – Part 1; May 2018: 53-62.

A Critique of the EPWP Infrastructure Sector – Part 2; June 2018: 35-46

A Critique of the EPWP Infrastructure Sector – Part 3; July 2018: 62-66

Robert McCutcheon. “*EPWP Projects have potential*” IMIESA April 2018: 50-51.

Robert McCutcheon. “*Is the EPWP off track?*” IMIESA February 2018: 46-47.

Robert McCutcheon. “*Engineering and Labour-intensive Construction.*” Technical Paper. IMIESA October 2017: 108-111.

Robert McCutcheon. “*Lessons in labour-intensive construction.*” Technical Paper. IMIESA August 2017: 38-41.

“Is labour-intensive construction still an option for unemployment alleviation” Cover Story by David Oliveira Engineering News 13th May 2016.

Sikhakhane, Reggie. 2013. “Public and private sector input needed to reverse skills shortage” Engineering News 18th November 2013.

Letter

‘Letter’ R McCutcheon. *SA Civil Engineering*, December 2017 p70-71.

In response to the CEO of SAICE’s September 2017 Editorial titled: *I’ve just got to get a message to you (Civil Engineering September 2017 p 1)*

Relatively Recent Publications / Conference Papers / Presentations

McCutcheon RT. 2018. “*Labour-intensive Technologies in RSA: Issues and Challenges.*” Zambia National Council for Construction (NCC) National Policy Dialogue Meeting, Siavonga, Zambia, 25th to 27th April.

McCutcheon RT. 2017a. “*Mutual Aid 1 - Africa to South Africa: The Potential for Skills Development and Employment Creation during the Construction and Maintenance of High Quality Public Infrastructure and Building: Modern Labour-intensive Construction in Africa*” 24th FIDIC-GAMA 2017. Conference on Infrastructure: African Partnerships for Sustainable Growth. Cape Town 7-10 May 2017. CESA Website: www.cesa.co.za/node/616

McCutcheon RT. 2017b. “*Mutual Aid 2 - South Africa to Africa: Consulting Engineers and Socio-economic Development: their Potential Contribution to Sustainable Development in Africa: South African Public Works Programmes and Modern Labour-intensive Construction.*” Ibid.

Govender, C and McCutcheon RT. 2016. *An examination of Rand Water’s scientific skills development planning to increase its skills pool for the assurance of quality drinking water.* WISA 2016.

Segers, I and McCutcheon, R.T. 2013. *Labour-intensive construction methods on Dam Safety Rehabilitation Projects.* ICOLD International Symposium. Seattle. August.

McCutcheon, RT. 2014. Council for the Built Environment: Stakeholder Forum. *Towards Development of Built Environment Professionals Relevant to South Africa’s Needs.* The Grand Airport Hotel, Ekurhuleni 1st October. 54 Slides.

McCutcheon, R., and Taylor Parkins, F. July 2012. *The Expanded Public Works Programme: policy, rhetoric, reality and opportunities foregone during the expenditure of over R40 billion on infrastructure.* SAICE Civil Engineering, July 2012, Vol 20, No 6: 34-46.

Padayachee-Saman, M., and McCutcheon, R.T. June 2012. *Mining and Socio-economic Objectives: a model for employment creation, skills and SMME development and women’s empowerment.* Zambia ZIMEC, June 2012: 11pp.

Croswell, J.A., and McCutcheon, R.T. 2011. *Housing and the Expanded Public Works programme: The Opportunity and Potential,* South African Housing Federation Annual Conference 2011, 12pp.

McCutcheon, R.T., *The generation of productive employment opportunities for the unskilled: principles, potential and pitfalls of labour-intensive construction.* Keynote Address:10th Path to Full Employment Conference / 15th National Unemployment Conference 4-5 December 2008, Centre of Full Employment and Equity (CoffEE) University of Newcastle, Australia; 12pp.

McCutcheon, R.T., and Taylor Parkins, F.L.M 2009. *South Africa’s Expanded Public Works Programme: a case study in government sponsored employment creation and poverty alleviation focusing upon the infrastructure component: rhetoric, reality and opportunities foregone.* Graham Wrightson (ed) *Labour Underutilisation, Unemployment and Underemployment, incorporating the 11th Path to Full Employment Conference and 16th National Conference on Unemployment, 3 – 4 December 2009,* Centre of Full Employment and Equity, The University of Newcastle, Australia, *Proceedings - Refereed Papers:* pp196-212.

Quainoo, H.A., and McCutcheon, R.T. 2009. *A comparative study of four country-specific labour-intensive infrastructure development programmes: Policy implications for sub – Saharan countries including South Africa.* Ibid pp243-258.

Recent & Relatively Recent Papers and Professional Reports:

McCutcheon, R and Taylor Parkins, F. 2016. *Chapter 5: A critical review towards improvement in Phase 3,* in Vaughan, Anne (Lead Editor), *Our Expanded Public Works Programme: Reflections on over a decade.* SA Cities Network. ISBN No. 978-0-620-69818-4: pp69-85.

Padyachee-Saman, M, McCutcheon, RT, van Steenderen, W and Voolla, J. 2015-2016. MPA team writing several *Chapters for the Committee of Land Transport Officials (COLTO): Standard Specifications for Road and Bridge Works for State Authorities: Volume Two Labour-intensive Construction.*

McCutcheon. R. 2015. *Council for the Built Environment: APP 2014/15 – Project 1.3 (Programme 1). One Project to develop a framework on incorporation of labour-intensive construction in BE academic curricula by 31 March 2016. Second Interim Progress Report.* 30th November 2015: 29pp.

McCutcheon R. 2014. *Review of Draft Study Report; Panel of Experts for Review of Draft Study Report for Review of Labour-intensive Training Curriculum for Expanded Public Works Programme (EPWP).* EPWP / ILO. 4 December 2014. 22pp. (Latest rev: 4Dec14). Plus presentation at the EPWP Training Workshop, Innovation Hub, Pretoria: 4th December 2014.

McCutcheon RT. 2014. *The Infrastructure Sector in SA’s Expanded Public Works Programme 2004 to 2014: A review leading to recommendations for improvement.* Paper being prepared for publication. August/September 2014 (latest rev 3Dec14). 61pp. (Single spaced.) Abridged version published as Chapter 5 for SA Cities (see above). Full version currently being revised and updated for publication elsewhere.

McCutcheon R. 2014. *Draft Research Report on incorporation of labour-intensive methods into the South African Construction Industry in order to contribute to skills development and employment creation.* 21Nov14am (rev 5 & 8Dec14): 94pp. (1.5 spacing requested by CBE.) Plus presentation at the CBE Offices, Pretoria: 10th December 2014.

Croswell, JA (Hatch Goba) and McCutcheon, RT (Malani Padayachee and Associates). 2014. *Guidelines for the Implementation of Labour Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP): Comments on the Working Draft of the 3rd Edition 2014, on behalf of CESA and SAICE.* 29th August. 21pp.

McCutcheon, R., and Taylor Parkins, F. July 2012. *The Expanded Public Works Programme: policy, rhetoric, reality and opportunities foregone during the expenditure of over R40 billion on infrastructure.* SAICE Civil Engineering, July 2012, Vol 20, No 6: 34-46.

Malani Padayachee and Associates (Pty) Ltd, Consulting Civil and Structural Engineers (principal author, RT McCutcheon). December 2012. "PQ 7V-8485: *Job Creation in the City: Skills Development and Employment Creation during the Construction and Maintenance of Infrastructure, with particular reference to the EPWP.*" Report of an investigation carried out for the Infrastructure Management and Socio-economic Development Department, Engineering Unit, Procurement and Infrastructure Cluster, eThekweni Municipality. *Volume 1: Report, 81pp; Volume 2: Appendices, 132pp.*

Team Member, Mid-term Evaluation of the IFDC-CATALIST project the Great Lakes region of Rwanda, Burundi and the Democratic Republic of the Congo (October 2009 – January 2010). Appointed in my personal capacity to perform a mid-term evaluation of the road infrastructure and agro-forestry components of the CATALIST project (Catalyze Accelerated Agricultural Intensification for Social and Environmental Stability), as implemented and administered by the IFDC (International Fertilizer Development Centre) and their local partners and subcontractors:

Reports:

Adolph, B., Fowler, M., McCutcheon, RT, Taylor Parkins, FLM. *Mid-term Review of IFDC CATALIST Programme* (Catalyze Accelerated Agricultural Intensification for Social and Environmental Stability), Final Report 25 January 2010, 171pp.

McCutcheon and Taylor Parkins. *Mid-term Evaluation of the IFDC-CATALIST project in the Great Lakes region of Rwanda, Burundi and the Democratic Republic of the Congo October 2009 - January 2010: KRA 8 and 9: Infrastructure Component* 42pp. (CATALIST project: Catalyze Accelerated Agricultural Intensification for Social and Environmental Stability).

McIntosh, Xaba and Associates (Pty) Ltd, Principal authors and editors: FLM Taylor Parkins, RT McCutcheon and M Cole, *Expanded Public Works Programme, Department of Public Works, South Africa; Review of Selected Reports and Focus Group Discussions: Report A: Meta-analysis and Systematic Review of Selected EPWP Reports and Research: April 2004 to March 2009.07.22; and Report B: Social Impact Survey of EPWP Beneficiaries and Stakeholders in Selected EPWP Projects*, McIntosh, Xaba and Associates (Pty) Ltd, for the Expand Public Works Programme Unit, Department of Public Works, South Africa, 1st Sept 2009, 245pp (Reports: 100pp; Annexures: 145pp Plus DVD).

LITEworks (Pty) Ltd, Principal authors and editors: FLM Taylor Parkins and RT McCutcheon, *Gauteng Province Expanded Public Works Programme Monitoring and Evaluation, June 2007 – May 2008, Final Report 4th August 2008.* LITEworks (Pty) Ltd, for Gauteng Province Department of Public Transport Roads and Works, 66pp.

14. Research

Supervision of completed student research (i.e. awarded degrees)

University of the Witwatersrand:

PhD: 9 and MSc(Eng) Dissertations and Investigational Project Reports: 53; MEng & MSc Research Reports: 3.

In association with the University of Twente, the Netherlands & Others: MSc: 40

Current Research Foci

In addition to keeping track of *Phase Three of the EPWP* (2014/15 to 2018/19), McCutcheon's main focus of research is on *Contractor Development: Policy, Procedures and Case Studies*

Current and Recent Supervision Details: 2013 to 2016

PhD

Muzondo FT. (Ms)

The limitations in public procurement practices in relation to contractor selection criteria: the importance of technical qualifications and experience

Dube S

Operational improvement of roads and Stormwater maintenance within the South African metropolitan Municipalities

MSc(Eng) Dissertation

Visser H. (Dr)

The effect of incomplete definition in the project life cycle domain affecting the critical success factors of project management of small scale projects.

MSc(Eng) Investigational Project Report

Summary of student research completed since 2013

MSc(Eng) Investigational Project Report

Successfully completed, to October 2018

Sekano L. Ms (2018)

Investigating Contractor Liability on Construction Projects: Risk Management as structured in FIDIC Contracts for Projects in South Africa with specific reference to Insurance

Mahlangu I. Ms (2018)

The effectiveness of a contractor development programme in the development of small contractors – an evaluation of a road construction project in the Eastern Cape

Chiloane S. Ms (2018)

Assessing the effectiveness of projects that are aimed at reducing water loss in Ekurhuleni Metropolitan Municipality

Govender N. (2017)

An Investigation into the Management of Successful General Building and Civil Engineering Contractors in Gauteng

Mwamlima B. Ms (2017)

An evaluation of employment creation and skills transfer during the delivery of capital projects in sub-Saharan Africa: A focus on three selected case studies

Govender C. Ms (2016)

An examination of Rand Water's skills development for the production of quality drinking water locally

Mohlala FT. Ms (2015)

The relationship between project performance of emerging contractors in government infrastructure projects and their experience and technical qualifications: an analysis of 30 projects conducted in the Mpumalanga Province over the 2011-2013 period.

Segers, I. (2013)

The feasibility of using rubble masonry concrete on Dam Structures during rehabilitation in South Africa to increase productive labour opportunities (2013)

First Draft (2018)

Kopung S.

Contractor Development Management in Engineering North West Province.

MEng Research Report

Dumakude M. Ms (2016)

The effectiveness of Enterprise Development Programmes in the Civil Engineering Construction Sector and the Sustainability of Enterprise Development beneficiaries (Emerging Contractors) after they have exited the programmes implemented by Established Civil Contractors (2016)

Dlamini MR. Ms (2015)

An investigation of the challenges faced by emerging contractors in KwaZulu-Natal Province (2015)