

**CURRICULUM VITAE: ROBERT THORBURN MCCUTCHEON**

1. **Family name:** McCutcheon
2. **First names:** Robert Thorburn
3. **Date of birth:** 22<sup>nd</sup> August 1942
4. **Nationality:** South African and UK. Married to Carol. Three sons: Keir, Ian and Martin.
5. **Education:**

| <b>Institution</b>   | <b>Degree(s) or Diploma(s)</b>  |
|--|---------------------------------|
| University of the Witwatersrand Johannesburg<br>South Africa 1960 - 1963 | B Sc (Eng) Civil                |
| University of the Witwatersrand 1964                                     | Graduate Diploma in Engineering |
| University of Sussex UK 1972   | M Sc                            |
| University of Sussex UK 1980   | D Phil                          |

6. **Language skills:** English and Afrikaans; very limited Farsi.
7. **Membership of professional bodies:** FSAAE; FSAICE, Pr Eng; FICE, C Eng; SHOT.
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 (WITS), 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.  
SAICE Panel of Mediators and Adjudicators: Member.

10. **Specific Country Experience:**

| <b>Years: Country Experience</b>  |
|---|
| 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 Ethiopia, Lesotho, Swaziland, Tanzania, Zambia and Zimbabwe.                               |
| 1987 to present: Professor and Consultant in SA   |
| 1987 to present: Since return to South Africa missions to: Cote d'Ivoire, Egypt, Malawi, Namibia, Rwanda/Democratic Republic of the Congo/Burundi and Zambia. |

11. **Professional Experience**

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|--------------|---|
| 2008 to date | Professor Emeritus, University of the Witwatersrand (WITS), School of Civil and Environmental Engineering.  |
| 2017 to date | Honorary Professor, School of Civil and Environmental Engineering, WITS.  |
| 2011 to 2018 | Malani Padayachee & Associates (Pty) Ltd: Head: Employment Creation and Development Unit (2011-2017), since January 2018: EC&D Specialist.  |
| 1987 to 2007 | Professor of Civil and Environmental Engineering (Chair: Project and Construction Management), Department of Civil Engineering / (renamed in 1999:) School of Civil and Environmental Engineering, University of the Witwatersrand. Devised and presented undergraduate, postgraduate and professional development courses in Development and Labour-intensive Construction and Maintenance.<br>Head of Department/School: April 1994 to December 2000. |
| 2009 to date | Research Fellow, Centre of Full Employment & Equity, University of Newcastle,   |

Australia.

- 1994 to date Contributed to the formulation, implementation and evaluation of South Africa's National Public Works Programme and Expanded Public Works Programme (EPWP) (established in the National Department of Works and Infrastructure (NDPWI)). Currently a member of the Provisional Steering Committee for the proposed NDPWI/EPWP Labour-Intensive Training College to be located in Kroonstad/Moqhaka.
- 2014 to 2016(02) Council for the Built Environment: Member of the Panel on Labour-intensive Construction.
- 1995 to 2011 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. (Mr JA Crosswell)
- 2002 to 2006 Co-founder, LITE (Labour-intensive Training and Engineering). 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. Developed and implemented training courses at NQF 2, 4, 5 and 7 levels. LITE was appointed as the lead agent for Infrastructure Provision for the Umsobomvu Youth Fund. LITE was an accredited training provider with the Construction Sector Education and Training Authority (CETA). (Mr JA Crosswell)
- 2001 to 2002 Contributed to the formal establishment of the NQF4 Qualification: Construction Processes Site Supervisor.
- 1992 to 2007 Founder and Director, WORK Research Centre for Employment Creation in Construction, University of the Witwatersrand.
- 1992 to 2000 Annual series of lectures on labour-intensive construction, International Institute for Hydraulics and Environmental Engineering (IIHEE) Delft, the Netherlands. (Prof JDFG Howe). Provided Prof Howe with the structure and content of the courses developed at WITS for Undergraduate and Postgraduate education and Orientation.
- 2002 to 2006 Visiting Professor, Loughborough University Department of Civil and Building Engineering. (Prof A Baldwin)  
Member of the editorial panel Municipal Engineer, Proceedings of the Institution of Civil Engineers.
- 1988 to date Independent Consultant. Various consultancies for national and international agencies including: Development Bank of Southern Africa (DBSA), South African National Roads Agency Limited (SANRAL), Gauteng Department of Public Transport, Roads & Works, World Bank (Cote d'Ivoire), Aurecon (Namibia) and the Development Fund of Norway (Malawi), Rwanda/DRC/Burundi. (See Publications below for details)
- 1979 to 1987 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). (See Publications below for details)
- 1985(09) to 1987(08) ILO, World Employment Programme Employment & Technology Branch, Advisor, Eastern and Southern Africa. Stationed in Nairobi, Kenya. Responsible for the co-ordination of the work on appropriate road construction and maintenance technology in Eastern and South Africa. The budget for five years (1987-1991) of the Kenyan Rural Access Roads Programme/Minor Roads Programme was 80 million US dollars (10 000 people employed on construction and maintenance). The budget for five years (1987-1991) of the programme in Botswana was 8 million US dollars (over 3 000 people employed). (Dr GA Edmonds and Dr AS Bhalla)

- 1982(07) to 1985(07) 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; directly responsible for 3 ILO engineers and 1 consultant, indirectly for two technicians, 12 supervisors, 84 junior staff and 1400 labourers (altogether over 3 000 people were employed). Local expenditure: R1 200 000 per year; ILO Technical Assistance: US\$300 000 per year (by 1987 this was down to US\$130 000). (Dr GA Edmonds and Dr AS Bhalla)
- 1980(01) to 1982(06) 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. Responsible directly for 3 ILO engineers and 4 ILO consultants and indirectly for employment of up to 150 people at any one time (altogether over 600 people employed). Expenditure: US\$800 000. (Dr GA Edmonds and Dr AS Bhalla)
- 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. (Dr S Drewer)
- 1978(05-09) UK: University of Sussex, Research Fellow, Nuffield Foundation, Science in its Social Context. (Prof W W Williams)
- 1976(08) to 1978(04) Iran: Bu-Ali Sina University, Hamadan. (Vice-Chancellor: Dr M T Farvar), Co-ordinator, Construction Section, Environmental Sciences and Natural Resources. 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(08) to 1975(04) UK: University of Sussex, Research Fellow, Nuffield Foundation Science in its Social Context. (Prof W W Williams)
- 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, Professional Reports and Conference Proceedings

**Summarised Publication Output:** 6 books; over 50 peer-reviewed/accredited publications; over 50 papers in refereed conference proceedings; over 40 reports for national and international agencies; founder and co-editor of an accredited journal *Urban Forum* (1990 – 2005). Publications categorised as follows:

### 12.1 Books

### 12.2 Recent Publications (2017 and 2018)

### 12.3 Refereed Journals Articles/Accredited Publications/Chapters in Books/Monographs

### 12.4 Professional Reports for International and South African Organisations.

### 12.5 Conference/Seminar Papers and Selected Lectures/Presentation

## 12.1 Books

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

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

## 12.2 Recent Publications (2017 and 2018)

Muzondo, F and McCutcheon, R T 2018. 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. *Journal of the South African Institution of Civil Engineers*, 60 (4): 25-33.

McCutcheon, R 2018. Contractor Development: Overcoming Barriers to SME Development. *Institute of Municipal Engineering of South Africa (IMIESA)*, 43(10): 67-69.

McCutcheon R T 2018. 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 (EPWP) 2004/05 to 2013/14.

Published in three parts in *SAICE Civil Engineering (South African Institution of Civil Engineers)* as:

A Critique of the EPWP Infrastructure Sector – Part 1. Vol. 26: May 2018: 53-62.

A Critique of the EPWP Infrastructure Sector – Part 2. Vol. 26: June 2018: 35-46.

A Critique of the EPWP Infrastructure Sector – Part 3 Conclusions and Recommendations. Vol. 26: July 2018: 62-66.

McCutcheon, R 2018. EPWP Projects have potential. *IMIESA*, 43(4): 50-51.

McCutcheon, R 2018. Is the EPWP off track? *IMIESA*, 43(2): 46-47.

McCutcheon, R 2017. Engineering and Labour-intensive Construction. Technical Paper. *IMIESA*, 42(10): 108-111.

McCutcheon, R 2017. Lessons in labour-intensive construction. Technical Paper. *IMIESA* 42(8): 38-41.

'Letter' R McCutcheon. *SAICE 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 (SAICE Civil Engineering September 2017 p 1)*

## 12.3 Refereed Journal Articles/Accredited Publications/Chapters in Books/Monographs

McCutcheon, R T 2003. Work and Public Works: Employment and High Standard Infrastructure, Chapter 1 in 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: 1-12.

McCutcheon, R T 2003. Concepts, Potential, Principles, Issues/Lessons and Guidelines, Chapter 2. *Ibid*: 15-56.

- McCutcheon, R T and Taylor Parkins, F L M 2003. Choice of Technique Analysis and Applications to High Cost, High Standard Infrastructure, Chapter 3. *Ibid*: 57-90.
- Lieuw Kie Song, M R, Phillips S and McCutcheon, R T 2003. Structural Properties and Behaviour of MacAdam Pavements, Chapter 4. *Ibid*: 93-129.
- Hefer, A, Moloisane, R, McCutcheon, R T, Horak E and van Wijk, A J 2003. Performance of Waterbound MacAdam Pavements: Case Study in Johannesburg, South Africa, Chapter 5. *Ibid*: 131-153.
- Gertzen, D, Nevin, G and McCutcheon, R T 2003. Employment-Intensive Urban Residential Street Construction - An Evaluation of the Soweto Experience 1992-1996, Chapter 6. *Ibid*: 155-162.
- van Steenderen, W and McCutcheon, R T 2003. Employment-Intensive Aspects of the Rehabilitation of the Great North Road: N 1-28 Matoks to Louis Trichardt, South Africa, Chapter 7. *Ibid*: 163-203.
- van Steenderen, W and McCutcheon, R T 2003. The Use of Sulphonated Petroleum Product Stabilisers in Employment-Intensive Road Construction, Chapter 10. *Ibid*: 229- 239.
- Bangma, S-R, de Bruijn E and McCutcheon, R T 2003. Employment-Intensive Concrete Block Pavement Construction for Upgrading Township Roads in South Africa, Chapter 11. *Ibid*: 241-249.
- van Steenderen, W and McCutcheon R T 2003. Labour Friendly Bituminous Surfacing and Wearing Courses, Chapter 12. *Ibid*: 251- 271.
- Croswell J A and McCutcheon R T 2003. Employment- Intensive Construction Methods and the use of Contractors, Chapter 14. *Ibid*: 295-335.
- Croswell, J A and McCutcheon, R T 2003. How to Activate the Power Inherent Within the Contract, Chapter 15. *Ibid*: 337-385.
- Croswell, J and McCutcheon, R T 2003. Group Tasks and Group Balancing, Chapter 16. *Ibid*: 387-413.
- McCutcheon, R T 2003. Summary and Closing Comments, Chapter 17. *Ibid*: 415-434.
- McCutcheon, R T 2001. Using employment-intensive methods to construct and maintain infrastructure. *Proceedings of the Institution of Civil Engineers, Municipal Engineer*, 45(4): 273-284. Winner of the James Hill Prize 2002, for the best paper published in the *Municipal Engineer* in 2001...awarded by the UK Institution of Civil Engineers.
- McCutcheon, R T 2001. Employment generation in Public Works: Recent South African Experience (post 1994). *The Journal of Construction Management and Economics*, 19: 275-284.
- Grobler, L J, Taylor Parkins, F L M and McCutcheon, R T 2000. Choice of Technique Analysis of the drainage structures component of a road construction project. *Journal of the South African Institution of Civil Engineering*, Vol. 42(1).
- McCutcheon, R T 2001. An Introduction to Employment Creation in Development and Lessons Learned from Employment Creation in Construction. *Urban Forum, Special Issue: WORK 2001, First International Conference on Employment Creation in Development*, Vol. 12(3-4): 263-278.
- Croswell J A and McCutcheon, R T 2001. Small Contractor Development and Employment - A Brief Survey of Sub-Saharan Experience in Relation to Civil Construction. *Urban Forum, Special Issue: WORK 2001, First International Conference on Employment Creation in Development*, Vol. 12(3-4):365-379.
- Rankine, R G D and McCutcheon, R T 1999. Investigating the use of lime as an admixture to improve the performance of rubble masonry concrete mortars with particular reference to bleeding, Part One. *Concrete Beton* No. 92 (January): 7-14.

- Rankine R G D and RT McCutcheon, R T 1999. Investigating the use of lime as an admixture to improve the performance of rubble masonry concrete mortars with particular reference to bleeding, Part Two. *Concrete Beton* No. 92 (April): 12-18.
- Rankine, R G D, Ballim Y and McCutcheon, R T 1999. Strength, variability and failure mechanisms of rubble masonry concrete under compressions. *Journal of the South African Institution of Civil Engineering*, Vol. 41(2) (Second quarter): 12-19.
- Rankine, R G D, Gohnert, M and McCutcheon, R T 1998. Proposed guidelines for the design of rubble masonry concrete arch bridges. *Journal of the South African Institution of Civil Engineering*, Vol. 40(3)(Third quarter): 9-16.
- Rankine, R G D, Peters, E M and McCutcheon, R T 1998. Estimating the human energy cost to mix mortar manually. *Concrete Beton*, No. 90: 7-16.
- McCutcheon, R T 1995. Employment creation in public works: Labour-intensive construction in sub-Saharan Africa: The implications for South Africa. *Habitat International*, Vol. 19(3): 331-355.
- Phillips, S D, McCutcheon, R T, Emery, S J, Little, R and Kwesiga, M B 1995. Technical analysis of the employment creation potential of the national public works programme. *Journal of the South African Institution of Civil Engineers*, 37(3): 18-24.
- Phillips, S D, PN Delius, and RT McCutcheon, R T 1995. Planning labour-intensive employment creation programmes for the short term. *Development Southern Africa*, Vol 12(2)(April): 237-247.
- McCutcheon, R T 1994. A review of recent developments in labour-intensive construction in South Africa. *Journal of the South African Institution of Civil Engineers*, Vol. 36(3)(fourth quarter).
- Phillips, S D, McCutcheon R T and Meyer, D 1993. Comparative strength parameters of waterbound macadam basecourses and crushed stone basecourses. *Journal of the South African Institution of Civil Engineers*, Vol. 35(3)(Third quarter): 13-15.
- McCutcheon, R T 1992. Industrialised House-building 1955 to 1977: Science Technology and the State in the provision of low-income accommodation. *Social Studies of Science*, Vol. 22: 353-371.
- McCutcheon, R T 1992. Botswana: A description of a district roads labour-intensive improvement and maintenance programme. *Development Southern Africa*, Vol. 9(3)(August): 269-294.
- Phillips, S D, Meyer, D and McCutcheon, R T 1992. Employment creation, poverty alleviation and the provision of infrastructure: Lessons from the construction of municipal services in Ilings. *Urban Forum*, Vol. 3(2).
- McCutcheon, R T 1991. Socio-political dimensions in civil engineering education at the University of the Witwatersrand. *The Bulletin of Science Technology and Society*, Vol. 11(3): 138-143.
- McCutcheon, R T 1991. The main findings of the District Roads Pilot Project in Botswana and the implications for South Africa. *Development Southern Africa*, 8(5): 149-170.
- McCutcheon, R T 1990. Modern Construction Technology in Low-income housing policy: The case of industrialised building and the manifold links between technology and society in an established industry. *History of Technology*, Vol. 12: 136-176.
- McCutcheon, R T 1990. Labour-intensive road construction and maintenance in Africa: an introduction. *The Civil Engineer in South Africa*, 32(11): 483-491.
- McCutcheon, R T 1990. The Role of Industrialised Building in Low-income housing policy in the United States of America. *Habitat International*, 14(1): 161-176.
- McCutcheon, R T 1989. Labour-intensive road construction in Africa. *Habitat International*, 13(4): 109-123.
- McCutcheon R T 1989. Industrialised House Building in the UK: 1965-1977. *Habitat International*, 13(1):33-64.

- McCutcheon, R T 1989. The Role of Industrialised Building in Low-income housing policy in the Soviet Union. *Habitat International*, 13(4): 43-61.
- McCutcheon, R T 1988. The District Roads Programme in Botswana. *Habitat International*, 12(1): 23-30.
- McCutcheon, R T 1988. Industrialised Housebuilding 1956-1976. *Habitat International*, 12(1): 95-104.
- McCutcheon, R T 1988. Major Participants in the UK (Industrialised) Building Industry 1964-1977", *Habitat International*, 12 (1) (July): 105-116.
- McCutcheon, R T 1988. Technical and Economic Efficiency in the UK (Industrialised) Building Industry 1965-1977. *Habitat International*, 12 (1) July): 117-128.
- McCutcheon, R T 1988. The Botswana District road labour-intensive improvement and maintenance programme - A summary. *Development Southern Africa*, 5(3): 383-92.
- McCutcheon R T 1988. The District Roads Programme in Botswana. *Habitat International*, 12(1): 23-30.
- McCutcheon, R T 1985. *District Roads Labour-intensive Road Construction and Maintenance Programme, Final Report CTP 17*. Geneva: International Labour Organisation (ILO), September: 108pp.
- McCutcheon, R T 1985. Donkey-drawn haulage in labour-intensive road construction. *Appropriate Technology*, 11(4): 28-30.
- McCutcheon, R T 1985. *The use of donkey-drawn carts in labour-intensive road construction in Botswana CTP 42*. Geneva: ILO, February: 57pp.
- McCutcheon, R T 1982. *Strengthening the domestic technological capacity of developing countries: sectors and areas of critical importance. Technology, development and environment: a case study of two resettlement programmes in Hamadan, Iran. Trade and Development Board, Committee on Transfer of Technology Fourth Session, Geneva 29 November, 1982 Item 3 (a) (ii) of the provisional agenda*. Geneva: UNCTAD, October 1982: 23pp and annex 9pp.
- McCutcheon, R T 1980. Social and Environmental Factors in a Labour-Intensive Road Building Programme, Iran. *Habitat International*, 5(3/4): 361-393.
- McCutcheon, R T 1980. Social and environmental factors: Lessons from Iran, Chapter 9 in GA Edmonds and JDFG Howe (Eds), *Roads and Resources - Appropriate Technology in Road Construction in Developing Countries A study prepared for the International Labour Office within the Framework of the World Employment Programme*. London: ITDG: 166-191.
- Ball, M, Drewer, S, Lansdell, H and McCutcheon, R T 1979. *Labour Mobility Study, The Employers Perspective A Research Report prepared for the Department of the Environment*. London: University College London, Building Economics Research Unit, 1979.
- Alward, R and McCutcheon, R T 1977/78. Bottlenecks in the adoption of Appropriate Technology in road construction and housing. *Communications and Development Review*, Communications and Development Institute, Tehran, Vol.1(4), Winter 1977/78.
- McCutcheon, R T 1975. Technical change and social need: the case of high flats. *Research Policy*, 4: 262 - 89.
- McCutcheon R T 1975. High flats in Britain, 1945 to 1971, in M Edwards, M, Merritt S and Webster, D (Editors), *Political Economy and the Housing Question*. London, 1975: 92-103.

#### **12.4 Professional Reports for International and South African Organisations**

- McCutcheon, R and Taylor Parkins, F 2016. A critical review (of the Expanded Public Works Programme) towards improvement in Phase 3. Chapter 5 in Vaughan, Anne (Lead Editor), *Our Expanded Public Works Programme (EP: Reflections on over a decade*. SA Cities Network. ISBN No. 978-0-620-69818-4: 69-85.

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.

Padayachee-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 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, R 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 revised for publication by SAICE in 2018.

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. *Comments (on behalf of CESA and SAICE) on the Working Draft of the 3rd Edition (2014) of the Guidelines for the Implementation of Labour Intensive Infrastructure Projects under the Expanded Public Works Programme (EPWP).* 29<sup>th</sup> August. 21pp.

Member of the 7 person Expert Panel, advising the EPWP Unit, National Department of Public Works on the preparation of the third five-year phase of the EPWP (2014/15 to 2018/19): *Expanded Public Works Programme Unit's High Level Proposal for Phase 3.* November 2013.

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: Taylor Parkins, F L M, McCutcheon R T and Cole M 2009. *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 F L M and McCutcheon, R T 2007. *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.

McCutcheon, R T 2007 and 2008. Team member, Gauteng Department of Public Transport, Roads and Works (Gautrans) / Council for Scientific and Industrial Research (CSIR). *Job creation, skills development and empowerment in road construction, rehabilitation and maintenance. A best practice manual by Gauteng Department of Public Transport, Roads and Works - Technology Development Programme Draft Version Rev 16 (All)*. October: 150pp. ([www.gautranshvs.co.za/popup/LICManualfinalOct08LRS.pdf](http://www.gautranshvs.co.za/popup/LICManualfinalOct08LRS.pdf)) (CSIR Dr W Steyn).

McCutcheon, R T 2006 and 2007. World Bank Missions: Opportunity Study for Youth Re-integration-Labour-Intensive Public Works. Opportunités de réintégration socio-économique des ex-combattants Programme National de Démobilisation, de Désarmement et de Réintégration/Rehabilitation Communautaire. 2006 – 2007. (Maurizia Tovo, World Bank, Washington). (On recommendation of Ms Tovo: in 2008: Liberia Cash for Work Employment Programme: merely telephone conversations.)

Partridge, T C, Crosswell, J A and McCutcheon, R T 2005. *Report on the extent and repair of erosional damage in the proposed Braamhoek biosphere using labour-intensive methods; Contract No. 4600010672*. Johannesburg: Partridge/EIEC. May 2005: 22pp and 11 Appendices.

McCutcheon, R, Quainoo, H, Fitchett, A and Lieuw Kie Song, M R 2004. *An Overview of the South African Construction Sector in 2003*. Prepared for NALEDI January: 60 pp and two Appendices: 23pp.

McCutcheon R T 2003. *An interim assessment of the job creation component of the Gauteng Department of Public Transport, Roads and Works” derived from the evidence provided in the following documents: ‘Gauteng Provincial Government Budget Statement 2003 / 2004’ and ‘Gauteng Provincial Legislature Public Transport, Roads and Works Committee*.

*Discussion Documents for Budget Vote 9 Financial Year 2003 / 2004. Member authorising distribution Mr C G Tsotetsi*, 8th May 2003: 5pp and 1 Appendix: 8pp.

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- McCutcheon, R T 1988. Labour-intensive road construction and maintenance: the implications for South Africa of other sub-Saharan experiences. *Developing Countries - Civil Engineering and Transportation. Eighth Quinquennial convention of SAICE/ 1988 Annual Transportation Convention, Financing and Management of Road Resources*, Vol.4C: 3.1-22. (Pretoria: Organizing Committee, SAICE-ATC88- S443CSIR)
- Stephenson D and McCutcheon R T 1988. Labour-intensive road construction and private contractors. *Developing Countries - Civil Engineering and Transportation. Eighth Quinquennial Convention of SAICE/1988 Annual Transportation Convention, Construction*, Vol. 2B: 3.1-12. (Pretoria: Organizing Committee SSAICE-ATC88- S443CSIR)
- McCutcheon R T 1981 to 1987: Several Lectures on LIC in Eastern and Southern Africa, including at the University of Nairobi and the *first* Engineers' Training Course on Labour-intensive Construction convened at the Kisii Training Centre (Kenya) in July 1987 and the *Road Maintenance Course* for the Eastern and Southern African Management Institute (ESAMI), Arusha, Tanzania.

McCutcheon, R T 1981. The District Pilot Project of Labour-Based Road Construction and Maintenance – Serowe. *Proceedings of the Drought Evaluation Consultancy Seminar Gaborone 12-14 May 1981*. Gaborone: Ministry of Local Government and Lands, May: 26-28.

Alward, R and McCutcheon R T 1978. The integration of traditional housing and community amenities with non-traditional sources of energy. *Proceedings of the Regional Co-operation for Developing, Seminar on Appropriate Technology, Tehran, October 3-4 1977*. Tehran: Centre for Science Policy, Institute for Research and Planning in Science and Education: 123-139.

Harper, P and McCutcheon, R T 1978. Cultural factors in the adoption of appropriate technologies. *Ibid*: 102-107.

McCutcheon, R T 1977. The effect of social and environmental factors upon the initiation and implementation of labour-intensive road building programme. *Report of ILO/SIDA/ADB Seminar on the application of Appropriate Technology in Road Construction and Maintenance. Manila 16-27 May 1977*. Part II Technical Papers. Geneva, ILO: 95-134.

### **Other: Important**

McCutcheon R T 1972. *High flats in Britain, 1945 to 1971: factors affecting their use by Local Authorities and some of the implications*. University of Sussex: MSc, 1972, 141pp. (Professor R Macleod, Founder of Subject Group, History and Social Studies of Science in the School of Mathematical and Physical Sciences, University of Sussex)

McCutcheon R T 1979. *Modern Construction Technology in Low Income Housing Policy: The case of Industrialised Building*. University of Sussex: D Phil Thesis, 1979, 604pp. (Supervisor: Professor C Freeman, Director, Science Policy Research Group (SPRU), University of Sussex)

Full CV contains internal reports and other minor items.

## **13. 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.** Titles in full CV.

In association with the University of Twente, the Netherlands & Others: MSc: 40. Titles in full CV.

### **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 Supervisory Details: 2013 to 2018**

#### **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.*

### **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.*

### **Dlamini MR. Ms (2015)**

*An investigation of the challenges faced by emerging contractors in KwaZulu-Natal Province.*