

# Road Construction & Compaction Fundamentals

VENUE: Hilltops Council, 189 Boorowa Street Young NSW 2594

DATE: 14 & 15 May 2019

IPWEA Member Price: \$1,350 Non Member: \$1,600

Excl. GST and catering (Lunch, M/A Teas) & Notes



IPWEA (NSW)  
Roads & Transport  
Directorate

## course overview (2 days) 2019 | In conjunction with IPWEA (NSW)

This Course provides information on the necessary planning and management of Road Construction, together with an overview of the resources and the necessary elements required in planning and managing investigation works prior to commencement of major site works in road construction.

The course looks at Preliminary Site Investigations and at the construction of a road to the alignment, gradient and cross falls selected by the designer that often involve a considerable amount of earthworks. The necessary operations for the setting out, and control of earthworks operations are described and elaborated on together with a brief outline of the elements involved in geometric design. Note that the establishment of control lines and bench marks are specialised survey operations that are not covered in this Course.

The Course provides an understanding of the operations involved in the loosening, removing and depositing of earth, soil and rock and information on the construction of earthworks and the preparation of pavement foundations subsequent to the construction of a pavement structure. The aspect of Roadsides is also covered as they provide an important range of functions, including: access for the construction and maintenance of the road, control of surface water drainage, the provision of underground drainage, the provision of safety barriers, signs and lighting for the safe operation of the road. Worked examples and case studies are used throughout to facilitate practical learning.

## topics

- Opening and Introduction to Road Construction
- Road Structure & Geometric Attributes
- Preliminary Investigations & Evaluations
- Pavement Design Principles
- Pavement Construction Methods
- Achieving Compaction
- Setting Out
- Earthworks & Formation Preparation
- Pavement Materials
- Environmental Issues & Drainage
- Testing Protocols
- Roadsides

## primary presenter

Geoff Webb, Principal, GR Webb Consulting Pty Ltd

Geoff is the Principal of an independent Tasmanian based consultancy providing technical services in Pavement Technology, Infrastructure Asset Management and Maintenance Management. The Company also delivers training in Pavement Management Systems, Road Condition Assessment, and Asset Management & Maintenance Management Systems.

Please refer to our [website](#) for more details on Presenters!

The following Austroads Guide is used as the key reference.

Guide to Road Design

Part 1: Introduction to Road Design

Part 6: Roadside Design, Safety & Barriers

Part 6B: Roadside Environment



# Presenters Profile

## Geoff Webb, Principal, GR Webb Consulting Pty Ltd Course Primary Presenter

Geoff is the Principal of an independent Tasmanian based consultancy providing technical services in Pavement Technology, Infrastructure Asset Management and Maintenance Management. The Company also delivers training in Pavement Management Systems, Road Condition Assessment, and Asset Management & Maintenance Management Systems.

Prior to establishing the consultancy in 1996, Geoff was the Technical and Quality Manager for Roadways Pty Ltd, (1986-1996), and has over twenty years' experience in the civil construction industry, specialising in pavements and surfacing, having held various technical positions in the resources and construction industry sector. Between 1998 and 2008 GR Webb Consulting was commissioned as Maintenance Auditor for the Maintenance Contractor for the Tasmanian Long Term Performance Based Road Maintenance Contract for the Tasmanian State Government. The company was also engaged as Consultant Pavement Engineer providing network analysis, pavement investigation and treatment selection and design services.

Geoff is a member of the Road Engineering Association of Asia and Australasia, REAA. He is a member of the Institute of Public Works Engineering Australia, IPWEA, and is a Consultant Supporter of the IPWEA National Asset Management Strategy (NAMS.AU) committee. He is an ARRB Associate with ARRB Group Ltd serving in Tasmania and is a member of the Australian Asphalt Pavement Association, AAPA. Geoff has contributed to Standards Australia committees, and has held NATA signatory positions.

## CPEE Professional Development (CPD)

This course, with content based on the relevant CPEE postgraduate distance learning study Unit is facilitated and delivered by recognised practitioners in the field and is of such technical content that the number of hours involved should be fully acceptable toward Continuing Professional Development (CPD) standing.



## Organisers & Endorsements

**Centre for Pavement Engineering and Education (CPEE):** This course is presented by CPEE, a non-profit, specialist higher education private provider (roads, pavements & infrastructure asset management), founded by AUSTRROADS and the Australian Asphalt Pavement Association (AAPA). CPEE offers Graduate Certificate, Bachelor of Engineering (Honours) and Master of Technology qualifications in roads, pavement engineering and infrastructure asset management, and has formal links to the University of Tasmania.

## Course Size, Enquiries & Management

Due to its practical nature, numbers are limited for this course so it is advisable that you register quickly to avoid missing out. Its unique and targeted content means this course is unlikely to be offered again in this location for some time.

## Course is supported by



# PROGRAM - customised

Day 1	8.00am – Course Registration	Day 2	
8.15am	Course Start	8.00am	Start Day 2
0	Setting the Scene	6B	Materials
1	Introduction to Road Construction	7	Pavement Design Principles
2	Road Structure & Geometric Attributes		
10.00am	Morning Tea	9.45am	Morning Tea
3	Preliminary Investigations & Evaluation	8	Pavement Construction methods
12.00pm	Lunch	12.00pm	Lunch
4	Setting Out	9	Achieving Compaction
5	Earthworks & Formation Preparation	10	Testing protocols
2.15pm	Afternoon Tea	2.30pm	Afternoon Tea
6A	Environmental Issues & Drainage	11	Roadsides
A	Case Studies & Review of Day 1	B	Case Studies & Open Forum Review
4.00pm	Close	4.00pm	Close

\*program subject to change

## Course is supported by:

**REAAA:** The Road Engineering Association of Asia and Australasia – Australian Chapter serves to develop technical, professional and commercial links within and between countries in the Pacific region. REAAA has some 1000 members in 26 countries in Asia and Australasia.

**Roads Australia:** Roads Australia is a not-for-profit, non-political industry association. Members are drawn from all corners of the Australian road sector, and we champion the interests of a vital national asset - Australia's road transport system - and provide a forum for policy development, networking and communication. Further, we seek to draw attention to the importance of Australia's road network to the economic and social fabric of the nation, and to ensure that information and decision-making in relation to roads and road transport is well informed and reflects an appropriate level of priorities.

**SRA:** State Road Agencies are responsible for the management of the road network, which includes planning, designing, construction and maintaining road use through registering vehicles, licensing drivers and traffic management, and providing information and other road user services. SRAs also provide quality assured integrated investigation, testing and design services in the pavement technology and geotechnical engineering disciplines, and provides support to CPEE in developing expertise and undertaking education in all aspects of the flexible pavements industry.

**Austroads:** Austroads is the peak organisation of Australasian road transport traffic agencies. Austroads members are the Australian state and territory road transport and traffic authorities, the Department for Infrastructure, Transport, Regional Development and Local Government, the Australian Local Government Association (ALGA), and the New Zealand Transport Agency. Austroads members are collectively responsible for the management of over 900,000 kilometres of roads valued at more than \$250 billion representing the single largest community asset in Australia and New Zealand.

**AustStab:** The Australian Stabilisation Industry Association is a national organisation set up to educate and inform the civil engineering industry of the environmental and economic advantages of road recycling and all types of stabilisation. Its members are contractors, binder suppliers, government road authorities and plant manufacturers.

**IPWEA:** The Institute of Public Works Engineering Australia is a professional organisation providing member services and advocacy for those involved in and delivering public works and engineering services to the community. Previously known as the Institute of Municipal Engineering Australia (IMEA), the organisation has expanded its traditional local government engineering focus to public works and thereby covering all levels of government and private practice.



# List of CPEE Short Courses

- **Fundamentals Road Construction**  
- materials & practices - (2 days)
  - **Road Design**  
- the geometric design fundamentals - (1 day)
  - **Rural Road Surfacing**  
- unsealed & sealed - (3 days)
  - **Unsealed Roads in Rural Environments – Workshop** - (1.5 days)
  - **Understanding Pavement Defects & Maintenance Options**  
- flexible pavements visual inspection & issues - (1.5 days)
  - **Pavement Surface Treatments**  
- evaluating & design - (2 days)
  - **Pavement Maintenance Essentials** - (1 day)
  - **Maintenance & Rehabilitation**  
- understanding & evaluating options - (2 days)
  - **Pavement Recycling & Stabilisation** - (2 days) and (1 day option)
  - **Understanding Sprayed Seals & Their Design** - (2 days)
  - **Flexible Pavement Design**  
- principles & practices - (2 days)
  - **Mechanistic Pavement Design – CIRCLY** - (1 day)
  - **Advanced Flexible Pavement Design** - (1 day)
  - **Haul Road Design** - (1 day)
  - **Concrete Pavement Design & Construction** - (2 days)
  - **Introduction to Concrete Pavement Construction Management** - (1 day)
  - **Contract Management & Administration Fundamentals**  
- project delivery - (2 days)
  - **Public Space Lighting for Community Safety Workshop** - (1 day)
  - **Road and Public Space Lighting Workshop** - (2 days)
- Water Issues in Road Design, Construction & Maintenance**  
- workshop - (1 Day)

Details on the above available via:

[CPEE Short Courses](#)



Centre for Pavement  
Engineering Education



IPWEA (NSW)  
Roads & Transport  
Directorate

## For more information:

Admin		Patricia		patricia@pavementeducation.edu.au
Content		Kym Neaylon		kym@pavementeducation.edu.au
Contact		Tel: +61 3 9890 5155		www.pavementeducation.edu.au

## Cancellation Policy:

- ▶ Cancellations made 10 working days or more prior to the events start date: Full refund.
- ▶ Cancellations within 9-5 working days of the event start date: 50% refund.
- ▶ Cancellations less than 5 working days of the events start date or after the event has started: No refund.

If you are unable to attend this event a substitute attendee may take your place, without penalty. CPEE reserves the right to cancel or reschedule any course, whereby a full refund or course transfer will be provided.