

# TRAININGTALK

TRAINING NEWS FROM THE NEW ZEALAND INSTITUTE OF HIGHWAY TECHNOLOGY JULY 2017

NZ Transport Agency & NZIHT

## 18<sup>th</sup> ANNUAL CONFERENCE

6<sup>th</sup> - 8<sup>th</sup> November 2017 Trinity Wharf, Tauranga

# Stand & Deliver

Making the customer the centre of thinking for the operation of New Zealand roads.

## CALL FOR PAPERS

Closing Date **5pm, Monday 31st July 2017**

We are moving towards a funding model for Maintenance and Operations for roads which places customers and stakeholders at the centre of our thinking. We are giving them certainty about the quality of the network and we are giving ourselves a robust method for assessing the quality of our roads and funding them accordingly.

In the past, much of our road work was driven by the squeaky wheels and embedded maintenance schedules. Thinking about the customer experience and placing that at the centre of our business model is a big culture shift for many, but it will ultimately lead to greater consistency in our work, and most importantly, better value and service for all New Zealanders.

To help achieve these outcomes an evidence based business case approach to investment in Maintenance and Operations of New Zealand roads is required by Road Controlling Authorities.

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For a list of topics please visit [www.nziht.co.nz](http://www.nziht.co.nz) or email [jill@nziht.co.nz](mailto:jill@nziht.co.nz) phone **06 7597065 Ext 709**

### What's Inside

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#### SHORT COURSES

Survey & Set Out  
Tendering for Projects  
Supercharged Supervisor Toolkit  
Managing Infrastructure Affected by Rivers  
Tendering for Projects  
Geomechanics for NZ Rooding  
Geometric Design for Roads  
Supercharged Supervisors Toolkit  
Successful Project Management  
Compaction - Operator Knowledge  
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3 Applying Bitumen Emulsions and  
3 Polymer-Modified Binders

Road Lighting Course A -  
to AS/NZS 1158  
Road Lighting Course B -  
Design Training  
**CONTACT Jan Kivell**

#### COURSE CALENDAR & REGISTRATION

July - September 2017  
Registration Form



Training recently held in Vanuatu.

## SURVEY AND SET OUT – STAGE 1 **ONE DAY**

**PRESENTER** Steve Parker

**This is a practical course that excites and enables all field staff to read and interpret plans and assist with survey and setting out activities.**

The course gives a strong emphasis on understanding construction plans, dimensions, datums, survey marks, accuracies, elevations and layouts to enable all participants to confidently appreciate the works scope and detail. Basic measurements, offsetting and marking out for construction works are discussed and demonstrated. Understanding with field exercises using levelling equipment and level reductions to establish design heights gives field staff new skills.

### DATES

<b>CHRISTCHURCH</b>	24 July
<b>NELSON</b>	28 July
<b>HAMILTON</b>	11 August
<b>PALMERSTON NORTH</b>	17 August
<b>AUCKLAND</b>	15 September
<b>INVERCARGILL</b>	29 September

### FOR MORE INFORMATION CONTACT

**Lisa Banks.** 📧 [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz) 📞 06 759 7065 ext 705.

## TENDERING FOR PROJECTS UNDERSTANDING THE PROCESS **1 DAY**

**PRESENTER** Fiona Knight

Winning contracts and evaluating tenders is essential to the continuing viability of any contractor/client. It involves an understanding of the issues and requirements of the procurement stage but also the skills and ability to structure the tender not just to be successful but to increase profits as well.

### DATES

<b>WELLINGTON</b>	19 July
<b>WHANGAREI</b>	27 July
<b>ROTORUA</b>	10 August
<b>AUCKLAND</b>	25 August
<b>CHRISTCHURCH</b>	27 September

### FOR MORE INFORMATION CONTACT

**Lisa Banks.** 📧 [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz) 📞 06 759 7065 ext 705.

## PAVEMENT SURFACING **1 DAY**

**PRESENTER** Glynn Holleran

This one day course will outline and identify the multiple types of surfacing currently in use, the variety of materials used in maintaining these pavements, as well as design, equipment use and surfacing type selection. Asphalt and Chipseal practices will be covered at length including cutting and preparation, along with procedures for patching both of these surfacing types.

### DATES

<b>CHRISTCHURCH</b>	9 August
<b>AUCKLAND</b>	1 September
<b>PALMERSTON NORTH</b>	22 September

### FOR MORE INFORMATION CONTACT

**Jan Kivell.** 📧 [jan@nziht.co.nz](mailto:jan@nziht.co.nz) 📞 06 759 7065 ext 708.

### CONTACT INFORMATION

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**Hamilton Office**  
P. 07 850 8330 F. 07 850 8329

**[www.nziht.co.nz](http://www.nziht.co.nz)**

**Conferences & Specialist Workshops**  
Jill Warner – [jill@nziht.co.nz](mailto:jill@nziht.co.nz)  
ext 709

### Short Courses

Lisa Banks – [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz) ext 705  
Jan Kivell – [jan@nziht.co.nz](mailto:jan@nziht.co.nz) ext 708

### Degree & Diploma

Jill Warner – [jill@nziht.co.nz](mailto:jill@nziht.co.nz) ext 709

### The Diploma of Engineering (Civil)

Gerhard van der Westhuizen –  
[gerhard@nziht.co.nz](mailto:gerhard@nziht.co.nz)  
May Osborne – [may@nziht.co.nz](mailto:may@nziht.co.nz)

**NZ Certificate in Infrastructure Works  
(Level 2) + (Level 3)**  
Jan Kivell – [jan@nziht.co.nz](mailto:jan@nziht.co.nz)

NZIHT operates as an independent company with  
the Western Institute of Technology at Taranaki  
as the sole shareholder.



# BITUMEN RHEOLOGY AND PERFORMANCE

## 1 DAY

**PRESENTER** Glynn Holleran

**Bitumen is the primary sealing material used in New Zealand roads which comes in various grades and may be modified with polymers or other materials. Before 2016 bitumen was graded according to empirical consistency measures with no reference to traffic, shear or climate. Modified Binders too have been classified by empirical tests.**

The volumes of traffic in New Zealand are increasing all of the time, and this combined with the heavier trucks on our roads means that we need to ensure the effectiveness and longevity of the bitumen and PMBs we use every day.

In the 1990s the USA introduced performance bitumen – PG grades, and now New Zealand has also moved in this direction. This specification recognizes that the rheological properties of binders are key to its performance in either asphalt or sealing.

It is essential that those designing and constructing surfacing and structural asphalt layers have a good understanding of the

NEW  
COURSE

material rheological properties to select the correct binder and design the final product and handle it correctly.

This course introduces the concepts of rheology and shows how they relate to performance in asphalt and seals. This is related to the design of asphalt and selection of sealing grades. The new asphalt specification is discussed and how the testing is done, reported and controlled.

### DATES

<b>CHRISTCHURCH</b>	13 July
<b>AUCKLAND</b>	8 August

### FOR MORE INFORMATION CONTACT

**Jan Kivell.** 📧 [jan@nziht.co.nz](mailto:jan@nziht.co.nz) 📞 06 759 7065 ext 708.

# BITUMEN AND CHEMICAL SAFETY IN A CIVIL ENGINEERING LABORATORY

## 1 DAY

**PRESENTER** Glynn Holleran

**Engineering laboratories carry out testing on asphalt and binders. The use of hot materials is always a potential for hazard. Often as civil engineering does not require handling of small amounts of materials bitumen and chemical safety is handled by teaching operational procedures and needs, these are often either inappropriate or cumbersome in a laboratory.**

Chemicals are also used in civil laboratories and their specific requirements and safe handling needs can be lost. SDS are designed mostly for larger scale usage of the product. Increasingly specialized testing has introduced new hazards. This course looks at use of bitumen and chemicals from a laboratory perspective.

- Storage of Solvents
- Laboratory heating and handling of bitumen including lab PPE
- Storage of Bitumen
- Laboratory handling of common solvents and the risks long and short term including lab PPE
- Laboratory handling of common chemicals and the risks long and short term
- Storage of Chemicals

### DATES

<b>AUCKLAND</b>	4 July
<b>CHRISTCHURCH</b>	11 July
<b>PALMERSTON NORTH</b>	18 July
<b>HAMILTON</b>	25 July

### FOR MORE INFORMATION CONTACT

**Jan Kivell.** 📧 [jan@nziht.co.nz](mailto:jan@nziht.co.nz) 📞 06 759 7065 ext 708.

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# APPLYING BITUMEN EMULSIONS AND POLYMER-MODIFIED BINDERS

## 2 DAYS

**PRESENTER** Phillip Muir

Bitumen emulsions for chipsealing offer some significant advantages over hot bitumen cutbacks in terms of safety, total energy use, greenhouse gas emissions and reduced risk in damp and cool environments.

Polymer-modified binders (PMB's) extend the range of engineering materials available to contractors and designers to solve many of the practical road-surfacing problems that arise due to such things as cracked pavements, high surface stresses and wide temperature ranges.

### DATES

<b>CHRISTCHURCH</b>	16 August
<b>AUCKLAND</b>	30 August
<b>WELLINGTON</b>	21 September

### FOR MORE INFORMATION CONTACT

**Jan Kivell.** 📧 [jan@nziht.co.nz](mailto:jan@nziht.co.nz) 📞 06 759 7065 ext 708.



# MANAGING INFRASTRUCTURE AFFECTED BY RIVERS

## 1 DAY

**PRESENTER** Kyle Christensen

The effective maintenance of a roading network is very dependent on managing the risks associated with erosion and inundation from rivers and streams. This workshop will provide an overview of river and stream processes, hydrological and hydraulic analysis tools, risk management techniques and an outline of protection options.

### DATES

TAURANGA	19 July
CHRISTCHURCH	17 August
PALMERSTON NTH	26 September

### FOR MORE INFORMATION CONTACT

Lisa Banks. [lisa@nzihl.co.nz](mailto:lisa@nzihl.co.nz) 06 759 7065 ext 705.



# GEOMECHANICS FOR NEW ZEALAND ROADING

## 1 DAY

**PRESENTER** Ian Anderson

This course draws together the necessary soil investigation and geotechnical procedures for roading construction and maintenance. The course provides an up-to-date overview of investigative techniques and analysis.

### DATES

TAURANGA	4 July
CHRISTCHURCH	20 July
WHANGAREI	28 August
PALMERSTON NTH	13 September
AUCKLAND	20 September
INVERCARGILL	28 September

### FOR MORE INFORMATION CONTACT

Lisa Banks. [lisa@nzihl.co.nz](mailto:lisa@nzihl.co.nz)  
06 759 7065 ext 705.

# GEOMETRIC DESIGN FOR ROADS 2 DAYS

**PRESENTER** Quintin Dettling

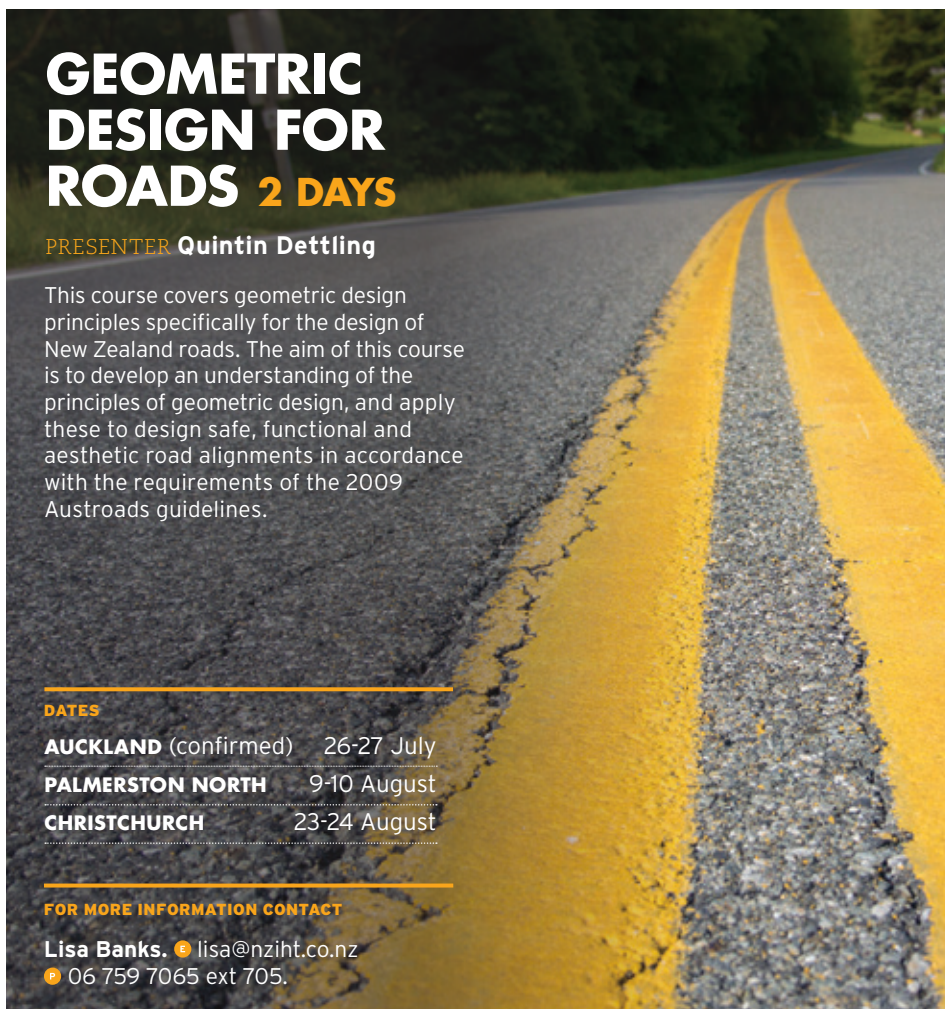
This course covers geometric design principles specifically for the design of New Zealand roads. The aim of this course is to develop an understanding of the principles of geometric design, and apply these to design safe, functional and aesthetic road alignments in accordance with the requirements of the 2009 Austroads guidelines.

### DATES

AUCKLAND (confirmed)	26-27 July
PALMERSTON NORTH	9-10 August
CHRISTCHURCH	23-24 August

### FOR MORE INFORMATION CONTACT

Lisa Banks. [lisa@nzihl.co.nz](mailto:lisa@nzihl.co.nz)  
06 759 7065 ext 705.





# ROAD LIGHTING COURSE A – TO AS/NZS 1158

**1 DAY** (with optional night tour)

**PRESENTER** Graeme Culling and Geoff English

This one day course covers the series of AS/NZS 1158 Standards for Lighting for Roads and Public Spaces. The design of lighting for vehicle and pedestrian road users is covered as well as historical reasoning behind “why we light roads”. It allows users to gain full advantage from the broad guidance the standards now provide.

The course will cover the elements of good road lighting design for all parts of the road network using the computer techniques specified in the standard.

## DATES

CHRISTCHURCH	1 August
HAMILTON	22 August
DUNEDIN	5 September
AUCKLAND	26 September

# ROAD LIGHTING COURSE B – DESIGN TRAINING

**1 DAY** (with optional night tour – previous evening)

**PRESENTER** Graeme Culling

This Road Lighting Design Training course provides practical guidance for those involved in the detail of design process. Road Lighting Design is a skill that is essential for Asset owners of Road Lighting (Road Controlling Authorities, Councils and NZ Transport Agency) to have ready access to. The course concentrates of the design methodology for roads lit to both Category V and P – but also covers public space lighting, lighting of pedestrian crossings and tunnel lighting principles. This one day design course builds on the NZIHT Road Lighting Course A. It covers the design methodology of the series of AS/NZS 1158 Lighting Standards and covers relevant material from the “right light” project.

## DATES

CHRISTCHURCH	2 August
HAMILTON	23 August
DUNEDIN	6 September
AUCKLAND	27 September

For more information contact Jan Kivell. ✉ [jan@nziht.co.nz](mailto:jan@nziht.co.nz) ☎ 06 759 7065 ext 708.

# SUPERCHARGED SUPERVISORS TOOLKIT 1 DAY

**PRESENTER** Megan Dawson

**Get the job done, on time, to specifications and to budget. This requires Supercharged Supervisory skills.**

This highly interactive one day course will address four essentials to the supervisor.

- What you have to BE
- What you have to KNOW
- What you have to DO
- What you have to LEARN

## DATES

WELLINGTON	11 July
CHRISTCHURCH	13 July
ROTORUA	19 July
AUCKLAND	26 July
NEW PLYMOUTH	9 August

## FOR MORE INFORMATION CONTACT

Lisa Banks. ✉ [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz)  
☎ 06 759 7065 ext 705.

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# SUCCESSFUL PROJECT MANAGEMENT 2 DAYS

**PRESENTER** Steven Briggs

The pace of change means that more and more inexperienced people are being asked to lead projects. The deadlines are often very close; the available resources are limited; and the stresses brought on by the pressure to succeed are intense. We've distilled the wisdom and experience of project managers into a simple six-step approach to leading a successful project. We'll help you learn it effortlessly in our highly interactive two day course. It's a practical approach that is easy to apply to any situation.

## DATES

WELLINGTON (confirmed)	12-13 July
AUCKLAND (confirmed)	18-19 July
INVERCARGILL (confirmed)	20-21 July
CHRISTCHURCH	9-10 August

## FOR MORE INFORMATION CONTACT

Lisa Banks. ✉ [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz)  
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## COMPACTION – OPERATOR KNOWLEDGE

HALF DAY

NEW  
COURSES

PRESENTER **Stu Moulding** (Civiltrain)

**This interactive classroom based course is now seen as a benchmark course in the industry and is often referred to simply as ‘the compaction course’.**

This course is more than what it seems. There is no waffle – just good sensible training. With decent information on materials (and how to fix up bad materials), compaction gear, gear selection, knowing when to stop, plus a good swag of tricks of the trade to make life easier for your field staff. This course will deliver very positive results for your staff.

We constantly hear that after attending this course, field staff have a better appreciation of what it is they are trying to achieve, how best to achieve it, communicating what they are doing with both the public and engineers, and most importantly, reduced remedials.

### SOME TOPICS INCLUDE

- What compaction is
- Sources and types of compaction
- Granular materials (river-run and pit-run)
- Cohesive materials (clay and silt)
- Important field tests to ensure best practice

## COMPACTION – ADVANCED KNOWLEDGE

HALF DAY

**This interactive classroom based course is a considerable leap above the Compaction – Operator Knowledge course. This is aimed at technical staff such as contracts engineers, graduate engineers etc.**

The aim of this course is to give the candidate confidence, especially when engaging with other technical staff. We have an in-depth look at materials and their properties, lab and field testing (and in particular, what the numbers mean, and how best to interpret them), soil mechanics, and how to apply all of this to a typical roading contract.

### SOME TOPICS INCLUDE

- What compaction is and the consequences of poor compaction
- Materials used in NZ
- NZ geology and its impact on construction materials
- Soil mechanics including density (OMC/MDD), solid density, air voids, CBR and shear strength

#### DATES

<b>WELLINGTON</b>	15 August
<b>AUCKLAND</b>	29 August
<b>CHRISTCHURCH</b>	7 September
<b>WHANGAREI</b>	20 September
<b>PALMERSTON NTH</b>	27 September
<b>HAMILTON</b>	3 October
<b>DUNEDIN</b>	10 October

#### FOR MORE INFORMATION CONTACT

**Lisa Banks.** [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz) 06 759 7065 ext 705.

## NUCLEAR DENSITY METER (NDM) – WHAT YOU NEED TO KNOW

HALF DAY

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COURSES

PRESENTER **Stu Moulding** (Civiltrain)

**This interactive classroom based course is aimed at anyone who is using the Nuclear Density Metre (NDM), or whose work may be affected by the NDM. In this half day course we cover all you need to know about the NDM. You will also learn some handy tricks about best practice use, storage and transportation.**

These are radioactive devices at the end of the day, so there are some rules and regulations around their use, storage and transport. We will also cover off many other technical aspects of Nuclear Density Metre (NDM) usage, troubleshooting, and issues with laboratory benchmark tests (e.g. Proctor Curves, Marshall and Voidless Density tests).

### SOME TOPICS INCLUDE

- What an NDM is
- How it works
- What an NDM actually measures
- How we interpret the results
- The implications of poor NDM use
- How we store it

## NUCLEAR DENSITY METER (NDM) – LICENSE COURSE

HALF DAY

**This interactive classroom based course is designed for anyone who wishes to obtain a license to own radioactive material, such as NDM's.**

This is an easy to follow course with plenty of backup support around some other issues with owning NDM's. For example; free Radiation Safety Plan (RSP) templates to those who require them. Plus contacts within the industry around personal monitoring and wipe testing.

### SOME TOPICS INCLUDE

- Nature and sources of ionising radiation
- Biological effects of ionising radiation and radiation risks
- ICRP principles of radiation protection
- Legal framework and regulations
- Transport and storage requirements
- Radiation Safety plans

#### DATES

<b>WELLINGTON</b>	16 August
<b>AUCKLAND</b>	28 August
<b>CHRISTCHURCH</b>	8 September
<b>WHANGAREI</b>	18 September
<b>PALMERSTON NTH</b>	26 September
<b>HAMILTON</b>	3 October
<b>DUNEDIN</b>	10 October

#### FOR MORE INFORMATION CONTACT

**Lisa Banks.** [lisa@nziht.co.nz](mailto:lisa@nziht.co.nz) 06 759 7065 ext 705.

## JULY – SEPTEMBER 2017

**Aggregates for Pavement Construction**  
(1 day)

This course identifies the properties and characteristics of aggregates and systems for quarrying, storage, selection and handling, so that these properties are not altered and their quality remains consistent until placements in the pavement.

11 July	Wellington
13 July	Auckland
25 July	Christchurch
22 August	Dunedin
12 September	Palmerston North
19 September	Hamilton
Cost (excl GST)	\$450

**Applying Bitumen Emulsions and Polymer-Modified Binders** (1 day)

Refer to page 3.

16 August	Christchurch
30 August	Auckland
21 September	Wellington
Cost (excl GST)	\$495

**Asphalt Pavement Construction Essentials** (1 day)

Asphalt paving construction productivity depends on the smooth and safe running of laying operations and effective contractual relationships. It also depends on understanding the materials being dealt with. Poor construction practices often lead to defects, incorrect layer thickness and shape problems. The cost associated with rework and/or the repair of asphalt surfacing can wipe out the value of the work. Competent supervision can avoid many of these problems.

13 July	Hamilton
20 July	Wellington
Cost (excl GST)	\$520

**Asphalt Production Essentials** (1 day)

*'The safe and efficient operation of asphalt plants'*

Asphalt hot mix is a more important part of the New Zealand construction industry. As plants become more automated and controlled the emphasis on operation is firmly on safety and quality. Thorough product and plant knowledge, coupled with skilled maintenance and operational procedures is needed for the economical production of asphalt mixes from both fixed and mobile plants.

14 July	Hamilton
21 July	Wellington
Cost (excl GST)	\$520

**Bitumen – Basic Safety**  
(1 day)

It is absolutely essential that all those involved in any way with bituminous materials fully understand the significant hazards presented and the procedures used to ensure safety. This is a required awareness course for all personnel in the road surfacing industry and is presented with the aid of graphic practical demonstrations.

1 September	Auckland
19 September	Christchurch
Cost (excl GST)	\$520

**Bitumen and Chemical Safety in a Civil Engineering Laboratory** (1 day)

Refer to page xx.

4 July	Auckland
11 July	Christchurch
18 July	Palmerston North
25 July	Hamilton
Cost (excl GST)	\$520

**Bitumen – Managing the Risk** (1 day)

This is an essential risk awareness course targeted at managers, engineers and supervisors involved in managing businesses or operations that include the storage, transport and production of bituminous materials; and road surfacing works. A separate course "Bitumen – Basic Safety" is intended for all others involved in the roading industry.

11 September	Palmerston North
Cost (excl GST)	\$520

**Bitumen Plant and Tanker Operator** (1 day)

The operation of bitumen tankers, sprayers and bitumen storage and blending plants demands a basic knowledge of the properties of bitumen and associated products and adherence to strict safety procedures. This course is a "follow-on" from the awareness level Bitumen – Basic Safety course and is designed specifically for "hands-on" operators. It is a pre-requisite for the Bitumen Sprayer Operator course.

13 September	Palmerston North
21 September	Christchurch
Cost (excl GST)	\$520

**Bitumen Sprayer Operator** (1 day)

Precise and competent operation of the bitumen sprayer is essential to successful chipsealing operations. Sprayer performance is improved if operators have detailed knowledge of the principles of the chipsealing process and the appropriate skills to accurately use the equipment. Output quality is enhanced by bitumen product knowledge, adherence to safe handling procedures and careful record keeping.

14 September	Palmerston North
22 September	Christchurch
Cost (excl GST)	\$520

**Bitumen Rheology & Performance** (1 day)

Refer to page 3.

13 July	Christchurch
8 August	Auckland
Cost (excl GST)	\$520

**Bridge Inspection and Maintenance Procedures** (2 days)

Bridges are valuable assets, which must be maintained and managed if they are to remain functional at optimal cost through their design life. Natural events such as floods and earthquakes cause damage. The bridge corrosion environment can affect durability

## CALENDAR KEY

- Confirmed courses, but spaces still available.
- Potential courses still require numbers to run.
- Course is full.

and must be recognised. These areas must be addressed and appropriate maintenance carried out to ensure continued public safety as well as to maintain the asset and minimise repair costs.

13-14 September	Dunedin
Cost (excl GST)	\$795

**Bridge and Other Significant Highway Structures** (2 days)

Refer to page 6.

16-17 August	Hamilton
Cost (excl GST)	\$1,050

**Compaction – Operator Knowledge** (half day)

Refer to page 6.

15 August	Wellington
29 August	Auckland
7 September	Christchurch
20 September	Whangarei
27 September	Palmerston North
Cost (excl GST)	\$395

**Compaction – Advanced Knowledge** (half day)

Refer to page 6.

15 August	Wellington
29 August	Auckland
7 September	Christchurch
20 September	Whangarei
27 September	Palmerston North
Cost (excl GST)	\$395

**Competent Pipeline Rehabilitation** (1 day)

Lining of ruptured underground drains and ducts provides a cost effective, less disruptive method for rehabilitation of the service.

This course will provide an insight into the range of drains and service ducts that may be suitable for rehabilitation by relining. We will also be covering surveying, cleaning and assessment of failed drains and ducts, selection of rehabilitation methods and materials. Key safety aspects of materials use and installation.

19 July	Palmerston North
8 August	Tauranga
17 August	Invercargill
Cost (excl GST)	\$450

**Conflict Management Skills** (2 days)

This course will help you improve productivity and engagement. It will result in better collaboration and trust throughout teams, clients, contractors and the wider organisation. Gain effective skills to support better communications, projects and improve your working relationships.

12-13 July	Wellington
7-8 August	Dunedin
29-30 August	Auckland
6-7 September	Palmerston North
Cost (excl GST)	\$750

Calendar continued on next page >



**Construction and Maintenance of Road Drainage Systems** (1 day)

Competent supervision skills are essential in producing a final product that meets all design and specification requirements. High levels of productivity can be achieved through the effective and efficient use construction techniques, gained through a combination of knowledge, good planning and organisation skills which best utilises the resources available to the supervisor.

20 July	Palmerston North
9 August	Tauranga
18 August	Invercargill
Cost (excl GST)	\$450

**Creating a Health and Safety Culture** (1 day)

How well are you doing in creating a health and safety culture? The Health and Safety legislation puts responsibility for managing risks and potentially hazardous situations on people at all levels in workplaces, from the Board Chair to the cleaner. Many people complain: "It's not based on common sense, so how can we apply it?" Do you know what your health and safety responsibilities are?

6 July	Christchurch
24 July	Auckland
14 August	Napier
21 August	Dunedin
31 August	Wellington
Cost (excl GST)	\$450

**Effective Leadership** (2 days)

The most common reason employees give for leaving their job is their leader / manager. Failing to inspire or engage with the team results in poor performance and all the issues that generate as a result. This course will help you learn how to lead yourself and your team, focus on the important things and develop strategies for dealing with everyday events. We appreciate the time pressure that everyone works under and so we give insights into effective processes that will yield results quickly, rather than theories that are difficult to put into practice.

15-16 August	Christchurch
12-13 September	Palmerston North
21-22 September	Tauranga
Cost (excl GST)	\$995

**Environmental Risks of Construction** (1 day)

*'Preparing you with the on-site essentials'*  
Do you know the environmental risks and obligations of the construction projects? This course provides participants with a practical understanding of the environmental aspects of civil construction. Providing you the know-how to understand your legal obligations, raise environmental awareness and find workable solutions too many of the common risks on construction sites. The course is designed for anyone involved in the construction industry, including contractors, project managers, regulators and consultants.

19 July	Auckland
25 July ●	Christchurch
Cost (excl GST)	\$595

**Geomechanics for NZ Roading** (1 day)

Refer to page 4.

4 July	Tauranga
20 July ●	Christchurch
28 August	Whangarei
13 September	Palmerston North
20 September	Auckland
28 September	Invercargill
Cost (excl GST)	\$450

**Geometric Design for Roads** (2 days)

Refer to page 4.

26-27 July	Auckland
9-10 August	Palmerston North
23-24 August	Christchurch
Cost (excl GST)	\$750

**Identify, Locate and Protect Services** (1 day)

Civil construction sites are inherently dangerous places of work. Where excavations are present or where the work requires ground penetration, particularly by metal pegs, rods, stakes and the like, there is an immediate opportunity for potential conflict with existing utility services located underground.

4 July	Palmerston North
13 July	Auckland
20 July	Christchurch
9 August	Wellington
24 August	Hamilton
Cost (excl GST)	\$450

**Inspecting Roads and Establishing Maintenance Needs** (1 day)

This course provides an introduction to the methodology used to inspect and determine road maintenance needs.

19 July	Tauranga
28 July	Palmerston North
10 August	Christchurch
23 August	Auckland
30 August	Napier
5 September	Hamilton
Cost (excl GST)	\$450

**Leading High Performing Teams** (1 day)

This course is an operator's manual for people. It gives you step by step instructions on how to get the best performance out of each person. Work smarter with people and get more done. Learn how to do this in one day.

17 July	Christchurch
27 July	Auckland
22 August	Wellington
29 August	Invercargill
19 September	Tauranga
Cost (excl GST)	\$595

**CALENDAR KEY**

- Confirmed courses, but spaces still available.
- Potential courses still require numbers to run.
- Course is full.

**Level 1 Basic Traffic Controller (TC)** (1 day)

This one day course promotes safe working practices, standards and operating procedures at roadwork sites. This is the NZ Transport Agency (NZTA) Level 1 Basic Traffic Controller (TC), which covers the standards and operating procedures required by the Code of Practice for Temporary Traffic Management (COP/TTM).

This course is the pre-requisite for entry requirement for people wanting further training to Level 1 Site Traffic Management Supervisor (STMS) standard of the Code of Practice for Temporary Traffic Management.

3 July	Napier
10 July	Lower Hutt
12 July	Nelson
20 July ●	New Plymouth
24 July	Christchurch
25 July	Auckland
1 August	Dunedin
8 August	Hamilton
15 August	Rotorua
17 August	Palmerston North
22 August	Christchurch
30 August	Auckland
7 September	New Plymouth
12 September	Taupo
14 September	Wanganui
19 September	Christchurch
21 September	Lower Hutt
25 September	Auckland
Cost (excl GST)	\$345
plus NZTA Registration	\$40

**Level 1 Site Traffic Management Supervisor (STMS)** (2 days)

This two-day course provides training to the requirements of the NZTA Code of Practice for Temporary Traffic Management, and covers the new standards and operating procedures for NZTA and Local Authority roads.

10-11 July	Hamilton
12-13 July	Palmerston North
17-18 July	Invercargill
20-21 July	Auckland
25-26 July	New Plymouth
27-28 July	Christchurch
3-4 August	Napier
10-11 August	Lower Hutt
14-15 August	Nelson
21-22 August	New Plymouth
24-25 August	Christchurch
28-29 August	Auckland
4-5 September	Dunedin
11-12 September	Hamilton
14-15 September	Rotorua
19-20 September	Palmerston North
27-28 September	Christchurch
Cost (excl GST)	\$545
plus NZTA Registration	\$40

Calendar continued on next page >



**Maintenance & Safe Use of Small Plant & Machinery** (1 day)

Power tools, generators, rollers, screeds and other small machines are basic equipment used in the everyday operation of any roading or civil contracting company.

12 July	Christchurch
14 July	Tauranga
24 July	Palmerston North
11 August	Christchurch
24 August	Auckland
31 August	Napier
6 September	Hamilton
Cost (excl GST)	\$450

**Managing Infrastructure Affected by Rivers** (1 day)

Refer to page 4.

19 July	Tauranga
17 August	Christchurch
26 September	Palmerston North
Cost (excl GST)	\$695

**Microsoft Excel** (1 day)

This workshop will hone your skills. Move from the basics to the many advanced Excel functions, make Excel work for you. Learn how analysis your data with functions, filters, Pivot tables, charting, navigate large spread sheets, save time, and become a confident Excel user.

18 July	Wellington
1 August	Tauranga
8 September	Christchurch
20 September	Auckland
Cost (excl GST)	\$520

**Microsoft Project – Resource Management** (1 day)

This course is designed for advanced users who have attended Task Management. It is essential that this course has been attended, completed and the learning applied before attending this Resource Management course.

25 July	Palmerston North
4 August	Tauranga
24 August	Dunedin
31 August	Auckland
7 September	Christchurch
Cost (excl GST)	\$520

**Microsoft Project – Task Management** (1 day)

The Task Management course provides a comprehensive introduction to Project Managers, Business Managers, or anyone responsible for scheduling tasks and resources. This course gives participants the skills necessary to develop, implement, schedule and manage a project plan.

24 July	Palmerston North
3 August	Tauranga
23 August	Dunedin
30 August	Auckland
6 September	Christchurch
Cost (excl GST)	\$520

**Microsoft Word – Documents** (1 day)

*'Preparing you to create better documents'*

This course is designed for Word users from basic to intermediate who need to be efficient with creating documents for tenders, health and safety, contracts, business proposals. This course will develop Word documents to an advanced level using many automation aspects of Word. Win more tenders, contacts with consistent, clear and well formatted files.

19 July	Wellington
2 August	Tauranga
25 August	Dunedin
5 September	Christchurch
13 September	Palmerston North
21 September	Auckland
Cost (excl GST)	\$520

**Nuclear Density Meter (NDM) – License Course** (half day)

Refer to page 6.

16 August	Wellington
28 August	Auckland
8 September	Christchurch
19 September	Whangarei
26 September	Palmerston North
Cost (excl GST)	\$395

**Nuclear Density Meter (NDM) – What You Need To Know** (half day)

Refer to page 6.

16 August	Wellington
28 August	Auckland
8 September	Christchurch
19 September	Whangarei
26 September	Palmerston North
Cost (excl GST)	\$395

**Pavement Investigation and Design** (2 days)

Understanding the main causes of pavement failures is crucial in determining the correct and cost effective solution. The understanding of recycling/reuse of existing material becomes an essential part in the design selection given the scarcity of compliant material in the local market. How to ensure the design have been met during and after construction is a key to the success of the design and longevity of pavements and surfacing.

6-7 September	Christchurch
Cost (excl GST)	\$995

**Pavement and Rehabilitation Design** (2 days)

Since the adoption of the Austroads Pavement Design guide in NZ, pavement and rehabilitation design requires an understanding of mechanistic analysis procedures and the use of the computer program CIRCLY. This course covers pavement design and rehabilitation design in accordance with the latest version of the Austroads Pavement Design Guide and the associated NZ Supplement and contains hands-on applications of CIRCLY.

19-20 July	Christchurch
Cost (excl GST)	\$995

**CALENDAR KEY**

- Confirmed courses, but spaces still available.
- Potential courses still require numbers to run.
- Course is full.

**Pavement Surfacing** (1 day)

This one day course will outline and identify the multiple types of surfacing currently in use, the variety of materials used in maintaining these pavements, as well as design, equipment use and surfacing type selection. Asphalt and Chipseal practices will be covered at length including cutting and preparation, along with procedures for patching both of these surfacing types.

9 August	Christchurch
1 September	Auckland
22 September	Palmerston North
Cost (excl GST)	\$520

**Refresher – Level 1 STMS** (1 day)

Registration for Level 1 Site Traffic Management Supervisor (STMS) expires at the end of three years, at which time you will need to attend a one-day refresher course to regain this qualification.

4 July	Napier
11 July	Lower Hutt
13 July	Nelson
21 July	New Plymouth
25 July	Christchurch
26 July	Auckland
2 August	Dunedin
9 August	Hamilton
16 August	Rotorua
18 August	Palmerston North
23 August	Christchurch
31 August	Auckland
8 September	New Plymouth
13 September	Taupo
15 September	Wanganui
20 September	Christchurch
22 September	Lower Hutt
26 September	Auckland
Cost (excl GST)	\$345
plus NZTA Registration	\$40

**Road Lighting Course A – to AS/NZS 1158** (1 day)

Refer to page 5.

1 August	Christchurch
22 August	Hamilton
5 September	Dunedin
26 September	Auckland
Cost (excl GST)	\$450

**Road Lighting Course B – Design Training** (1 day)

Refer to page 5.

2 August	Christchurch
23 August	Hamilton
6 September	Dunedin
27 September	Auckland
Cost (excl GST)	\$450

Calendar continued on next page >

**Safety in Trenches** (1 day)

This course covers the safety aspects of working in and around trenches within the civil industry and covers drainage work from small pipe, small scale excavations to large storm water and deep excavations.

14 August	Wellington
21 August	Christchurch
28 August	Auckland
Cost (excl GST)	\$450

**Slings, Lifting, Moving and Placing, with and Excavator or Loader** (1 day)

When on the job, there will be times where you need to move or place equipment and there is a right way and a wrong way to do this. The information that is presented to you on course will give you the industry standard on the step you will need to do to get the job done efficiently and safely.

5 July	Palmerston North
12 July	Auckland
19 July	Christchurch
10 August	Wellington
22 August	Hamilton
Cost (excl GST)	\$450

**Stabilisation of Road Pavements** (1 day)

Stabilisation can provide major benefits for roading projects of all sizes, and significantly offer acceptable cost effective alternatives to the use of premium sources of aggregates. This workshop provides an overview of the main issues involved with the design and construction of sealed and unsealed pavements using stabilisation.

14 July	Auckland
31 August	Whangarei
14 September	Palmerston North
26 September	Tauranga
29 September	Invercargill
Cost (excl GST)	\$450

**Stress Free Processes** (2 days)

The demands of the job often mean late nights “fixing” issues or correcting other people’s work so that the customer gets the right result. Sometimes mistakes get through and that leads to even more stress! Effective people fix the problem and avoid having to fix the errors. To others, fixing problems can seem “too hard”. On this course you’ll be guided through the simple 5 step approach in our highly interactive two day course.

25-26 July	Wellington
17-18 August	Christchurch
14-15 September	Palmerston North



19-20 September	Auckland
Cost (excl GST)	\$995

**Successful Project Management** (2 days)

Refer to page 5.

12-13 July	Wellington
18-19 July	Auckland
20-21 July	Invercargill
9-10 August	Christchurch
Cost (excl GST)	\$995

**Supercharged Supervisors Toolkit** (1 day)

Refer to page 5.

11 July	Wellington
13 July	Christchurch
19 July	Rotorua
26 July	Auckland
9 August	New Plymouth
Cost (excl GST)	\$595

**Survey & Set Out** (1 day)

Refer to page 2.

24 July	Christchurch
28 July	Nelson
11 August	Hamilton
17 August	Palmerston North
15 September	Auckland
29 September	Invercargill
Cost (excl GST)	\$595

**Tendering for Projects** (1 day)

Refer to page 4.

19 July	Wellington
27 July	Whangarei
10 August	Rotorua
25 August	Auckland
27 September	Christchurch
Cost (excl GST)	\$520

**The Fundamentals of Asphalt Mix** (2 days)

This course provides an overview of asphalt mix design and includes the latest design methods from America and Australia. The methods will include Austroads Selection and Design of Asphalt Mixes and SHRP Superpave Mix Design. It has also been updated to include the draft specification for dense graded, stone mastic and fine graded asphalt paving mixtures NZTA M/10. This will assist engineers and supervisors in their understanding of the design process and specifications.

10-11 July	Auckland
21-22 August	Christchurch
Cost (excl GST)	\$750

**CALENDAR KEY**

- Confirmed courses, but spaces still available.
- Potential courses still require numbers to run.
- Course is full.

**Time Management** (1 day)

Stop working hard – work smarter and get more done. Learn how to do all this in one day. You have as much time in a day as everyone else does. So what happens to it? Are you using it the way you want? Have you the capacity to work on your business as well as in it? This very powerful seminar has participants construct their own personalised Time Management Plan according to their style and work environment.

18 July	Christchurch
28 July	Auckland
16 August	Palmerston North
14 September	Whangarei
18 September	Tauranga
27 September	Dunedin
Cost (excl GST)	\$595

**The National Utilities Code –****What Staff On-Site Should Know** (1 day)

This course is designed specifically for contractors and utility network staff who install or maintain utility assets in the road and rail corridors to give an overview of the National Utilities’ Code.

28 July	Auckland
11 August	Palmerston North
18 August	Christchurch
Cost (excl GST)	\$495

**Transforming Your Leadership**

(1 day)

Being a leader in your business or field can be tough. Managing people, making hard decisions and maintaining an effective work/life/family balance can be challenging. We can teach you many things about leadership, culture and teams. We can train you in conflict management, team building, and creative organisational solutions.

14 July	Christchurch
11 August	Tauranga
17 August	Palmerston North
30 August	Invercargill
20 September	Auckland
Cost (excl GST)	\$595

**Understanding NZS3910:2013 Conditions of Contract** (2 days)

How well do you know the contents of NZS3910, which are the ‘rules’ for administering and managing civil and building contracts? This popular course, from a practical and ‘hands-on’ point of view will benefit Clients, Consultants and Contractors regarding how to manage and administer contracts and to understand their obligations and liabilities in terms of these General Conditions of Contract.

17-18 July	Wellington
25-26 July	Auckland





# SHORT COURSE REGISTRATION FORM

16-17 August	Christchurch
22-23 August	Dunedin
23-24 August	Auckland
28-29 September	Auckland
Cost (excl GST)	\$750

## Understanding Quality Pavement

Construction (2 days)

The current trend towards performance based specifications for roading and civil construction projects increases the need for contracting firms to understand the issues involved with pavement construction, especially material compaction.

This course provides an overview of theory and practice to assist team leaders and supervisors/forepersons to manage construction in the field.

5-6 July	Tauranga
18-19 July	Wellington
26-27 July	Christchurch
9-10 August	Auckland
17-18 August	Napier
23-24 August	Invercargill
29-30 August	Whangarei
Cost (excl GST)	\$750

## Understanding the National Utilities Code

(2 days)

How well do you know the National Utilities Code? Its use is compulsory for all road and rail controlling authorities and utility network operators and their contractors for access to the road and rail corridors to install and maintain utility assets.

This popular course gives an intensive look at the Code from principles to specifics, and includes discussion on the roles and needs of the different parties. It is designed for corridor managers, utility operators, consultants and contractors and covers interpreting the Code and how to work better to comply with the requirements of the Utilities Access Act 2010.

20-21 July	Christchurch
2-3 August	Auckland
28-29 August	Wellington
Cost (excl GST)	\$750

## Working with Concrete – Basic Skills

(1 day)

This course aims to give workers basic knowledge relating to preparing, placing and finishing minor concrete works and the equipment needed to produce quality results.

6 July	Palmerston North
8 August	Wellington
23 August	Hamilton
28 September	Christchurch
Cost (excl GST)	\$450



## I / WE WILL ATTEND THE FOLLOWING NZIHT SHORT COURSE

Please fill details in below.

COURSE NAME

COURSE LOCATION

COURSE DATE

NAME OF PARTICIPANT (1)

NAME OF PARTICIPANT (2)

NAME OF PARTICIPANT (3)

NAME OF PARTICIPANT (4)

ORGANISATION NAME & POSTAL ADDRESS

CONTACT PERSON (All correspondence will be forwarded to the Contact person)

CONTACT'S JOB TITLE

CONTACT'S PHONE NUMBER

CONTACT'S EMAIL

PURCHASE ORDER NUMBER

Course cost \$

Plus 15% GST \$

Cheque enclosed for: \$

Please make payable to NZ Institute of Highway Technology Ltd, or

Please invoice us for: \$

Please charge my credit card: \$

Name on card

Card number

Expiry date Security Code

3 digit number  
on back of card

Post or email back at least **two weeks prior** to the course date:

## The Course Co-ordinator

New Zealand Institute of Highway Technology Ltd

P O Box 4273, New Plymouth, 4340

P. (06) 759 7065 E. admin@nziht.co.nz

## TERMS AND CONDITIONS

**Note:** Late registrations will be accepted if space is available.

**Please note:** Confirmation letters will be sent five working days prior to the course date.

**Cancellations:** Participant withdrawals must be notified in writing. Withdrawals after the close-off date (5 working days prior to the course date) will be charged 50% of the course fee. Non attendance will also be charged the full rate. Substitute participants are welcome. Please refer to our current Training Programme for full registration details and conditions. Attendee will be responsible for any debt recovery costs on unpaid fees. The NZIHT reserves the right to alter course dates, postpone or cancel courses due to unforeseen circumstances or where numbers are not sufficient.

ENROLMENTS ARE OPEN FOR SEMESTER 2  
COMMENCING 17 JULY 2017 ACROSS NZ.

# ENGINEER

## QUALIFICATIONS WHILE YOU WORK

### FEELING LIKE A CAREER CHANGE OR LOOKING TO UPSKILL YOURSELF? GAIN CIVIL ENGINEERING QUALIFICATIONS – WHILE YOU WORK!

The qualifications will be delivered in Auckland, Hamilton, Palmerston North and Christchurch – unless otherwise stated right. Learn with us in a Block Format, which involves face-to-face delivery in a classroom with a tutor, along with some self-directed study in your own time.

#### QUALIFICATIONS AVAILABLE ARE

##### **NZ DIPLOMA IN ENGINEERING (CIVIL) – Level 6**

The NZ Diploma in Engineering (Civil) – [NZDE (Civil)], administered by the NZ Board of Engineering Diplomas, is a well-established, 240 credit qualification. It is recognised by IPENZ (as fulfilling Dublin Accord requirements) and by Connexis as a pre-requisite/co-requisite for the NZDE Practice.

##### **NZ DIPLOMA IN ENGINEERING (ELECTRONICS) – Level 6**

NZiHT has begun the gradual phasing in of the delivery of the “Electronics Specialisation” of this programme. The four courses that are common with NZDE (Civil) are immediately available in all the venues where Civil is offered. The remaining electronics courses will be phased in at a rate dictated by demand.

##### **GRADUATE DIPLOMA IN ENGINEERING (HIGHWAYS) – Level 7** *(Delivered in Hamilton only)*

The Graduate Diploma in Engineering (Highways), one year (full time equivalent), 120 credit qualification designed to provide holders of civil engineering qualifications an opportunity to acquire technical knowledge of applied management.

##### **CERTIFICATE IN ENGINEERING TECHNOLOGY – Level 4**

60 credit certificate providing a choice of three areas to study:

- Core Engineering
- Highway Engineering
- Civil Engineering

This is a good foundation for further engineering studies at higher levels:

- NZ Diploma in Engineering (Civil) and
- NZ Diploma in Engineering (Electronics)

##### **NZ CERTIFICATE IN INFRASTRUCTURE WORKS (Level 2)**

This is a \*\*fee free 41 credit programme delivered over 20 weeks. This involves five blocks of classroom training (total 7 days).

##### **NZ CERTIFICATE IN INFRASTRUCTURE WORKS (Level 3)**

This is a \*\*fee free 56 credit programme delivered over 20 weeks. This involves five blocks of classroom training (total 9 days).

For further information please contact the Programme & Office Co-ordinator

EMAIL. [admin@nziht.co.nz](mailto:admin@nziht.co.nz) HAMILTON OFFICE. (07) 850 8330 NEW PLYMOUTH OFFICE. (06) 759 7065

Make it Happen.

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**nziht**  
institute of highway technology