

# INFRASTRUCTURE SKILLS CENTRE

Your first step to a future in the Water Industry

Training initiative created and facilitated by:



SUPPORTED BY:



MINISTRY OF SOCIAL  
DEVELOPMENT  
TE MANATŪ WHAKAHIATO ORA









## Infrastructure Skills Centre

“Infrastructure is the key enabler that keeps communities healthy, moving and safe. The Infrastructure Skills Centre will provide new entrants to the sector with foundational skills, capabilities and knowledge that will help them establish a meaningful career delivering critical infrastructure for their communities through its construction, operation and maintenance. Training programmes at the centre use tailored course content and realistic, hands-on delivery methods facilitated by experienced instructors along with governance and oversight from industry, to ensure that the right skills are taught, the right way at the right time. Employers should expect graduates of the programme to possess a working knowledge of health, safety and environmental requirements for industry, along with the capability to use key tools and techniques in the field, all of which will have been developed against a backdrop of expected values and behaviours to help them contribute strongly as part of a team”












Graeme Johnson – Chief Executive Officer NZ, Fulton Hogan Limited




## 6 WEEK OVERVIEW

<b>WEEK 1</b> Introduction	Induction 2 hours	Being Ready for Work 1 hour	Team Activity 2 hours	Light Trailer Safety 3 hours	Prestarts and danger zones 3 hours
	Quality 2 hours	Site Visit: Batching Plant 5 hours	Concrete Works Basic 2 hours	Concrete Practical 4 hours	Effective Communication 4 hours
	Locating & Protecting Underground Services 4 hours	Read & Interpret Plans 1 hour	Soil & Aggregates Awareness / Efficient Compaction 3 hours	Asbestos Awareness 2 hours	Life Skills - Nutrition and Mental Health 3 hours
<b>WEEK 2</b> Concrete					
<b>WEEK 3</b> Drainlaying					
<b>WEEK 4</b> Water					
<b>WEEK 5</b> Temporary Traffic management					
<b>WEEK 6</b> Power & Hand Tools					



<b>Spotter &amp; Observer</b>  3 hours 	<b>Fire Extinguisher</b> 4 hours 	<b>Lifes Skills - Budgeting</b> 2 hours 	<b>First Aid</b>  8 hours 	<b>Team Building</b> 2 hours 	<b>NZCIW Level 2</b>  3 hours 	<b>Week 1 Review</b> 2 hours 
<b>Site Visit: Precast Yard</b> 5 hours 	<b>NZCIW Level 2</b> 2 hours 	<b>Site Visit: Quarry</b> 6 hours 	<b>Week 2 Review</b> 2 hours 			
<b>Hazardous Substances Awareness</b> 2 hours 	<b>Laying Pipes and Manholes</b>  8 hours 	<b>Site Visit: Civil Construction</b> 8 hours 	<b>Courageous Conversations</b> 3 hours 	<b>Manual Handling &amp; Back Care</b> 2 hours 	<b>Emergency Response</b> 3 hours 	<b>Week 3 Review</b> 3 hours 
<b>Site Visit: Pump Station</b> 8 hours 	<b>Safety in Trenches with Practical</b> 8 hours 	<b>Handling Hazardous Substances</b> 5 hours 	<b>Week 4 Review</b> 3 hours 			
<b>Spill Response</b> 2 hours 	<b>Responding to Water Emergencies</b> 4 hours 	<b>Isolating Water</b> 4 hours 	<b>Lockout Tagout Awareness</b> 2 hours 	<b>Week 5 Review</b> 4 hours 		
<b>Graduation</b> 4 hours 						

## KEY

Class Based Training



Practical Hands on Session



Site Visits



Includes Unit Standards



**New Zealand  
Certificate in  
Infrastructure  
Works – L2**



## WEEK 1 INTRODUCTION

### Introduction

Induction 	Meet the team, guest speaker. Sign into L2 qualification (to be done prior to this day)	2 hours
Being Ready for Work 	PPE, being on time and ready for work, bringing the right attitude, non-negotiables, Nutrition/Sleep/Mental wellbeing, industry critical risks, prioritising safety	1 hour
Team Activity 	Participants are challenged to build a structure with certain specifications	2 hours
Light Trailer Safety 	Hitching, unhitching, load security, towing and reversing of light trailers	3 hours
Prestarts & Danger Zones  	Daily prestart tailgate, PPE, hazards, risk, sign on & importance, separation requirements when working around machinery	3 hours
Spotter & Observer  	Signals and communication for spotting/working around machinery safely	3 hours



# Introduction

<p>Fire Extinguisher</p> 	<p>Evaluate fire scenarios, evacuation &amp; methods to suppress fire</p>	<p>4 hours</p>
<p>Life Skills Budgeting</p> 	<p>Learn how to budget, set financial goals understand the financial benefits of Kiwisaver</p>	<p>2 hours</p>
<p>First Aid</p>  	<p>Workplace First Aid training (US6401 and 6402)</p>	<p>8 hours</p>
<p>Team Building</p> 	<p>Outdoor activity to support participants to connect with each other, through problem solving, communication and exercise</p>	<p>2 hours</p>
<p>NZCIW (Level 2)</p>  	<p>Qualification book work - complete modules from prior learnings</p>	<p>3 hours</p>
<p>Week 1 Review</p> 	<p>Recap first week, allow some time for IW2 workbooks and a BBQ to wrap up the week</p>	<p>2 hours</p>








## WEEK 2 CONCRETE

### Concrete

<p>Quality</p> 	<p>Importance of Quality. Do it once and do it right. QA vs QC. Specs &amp; Design including the Felix quality exercise</p>	<p>2 hours</p>
<p>Site Visit: Batching Plant</p> 	<p>How concrete is made, how the concrete plant works (mix design, mpa differences), aggregates, add mixtures (retarders &amp; accelerates) concrete testing</p>	<p>5 hours</p>
<p>Concrete Works Basics</p> 	<p>Further discussion around concrete and it uses on a construction site. Hazards of concrete and the correct PPE while handling concrete</p>	<p>2 hours</p>
<p>Concrete Practical</p>  	<p>Levels and offsets, boxing, pouring, vibrating and finishing</p>	<p>4 hours</p>
<p>Effective Communication &amp; Time Management</p> 	<p>Identify ways of communicating effectively, active listening, give clear instructions, identify barriers to communication. Develop strategies to manage time efficiently. Team Building Activity</p>	<p>4 hours</p>
<p>Site Visit: Precast Yard</p> 	<p>Learn how precast panels, super Ts etc. are made. Understand what pre-stressing does to concrete beams. Understand the importance of quality control</p>	<p>5 hours</p>



# Concrete

<div>NZCIW Level 2</div> <div></div>	Qualification book work - complete modules from prior learnings	2 hours
<div>Site Visit: Quarry</div> <div></div>	Learn how a quarry operates, aggregate production and their different uses	6 hours
<div>Week 2 Review</div> <div></div>	Recap week 2, allow some time for IW2 workbook completion	2 hours





## WEEK 3 DRAINLAYING

### Drainlaying

<b>Locating &amp; Protecting Underground Services</b> 	Hazards involved in working around services, location tools available to manage risks & cable location practical session	<b>4 hours</b>
<b>Read &amp; Interpret Plans</b> 	Awareness of plan reading	<b>1 hour</b>
<b>Soil &amp; Aggregates Awareness / Efficient Compaction</b>  	Soil & Aggregates Awareness/ Efficient Compaction Practical	<b>3 hours</b>
<b>Asbestos Awareness</b> 	Identifying potential asbestos materials, health affects, legislation, safe work procedures	<b>2 hours</b>
<b>Life Skills - Nutrition and Mental Health</b> 	Learn about good nutrition and how to look after your mental health	<b>3 hours</b>
<b>Hazardous Substances Awareness</b> 	Health risks and safety issues associated with hazardous substances; how to safely use, handle, store and dispose of those substances; the safe use of associated equipment, including personal protective equipment (PPE); user obligations under the regulations; and responsibilities and actions to be taken in an emergency.	<b>2 hours</b>



# Drainlaying

<div>Laying Pipes &amp; Manholes</div> <div></div>	Practical demonstration session on pipe laying including awareness of the hazards of excavation and trenching	8 hours
<div>Site Visit Civil Construction</div> <div></div>	Visit to 2 civil construction site visits looking at a variety of projects incorporating learnings to date	8 hours
<div>Courageous Conversations</div> <div></div>	How to approach situations or conversations that could be uncomfortable or complex	3 hours
<div>Manual Handling &amp; Back Care</div> <div></div>	Learn the correct way to lift objects and understand the first sign of back pain	2 hours
<div>Emergency Response</div> <div></div>	Learn about the types of emergencies and how to respond to these situations on a construction site	3 hours
<div>Recap - Week 3</div> <div></div>	Recap 3 week, allow some time for IW2 workbook completion	3 hours





## WEEK 4 WATER

### Water

#### Monitoring Water Systems



Introduction to the Water Systems, where water comes from and the flow through the water network.

4  
hours

#### 6 Principles of Water



Six principles of safe water including water safety plans introduction – an approach to managing a drinking water supply that ensures owners and operators understand, threats, capabilities, limitations and responses.

2  
hours

#### Mobile Field Tools



Introduction to the common electronic job management tools used in the field to task work, record what you see and inform clients when jobs are completed. Session on how to use them.

4  
hours

#### Importance of Data



Understand why data collection is important to the efficient maintenance and operation of the water network

2  
hours

#### Talking to Customers



Learn to recognise how your attitude impacts on your interactions, how to apply communication techniques to tailor delivering messages to the public and how to deal with difficult customers and deliver on your promises. Know when to pass info on without commenting.

2  
hours

#### Site Visit Pump Station



Understand the basic principles of operating and maintaining a pump station

8  
hours



# Water

## Safety in Trenches with Practical



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.

8  
hours

## Handling Hazardous Substances



Hazards associated with working around human waste. Common chemicals used for disinfection, correct PPE, First Aid and handling procedures.

5  
hours

## Recap - Week 4



Recap week 4, allow some time for IW2 workbook completion








3  
hours









## WEEK 5 TEMPORARY TRAFFIC MANAGEMENT

### Temporary Traffic Management

<p>Temporary Traffic Management</p> 	<p>Introduction to temporary traffic management</p>	<p>1 hour</p>
<p>Level 1 Basic Traffic Controller (TC)</p> 	<p>This one day course promotes safe working practices, standards and operating procedures on roadwork sites.</p>	<p>7 hours</p>
<p>Practical Traffic Control</p>  	<p>Putting into practice what participants have learnt the day before, including cone set up, E Stops, radio control and attitude towards motorists</p>	<p>8 hours</p>
<p>Load Security</p> 	<p>Covers the NZTA Light Vehicle towing guide and truck loading code, with a practical training on load security</p>	<p>4 hours</p>
<p>EnviroWise</p> 	<p>Understand the common environmental risks and controls that may be encountered and required on construction and operational sites</p>	<p>2 hours</p>
<p>Spill Response</p> 	<p>How to clean environmental pollution discharges using the correct equipment contained in a spill kit</p>	<p>2 hours</p>



# Temporary Traffic Management








<div>Responding to Water Emergencies</div> <div></div>	Learn the process of how to respond to an urgent water incident	4 hours
<div>Practical Unit</div> <div></div>	Practical session on how to isolate a section of a Water Network	4 hours
<div>Lockout Tagout Awareness</div> <div></div>	Awareness of why we need lockout tagout procedures for carrying out repair/maintenance on fixed and mobile plant	2 hours
<div>Recap - Week 5</div> <div></div>	Recap week 5, allow some time for IW2 workbook completion	4 hours





## WEEK 6 POWER & HAND TOOLS

### Power & Hand Tools

<b>Power and Hand Tools</b>  	Introduction and Assessments	<b>11 hours</b>
<b>Let's Build Something</b>  	Work instruction, materials and tools will be given to participants to build something for a charity or a community project	<b>16 hours</b>
<b>Wheels, Tracks &amp; Rollers (WTR)</b> 	Obtain wheels, tracks and rollers endorsements (class 1 licence a prerequisite)	<b>4 hours</b>
<b>Constructsafe Tier 1 assessment</b> 	Assessment provided by Construction Safety Council. It is best practice and sets a benchmark for health and safety competency in the NZ construction industry	<b>2 hours</b>
<b>NZCIW (Level 2)</b> 	Qualification book work - complete modules from prior learnings	<b>6 hours</b>
<b>Graduation</b> 	Graduation celebration	<b>4 hours</b>



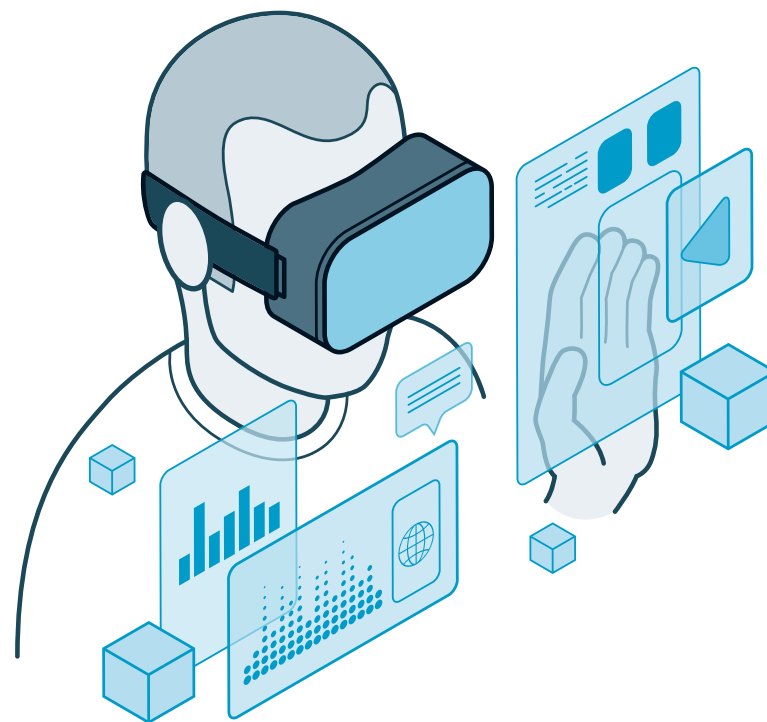




## Virtual Reality Training

The following virtual reality modules will be covered during the various days within the 6 week programme:

- Confined Spaces US18426
- Working at Heights US17600
- Traffic Control
- Machine Operation









Contact: Alena Taylor – Programme Manager  
alena.taylor@fultonhogan.com | 027 545 5567

Contact: Dasha Moore – Programme Manager  
dasha.moore@fultonhogan.com | 027 444 4458



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DEVELOPMENT  
TE MANATŪ WHAKAHIATO ORA



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