ELECTRICAL GROUP TRAINING

Induction Hand Skills Manual

REMEMBER
Quality & Pride
=
Good Workmanship

Apprentice Name: _____

Date: _____/_____/20____

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Apprentice to Sign-Off & Return

Apprentices must sign and return the **EGT OFFICE COPY** to the EGT Staff Representative for the following:

- Hand Skills Practical - Apprentice Tasks
- Circuit Breaker Lockout Device Acknowledgement
- EGT Uniform & Personal Protective Equipment (PPE) Acknowledgement

Risk Assessment Checklist (RAC)

Have you done your RAC?

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RISK MATRIX

CONSEQUENCE / LIKELIHOOD	RARE	UNLIKELY	POSSIBLE	LIKELY	CERTAIN
INSIGNIFICANT	1	2	4	7	11
MINOR	3	5	8	12	16
MODERATE	6	9	13	17	20
MAJOR	10	14	18	21	23
CATASTROPHIC	15	19	22	24	25

LIKELIHOOD

Rare, Not expected to occur.
Unlikely, May occur only in exceptional circumstances.
Possible, Could occur at some time.
Likely, Expected to occur at some time.
Certain, Occurs in most circumstances.

CONSEQUENCE

Insignificant, No injury, no cost, no lost time.
Minor, First aid treatment required.
Moderate, Medically treated injury - heavy damage
Major, Lost time injury - severe damage.
Catastrophic, Death or extensive lost time.

LEVEL OF RISK

LOW	Manage individual risks using appropriate controls and proceed working with caution. (Negligible Risk)
MEDIUM	Risks are assessed and controlled using the hierachy of controls. Supervisor to approve appropriate use of controls. (Tolerable Risk)
HIGH	Do not commence activity. Implment controls to reduce the risk to Medium or lower. Full JSA / SWMS required by Supervisor. (Intolerable Risk)

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RISK ASSESSMENT CHECKLIST

000001

Date: Host:

Task: Supervisor's Name:

Address:

Supervision Level
☐ Direct ☐ General
☐ Broad

Hazard / Risk	I	Controls	R
Electricity / Isolation			
Traffic management			
Working at heights			
Slips, trips, falls			
Pinch Points			
Public or pedestrians			
Protruding - flying objects			
Tools or other equipment			
Substances / Chemicals			
Manual handling			
Environmental			
Noise			
Fumes / dust			
Access / egress			
Flammables / fire			
Pressure / burst / explo			
Lighting / visibility			
Confined space			
Other			
I= Inherent Risk Before control measures		**R= Residual Risk** After control measures	

Name: _____ **Signature:** _____

TEST BEFORE YOU TOUCH ISOLATION CHECKLIST (IITT)

Task	Checked
Notify all concerned parties of pending isolation	
Test Tester on known live source	
IDENTIFY circuit or circuits to be isolated	
ISOLATE circuit or circuits (Main switch where possible)	
Lock out and attach individual danger **TAG**	
TEST circuit to validate isolation	
Re-test separated conductors for possible back feed	
SIGNED	

Important:
All persons are required to carry out a Risk Assessment Checklist (RAC) and wear the appropriate Personal Protective Equipment (PPE) prior to entering the EGT Workshop.

All practical projects will be demonstrated on the whiteboard prior to commencement.

If in doubt, ask!

DRAFT

RAC - 5 Basic Steps

This process comprises of 5 basic steps:

1. **BREAK** the job down into small tasks.
2. **IDENTIFY** the hazard for each job.
3. **ASSESS** the risk associated with the hazard – Consider unexpected events.
4. **DECIDE** on the control measures.
5. **COMMUNICATE** the actions to be taken.

Important Note:
Ensure you identify the potential emergencies and controls.

Project 1: 1 Way Lighting Circuit

NOTE: Have your Trainer check your work at each step.

Step 1
Gather the following materials:

- A length of 1.5mm TPS 2 Core & E (ensure to get enough to be used for your following Projects).
- A Length of 1.5mm TPS twin active (ensure to get enough to be used for your following Projects).
- 1 batten holder
- 1 single switch

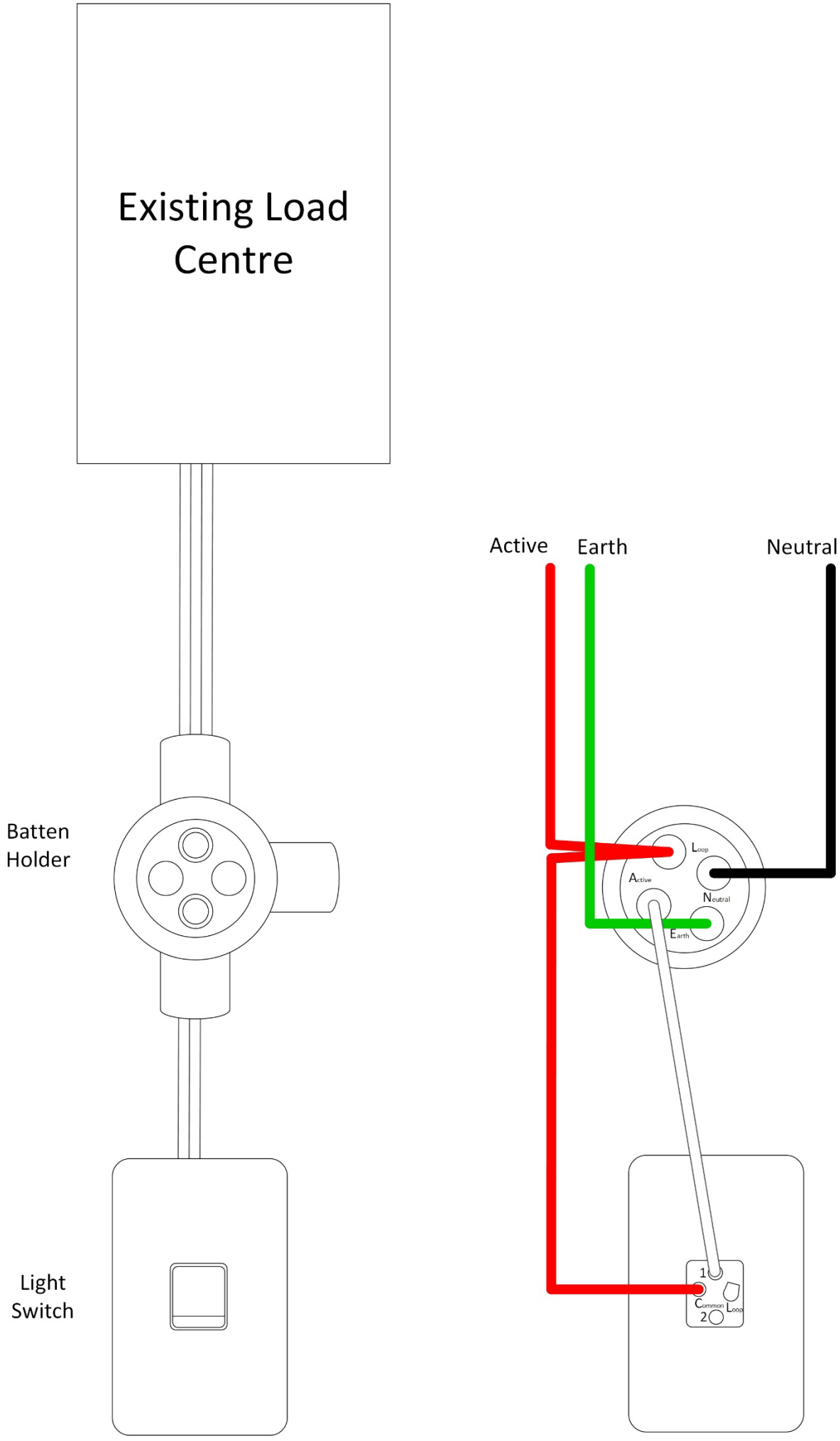
Step 2
Using your twin active cable wire between your switch and batten holder. Run in your 1.5mm TPS 2 Core & E from the existing load centre to your new batten holder, leaving a long enough tail in the existing load centre to complete termination at a later step & the remainder of your TPS to hang out the right side of the first-round mounting block.
(Refer to example Project Board)

Step 3
Clip your cables into place using the right sized clips ensuring the cables stay neat and straight.

Step 4
Terminate your batten holder and switch. Ensure you strip and twist your cables neatly, have no insulation crimped and do not have copper protruding the terminals.
(Refer to example project board).



Step 5
Have your Trainer check your work and move onto the next project.


Existing Load Centre
Batten Holder
Light Switch
Active
Earth
Neutral
Loop
Active
Neutral
Earth
1
Common
Loop
2

Project 2: 1 Way Lighting Circuit with Additional Light

NOTE: Have your Trainer check your work at each step.

Step 1
Gather the following materials:

- A Length of 1.5mm TPS 2 Core & E
- 1 lighting socket (413)
- 1 batten holder
- 1 single switch

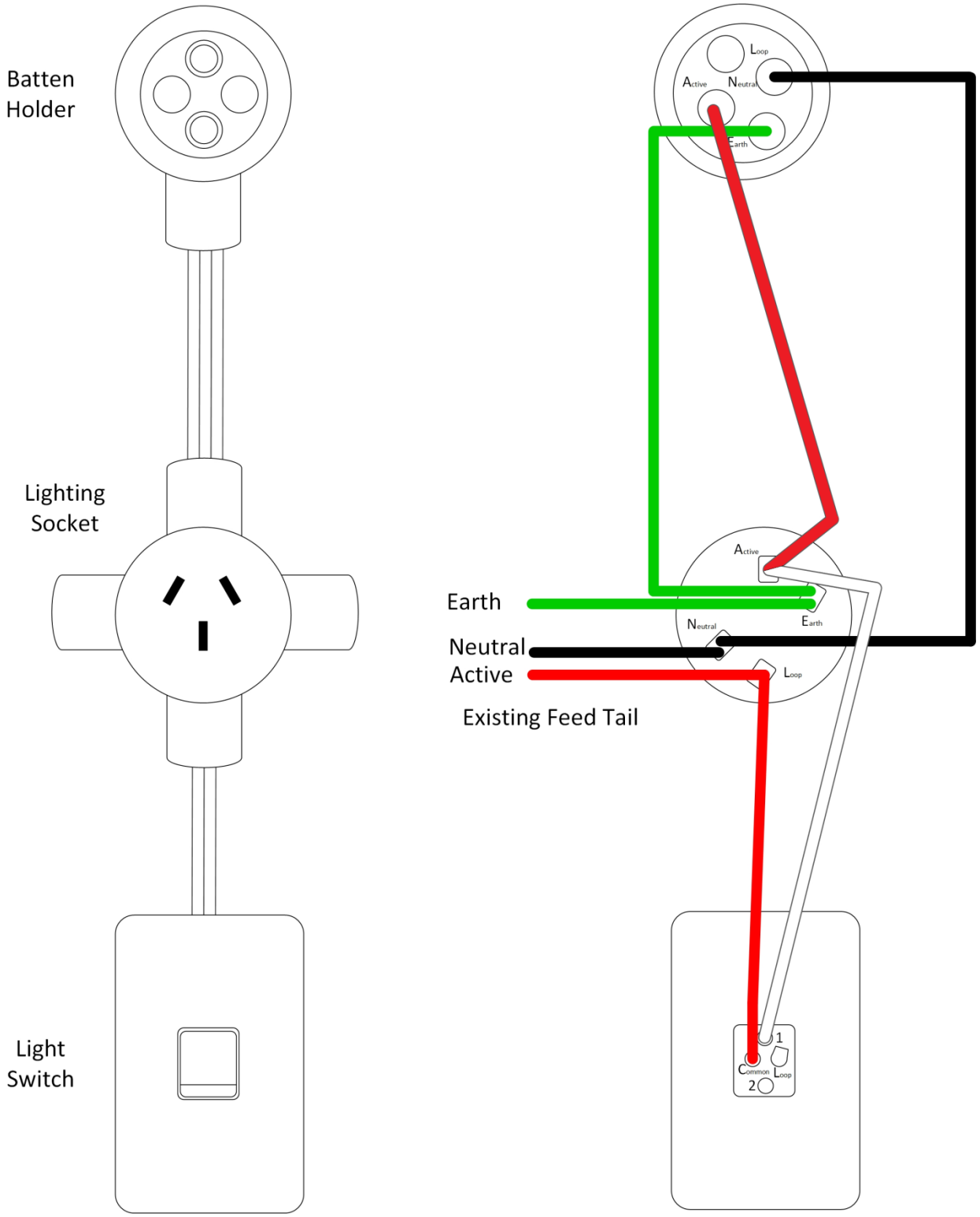
Step 2
Using your twin active cable wire between your switch and batten holder. Run in your 1.5mm TPS 2 core & E from the batten holder in Project 1 to your new lighting socket and a new length of 1.5mm TPS 2 core & E to your new batten holder.
(Refer to example project board).

Step 3
Clip your cables into place using the right sized clips ensuring the cables stay neat and straight.

Step 4
Terminate your lighting socket, batten holder and switch. Ensure you strip and twist your cables neatly, have no insulation crimped and do not have copper protruding the terminals.
(Refer to diagram over page or example board).



Step 5
Have your Trainer check your work and move onto the next project.

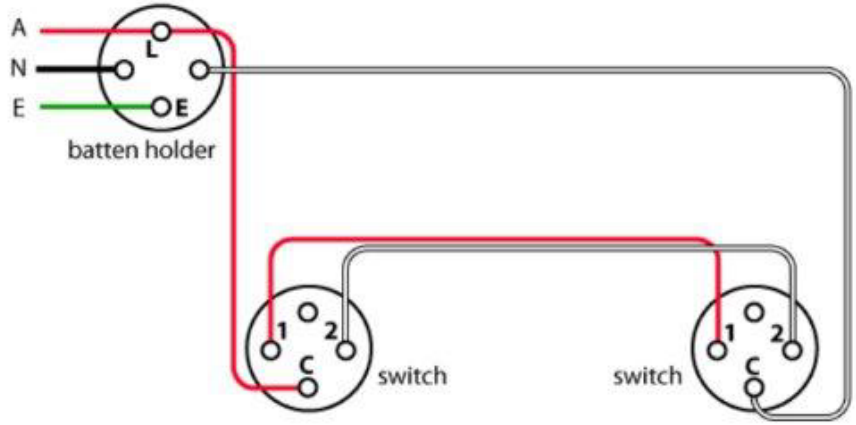

Batten Holder
Lighting Socket
Light Switch
Loop
Active
Neutral
Earth
Earth
Neutral
Active
Existing Feed Tail
Active
Earth
Neutral
Loop
1
Common
Loop
2

Lighting circuits

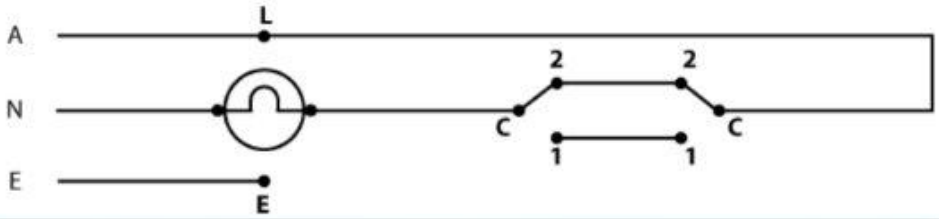
Two way

A two way lighting circuit enables one circuit to be turned on or off by either of two switches. The circuit may have one or more lights in it. This type of circuit uses two of the two way switches.

A wiring diagram and a circuit diagram are shown below.



Two way lighting wiring diagram



Field Officer Demonstrations

How to use Multimeter

- **Multi Meter Functions**
- **Visual inspection of meter and test leads (Cat 3, 600V, 10A leads)**
- **Correctly insert test leads**
- **Function Settings of Meter: Continuity and AC/DC setting**

How to use Volt Stick

Isolation Procedure (IITT)

Apprentice Name: _____

Volt Stick - Test your tester on known source

- ☐ Proved PowerPoint is Deenergised
- ☐ Identified Light socket (413) as ON
- ☐ Identified Light socket (413) as OFF
- ☐ Identified HWS as ON
- ☐ Used Correct technique to identify Energised circuit in TPS bundle

Multimeter

- ☐ Correctly identified Isolated PowerPoint as De-energised

Continuity

- ☐ Correctly Set Multimeter to Ohms
- ☐ Correctly Tested leads
- ☐ Showed continuity between Earth Bar and Earth Stake

Apprentice Signature: _____ **Date: ___/___/20___**

Field Officer Signature: _____ **Date: ___/___/20___**

Apprentice Name: _____

I acknowledge that I have been issued with a **circuit breaker lockout device and padlock** by EGT during the EGT Induction.

I have been instructed in the use of the circuit breaker lockout device and understand that it is used as part of the circuit breaker isolation process. I acknowledge that I am responsible for keeping the device and padlock secure and using them correctly.

The isolation process is described below and must only be carried out once a risk assessment has been completed.

- Notify the customer of the pending isolation.
- Ensure that the testing equipment is working correctly and is safe to use. Check test leads and settings and test on a known live source.
- Identify the correct circuit to be isolated and any other possible sources of energy and hazards.
- Isolate the circuit **with the tradesperson**.
- If applicable the tradesperson may choose to remove the load tails from the circuit breaker and make them safe.
- Both the apprentice & tradesperson MUST attach their own personal danger tag to the isolation point using the circuit breaker lockout device.
- Secure the circuit breaker lockout device and padlock.
- Test for correct isolation, test to a reliable earth or neutral. Don't assume it is **"Dead" Prove it.**
- Retest the testing equipment after the isolation process is complete to ensure that it is still functioning.
- Proceed with caution and continue to use your volt stick before cutting cables or working on exposed terminals or conductors.
- Treat all isolated cable and equipment as if they are live and potentially dangerous.

Remember that there is a no live working policy for all EGT Apprentices and that the "Safe working guidelines for electrical workers and apprentices (February 2025)" does not allow live work on domestic electrical installations other than testing. This may require the main switch to be turned off before work is commenced.

UNDER NO CIRCUMSTANCES ARE APPRENTICES TO WORK ON - OR BE EXPOSED TO 'LIVE' CIRCUITS.

I understand that I am required to use the circuit breaker lockout device and padlock and am responsible for replacing them if they are lost or damaged.

Apprentice Signature: _____ **Date:** ___/___/20___

Apprentice Name: _____

I acknowledge that the following procedures were explained and demonstrated during Electrical Group Training's (EGT) Induction.
I acknowledge that it will be my responsibility to follow these procedures in the workplace.

Ear Plugs

- ☐ I was shown a video demonstrating how to insert and remove ear plugs
- ☐ Field Officer explained the use and when to use ear plugs
- ☐ I participated in a practical in inserting and removing ear plugs
- ☐ Ear plugs were issued with the Uniform provided by EGT

Gloves

- ☐ Field Officer has explained the importance of gloves at all times in the workplace
- ☐ Gloves were worn during workshop activities
- ☐ Gloves were issued with the Uniform provided by EGT

Safety Glasses

- ☐ Field Officer explained the importance of Safety Glasses in the workplace
- ☐ Safety Glasses were worn during workshop activities
- ☐ Safety Glasses were issued with the Uniform provided by EGT

Uniform

- ☐ It was explained that the EGT Uniform Policy is Long Pant, Long Sleeve Shirt, Lace up Steel Cap Boots
- ☐ Uniform was worn during workshop activities
- ☐ EGT's Apprentice Uniform and Personal Protective Equipment (PPE) Policy is available from EGT's Apprentice Library of Documents and Uniform & PPE was provided during the EGT Induction

Apprentice Signature: _____ **Date:** ___/___/20___