



EEA Public Safety Award

HEALTH AND SAFETY WORKSHOP 2023

Mark Chatterton
11th October 2023

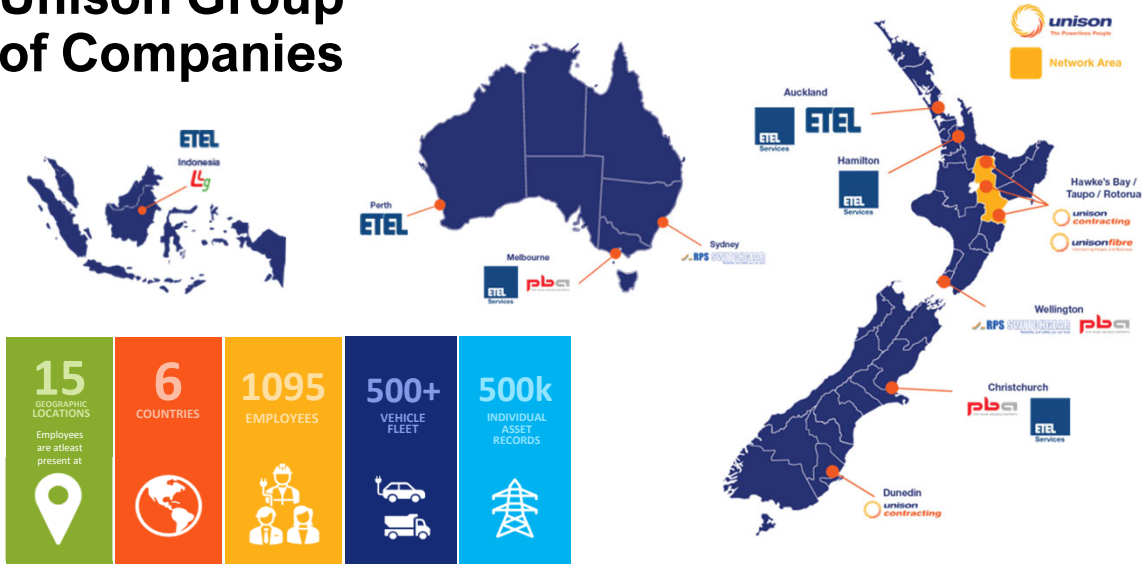


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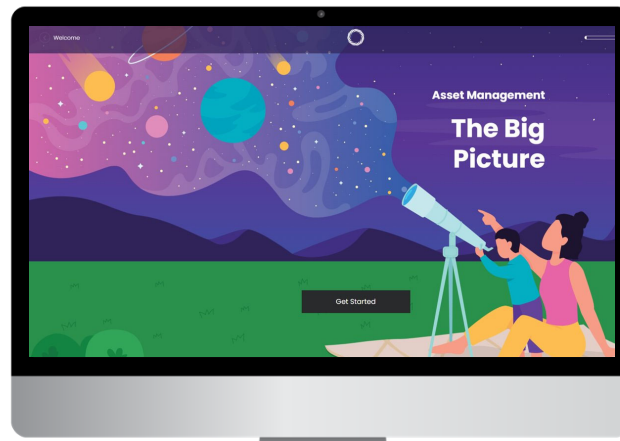
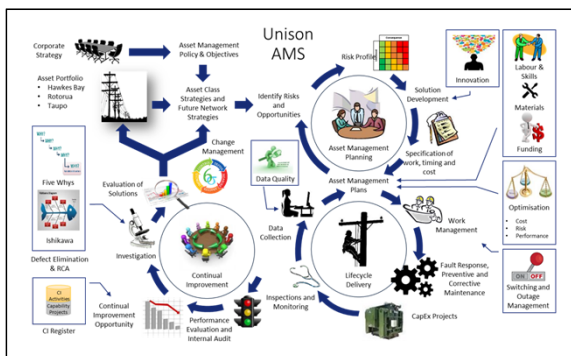


Unison Group of Companies

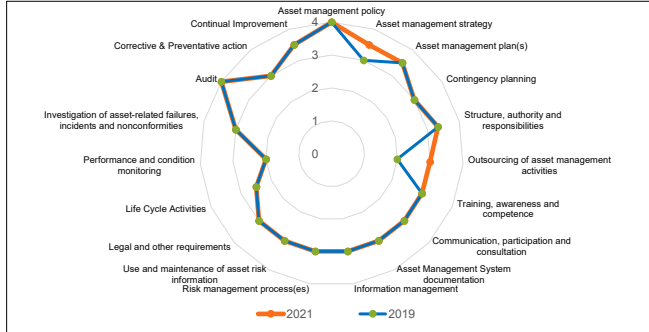
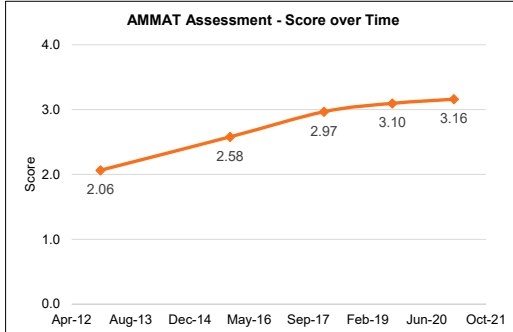
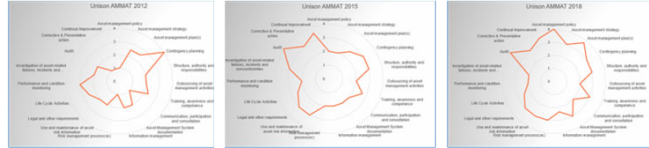


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Asset Management at Unison



Asset Management Maturity Assessment Tool (AMMAT)



Policy

ASSET MANAGEMENT POLICY

In alignment with our values, **unison** is committed to the following principles

<p>Safety & Wellbeing</p> <ol style="list-style-type: none"> Ensuring that our people take personal responsibility for managing risks to ensure the safety of: <ul style="list-style-type: none"> • themselves • their colleagues • their contractors, and • members of the public. Ensuring that our assets are safe, robust, free from defects and do not impact community or the environment. Ensuring compliance with all applicable legislative and regulatory requirements, and industry and internal standards. 	<p>Excellence</p> <ol style="list-style-type: none"> Taking a risk-based, quality systems approach to asset management through an asset management system that is ISO 55001 certified. Using data, innovation, technology and effective processes to support fact-based and robust decision making. Implementing asset management plans that: <ul style="list-style-type: none"> • propose efficient levels of service • manage risk to the Asset Portfolio, and • secure customer service levels that are consistently over the long-term. 	<p>Customer Service</p> <ol style="list-style-type: none"> Investing in assets proactively and undertaking asset management in a way that represents value for money for our customers. Working closely with our customers and other stakeholders, and being responsive to all feedback, requests and complaints. Playing a positive, engaged and consultative role in the development of infrastructure to serve communities. 	<p>Integrity</p> <ol style="list-style-type: none"> Acting ethically and transparently to gain the trust and respect of communities. Providing appropriate levels of insurance to enable asset management objectives to be achieved. Monitoring, measuring and reporting on asset and asset management performance. 	<p>Teamwork</p> <ol style="list-style-type: none"> Developing the capability of our people and teams to enable them to reach their potential in asset management. Ensuring a positive, diverse and inclusive work environment that motivates our people to deliver their best each day. Ensuring that our people are supported and empowered to find ways to do things better and continually improve asset management of issues.
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1. Policy Statement

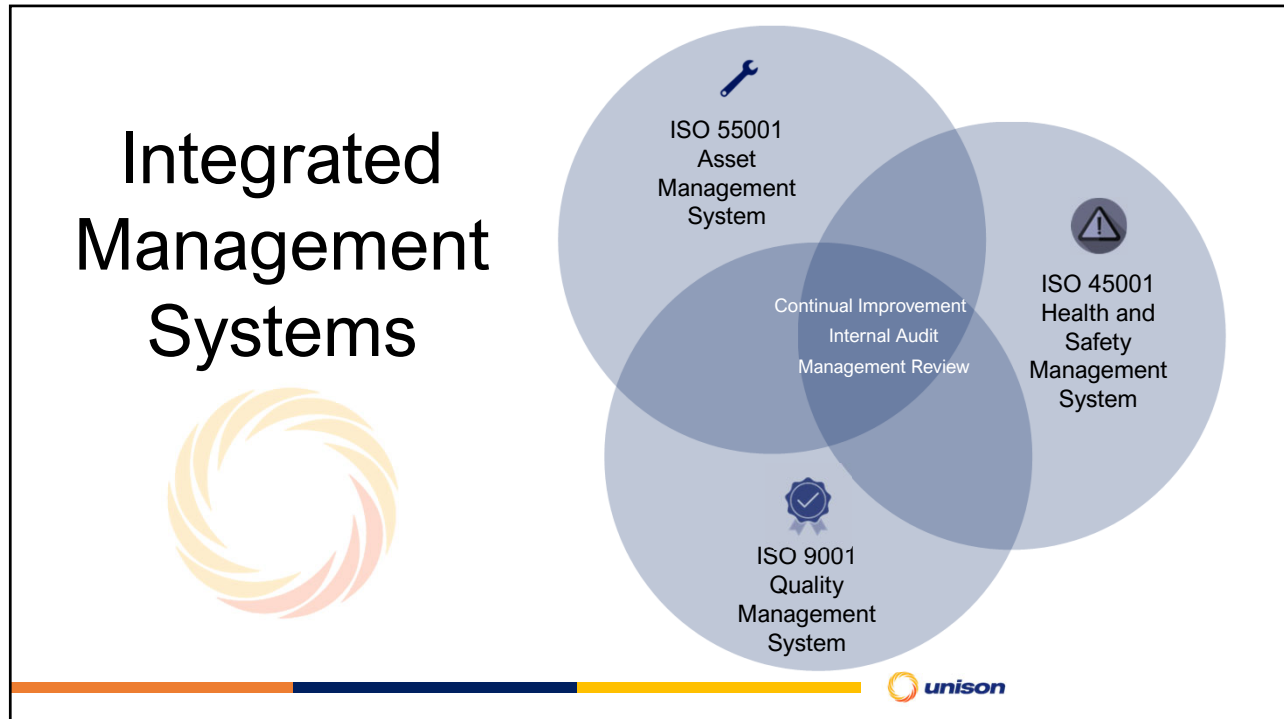
1.1 Unison's commitment

At Unison, **'Safety and Wellbeing'** is the first of our five core values. **'We care for the safety and wellbeing of our people, families and communities.'**

Unison is committed to:

- the prevention of harm to our workers, visitors, members of the public
- providing safe and healthy work conditions and environments
- providing a workplace that has a positive impact on employees physical and mental health
- achieving the highest level of health and safety practices and management systems, and
- consulting, enabling participation and communicating with Unison workers, customers, stakeholders, and members of the public on health and safety matters.





The Catalyst


In 2020 an external audit by Telarc of UNL's compliance with 7901:2008 raised a moderate non-conformance, signifying we hadn't identified all hazards and assessed all risks to the public and third parties associated with UNL assets.

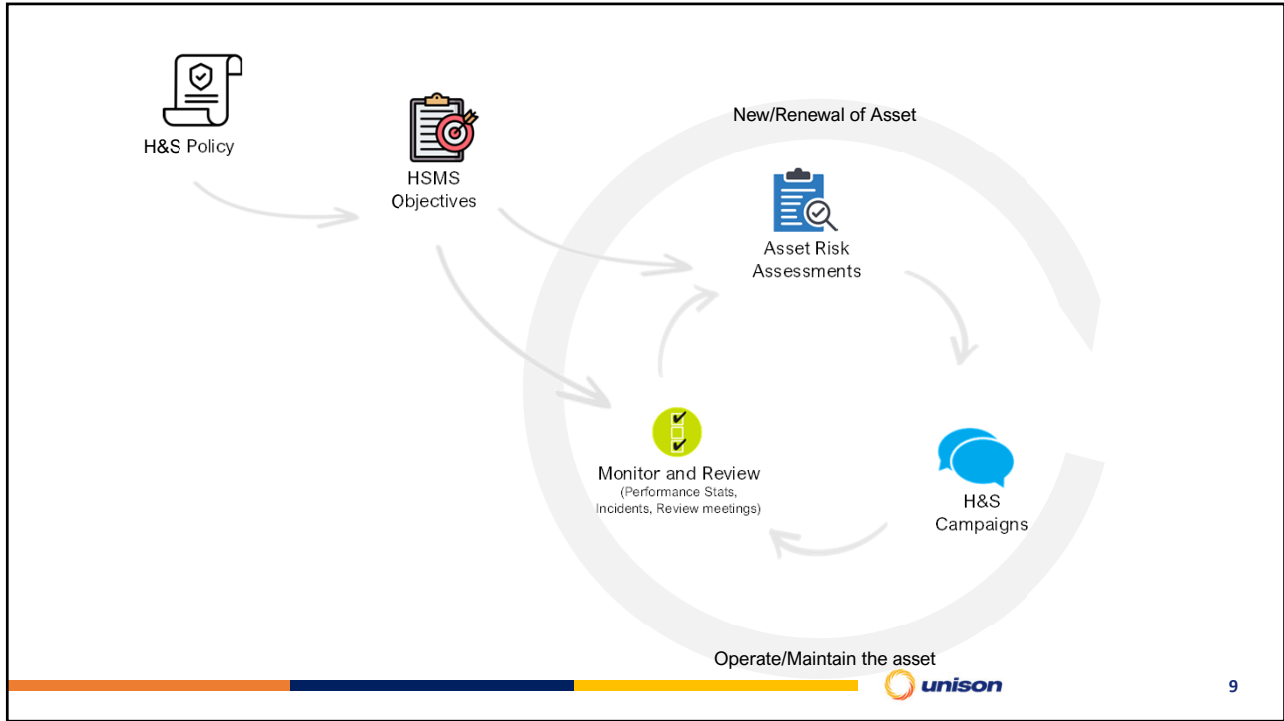
4.2 HAZARD IDENTIFICATION

All practicable steps shall be taken to systematically identify, describe, and document any hazard associated with:

- Existing assets;
- New assets (if possible before the hazard arises or else as the hazard arises) that have the potential to harm the public or damage public property.

The identification process shall be formal and systematic to minimise the possibility of overlooking any hazard. It should record the characteristics of each hazard, its environment, and the exposure of people and property to it.





unison
The Powerlines People

FC1003
Unison Group
Risk Management Framework

Issue Version Number: 5.0

Data Classification: In Confidence
Published Date: 19/11/2021
Next Review Due: 17/11/2024

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This is an approved controlled document and is subject to change.
Please ensure you always have the most up-to-date copy.
Contact the Commercial group for the latest version.

Risk Management Process

Scope, context, criteria

Risk assessment

Risk identification

Risk analysis

Risk evaluation

Risk treatment

Recording & reporting


Communication & consultation

Monitoring & review

unison

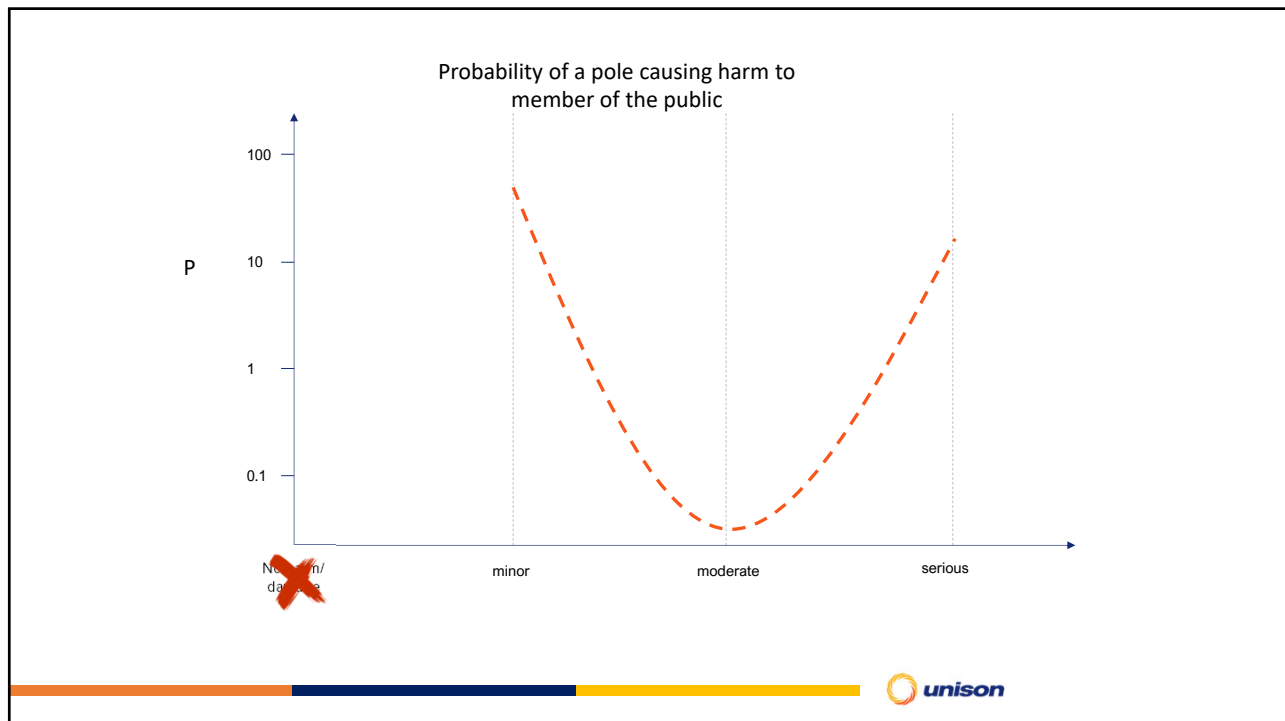
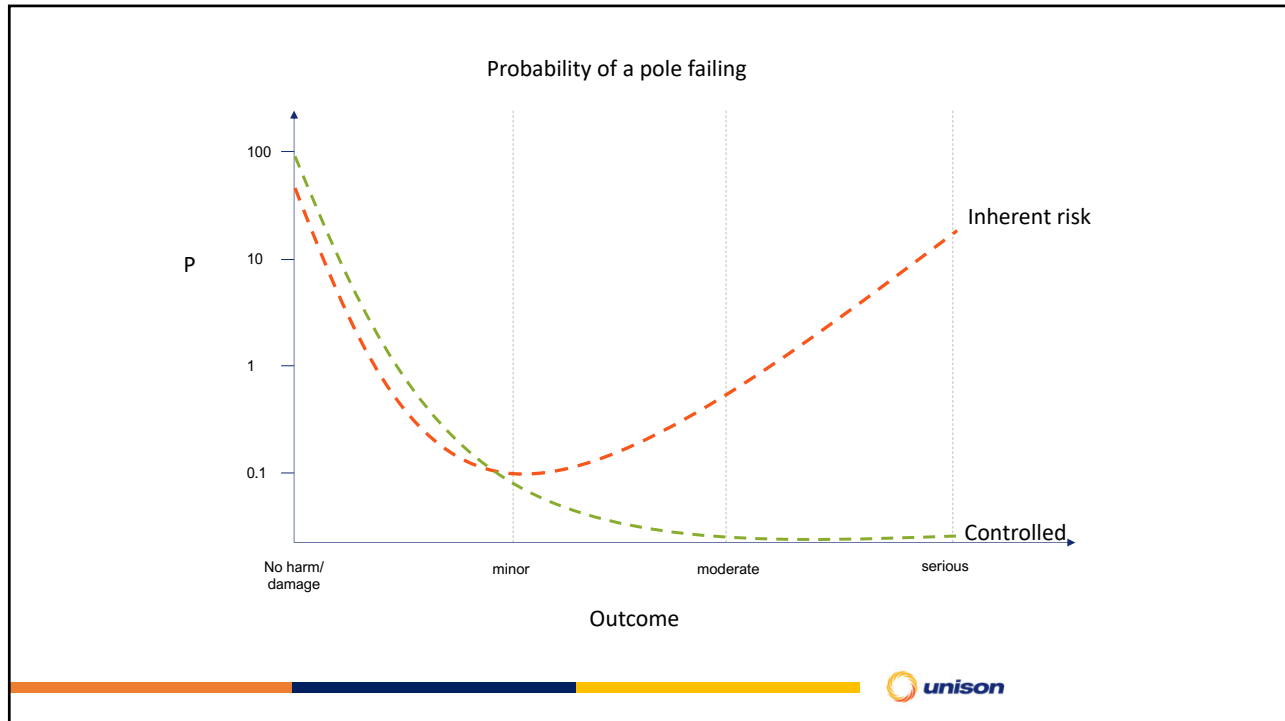
Workplace Injury and/or Occupational Health Illness		RISK SEVERITY (CONSEQUENCES)					
		Insignificant	Minor	Moderate	Major	Catastrophic	
		Slight pain and/or discomfort	Superficial injury/illness that may need first aid treatment or medical assessment	Injury/illness causing temporary reversible health effects. May need medical treatment and/or alternative work duties or lost time	Serious harm injury or illness causing permanent partial or temporary severe disability	Fatality or serious injury/illness causing permanent disability including irreversible health effects	
		5	4	3	2	1	
RISK PROBABILITY (LIKELIHOOD)	Almost Certain: Is expected to occur in most circumstances	A	Low	Medium	High	Extreme	Extreme
	Likely: Will probably occur in most circumstances	B	Low	Medium	High	Extreme	Extreme
	Possible: Might occur in most circumstances	C	Low	Medium	High	High	Extreme
	Unlikely: Could occur in some circumstances	D	Very Low	Low	Medium	High	Extreme
	Rare: Practically impossible may occur only in exceptional circumstances	E	Very Low	Low	Medium	Medium	High

Risk Level	Meaning
Extreme	Unacceptable level of risk – do not commence the activity or task, the risk must be eliminated.
High	Undesirable level of risk – action plan required – additional controls to be implemented, Group CEO and the risk owning General Manager approval.
Medium	The risk is acceptable provided that the risk has been controlled so far as is reasonably practicable. Approval required by the risk owning General Manager.
Low	Risk is acceptable.
Very Low	Risk is acceptable.





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UNL HEALTH & SAFETY RISK REGISTER – PUBLIC SAFETY

NOTES:

- The purpose of this risk register is to serve as a documented record of the consideration of public safety risks posed by network assets and through a systematic process highlight any gaps in controls applied which may result in unacceptably high risk, significant risk of harm to the public or damage to property.
- Type of assessment controls are: 0 - Surveillance, 1 - Engineering, 2 - Isolation, 3 - Administrative, PPE - Personal Protective Equipment
- Scope: Includes people and parties undertaking commercial interests, i.e. non approved high loads, logging operations and general public
- Consequences includes injuries to persons and damage to property including animals.
- Approach for scoring risks has been to assess mitigated risk as 4 levels with correct practices, then specify practices, then imagine what the risk would be without the current controls in place.
- Likelihood and consequence scoring been applied based on the likelihood of a failure occurring and resulting in the most probable type or property damage outcome, i.e. the asset fails, and someone is actually injured, or property is damaged in some way. Noting we have a very limited history to base assessments on with this approach.
- The likelihood of an event occurring was considered on the percentage in the risk matrix (under HS3000 Procedures) of the asset being considered over their assets typical lifecycle
- Highlighted - Changes/additions to the register from the previous version

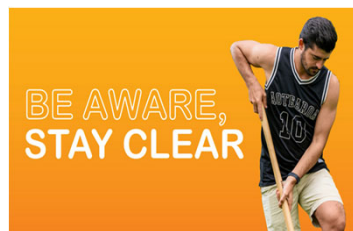
AMS Asset Category	AMS Asset Class	AMS Asset Type/ Material	Hazards	Most Probable Outcome resulting in an harm or damage	Worst Case Outcome	Unmitigated Risk (Pre Controls)	Unmitigated Consequence (Pre Controls)	Required Control Measures	Frequency of Monitoring	Personal Responsible	Logic for controlled risk assessment or most probable event resulting in harm or damage	Eliminated	Type of Mitigation	Controlled Outcome	Controlled Consequence (Post Controls)																			
Distribution Cable (PSSL)	PSSL M07 Cable	All	What can cause harm to members of the public (accident or asset failure)	Cable insulation wear failure resulting in an exposed conductor which may result in a person digging through or entering a cable (either unintentionally or intentionally as vandalism)	The worst case outcome would be someone was actively cutting through a cable as an act of vandalism and the conductor failed to operate	B	1	<ul style="list-style-type: none"> Cables insulated Regular inspections of adjacent assets where cables are above ground (HS202) Equipped cable ends (commercial) are at sufficient distance (vertically) or contained within enclosed cabinets Safety campaigns highlighting risk of cables and safety risk Additional cover and signage on DBR panels with cables Warning signs on all visible assets Warning Tape - M04015 Warning Cable Jacket - M04016 	All times	UNL, UCL, Commercial	Most likely that protection will operate very quickly limiting the potential for injury	N	A	B	4	M																		
																	<ul style="list-style-type: none"> Exposed cable ends (commercial) are at sufficient distance (vertically) or contained within enclosed cabinets Safety campaigns highlighting risk of cables and safety risk Additional cover and signage on DBR panels with cables Warning signs on all visible assets Warning Tape - M04015 Warning Cable Jacket - M04016 	Periodic	UNL, Commercial	N	A	E	C	4	M									
																										<ul style="list-style-type: none"> Additional cover and signage on DBR panels with cables Warning signs on all visible assets Warning Tape - M04015 Warning Cable Jacket - M04016 	All times	UNL, UCL, Commercial	N	A	E	C	4	M
Distribution Line (PSSL)	PSSL M07 Overhead Conductor	All	Conductor failure resulting in energised conductor on the ground, or at a non-compliant height, or an unsafe conductor resulting in person making accidental contact i.e. on a bike	Most probable outcome resulting in injury or damage to public could be an overhead line being in contact and starting a fire which get to ground and damage to assets	The worst case situation would be a low conductor falling on a person and the protection failing to operate	B	1	<ul style="list-style-type: none"> Regular inspection (HS202) Public safety campaigns Higher likelihood areas have additional visual markers installed Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL - N, B, D Commercial UNL - N, B, D	A fire could be started on a CH conductor at least once a year	N	A	B	4	M																		
																	<ul style="list-style-type: none"> Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL, UCL, Commercial	N	A	E	C	4	M									
																										<ul style="list-style-type: none"> Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL, UCL, Commercial	N	A	E	C	4	M
PSSL M02 Overhead Conductor	All	Unauthorised access e.g. non-compliant building clearance	Most probable outcome resulting in injury would be a person coming in contact with a live LV line and receiving a minor electric shock	The worst case situation would be a person coming in contact with a live LV line and receiving a minor electric shock	B	1	<ul style="list-style-type: none"> Regular inspection (HS202) Public safety campaigns Higher likelihood areas have additional visual markers installed Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL - N, B, D Commercial UNL - N, B, D	This most probable event has not been recorded in recent history (1-15 years)	N	A	B	4	M																			
																<ul style="list-style-type: none"> Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL, UCL, Commercial	N	A	E	C	4	M										
PSSL LP Overhead Conductor	All	Vegetation within growing through lines resulting in potential fire hazard or hazard to someone entering the vegetation without recognition of the risk	Most probable outcome resulting in injury would be a tree falling through the line, striking them and causing them to fall to the ground	The worst case situation would be a tree falling through the line, striking them and causing them to fall to the ground	C	2	<ul style="list-style-type: none"> Regular inspection (HS202) Public safety campaigns Higher likelihood areas have additional visual markers installed Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL - N, B, D Commercial UNL - N, B, D	Low voltage likelihood of failure resulting in most probable injury would be possible once in 33 years	N	D	4	L																				
																<ul style="list-style-type: none"> Warning signs on supporting structures Dependence defects based on the course of other work 	As required	UNL, UCL, Commercial	N	D	4	L												

Our risk registers enabled us to identify key stakeholder groups who may need bespoke engagement, develop targeted messaging, and use specific channels to reach them, including radio, newspaper, social media, website, and face-to-face, for example school visits.

Audience	Target demographics	Insights	Channels
Hawke's Bay community and businesses	Homeowners Gardeners Landscapers Children and families Real estate? Rural: farmers, orchardists, horticulturalist Contractors Tourists / people visiting from outside the region	<ul style="list-style-type: none"> - In Hawke's Bay the contact of the overhead network by third parties/members of the public was generally in rural areas, however State Highway 50 appeared to be the location for 7 events following the road. This probably reflects the large volume of traffic on this road but may need monitoring. - As expected, cars and trucks cause the greatest damage to poles, while diggers from underground assets. Of concern is the number of trucks and diggers damaging overhead conductors which may indicate more media communications and education programmes are needed. 	<ul style="list-style-type: none"> Social media Radio Giggle TV Bus backs? Billboards? Digital advertising Face to face presentations (stakeholder engagement) Safe Sparks schools programme Field Days
Taupō community and businesses	Homeowners Gardeners Landscapers Children Real estate? Children and families Rural: farmers Tourists / people visiting from outside the region	<ul style="list-style-type: none"> - In a more detailed analysis of comparing vehicles incidents as the most common cause resulting in damage to Unison network assets, the main incident involved pedestals i.e., those with close proximity to private driveways and low to the ground profile. 88% (126) of vehicle damage incidents to a pedestal were caused or assumed to be caused by a passenger car compared with 9% (13) known to be caused by trucks. There was a 22% increase in vehicle vs pedestal incidents and an 8% increase in vehicle vs pole incidents from FY21 to FY22. It is unclear what caused the increase, but this trend will be monitored in the next financial year. - In a location assessment to determine if there are specific geological areas of concern, poles in all regions are primarily impacted closer to the urban centres while overhead conductor is more likely to be contacted in more rural areas. 	
Rotorua community and businesses	Homeowners Gardeners Landscapers Children Real estate? Children Tourists / people visiting from outside the region Forestry	<ul style="list-style-type: none"> - Requests for close approach permits were highest during May through July, and November. - The months which had more contacts with underground conductor also had the most close approach permits issued possibly reflecting increased works happening during those months. - Like Hawke's Bay, contact with the overhead network in Rotorua was primarily in rural areas while also following the State Highways 30 and 5, reflecting traffic volume. 	



Risk driven safety campaigns, identified and reviewed through enduring process



STAY SAFE AROUND ELECTRICITY

BE AWARE, STAY CLEAR

Locating underground cables before carrying out work can be a life-saving decision.

Unison's cable location service will help you understand what's underground before you start any digging, making or maintenance work. Visit our website to make sure you're working safely.

TELL US ABOUT TREES NEAR POWERLINES

Trees growing through, or close to power lines are dangerous and put people at serious risk of being electrocuted or receiving significant electrical burns. Unison's satellite or drones can help you ensure trees are trimmed safely and with care. Contact us for help.

LOOK UP AND LIVE

If you're planning to carry out a task which puts you, machinery, tools or vehicles close to power lines or power boxes, contact Unison and we can help you get the job done safely. Visit our website to find out more about permits you can apply for to shut off power for certain jobs, and other services to help you get the job done safely.

POWER BOXES ARE LIVE. WATCH WHERE YOU DRIVE

Unison power boxes come in many different shapes, sizes and colours, and carry volts of electricity to power multiple properties - some of these power boxes are live 24/7.

Vehicle damage to these can create a public safety risk and cause power outages to customers' homes or businesses. Make sure you always know where the power box is before entering or exiting a driveway. Plus, if you see a damaged power box or pole, report it.

GET THE JOB DONE SAFELY WITH UNISON
 VISIT: UNISON.CO.NZ CALL: 0800 2 UNISON

"Great session. Kids were really interested and involved. Pitched at the right level that it was easy for the children to understand. The booklets, stickers and certificates were great so that the children could take them home and then discuss with their families what they had learnt. Thanks so much"

"I thought it was a great presentation. Great visuals and it really got the message across"

"A fabulous program and session. Thanks so much Unison"

Outcomes

Effectiveness of the campaign is evidenced in the reduction in incidents and injuries related to these four key issues between the periods 1 April 2021 – 31 March 2022 and 1 April 2022 – 31 March 2023:

Injuries and incidents related to 'contact with underground cable' reduced by 83%

Injuries and incidents related to 'tree trimming/felling' reduced by 67%

Injuries and incidents related to 'vehicle vs pedestal' reduced by 74%

Injuries and incidents related to 'contact with overhead conductor' reduced by 54%.

Is That Enough?



UNL HEALTH & SAFETY RISK REGISTER – THIRD PARTY ACTIVITIES

- NOTES:**
- The purpose of this risk register is to serve as a documented artefact of the consideration of the risks posed by third party activities approved by Unison through a systematic process to highlight any gaps in controls applied which may result in unacceptably high risk, significant risk of harm to third parties or significant damage to property.
 - Third Parties** – any person approved by Unison to work within reduced MADs or access Unison assets e.g. O&M agents, high load operators, forestry operations, non-electrical utility operations etc
 - Types of minimisation controls key = S = Substitution, E = Engineering, I = Isolation, A = Administration, PPE = Personal Protective Equipment
 - Consequences includes injuries to persons and damage to property.
 - Approach for scoring risks has been to assess mitigated risk as it stands with current practices, then specify practices, then imagine what the risk would be without the current controls in place.
 - Likelihood and consequence scoring been applied based on the likelihood of a failure occurring and resulting in the most probable injury or property damage outcome – i.e. the asset fails, and someone is actually injured or property is damaged in some way. Noting we have a very limited history to base assessments on with this approach.
 - The likelihood of an event occurring was considered on the percentages in the risk matrix (under HS3000 Procedure) of the asset fleet being considered over that assets typical lifecycle

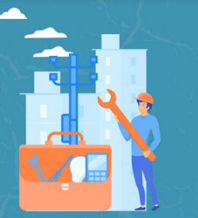
AMS Asset Category	AMS Asset Class	AMS Asset Type/ Material	Unison Approved Reduced MAD's	Hazards What can cause harm to third party	Most Probable Outcome resulting in an harm or injury What is most likely to happen which results in harm or damage	Worst Case Outcome What could happen	Uncontrolled Likelihood of Occurrence	Risk Rating (Pre-Controls)	Required Control Measures	Frequency of Monitoring	Personnel Responsible	Eliminate? (Y/N)	Controlled Likelihood	Controlled Consequence (Pre-Controls)			
Distribution Cable (TPDC)	All	All	TPDC M01 Mechanical, hydro excavation, directional drilling activities up to 2.2m TPDC M01 Hand excavation activities up to 2.2m TPDC M03 Cable locate – installing marker pips	Inadvertent or intentional damage to energised distribution cable resulting in insulation failure	Major electric shock or burns (from arc flash)	Fatality	A	1	<ul style="list-style-type: none"> OS1016 Close Approach Permit Process Warning tape (NK4015 Standard) Cable location process Standard cable depths (NK4015) Shaft thickness in cable armour Electrical protection scheme Media campaigns – safe working near electrical assets Education programme – individual company safe working near electrical assets presentations Regular inspections of adjacent assets where cables are above ground (NK5002) Minimum separation from other services (NK3001) 	All times	UNL – N & O UNL – N & O UNLJCSL UNLJCSL UNL – N & O UNL – Commercial	N	A	3	M		
					Major electric shock or burns (from arc flash)												
					Major electric shock												
LV Cable (TPLCV)	Cable	All	TPLCV L01 Mechanical, hydro excavation, directional drilling and hand excavation activities up to 2.2m TPLCV L02 Cable locate – installing marker pips	Inadvertent or intentional damage to energised distribution cable resulting in insulation failure	Minor electric shock	Burns (from arc flash), fatality	A	1	<ul style="list-style-type: none"> OS1016 Close Approach Permit Process Warning tape (NK4015 Standard) Cable location process Standard cable depths (NK4015) Shaft thickness in cable armour Electrical protection scheme Media campaigns – safe working near electrical assets Education programme – individual company safe working near electrical assets presentations Regular inspections of adjacent assets where cables are above ground (NK5002) Minimum separation from other services (NK3001) 	All times All times As requested All times All times Periodic	UNL – N & O UNL – N & O UNLJCSL UNLJCSL UNL – N & O UNL – Commercial	N	A	4	L		
									Files (1 week) Files (1 week) or above (200) which are group asset breakdown (1 week)	UNL H & S Advisor UNL N & O	A	D	4	L			
										All times	UNL N & O	I					



To address the one high-residual-risk activity revealed through the risk assessment process - approved third parties climbing poles on Unison's network - Unison chose to develop an online, interactive learning module as an effective, engaging and mobile approach to educating third parties on the safe work practices and risks associated with climbing poles on Unison's network.

Safe Climbing and Working on Power Poles for Unison OS1010 certified agents

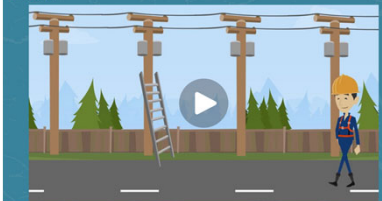
In this module you will learn how to inspect and test different types of power poles to safely climb and work on them.



The pole climbing online learning module is shared with third party company workers approved by Unison to work within reduced minimum approach distances of, or access, Unison assets.

It has given us confidence we have taken all reasonable steps to educate those third party company workers on the risks, how to identify which poles are safe to climb, and how to climb safely.

Before you climb a pole and start working on it, there are a few things you need to do, like checking it is safe. You don't want to end up like this guy!

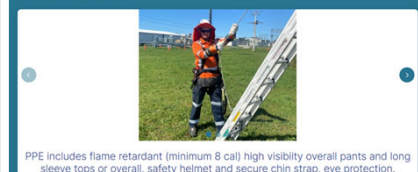


You will need to identify the type of pole and inspect and test it according to the pole requirements. Can you identify the poles below? Click on each card to reveal the pole type.



You must have the correct PPE before you inspect, climb and work on any power poles. You will also need the correct safety gear before you climb and work on any power poles.

Take a look below.



Man installing sign suffers electric shock from underground cables in Rotorua

Rotorua Daily Post
21 Feb, 2023 03:50 PM 2 mins to read

Save Share



The award recognises initiatives to:

1. **Entries may cover:** Excellence in electrical safety of the public.
2. Raise awareness of electrical safety issues in the local community.
3. Reduce accidents to the public which involve electricity supply industry assets.
4. Improve public understanding or awareness of electrical safety issues around electricity supply industry assets.
5. Encourage industry and the public to think about and participate in electrical safety initiatives.
6. Publicise ideas, procedures and programmes which deliver a high standard of public awareness of electrical safety.
 - The development of new or improved types of public safety promotion or information
 - The introduction of new or improved safety education methods, practices or procedures
 - New ways of encouraging a positive approach to electrical safety
 - Any other new aspect or suggestion which conforms to the objectives set out above

Judging is in accordance with the following criteria:

- **The effectiveness of identification of the problem the safety issue(s), the target audience and the medium selected.**
- **The extent of commitment in development and implementation.**
- **The effectiveness of the impact or outcome of the achievement in the public domain.**
- **The extent of integration of the achievement with other management systems in the organisation.**
- **The suitability of the achievement or contribution for wider application to industry.**
- **Compliance with all relevant statutory requirements.**
- **Evidence of achievement. Where possible, external verification of the achievement should be provided.**