User guide

Control of Work

Watercare
An Auckland Council Organisation

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Purpose

This purpose of this user manual is to help users of the Watercare Control of Work System to understand:

- What the Control of Work System is
- Why is the Control of Work System is important
- Control of Work - workflow
- User Instructions
- Control of Work Tools and how to use them

What is a Control of Work System?

A Control of Work System is made up of three critical risk management processes which support effective work planning and safe execution.

The Watercare Control of Work System provides the tools and framework for how we manage and authorise work. It's our way of making sure all safety precautions are in place before work starts.

Definition of work

An activity involving mental or physical effort done in order to achieve a purpose or result

The word "work", covers every type of work imaginable. In an occupational sense however, work can generally be grouped into three different types: routine, planned and reactive.

Routine: Performed as part of regular work. There are two types of **routine** work:

- ***Vocationally skilled work*** – these are daily routine work tasks for which you have been trained and your competency assessed to carry out the tasks safely and effectively. For example, driving a vehicle or doing computer work or an electrician doing electrical work. For this type of work, vocational training and competency assessments (apprenticeship, tertiary study, on the job training), is completed so that you become vocationally skilled to do the work without instruction. The Control of Work Process work-flow does not apply to this type of routine work.

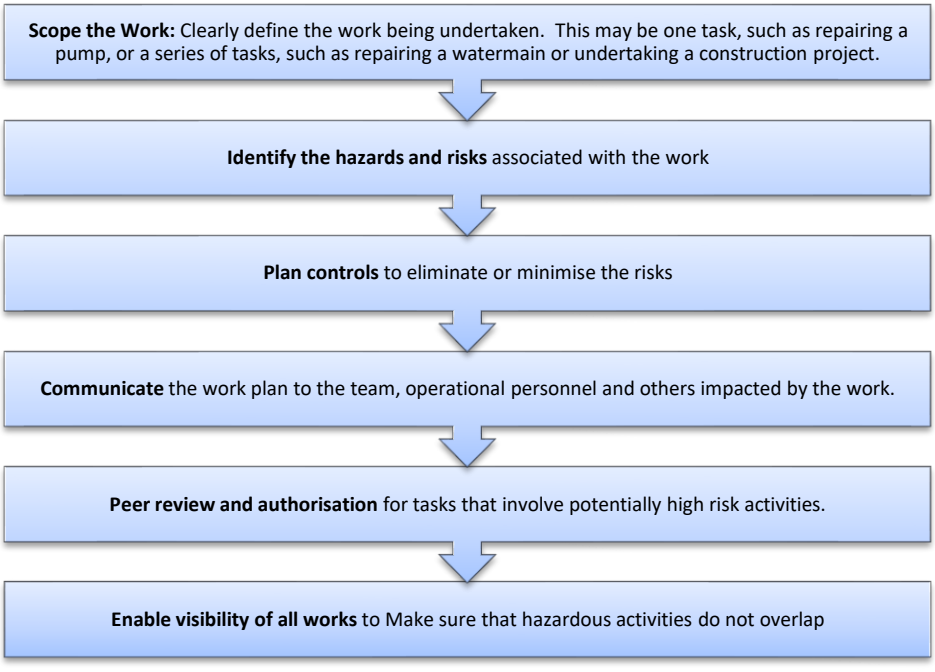
- ***Complex Routine Work*** - such as operating or maintaining plant and equipment. Hazards are known, controls and safe work methods are repeatable. Typically this type of work is covered by a Standard Operating Procedure (SOP). The SOP is a set of set-by-step instructions to assist *vocationally skilled* workers carry out complex routine activities correctly (and to industry standards), safely and always in the same manner.

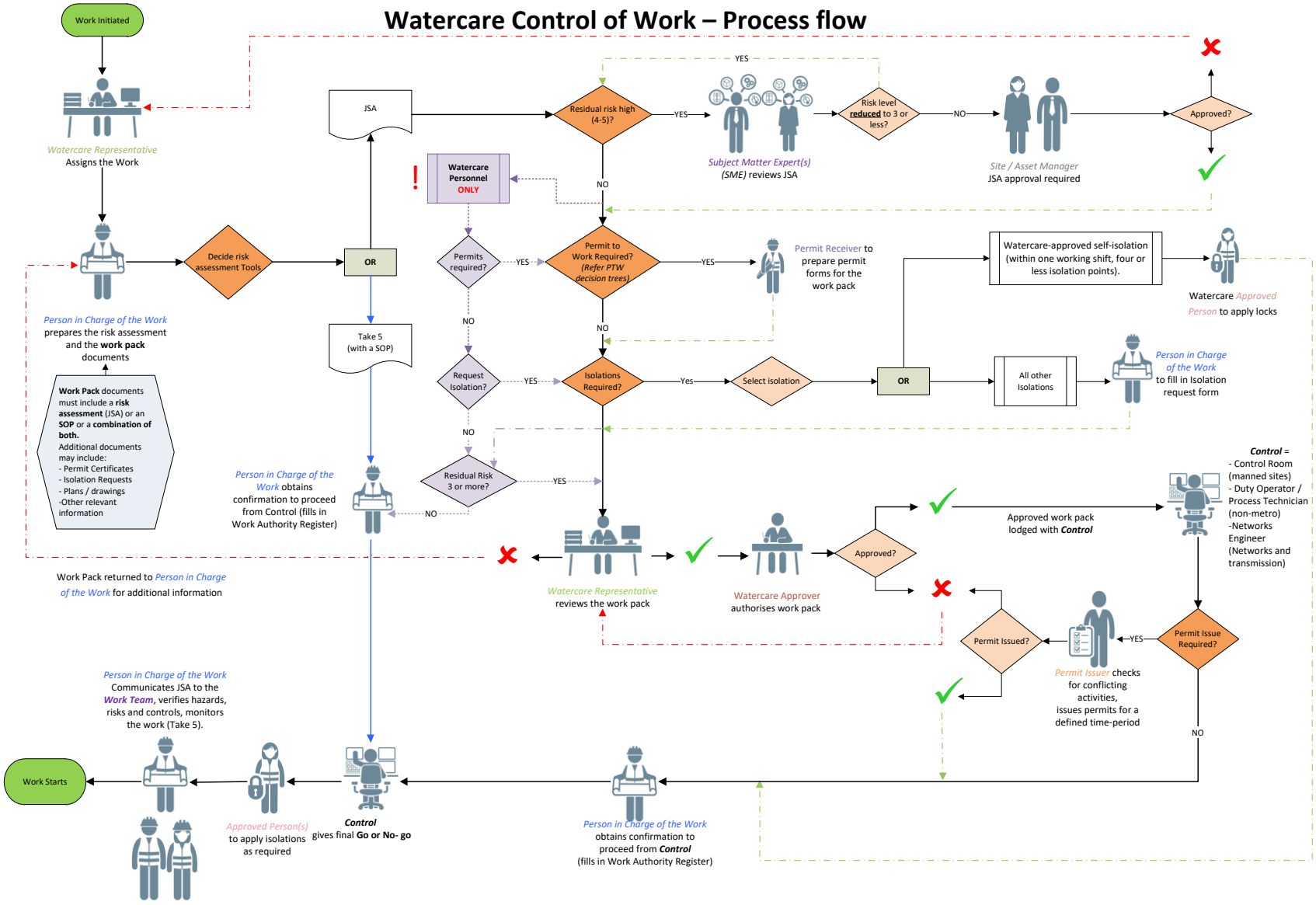
Planned Work: This is work that has gone through a formal planning process to identify labour, materials, tools, and safety requirements. Typically this type of work has a work order, requires an SOP, a Job Safety Analysis (JSA) or combination of both. Large work programmes are often divided into smaller work tasks each with its own JSA.

Reactive Work: Work that is in response to an emergency, breakage or failure. Again this type of work requires an SOP, JSA or combination of both.

Why is having a Control of Work System important?

Having a Control of Work System is important because it provides a framework and tools which support anyone who is doing work, or has responsibility for works to:





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Users of the Control of Work System

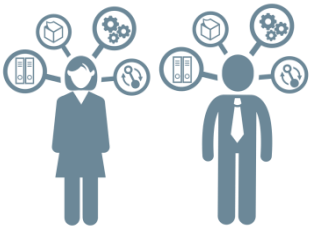
The Control of Work System is a framework designed to help each person involved with the work, to make informed decisions. It is intended to allow flexibility to suit many different types of work and working environments.

The following roles are involved with assigning, planning, checking, approving and doing work.

How the system is used,
which tools are selected,
who is involved and
what they need to do,
is determined by the **scope of the work** and
the hazards and risks involved.

Watercare Representative

Person in Charge of the Work



Subject Matter Expert(s)

Watercare Approver

Permit Issuer

Permit Receiver

Control

Work Team

Approved Persons

Watercare Representative

Watercare Representative

Watercare person who arranged the work to be done.

This person may be:

- Maintenance controller
- Project engineer/manager
- Maintenance Delivery leading hand/supervisor
- Others who organise work

Watercare Representative

Responsible for:

- Making sure that the right person/organisation is given the work
- Telling the *Person in Charge of the Work*, of the hazards within the work location.
- Review work pack documentation hazards and risks. Check to make sure that the hazard and risk controls are well planned to reduce the risk of harm as low as possible.
- Communicating extra requirements or changes to the *Person in Charge of the Work*
- Making sure that work pack documentation is complete
- Giving the *Watercare Approver* the completed work packs (JSA, Permits and other associated documents).
- Reviewing and monitoring to make sure Control of Work system is followed
- Alerting site/asset managers of high risk activities (**residual risk 4 or 5**).

I need to….	*Where do I find…?*	*How do I do….?*	*When do I do it?*
Communicate hazards and risks of my site/plant/process to the *Person in Charge of the Work*	- Site Hazard Register - Worksite visit with *Person in Charge of the Work*	- Site hazards **specific to the work**, can be pre-loaded into the JSA along with Watercare controls. - Print and provide a copy of the hazard register - When doing a worksite visit, check the hazard boxes on the JSA as identified.	- When arranging the work pack documentation to send to the *Person in Charge of the Work*
Create a new JSA number and electronic file for the work.	- Each operational business unit maintains their own JSA register and electronic filing system.	- Ask the *Watercare Approver* how this is done.	- When arranging the work pack documentation

I need to….	*Where do I find…?*	*How do I do….?*	*When do I do it?*
Provide the *Person in Charge of the Work* with work pack documentation	Download: - **JSA Template** and Guideline from the Permit to Work page on *OurPlace* - **Permit Certificates** from Permit to Work page on *OurPlace* - **Isolation Permit** and **Confined Space Entry** Permit books are available on the operational sites and functions.	- Download and email electronic copies to the *Person in Charge of the Work.* IMPORTANT: Always make sure you have the latest version by regularly downloading from the website.	- Planned work, at least 7 days before the work needs to be started. - Reactive work, as soon as possible.
Review a JSA	- Hazard and Risk information: ➢ Watercare Key Requirements ➢ Inspection suite ➢ WorkSafe Website ➢ Industry guidelines ➢ Contractors hazard management info	- Refer to hazard & risk information to determine if the *Person in Charge of the Work* has planned adequately. - The inspection suite is a handy tool for checking if suitable controls are in place - Apply your own knowledge and training - **If in doubt, ask.**	- As soon as possible after received
Make sure that work pack documentation is complete	- Completed work pack returned from *Person in Charge of the Work*	- All documentation should be shown on the work pack section 5 of the JSA	- During JSA Review
Obtain confirmation to proceed with work from the *Watercare Approver*	- Confirmation signature on the JSA	- Provide the completed work pack to the *Watercare Approver*	- Planned work, at least 5 days before the work needs to be started. - Reactive work, as soon as possible.
File and store documentation	- Each operational business unit maintains their own JSA file and electronic filing system.	- Ask the *Watercare Approver* how this is done.	- Make sure an approved copy is available to the *Watercare Approver*, ***Control*** and *Permit Issuer* before work starting

Person in Charge of the Work

Person in Charge of the Work
Person who will be in charge of doing the work.

This person may be a Watercare employee or a contractor.

This person may be (but is not limited to):

- Work foreperson/supervisor
- Worker in charge of the work (solo tasks)
- Permit Receiver

Responsible for:

- Doing the risk assessment (JSA or Take 5 with SOP review)
- Selecting and preparing the Control of Work documentation for the work pack
- Having the work pack reviewed by *Subject Matter Expert* (**residual risk 4 or 5**)
- Giving completed work pack to *Watercare Representative* so that the *Watercare Approver* and *Permit Issuer* have a suitable amount of time to consider the application (ideally five working days).
- Co-ordinate and communicate risk management activities to the *Work Team*
- Communicating with ***Control*** before the work starts, when stopped and when finished.
- Making sure risks are verified, controls are implemented and monitored during works
- Making sure the right resources and tools are made available to complete the work safely.
- Alerting authorisers when work is suspended or complete

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Find out the Watercare hazards which may impact my work	- Ask your *Watercare Representative* for a list of hazards - If unfamiliar with the worksite do a site walk	- Contact your *Watercare Representative*	- Before starting the JSA
Decide what risk assessment tools to use	- Search SOP library (Watercare operational sites each have their own SOP library. Watercare maintenance also have their own SOP's) - Obtain JSA template from *Watercare Representative*[1]	- If the SOP covers the entire scope of the work, then use the SOP with a Take 5. - If there is no SOP, OR the SOP only covers part of the job, use the JSA template and JSA Guideline.	- Review the SOP and do the Take 5 prior to starting work. - Prepare the JSA and work pack documentation at least 5 days ahead of scheduled start date.

[1] Contractors may use their own JSA templates or SOP's – however they must complete pages 1 & 2 of the Watercare JSA to make sure that Watercare information and confirmation is obtained and recorded.

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Fill in the JSA, do the Task Risk Assessment and plan hazard controls	- JSA Guideline - WorkSafe information, AS/NZS standards, industry standards, CoP - Your organisational standards and policies for managing risks - Watercare Key Requirements	- Use the JSA Guideline to help you prepare the JSA - Use organisational and external sources of information to plan your hazard controls.	- **Planned work**- Prepare the JSA and work pack documentation at least 5 days ahead of scheduled start date. - **Reactive work** – Prior to starting activities.
Do a Take 5	- Watercare provides Take 5 Booklets to Watercare employees. - Many contractors have their own Take 5 or similar and this may be used. - Contractors- If you do not have a Take 5 booklet – ask your *Watercare Representative* to provide you with a book (please return book at end of job)	- Instructions for doing a Take 5 are in the booklet	- Use with the JSA and SOP's before starting work *AND* after each absence from the work site i.e. after work breaks and at the start of each day.
Understand what documentation is needed for the work pack	- Section 5 of the JSA	- Complete the Job Task Analysis section of the JSA, this will show what permits, isolations, and other documentation are needed to complete the work safely.	- When preparing the JSA
Arrange for Watercare to Isolate equipment	- Request an Isolation Certificate from your *Watercare Representative*	- Fill in the Request section of the Isolation Certificate	- Include with the work pack documentation

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Request a work permit (*Permit Receiver*) 	- Request the permit forms from your *Watercare Representative*	- A trained *Permit Receiver* must fill in the permits. Return completed permit certificates to your *Watercare Representative.* - The Permit Receiver must be available to be onsite for some or all of the work (refer PTW Procedure)	- Include with the work pack documentation
Have the JSA reviewed because residual risk levels are still high (4 or 5)	- Seek out a *Subject Matter Expert* who can review your work pack documents	- Arrange a meeting, - Depending on the work complexity, this may be with one person or a group including the Work Team - Update the work pack documents with the improved risk controls	- After completing the risk analysis section 6 of the JSA
Submit the work pack		- Return all completed and signed documentation to your *Watercare Representative* - Your *Watercare Representative* will review your work pack and when all information is complete, give the work pack to the *Watercare Approver* and the *Permit Issuer* for confirmation to proceed with work and permit issuing - Once approved, your *Watercare Representative* will return the work pack to you.	- **Planned work**- least 5 days ahead of scheduled start date. - **Reactive work** – as soon as possible

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Get the **go or no-go** to start my work from ***Control***	- In the control room will be the printed Work Authority Register - Attend the daily toolbox meeting as requested (some operational sites) - On non-manned sites work authority may be verbal and recorded on a digital Work Authority Register by ***Control.***	- Manned sites – go to the Control Room - Non-manned sites, phone the control room or the duty operations technician. - Discuss the work and await final confirmation to start work. - Fill in the Work Authority Register	- Just before starting the work.
Isolate equipment (Watercare isolation *Approved Person*) to apply isolations 	- Isolation request (on the isolation certificate)	- ***Control*** will arrange for an *Approved Person* to isolate equipment and complete the isolation certificate. - Place your lock on the lock-out bar - **ALWAYS** test that equipment is isolated before starting work.	- Just before starting the work.
Close my permits	- Control room for manned sites or your *Watercare Representative*	- Control or your *Watercare Representative will c*ontact the duty *Permit Issuer*	- When all permitted activities are complete and returned to a safe state.

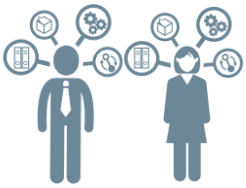
Subject Matter Expert

Subject Matter Expert(s) **(SME)**[2]

Competent person who understands the work, the risks and controls. This person/s may be from the contractor's organisation or from Watercare or both.

This person may be:

- Senior team member
- Leading hand or supervisor
- Subject matter expert
- Controller / Manager
- A group of people who understand the work



Responsible for:

- Reviewing the Control of Work documentation.
- Giving feedback and advice to *Person in Charge of the Work* to reduce the risk of harm to workers as far as reasonably practicable.
- Where the residual risk remains high or very high, being available during the works to monitor controls and risk levels.

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Review the control of work documentation, giving feedback and advice to reduce the risk of harm to workers as far as reasonably practicable.	- The *Person in Charge of the Work* will provide the documents to you	- Face to face or in a group is the most effective method for exchanging advice and ideas. However email exchange is acceptable. - Apply your area of expertise to the hazard and risk controls planned. - Discuss your recommendations with the *Person in Charge of the Work* so they can apply them to the work pack documents	- As soon as possible when asked.
Be available during the works to monitor controls and risk levels.	- The *Person in Charge of the Work* will advise you when you are needed on-site	- Onsite – review the planned hazard controls on the work pack documents - Physically verify that controls are in place and risk levels reduced as planned - Participate in the Toolbox meeting or discuss the work plan with the Work Team to verify their understanding. - Monitor the activity	- During the works when high risk activities are being undertaken

[2] Definition **Expert**: a person who is knowledgeable or skilful in a particular area i.e. an electrician is an electrical expert, a fitter is a mechanical expert, a person trained and experienced to do confined space entry is a confined space entry expert.

Watercare Approver

Watercare Approver

Approval is required for JSA's with residual risk levels 3, 4 or 5. (refer to Appendix 1)

Watercare Person who accepts the completed work pack documentation and approves for the work to proceed.

This person must have control responsibility for the asset and may be:

- Site / Asset Managers
- Operations Controllers
- Maintenance Controllers

Responsible for:

- Making sure that the Work pack is complete
- Evaluating planned concurrent activities
- Giving approval to proceed with the work
- Lodging the approved work pack with **Control**

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Make sure that the work pack is complete	- The *Watercare Representative* will provide you with the work pack - All required documentation should be listed on the JSA and attached	- Review and confirm or respond to *Watercare Representative* with additional requirements.	- Within 3 days
Evaluating planned concurrent activities	- JSA Register and Operational work plans	- Check for activities happening in the same area, at the same time, that may impact on the planned activities.	- During the review
Provide confirmation to proceed with the work		- Sign Approval section of the JSA	- On review completion
Lodging the approved work pack with **Control**		Each business unit will have their own method of sharing information with **Control**	- When approval has been given

Permit Issuer

Permit Issuer

Duty Watercare person who has permit issuing responsibilities.

Responsible for:

- Checking work pack and permit documentation is complete, approved and correct
- Making sure that work activities needing permits are planned and co-ordinated to avoid risks caused by simultaneous activities.
- Issuing permits for defined time-period
- Suspending / revalidating or cancelling permits
- Closing out PTW
- Daily monitoring by permit issuers – at least one permit per day
- Communicating risks to other effected parties

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Check the work pack and permit documentation is complete, confirmed and correct	- Permits are part of the work pack documentation	- Check planned hazard and risk controls using your experience, the Watercare Key Requirements and other relevant reference information	- When requested
Check simultaneous activities	- JSA register, Work Authority Register and operations work plans	- Check for con-current activities that may impact the planned activities at the time the work is scheduled to take place.	- Before approving the permits
Issue permits	- Sign permit certificates	- Refer to PTW Procedure	- Before work starts (up to 5 days before)
Suspend / revalidate or cancel permits	- Initial permit certificates	- Refer to the PTW procedure	- As requested
Daily monitoring	- PTW Audit in Synergi	- Refer to the PTW procedure	- Once a day for active permits
Issue a permit remotely (applies to residual risk level 3 or lower)	- Remote issue Workflow - Remote Authorisation Register (to be developed)	- Refer PTW Procedure - Communicate and agree permit receiver, remote permit and control verification method. - Verify controls and issue/record a unique authorisation code	- When requested

Control

Control

Watercare person who is operating the asset at the time the work needs to be done.

This person may be:

- Process controller (Rosedale)
- Control room operator
- Process technician
- Networks Engineer / Transmission Engineer

Responsible for:

- Checking that the work pack is confirmed for work to proceed
- Attending toolbox discussion (applicable to manned sites)
- Checking the assets to make sure safe to start
- Arrange necessary isolations
- Escalates issues to Watercare Representative or Authorisers
- Provides final Go / No-Go

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Check the work pack is authorised	- Each site will have an area where work pack documentation is held.	- Approval box on JSA is signed by the *Watercare Approver*	- On the day of the work, when *Person in Charge of the Work* requests the **Go or No-go,** to start work.
Check the assets to make sure safe to start	- Operational control systems - Work Authority Register - Daily toolbox meeting and toolbox white boards	- Attend the daily toolbox and update the whiteboard - Look at current operational tasks taking place or planned during the works. - Check the Work Authority Register to see what other work activities are taking place.	- When the **Go or No-go** is requested
Get a Permit Authorised	- Refer to the Duty Permit Issuers roster	- Give the work pack documentation to the *Permit Issuer*	- Before giving the **Go or No-go**
Arrange for isolations to be applied	- Isolation request on the Isolation certificate in the work pack.	- Contact an *Isolation Approved Person* (AP or SAP) as determined by the isolation request	- Confirm contractors lock has been applied to the lock out bar before giving the **Go or No-go**

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Escalate issues		- **No-Go** the activity - Contact the *Watercare Approver* or *Watercare Representative*	- When conflicts with the work and operations may occur. - When I am unsure about whether it's okay to give the **Go or No-go**
Provide the **Go or No-go**	- Work Authority Register	- Check the Work Authority Register to see if there are any other works or operational activities that may be impacted by the work. - Advise the *Person in Charge of the Work* and initial the Work Authority Register	- When all checks are complete

Work Team

Work Team

Employees or contractors doing the work.

Responsible for:

- Identifying hazards
- Participating in the development of risk assessments
- Understanding and following the JSA work plans and controls
- Stopping the work and alerting the person in charge if conditions change or the activity is unable to be carried out safely
- Making sure that others who need access to the work area are inducted into the JSA

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Identify hazards	- JSA and Take 5	- Before starting work do a hazard walk and check that all hazards and risks have been planned in the JSA - During the work, do a Take 5 at the start of each day and when returning to the worksite after breaks.	- Before and during the work
Participate in risk assessments	- JSA and Take 5	- Attend risk assessment meetings - Take part in group Take 5's - Attend toolbox / prestart meetings - When work changes, participate in the update of the JSA assessments	- Meetings when requested - Attend Take 5 and toolbox or prestart meetings, whenever they take place.
Understand and follow the JSA work plans and controls	- Toolbox or pre-start meeting	- Listen to *Person in Charge of the Work* communicating the JSA and the work plan - Read the work pack documents (JSA, PTW and other information i.e. design plans) - Ask questions - Suggest risk improvements - Follow the work plan	- Before starting work and whenever a change is made to the work plan

I need to….	*Where do I find it?*	*How do I do it?*	*When do I do it?*
Stop the work and notify the *Person in Charge of the Work* if conditions change, or the activity is unable to be carried out safely		- Immediately inform the **Work Team** that you are stopping the work - If the risk cannot be immediately eliminated, then set up a perimeter or isolate equipment so that work cannot be restarted. - Inform the *Person in Charge of the Work*	- As soon unsafe conditions, behaviour or equipment is noticed.
Make sure that others who need access to the work area are inducted into the JSA	The onsite JSA	- Communicate via a tool box or pre-start. Go through each step of the JSA with the person who requires access to the work area.	- Before allowing the person access.

Risk Assessment

Risk Assessment Tools

Like tools in a toolbox, every tool has particular types of work that its best suited to. Risk assessment tools are similar. As with physical tools, which tool, or combination of tools you choose depends on the task you need to do, and the risks associated with that task.

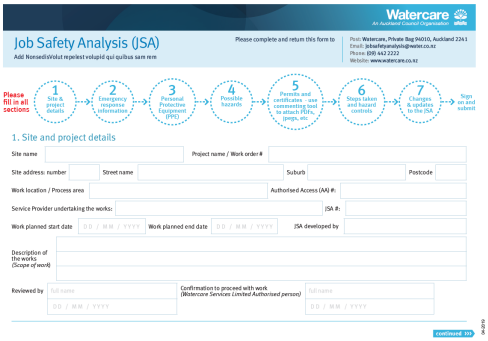
All risk assessment tools work off the same 5 principles:

1. Identify the hazards
2. Decide who may be harmed and how
3. Assess the risk and decide how to control the risk to minimise potential harm
4. Record the risk assessment
5. Review the risk assessment

A risk assessment forms the basis for all work. At Watercare there are three commonly used risk assessment tools used with the Control of Work System:

TAKE 5

JOB SAFETY ANALYSIS (JSA)



PERMIT TO WORK

Assessing the Risk – Back to Basics

A RISK is the LIKELIHOOD that a hazard would cause harm, and the SEVERITY of the harm that could occur. Controls are layers of protection put in place to firstly PREVENT a loss of control (e.g. brakes on a car), but also MITIGATE the harm that may occur if control of the hazard is lost (e.g. seatbelt).

We use a risk matrix to score risk.

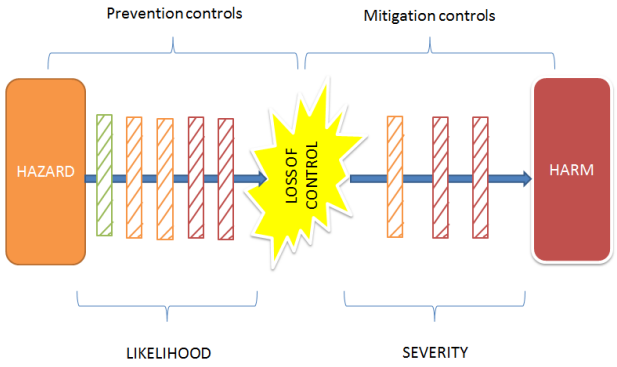
Job Safety Analysis (JSA)

			CONSEQUENCE / POTENTIAL SEVERITY				
			MINIMAL Non-injury or first aid injury (FAI)	**MINOR** Medical Treatment Injury	**MODERATE** Medical Treatment Injury, with lost time (LTI)	**MAJOR** Injury requiring hospitalisation/notifiable event	**CATASTROPHIC** Fatality or Multiple Fatalities
LIKELIHOOD	Very high	**Almost certain:** Commonly Occurs	3: Medium	4: High	4: High	5: Very high	5: Very high
	High	**Likely:** Could easily happen	2: Low	3: Medium	4: High	4: High	5: Very high
	Medium	**Possible:** Could happen or has been known to happen	2: Low	2: Low	3: Medium	4: High	4: High
	Low	**Unlikely:** Hasn't happened yet but could happen	1: Very Low	2: Low	3: Medium	3: Medium	4: High
	Very low	**Rare:** Very unlikely but could happen in exceptional circumstances	1: Very Low	2: Low	2: Low	3: Medium	4: High

To reduce the **likelihood** of a hazard causing harm you need to put in place controls which are designed to prevent a loss of control and the hazard causing harm.

To reduce the **severity** of a **consequence** you need to put in place controls that will minimise the potential harm once there is a loss of control.

Example: For example; seat belts and airbags in vehicles minimise the severity of harm in a crash, a harness will catch you if you fall and a rescue plan will enable the team to get you down safely. When a hazard comes into direct contact with a human, PPE can minimise the harm it causes and decontamination, evacuation and emergency plans all work to mitigate the severity of harm.



Controlling the risk

Once you have identified the hazards which have the potential to cause harm, you need to assess the risk to work out the best controls to reduce the risk of harm.

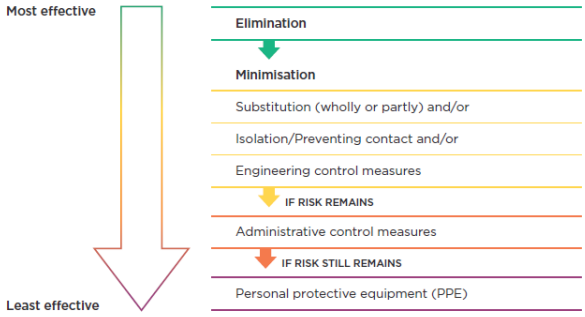
Assessing the Risk

Step 1: Evaluate the hazards and current controls in place to manage the hazard. Assess the **Existing Risk** of each hazard using the risk matrix to score the risk level.

Step 2: Using the **Hierarchy of Control**, plan extra controls to reduce the risk of harm as far as reasonably practical.

Step 3: Assess the **Residual Risk** after the extra controls have been

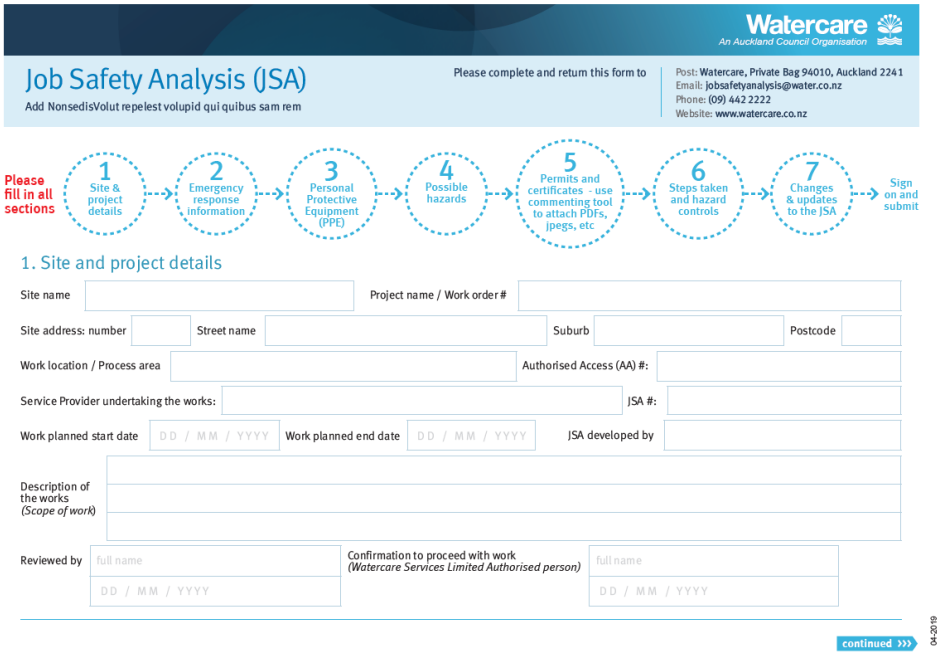
Hierarchy of Control



Take 5

What is a Take 5?	The Take 5 is a simple and quick risk assessment tool. It is used to identify health and safety hazards before starting work on a job. It helps workers and contractors, particularly those new to a site understand and reduce exposure to hazards and risks.
Why use a Take 5	Everyone agrees that safety in the workplace is important. Yet everyday shortcuts in safety are taken to get jobs done faster or easier. Sometimes safety is compromised due to work activities being so ingrained in our minds that we go on autopilot, and we forget to check for potential safety hazards. A Take 5 reminds us of the simple things, they are used to prompt us to stop and take a moment to assess the situation and our immediate work environment. Checking for potential safety hazards allows us to manage risk and minimise the chance of injury.
When do you use a Take 5?	Use for simple activities which are effectively controlled and the risks already minimised Use for a pre-start and re-start check for SOP's and JSA's
Who can do a Take 5	Anyone can do a Take 5 Take 5 can be done individually or as a work group
How do you do a Take 5?	First examine the work area and discuss the work with the work team. Identify the hazards and risk controls. Follow the instructions on the Take 5 booklet and fill in the form.

Job Safety Analysis (JSA)



Watercare
An Auckland Council Organisation

Job Safety Analysis (JSA)

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Please complete and return this form to

Post: Watercare, Private Bag 94010, Auckland 2241
Email: jobsafetyanalysis@water.co.nz
Phone: (09) 442 2222
Website: www.watercare.co.nz

Please fill in all sections

1 Site & project details → 2 Emergency response information → 3 Personal Protective Equipment (PPE) → 4 Possible hazards → 5 Permits and certificates - use commenting tool to attach PDFs, jpegs, etc → 6 Steps taken and hazard controls → 7 Changes & updates to the JSA → Sign on and submit

1. Site and project details

Site name | Project name / Work order #

Site address: number | Street name | Suburb | Postcode

Work location / Process area | Authorised Access (AA) #:

Service Provider undertaking the works: | JSA #:

Work planned start date DD / MM / YYYY | Work planned end date DD / MM / YYYY | JSA developed by

Description of the works (Scope of work)

Reviewed by full name DD / MM / YYYY

Confirmation to proceed with work (Watercare Services Limited Authorised person) full name DD / MM / YYYY

continued >>>

04-2019

What is a JSA? A job safety analysis (JSA) is a form which helps plan health and safety principles and practices into a particular task or job operation.

In a JSA, each basic step of the job is planned, hazards identified, risks assessed and control measures determined.

A JSA provides a framework for communication, peer review and authorisation

Why use a JSA? Effective work planning is needed for controlling risks in the workplace. The major advantages of using a JSA include that it does not rely on individual memory and that preparing and participating in the development of the JSA prompts the recognition of hazards and increases the job knowledge of those participating. Communication between workers and supervisors is improved, and acceptance of safe work procedures is promoted.

For large jobs, a JSA forms the basis for regular contact between supervisors and workers. It can serve as a teaching aid for initial task training and as a briefing guide for infrequent jobs. It may also be used as a reference for health and safety inspections or observations.

When do you use a JSA?	Factors to be considered in setting a priority for a JSA include: Use for complex work where risk controls need to be planned and implemented. Use for complex work where the SOP only covers a portion of the work to be done. Use for the development of SOP's. Newly established jobs: due to lack of experience in these jobs, hazards may not be evident or anticipated. Modified jobs: new hazards may be associated with changes in job procedures. Infrequently performed jobs: workers may be at greater risk when undertaking non-routine jobs and a JSA provides a means of reviewing hazards. Potential for severe injuries or illnesses: the consequences of an accident, hazardous condition, or exposure to harmful products are potentially severe.
Who can do a JSA	Anyone who has an understanding of the hazards and risks involved in the work can prepare a JSA (typically this is the Person in Charge of the Work) A JSA can be done individually or as a team. For complex jobs or SOP development an effective way to develop the JSA is to have a group of experienced workers and supervisors complete the analysis through discussion. An advantage of this method is that more people are involved in a wider base of experience and promoting a more ready acceptance of the resulting work procedure. Members of the Health, Safety and Wellness committee can also participate in this process.
How do you prepare a JSA?	Four basic stages in preparing a JSA are: 1. Selecting the job to be analysed 2. Breaking the job down into a sequence of steps 3. Identifying potential hazards 4. Determining prevention and mitigation controls to reduce the risk of harm The instructions for completing a JSA are contained in the JSA guideline

Permit to Work (PTW)

What is a PTW?	The Permit to Work Procedure (PTWP) is a set of detailed documents that authorise specific people to carry out potentially high-risk work, at a specific site at a specific time, and sets out the controls required to complete the work safely.
Why use a PTW?	A permit to work is not simply permission to carry out a potential high risk job. It is an essential part of a system which determines how that job can be carried out safely, and helps communicate this to those doing the work. The issue of a permit does not, by itself, make a job safe - that can only be achieved by those preparing for the work, those supervising the work and those carrying it out. The PTW procedure outlines Watercare's requirement to have formal, written authority to undertake work identified as potentially high risk. It also allows communication about work and work status between those undertaking the work and those overseeing it.
When do you use a PTW?	A permit to work (PTW) is required for any of the work defined (but not limited to) below. • Confined space entry (residual risk level 2 and above) • Working at height • Excavations • Isolation of hazardous energy or substances • Safety device impairment • Hazardous atmosphere zoned areas • Hot work • Other high-risk work (residual risk level 4 or 5) Further details for when a permit is required are contained in the JSA Guideline and the Watercare Permit to Work Procedure.
Who can do a PTW	Trained Permit Receivers (PR's), who have expertise in the work, planning and risk controls.
How do you prepare a PTW?	Firstly a JSA (or an SOP) must be prepared. This will show the activities that will require permits. Each PTW form has a set of prompts specific to the risk involved with the activities. These assist the Permit Receiver to identify hazards, plan risk controls and obtain Permit Issuer authorisation to do the work.

Isolations

Isolations must be undertaken following the Watercare *Isolation procedure*.

What is Isolation?

Isolation is a process which protects workers from uncontrolled hazardous energy when undertaking cleaning, maintenance, construction, repair and fault response.

Hazardous energy is defined as any energy that has the potential to cause harm including (but not limited to):

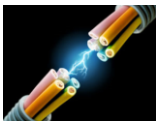
Mechanical

Energy made available through the movement of an object i.e. motors, pumps, conveyors.

Chemical

Energy made available through a chemical reaction i.e. gases, petroleum, fumes

Electrical

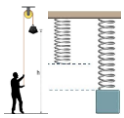


Energy made available by the flow of electric charge through a conductor i.e. power cables, batteries

Thermal

Energy made available through the release of heat i.e. steam, radiation, convection

Gravitational or Potential

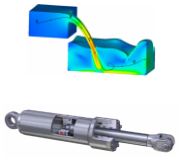


Energy stored in an object made available through gravity i.e. overhead conveyor. Potential energy is the stored energy possessed by an object i.e. compacted spring

Pneumatic

Energy made available through pressurized air. I.e. surge tanks or pressure tanks or in motion through tubing or hoses.

Hydraulic



Energy made available through pressurised fluid. i.e. water which is stored in reservoirs at a high altitude (so that it has gravitational potential energy) or fluids in motion through pipes, pistons or hoses.

Why use Isolation?

To prevent potential harm to workers through contact with uncontrolled energy sources.

When do you use Isolation?

It is Watercare's policy to lock out and tag out (LOTO) all isolation points; where-ever a source of energy is identified through a risk assessment.

Who can do an Isolation	A Watercare approved person who has, through a combination of training, education and experience acquired knowledge and skills enabling that person to correctly perform a specified task.
How do you request Isolation?	The Person Responsible for the Work fills in the Isolation Request section of the Isolation **Certificate** and includes it with the work pack documentation.

Further Reading

Watercare Documents

- JSA Guideline
- Permit to Work Procedure
- Isolation Procedure
- Managing Risk
- Confined Space Key Requirement
- Working at Height Key Requirement
- Working in Excavations Key Requirement
- Hazardous Substances (Volatile Atmospheres) Process
- Isolation procedure

External Documents

- https://worksafe.govt.nz/dmsdocument/839-identifying-assessing-and-managing-work-risks