



New Zealand's Leading Astronomy Attraction

HEALTH AND SAFETY MANUAL

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INTRODUCTION

The Health and Safety in Employment Act promotes excellence in managing health and safety in places of work.

Its aim: instill an attitude of responsibility in all management, staff, and others to provide and maintain a safe working environment.

Its focus is on the prevention of harm arising out of work activities. Hazards must be eliminated, isolated, or minimized in that order of priority.

The purpose of this manual is to describe the Health and Safety roles and responsibilities of Stardome Observatory as an employer, and to provide awareness for employees concerning the Health and Safety issues, and to assist them in compliance with the Act.

If you have any suggestions for improvement of procedures, identification of new hazards, or elimination of outstanding hazards, please convey these to the CEO, or to the Health and Safety Officer.

This manual is a guideline and does not detail all the health and safety issues that apply, nor all the hazards that may exist in a particular situation. Common sense and safe practices must prevail at all times.

Under the Health and Safety in Employment Act 1992 (HSE Act), the employer has legal responsibilities to you as an employee. At the same time you, as an employee, also have legal responsibilities to look after yourself, and ensure that the work you do does not affect anyone else.

For definition of the terms used in this manual refer to the Health and Safety in Employment Act 1992:

Website: <http://www.osh.dol.govt.nz/order/catalogue/153.shtml>

HEALTH AND SAFETY POLICY

It is the policy of Stardome Observatory to minimize people's (staff, volunteers, clients, school groups, service people, contractors, guests and the general public) exposure to the risk of hazards in the Stardome places of work.

Stardome Observatory will provide sufficient resources, so far as is practicable, to make all places of work as safe and healthy as possible.

Stardome Observatory will provide training in Health and Safety; staff will be encouraged to participate in development and maintenance of systems for eliminating, isolating or minimizing hazards, and promoting health and health awareness.

Health and Safety Goals

So far as is required, all staff will be trained in safety, health and emergency procedures.

All Stardome Observatory places of work will be managed and organized to provide a safe and healthy work environment.

All work conducted away (field) from the Stardome Observatory building will be conducted in a safe manner.

Non Smoking Policy

Smoking is not permitted within Stardome Observatory.

Smoking is permitted in the courtyard area providing:

1. There is a receptacle to dispose of cigarettes, matches etc
2. There are no fire risks or hazardous goods in the vicinity.

HEALTH AND SAFETY PLAN

Employer

The Stardome Observatory and Planetarium Trust Board, as employers, are required to have Health and Safety procedures in place, and to monitor these procedures regularly, so that they remain up to date. These procedures are documented in the Health and Safety Manual. It is the duty of employers to take all practicable steps to ensure the safety of employees and other people in Stardome Observatory places of work.

Employees

Whilst at work, employees are responsible for ensuring their own safety and the safety of others (e.g. visitors, public, other staff, etc.) as far as is practicable.

Employees have an ongoing duty to take part in the process of establishing health and safety procedures and in the identification of hazards.

Employees should pass any comments or concerns to the Health and Safety officer and/or record them on the Hazard Identification form (held at reception). Time is put aside at every staff meeting so that Health and Safety issues may be discussed.

All staff must adhere to Stardome Observatory safety plans.

Health and Safety Officer

The Health and Safety Officer is responsible for: keeping records; presenting issues at staff meetings; recommending procedures for identifying, controlling and monitoring hazards; reporting accidents and incidents to the Occupational Safety and Health office of the Department of Labour (OSH).

Fire Wardens

Wardens have been appointed (Refer to Appendix 1 of the Staff Manual).

In the event of an emergency the instructions of any fire warden are to be followed (see Fire Evacuation Procedures page 7).

Training

New staff will be briefed on the procedures in the Health and Safety Manual soon after starting work.

Staff will also be informed about any changes to the Health and Safety procedures and the general content of the manual within a month of the manual's regular review.

HAZARD IDENTIFICATION AND CONTROL

Management of risk from hazards involves the following processes:

- Identification of hazards
- Controlling and monitoring of hazards
- Reporting of accidents/incidents

All employees are responsible for hazard identification and control.

Types of Hazards

- Noise
- Chemical
- Radiation
- Electrical
- Lighting
- Vibration
- Temperature
- Biological
- Ergonomic
- Physical
- Miscellaneous (including stress, fatigue, and assault)

The hazard identification form is used for identifying and recording hazards. Once a hazard is identified, it is then eliminated, isolated, or minimized.

Accident / Incident Reporting

For the purpose of this manual an *accident* includes a circumstance that has resulted in the injury or death to a person in the Stardome place of work (Stardome staff or not). An *incident* is a circumstance where an accident may have occurred, but did not cause an injury, i.e. a near miss.

All accidents and incidents must be reported on the standard OSH forms. The Health and Safety officer will advise whether any incident or accident should be reported to OSH (whether it is serious harm, or is a serious harm 'near miss').

All accidents and incidents, including near misses must be reported to the Health and Safety officer who will:

1. Obtain a register number for the particular accident/incident.
2. Record the accident/incident on the "Accident or Incident Report Form".
3. Also, using the "Investigation Report Form" investigate the cause, document
4. the investigation and recommendations and follow up on the outcome.
5. In the event of injury to a child, the Manukau City Council is to be notified (this
6. is due to funding requirements).

In the case of serious harm:

Do not disturb the scene of the accident, except to the extent needed to save life, prevent further harm, reduce a hazard or relieve suffering of any person, or maintain access to an essential service or utility.

Notify OSH "as soon as possible" after its occurrence and complete and provide a written report to OSH of the circumstances within a week of the occurrence.

Note

The Department of Labour has for a number of years received notification of accidents occurring in places of work. Information from ACC may also be given to OSH, however for confidentiality reasons, the information does not include the individual's name.

EMERGENCY PROCEDURES

These procedures cover the actions required in an emergency situation at Stardome Observatory.

Emergency evacuation procedures

Notices displaying the evacuation routes are posted at strategic locations in the Stardome Observatory.

Fire

All staff members must be familiar with the following procedures in the event of a fire (remember that the designated fire wardens may be absent).

- On discovering a fire activate the nearest manual alarm.
- Leave the premises immediately, by the nearest escape route.
- Switch off appliances but leave lights on.
- Move quickly, but do not run.
- Do not return to collect any personal possessions.
- Remember to crawl low if there is smoke.
- Test doors for heat with the back of your hand before opening.
- If your clothing catches on fire, drop to the ground and roll.

Designated Assembly Point

Grass area situated at the front of the building (beyond the car park).
Do not re-enter the building until advised by the building warden that it is safe to do so.

Fire Drills

Fire drills will be held at intervals not exceeding 6 months unless the building owner directs otherwise. The Health and Safety Officer is to record the results, along with the implementation of further training if necessary.

Fire Extinguishers

Important: Do not attempt to extinguish the fire unless conditions permit.

Know your fire extinguishers and the different classes of fire. A fire extinguisher is a portable device used to put out fires of limited size. Such fires are grouped into four classes, according to the type of material that is burning.

CLASS	Combustible Material	Extinguisher Type
Class A	Ordinary combustibles such as wood cloth and paper	Usually water based e.g. hose reels
Class B	Flammable liquids, oils and grease	Carbon dioxide gas (CO ₂); has the advantage of leaving no residue
Class C	Live electrical equipment	Carbon dioxide gas or dry Chemical
Class D	Combustible metals such as magnesium, potassium and sodium	Dry powders

Use of fire extinguishers

Only if conditions permit should attempts be made to extinguish a fire.

Ensure that you have read the instructions on the equipment before you attempt to use it.

Do not use an extinguisher that appears to be damaged. If you decide to fight the fire, evacuate occupants out of the hazard area, call the Fire Department, and then:

- Use the appropriate extinguisher for the class of fire as indicated on the nameplate
- Maintain proper distance from the fire
- Pull the safety pin or release the safety lock (unit dependant)
- Hold the extinguisher firmly and begin discharging the agent at the near edge of the fire
- After the fire has been extinguished, be alert for possible re-ignition

Warnings: Improper application could lead to personal injury or death. Example: a Class A (water) extinguisher used for a Class C (electrical) fire could self promote electrocution.

Know how to activate your extinguisher before an emergency ensues.

Avoid prolonged skin contact with the extinguishing agent; although most agents are non-toxic, prolonged contact may result in eye or respiratory irritation.

Do not attempt to repair a fire extinguisher. Authorised personnel must perform maintenance or repairs.

Post Fire Procedures

Avoid damage to the surrounding area and equipment by properly cleaning up extinguishing agents, residue and fire debris promptly.

Regardless of how much extinguishing agent was used, recharge the extinguisher immediately after use. If you discharge even the slightest amount of agent, have the unit immediately serviced (recharged). Partial discharge can cause the extinguisher to slowly lose pressure.

Warning: The refill agent must be the same as originally used. Improper filling can result in an inoperable extinguisher or a safety hazard due to pressure and heat generated by the chemical reaction caused by mixing the agents.

EMERGENCY PROCEDURES (Continued)

Volcanoes

During a volcanic eruption:

- Stay indoors as much as possible
- Conserve water as soon as possible, save supplies in the containers as water may become polluted later.
- Wear a mask and goggles when going outside. A damp scarf will make an improvised mask.
- Help keep gutters and roof clear of ash as heavy deposits can collapse the roof.

After a volcanic eruption:

- Remain indoors as much as possible
- Keep windows and doors closed unless told otherwise by authorities.
- Listen to a battery operated radio for advice and information.

Storms

Before a storm:

- Secure any loose boards and roofing iron.
- Avoid being in rooms with large windows.
- Put strips of tape across large windows to prevent shattering.

During a storm:

- Stay indoors
- Shelter in the smallest parts of the building – usually the smallest rooms with small windows or in the hallway.
- Open a window on the side of the building away from the wind – this will relieve pressure on the roof.
- Close the curtains to slow down flying glass or other loose objects.
- Stay away from doors and windows. If the wind becomes destructive, shelter further inside the building.
- Stay away from metal and electrical fixtures.
- Contact your local council if your house or building is severely damaged.
- Do not walk around outside.
- Do not go driving unless absolutely necessary.

After the storm:

- Avoid dangling and broken power lines.
- Contact your local council for advice about cleaning up debris.

Earthquakes

During an earthquake:

- Stay indoors.
- Keep calm.
- Take covers in doorways or tables, and hold on.
- If outdoors, stay clear of buildings, high walls and electricity lines.
- Curl into a turtle shape and protect your head.

If there is severe damage after an earthquake:

- Turn off electricity, water and gas supplies at the mains.
- Treat injuries.
- If there is a smell of gas after turning off the main supply, evacuate the building.
- Conserve water and stop any leaks if possible.
- Keep refrigerators and freezers closed as much as possible if the electricity supply is cut.
- If the building is unsafe, evacuate

Chemical Spillage

During a chemical spillage (external to building):

- Close all the windows and remain inside.
- Listen to a battery operated radio for advice and information.
- Advise emergency services immediately if any affects are noticed inside (e.g. irritation to the eyes, nausea).
- Block doors and windows with any available materials e.g. tape, blankets.
- Evacuate immediately if advised to do so.
- Turn off electricity, water and gas supplies at mains if required to evacuate.

Flood

If there is a flood warning, prepare to:

- Listen to a battery operated radio for advice and information.
- Follow the official Civil Defense advice and instructions.
- Disconnect electrical appliances.
- Turn off electricity, water and gas mains (if there is time).
- Move valuables, clothing, food, medicines and chemicals above the likely reach of the floodwater.
- Move to the nearest high ground if advised to do so.

During a flood:

- Keep calm.
- Listen to a battery operated radio for advice and information.
- Stay as warm and as dry as possible.
- Stay where you are unless told to do otherwise.

After a flood:

- Assist with the clean up.
- Store damaged articles outside until assessed.

Note: If you have a battery-operated radio, turn it on – this will be your major source of information.

Violence

Violence is a hazard encountered in many places of work. It can occur suddenly, without notice or provocation. It may cause mental and physical pain and suffering and may result in permanent disability or even death.

A definition of violence at work is:

Any incident, in which an employee is abused, threatened or assaulted by fellow employees or by a member of the public in circumstances arising out of the course of his or her employment.

Violence includes sexual or other forms of harassment.

Depending on your job, you could be exposed to violence or threatening behaviour from members of the public, students, patients or clients, or from supervisors, managers or other workers.

The law requires all practicable steps to be taken to protect people from violent incidents that may result in injury, or in harm to their health.

Both you and your employer have an interest in, and can benefit from, reducing violence at work.

For you, violence can cause pain, suffering and even disability or death. Physical attacks are obviously dangerous but serious or persistent verbal abuse or threats can also harm your health through anxiety or stress.

For employers, violence can lead to low morale and a poor image for the organisation, making it difficult to recruit and retain staff. There are costs associated with violence at work.

As well as the financial costs of absenteeism, lost productivity, possible higher insurance premiums and ACC levies, and medical expenses, there is the personal cost of emotional trauma suffered by the victims and their families.

Different forms of violence include:

- Random violence with no clear intent, such as from a deluded psychiatric patient, or from someone under the influence of alcohol or drugs.
- Intimidation used to achieve a desired end such as control or sexual satisfaction or simply faster service.
- The expression of uncontrolled irritation such as dissatisfaction with poor service or prolonged discomfort.
- Displaced anger from past situations applied unreasonably to the issue.

Co-operate with your employer to identify areas of work where the potential for violence is likely:

Work in accordance with the procedures and policies put in place by your employer to prevent or reduce the incidence of violence.

- Follow the work practices, methods and instructions applicable in your place of work.
- Report all incidents of violence to you or your colleagues. If appropriate, use the system for reporting in your place of work.
- Give support to fellow employees who have been victims.
- Do not provoke violence, intimidate or harass fellow employees.
- Treat customers in a friendly and courteous manner, and be patient and willing to assist.
- Do not discuss the security measures used in your place of work with outsiders.
- If you work alone, take reasonable steps to ensure your safety. For example, check the credentials of clients and any arrangements for meetings away from your normal place of work.
- If you work at night, park in and keep to well-lit areas.

In armed robbery situations:

- Co-operate as much as possible, without putting yourself in further danger.
- If you are able, and it is safe to do, press the panic button.

- Do not aggravate the situation.
- Do not try to be a hero.
- Co-operate with and assist the police.

(see Stardome Observatory Security Manual for full details).

The provision of personal protection, such as personal alarms or self-defense training, should be used only when all practicable steps have been taken to minimize the risk of injury or harm to health.

Because circumstances can vary so widely, it is impossible to cover every scenario or provide advice on every practicable step you could take to avoid, prevent or deal with incidents of violence.

Take a common-sense approach to your own health and safety and treat others in the same manner you wish to be treated.

Be alert, and act in a healthy and safe way to yourself, your colleagues, your clients, and all others you meet during your working day.

Bomb Threat

In the event of receiving a bomb threat by phone:

- Keep the caller talking and on the line as long as possible
- Find out all you can about the bomb
- Alert someone else to call the police and/or listen in
- Take detailed notes of the conversation including your assessment of the caller's manner, voice, age, etc.
- Evacuate the building. Take all personal effects.

DO NOT:

- Activate the manual alarm
- Activate any electrical switches

FIRST AID

The First Aid kit is kept at reception.

In the event of serious injury or risk to life or property obtain an outside line (9) Then Dial 1 1 1 and ask for the appropriate emergency service.

GENERAL HEALTH AND SAFETY PROCEDURES

Protective Clothing / Safety Equipment

Plan ahead: Ensure that you wear suitable clothing and use the appropriate equipment for the type of work you are doing and the environment you are in.

- Wear protective headgear and sunscreen lotion when working in the sun, particularly if for more than 10 minutes at a time.
- Stay warm and dry – use wet weather gear when required.
- Wear ear protection muffs when working in noisy surroundings.

Office Safety

This section deals with Health and Safety within the office environment.

- Basic Office Safety Rules:
- Keep walkways clear
- Don't use defective chairs, desks or other furniture or equipment.
- Use optimum lighting level and direction according to task.
- Keep draws closed when not in use.
- Do not turn off lights when others are present.
- Do not run. Be careful when turning corners.
- Watch underfoot hazards (e.g. power / telephone cords / carpet)
- Close photocopier lid before photocopying.
- Use stairwell handrails. Take your time, watch your step.
- Handle sharp objects and guillotines carefully – hands clear
- Never adjust or clean office machinery when power is turned on
- Do not attempt electrical repairs. Request a qualified electrician
- Vehicles – keep speed down, particularly in the car park
- Do not read whilst walking
- Do not stand in front of closed doors
- Use secure stepladders to reach high places.
- Do not lift heavy objects alone; request help, and bend your knees, not your back.
- Adjust your seating and work areas to suit your physical and mental make-up (if in doubt use recommended settings).
- Check locks and security when working after hours. In an emergency; dial (9) then 111.
- Be careful of microwave oven food and beverages; they can be very hot; stand clear whilst cooking.
- Secure bookcases and other heavy items against falling (gravitational inclination).

Occupational Overuse Syndrome (O.O.S)

O.O.S is a term used for a range of conditions where people feel discomfort or persistent pain in muscles, tendons and other soft tissues. If you develop any of these symptoms, or sense the possible onset of O.O.S, or would just like advice or assessment, see the Health and Safety officer.

To reduce the risk of O.O.S. remember the following points:

- Setup your VDU workstation as described below.
- Good posture is essential.

- Relax while working and take regular breaks i.e. micro pauses, five minutes away from the computer each hour. Make sure that lunch breaks and other breaks are taken.
- Exercise and stretch at regular intervals.
- Use a good keyboard technique.

How to setup your VDU workstation

- Adjust your workstation to suit yourself
- Orientate the VDU to eliminate reflections and glare on the screen.
- Adjust the chair so that the forearms are horizontal when positioned on the home keys. Ensure that your feet are flat on the floor and you are sitting on your chair.
- Allow a space in front of the keyboard to rest your wrists when not typing.
- Place monitor screen at arms length and slightly below eye level.
- Arrange workspace so that frequently used equipment is close at hand.
- Use glasses with the correct focus distance, not reading glasses.

Further information can be found in “*Approved Codes of Practice for the use of Visual Display Units in the Place of Work*” produced by O.S.H.

Visitors

Staff must meet visitors at reception, and are responsible for the health and safety of them whilst they are in the building. Temporary contract staff must be made aware of any significant hazards and instructed on basic emergency procedures, including evacuation, by the staff member overseeing the project.

Contractors

Staff who engage outside contractors (including service providers and repair and maintenance personnel) to work on the Stardome premises must verify prior to the contractor starting work that they have in place their own Health and Safety procedures, particularly in the area of hazard identification (imported).

Hazardous Substances

To be recorded on the Hazardous Substances form; held and maintained by the Health and Safety officer.

Use of Photocopiers

Long-term use of photocopiers has been identified as a potential hazard. To protect against the possible impacts it is important to note the following:

- Avoid exposure to light by closing the cover during photocopying.
- Take breaks during long photocopy sessions
- Avoid photocopying during pregnancy.
- Photocopiers should be at least 4m from any workstation or partitioned off from workstations
- Protective gloves are available to be worn when disposing of toner and to guard against skin contact when collating finished copies.
- Machines should be regularly serviced.

Discomfort or health effects may arise if machines are poorly sited, inadequately ventilated, poorly maintained or used by operators continually for long periods.

Ozone

Photocopiers produce small amounts of ozone (an unstable form of oxygen). Ozone is also produced naturally in the upper atmosphere by UV solar radiation. If present in sufficient concentration, this odorous gas is irritating to the eyes, the lungs, and the throat and nasal passages. Severe exposure can result in lung damage. The concentrations of ozone within the breathing zone of the operator depend on the amount of ozone discharged by the copier, the rate of decay of ozone, the volume of air in the room, the temperature and the ventilation in the room. Odour problems with modern copiers and fax machines usually indicate inadequate ventilation.

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Selenium and cadmium

The photoconductive material in photocopiers is usually selenium. Cadmium sulphide, zinc oxide and organic polymers are also used. Trace amounts of these materials can become airborne. However, under normal operation, the concentrations of these pollutants are well below those associated with health effects.

Toner materials

The main ingredient in the toner is carbon black.

This is:

- mildly toxic - though some impurities in toners may be carcinogenic. As currently manufactured, carbon blacks contain extremely low levels of impurities and do not warrant concern regarding health effects;
- a respiratory irritant;
- may cause eye irritation.

Older machines pose a greater exposure risk, because adding toner may involve transferring loose toner rather than replacing a cartridge, as is the case with newer machines.

Liquid Toners

Some modern toners are in a liquid form and so rarely irritate the skin, but exposure to solvents within them can dry and crack the skin, and mildly irritate the eyes. The same hazards apply to the various solvents used for cleaning duplicating machines. They also pose a fire risk if not stored adequately. Frequent contact with toner or other solvents may cause dermatitis or asthma.

UV Radiation

Ultra-violet radiation may also be released through the glass plate, but at very low levels. Modern equipment does not present a bright light hazard beyond short-term discomfort to the eyes, but it is recommended that the photocopier lid be kept down.

Other EMR

Electro-magnetic fields (EMFs) are produced by electronic equipment. There are ongoing concerns regarding the effects of EMFs. It is recommended that workers should not stand by the photocopier when doing long runs (e.g. 15 minutes). If it is necessary to stand by, then at the distance should be at least 1 metre from the photocopier

All laser printers are classified as class 1 laser products meaning that under normal conditions the laser radiation (beam) is inaccessible and therefore not a hazard unless the shielding or enclosure around the laser is tampered with, or removed. Only properly trained technicians following the manufacturers safe working procedures should carry out maintenance.

Physical factors

Excessive dry heat can build up if too many machines are placed in a small area, or where their use is frequent and ventilation insufficient. This can cause discomfort to the eyes, and the workplace can become too dry and hot.

Excessive noise may also be experienced in such circumstances, or where the machines are old or poorly maintained. Printers in frequent use and close to a workstation can impair concentration.

Clearing paper jams in printers and other duplicating machinery will expose users to hot or moving parts, sharp edges, pinch points, or exposed electrical parts. Modern machines should have such risks designed out and should turn off automatically upon opening of the machine. However, a machine must always be disconnected from the power supply before opening.

Handling paper or collating copies are manual handling risks.

EVACUATION PROCEDURES FOR EVENINGS AND WEEKENDS

Building: Stardome Observatory

Address: One Hill Tree Domain.

Building Warden: Show Manager (TBC)

Floor Wardens: Presenter 1 and Presenter 2 (rostered)

Assembly Point- Grass area in front of building (beyond carpark)

Building Warden Duties (during an evacuation)

- Evacuation co-ordination.
- Ensure the Fire Service has been called. Dial (9)111.
- Get First Aid kit and daybook (showing visitor numbers) from reception.
- Keep an overview of the evacuation, and delegate as necessary.
- Be stationed at the front entrance by the fire alarm panel.(Checklist and procedures are posted on the alarm panel door).
- Initiate action if reports are not received from wardens.
- If necessary, appoint a suitable person to assist with disabilities (if timing allows remove Assistance Register from reception).
- Update the Fire Department on the evacuation status upon their arrival.
- Do a roll call.

Presenter 1 -Floor Warden Duties(during an evacuation)

Areas of Responsibility:Planetarium,Media Room,Storage Room,Offices.

- Ensure all occupants are evacuated to the designated Assembly point.
- If any occupant remains in the building (fire fighting,trapped etc), note their location.
- Designate a suitable person to assist anyone needing help.
- Report status to Building Warden.

Presenter 2 –Floor Warden Duties

Areas of Responsibility: Space room, Shop, Foyer, Toilets, Workshop, Zeiss Dome, Education Office, Sunroom, Telescope Room, Harry Williams Dome, Kitchen, Astronomical.Society.Library.

- Ensure all occupants are evacuated to the designated Assembly point.
- If any occupant remains in building, (fire fighting,trapped etc) note their location.
- Designate a suitable person to assist anyone needing help.
- Report status to Building Warden.

Building Warden and Floor Warden must be able to be identified (Identifiable by armbands-located in planetarium, office passageway and alarm panel door).

Fire Fighting should only be attempted if it is safe to do so.



HEALTH & SAFETY AUDIT: SCHOOL AND PRESCHOOL DAYTIME GROUP SESSIONS

General Note:

School and pre-school activities conducted at StarDome Observatory are of a low risk nature. Activities occur inside a purpose-built facility, with participants seated throughout much of the session, and do not involve physical activity. Students are supervised by accompanying teachers and caregivers, and by the StarDome education staff.

Facility	Location	Contact Details
StarDome Observatory	Manukau Road Entrance, One Tree Hill Domain Royal Oak, Auckland	Tel 09-624 1246 Fax 09-625 2394 leighf@stardome.org.nz

Safety Resource	Location/Detail	Comments
Evacuation Procedure	oned system with 5 appointed wardens and designated external assembly point	StarDome staff responsible
Attendance Count	Head count of group participants – provided by Teacher / Caregivers and recorded by receptionist	Teacher/ caregivers to provide numbers
Wheelchair/pushchairs	Recorded at reception and attendant assigned	School provides attendant
First Aid Kit	Main foyer	Reception Desk
First Aid Staff	2 x Education staff and receptionist	St John trained
Emergency Exits	Throughout facility illuminated and standard type	
Emergency Lighting	Low level stand by automatic system	
Fire Alarm	Automatic system with smoke detectors and break-glass manual actuation	Regularly serviced and inspected
Fire Extinguishers	Throughout facility Regularly serviced and inspected	
Exit Doors	Fitted with internal panic bar actuation	
Medical Attention	Cornwall Medical Centre – Manakau Rd	Opposite domain entrance tel 09 625 3140
Registers	Accident, Assistance and Fire Registers - Reception	

Potential Risk	Control Methods	Responsibility
Car Park vehicle maneuvers	Adult supervision	Group Teachers/Caregivers
Supervised Rocket Launching (external)	Optional activity only by request. Adult supervision by certified staff to prevent contact with eyes or skin. (diluted acetic acid (vinegar) and baking soda).	StarDome supervisor

*Report prepared by:
Leigh Findlay (Health and Safety Officer)
14 October 2004*



Stardome Observatory Risk Analysis and Management System

Overview

First Aid

The First Aid kit is maintained, and is located at the reception desk. Three Stardome staff have St Johns First Aid certification.

Fire Evacuations

A Fire Evacuation procedure is in place (five wardens, zoned system designated external assembly point and fire extinguishers located throughout facility).

Emergency Exits

Emergency Exits are located throughout the facility (illuminated and standard type).

Emergency Lighting

Emergency lighting: throughout the building (automatic system).

Exit Doors

Exit Doors are fitted with internal panic bars.

There are standard operating procedures for all staff when using equipment (eg. telescopes, star projector, rocket launching).

Three registers are maintained (located at the reception desk):

- Accident Register
- Assistance Register
- Fire Register

These registers also contain monthly Safety Checklists, and Hazard Identification / Control forms.

The Stardome is situated in close proximity to Cornwall Medical Centre. In seven years of operation there has not been a major accident.

*Report prepared by:
Leigh Findlay (Health and Safety Officer)
8 December 2003*



Rocket Safety Procedures

Only an employee with Rocket Certification may demonstrate rocket making and launching.

Rocket Launching Requirements

- Present to the audience the idea that rocket making is fun, but can be dangerous if safety procedures are not followed.
- State the importance of common sense.
- State that an adult or parent needs to be present if children are making rockets at home.
- All potential dangers need to be demonstrated and explained.

Rocket Launching Procedures

- The safety notice must be displayed during each launch session.
- Never point the bung at any part of the body, particularly the face.
- Never point the bung at anyone else.
- Always keep the bung pointing at the ground, and away from the body.
- Note wind conditions Presenter must ensure that there are no public positioned dangerously Once the rocket is 'loaded' and the bung is in place, ensure that the 'shaker' knows to move back 7 metres;
- 7 metres is the minimum distance the observers need to be from the launch pad.
- Whilst launching the rocket, it is important to bend at the knees so that no part of the body is in the firing line.
- Prior to launch, a 'loaded' rocket must be handed to the presenter so he/ she can ensure:
 - a) Rocket has the bung facing towards the ground.
 - b) The bung is in securely.
- If a rocket fails to fire, it must be disarmed safely (i.e. punctured).
- The First Aid Kit is always on hand (at reception).
- Whilst making white vinegar, ensure that ventilation is adequate and there are no obvious dangers (make outside if possible).

*Report prepared by:
Leigh Findlay (Health and Safety Officer)
8 December 2003*

Occupational Health and Safety (OSH) Notes (edited) and Glossary

Accident

"Accident" means an event that-

- (a) Causes any person to be harmed; or
- (b) In different circumstances, might have caused any person to be harmed.

The second part of this definition means that what are sometimes referred to as "near misses" are covered. The term's most important use is in relation to the recording and reporting of accidents.

All practicable steps

(1) In this Act, all practicable steps in relation to achieving any result in any circumstances, means all steps to achieve the result that it is reasonably practicable to take in the circumstances, having regard to:

- a) the nature and severity of the harm that may be suffered if the result is not achieved; and
- b) the current state of knowledge about the likelihood that harm of that nature and severity will be suffered if the result is not achieved; and
- c) the current state of knowledge about harm of that nature; and
- d) the current state of knowledge about the means available to achieve the result, and about the likely efficacy of each of those means; and
- e) the availability and cost of each of those means.

(2) To avoid doubt, a person required by this Act to take all practicable steps is required to take those steps only in respect of circumstances that the person knows or ought reasonably to know about.

The phrase **all practicable steps** is important, and qualifies many of the duties in the Health and Safety in Employment Act. It specifies a level of reasonable endeavour, not perfection. This phrase applies to the general duties that must be carried out by employers, employees, self-employed people, people in control of workplaces, and principals (people who engage contractors to carry out work for them). Subsection (2) of the definition of **all practicable steps** was added by the Health and Safety in Employment Amendment Act 2002 to confirm that people are responsible for taking all practicable steps only in circumstances they know or ought reasonably to know about.

Compliance order

"Compliance order" means an order that is made under section 137 of the Employment Relations Act 2000.

An OSH inspector or any other person can apply to the Employment Relations Authority for a compliance order for breach of the employee participation provisions of the Health and Safety in Employment Act. The compliance order will require the person to do a specified thing or to cease a specified activity, for the purpose of preventing further non-observance of, or non-compliance with, the employee participation provisions.

Contractor

"Contractor" means a person engaged by any person (otherwise than as an employee) to do any work for gain or reward. Contractors are often referred to as independent contractors.

Employee

"Employee", subject to sections 3C to 3E, means a person of any age employed by an employer to do any work (other than residential work) for hire or reward under a contract of service and, and in relation to any employer, means an employee of the employer.

This essentially covers anyone who works for an employer under an employment agreement.

Employer

"Employer: means a person who or that employs any other person to do any work for hire or reward; and, in relation to any employee, means an employer of the employee.

Enforcement action

"Enforcement action" means:

- (a) in relation to an inspector-
 - (i) the laying of an information under this Act; or
 - (ii) the issuing of an infringement notice under this Act; or
 - (iii) the making of an application for a compliance order; and
- (b) in relation to a person other than an inspector, -
 - (i) the laying of an information under this Act; or
 - (ii) the making of an application for a compliance order.

Both OSH inspectors and other persons can:

- Apply for **compliance orders** for breach of the employee participation provisions of the Act; and
- Take action to prosecute a person for a breach of the Act (ie, "laying an information").

However, only an OSH inspector can issue an infringement notice under the Act.

Harm

"Harm" -

- (a) means illness, injury, or both; and
- (b) includes physical or mental harm caused by work-related stress.

Harm includes not only physical illness or injury, but also mental illness or injury caused by work-related stress. Corresponding meanings apply to the terms **harmed**, **to harm**, and **unharm**.

Hazard

"Hazard" -

- (a) means an activity, arrangement, circumstance, event, occurrence, phenomenon, process, situation, or substance (whether arising or caused within or outside a place of work) that is an actual or potential cause or source of harm; and
- (b) includes-

- (i) a situation where a person's behavior may be an actual or potential cause or source of harm to the person or another person; and
- (ii) without limitation, a situation described in subparagraph (i) resulting from physical or mental fatigue, drugs, alcohol, traumatic shock, or another temporary condition that affects a person's behaviour.

The concept of a hazard is central to the Act's focus on preventing harm. Hazards must be systematically identified and managed.

Hazards can:

- be actual or potential
- be physical, biological, or behavioural (including temporary conditions that can affect a person's behaviour, such as fatigue, shock, alcohol or drugs)
- arise or be caused within or outside a place of work.

The term **hazardous** has a corresponding meaning.

Hazard notice

"Hazard Notice" means a notice that-

- (a) describes a hazard identified in a place of work; and
- (b) is in the prescribed form; and
- (c) may set out suggested steps to deal with the hazard.

Only a trained health and safety representative can issue a hazard notice. Hazard notices are intended to act as a communication tool between trained health and safety representatives and their employers for the management of health and safety in the workplace. They are not enforceable.

Health and Safety Committee

"Health and Safety Committee" means a committee established to support the ongoing improvement of health and safety in a place of work. Such committees are not required but they are often a useful way of involving employees in health and safety issues.

Health and Safety Representative

"Health and Safety representative" means an employee elected, as an individual or as a member of a health and safety committee or both, to represent the views of employees in relation to health and safety at work.

There is no requirement to have health and safety representatives as part of an agreed employee participation system. However, they are an effective mechanism for achieving employee involvement in health and safety issues.

Improvement notice

"Improvement notice" means a notice under subsection (1) or subsection (2) of section 39 of this Act.

An OSH inspector can issue an Improvement Notice if he or she believes a person is not complying with their health and safety duties under the Act.

The notice must

- indicate the section of the Act or the regulation that has been breached;
- set out the inspector's reasons for believing that there is a failure to comply and the nature of that failure; and
- specify a date by which there must be compliance.

The notice may, but does not have to, specify steps that you could take to comply. Failure to comply with an Improvement Notice is an offence for which a person may be issued an Infringement Notice or prosecuted.

Infringement notice

"Infringement notice" means a notice given under section 56B. These are sometimes referred to as instant fines.

An OSH inspector will issue an infringement notice if:

- The inspector has reasonable grounds to believe that a person has failed to comply with their duties as outlined in the Act;

- That person has had prior warning of their offence.

An inspector can issue an infringement notice for any breach of the Act. Infringement notices will be issued for clear breaches of the Act in cases where the inspector considers that prosecution is not warranted. An infringement notice informs a person that they have breached the Act, and that they are required to pay a penalty. Only an OSH inspector can issue an infringement notice.

Person who controls a place of work

Person who controls a place of work in relation to a place of work, means a person who is-

- (a) The owner, lessee, sub lessee, occupier, or person in possession, of the place or any part of it; or
- (b) The owner, lessee, sub lessee, or bailee, of any plant in the place.

This definition covers those people who are responsible for places where work is done, or plant in the place.

Place of work

Place of work means a place (whether or not within or forming part of a building, structure or vehicle) where any person is to work, is working, for the time being works, or customarily works, for gain or reward; and, in relation to an employee, includes a place, or part of a place, under the control of the employer (not being domestic accommodation provided for the employee),--

- (a) Where the employee comes or may come to eat, rest, or get first-aid or pay; or
- (b) Where the employee comes or may come as part of the employee's duties to report in or out, get instructions, or deliver goods or vehicles; or
- (c) Through which the employee may or must pass to reach a place of work.

The definition of "place of work" is broad, to cover all the sorts of places where people work. It was amended to confirm that people who work in vehicles and people who are mobile in the course of their work are still covered by the Act.

Plant

Plant includes -

- (a) Appliance, equipment, fitting, furniture, implement, machine, machinery, tool, and vehicle; and
- (b) Part of any plant, the controls of any plant, and any thing connected to any plant.

Principal

Principal means a person who or that engages any person (otherwise than as an employee) to do any work for gain or reward.

Prohibition notice

Prohibition notice means a notice under section 41(1) of this Act.

A notice under section 41(1) is a notice from an inspector that requires a person to stop doing certain things that may cause serious harm to anyone.

Residential work

"Residential work", in relation to the occupier of a home, means--

- (a) Domestic work done or to be done in the home; or

(b) Work done or to be done in respect of the home,--
by a person employed or engaged by the occupier solely to do work of one or both of those kinds in relation to the home.

People who employ or engage others to do residential work on or in their own home do not have responsibilities under the Act in relation to that work.

Safe

Safe -

- (a) In relation to a person, means not exposed to any hazards; and
 - (b) In every other case, means free from hazards; --
- and "unsafe" and "safety" have corresponding meanings.

Serious Harm

Serious harm, means death, or harm of a kind or description declared by the Governor-General by Order in Council to be serious for the purposes of the Act; and "seriously harmed" has a corresponding meaning.

Until such an Order in Council is made, the following types of harm are defined in Schedule 1 as "serious harm" for the purposes of the Act:

- a) Any of the following conditions that amounts to or results in permanent loss of bodily function, or temporary severe loss of bodily function: respiratory disease, noise-induced hearing loss, neurological disease, cancer, dermatological disease, communicable disease, musculoskeletal disease, illness caused by exposure to infected material, decompression sickness, poisoning, vision impairment, chemical or hot-metal burn of eye, penetrating wound of eye, bone fracture, laceration, crushing.
- b) Amputation of a body part.
- c) Burns requiring referral to a specialist registered medical practitioner or specialist outpatient clinic.
- d) Loss of consciousness from lack of oxygen.
- e) Loss of consciousness, or acute illness requiring treatment by a registered medical practitioner, from absorption, inhalation, or ingestion, of any substance.
- f) Any harm that causes the person harmed to be hospitalised for a period of 48 hours or more commencing within 7 days of the harm's occurrence.

The definition of serious harm is relevant to employers' duties to manage hazards, notification requirements, employees' rights to refuse to do dangerous work, and inspectors' powers to issue prohibition notices.

Significant hazard

Significant hazard means a hazard that is an actual or potential cause or source of -

- 1. Serious harm; or
- 2. Harm (being harm that is more than trivial) the severity of whose effects on any person depend (entirely or among other things) on the extent or frequency of the person's exposure to the hazard; or
- 3. Harm that does not usually occur, or usually is not easily detectable, until a significant time after exposure to the hazard.

The definition of significant hazard is relevant to:

- employer's duties to manage hazards under Part II of the Act
- duties of persons in control of a place of work
- departmental medical practitioners' powers to suspend employees or require them to undergo medical examinations.

Union

Union has the same meaning as in section 5 of the Employment Relations Act 2000. In the Employment Relations Act, a "union" is a union registered under that Act.

Volunteer

Volunteer-

(a) means a person who-

(i) does not expect to be rewarded for work to be performed as a volunteer; and

(ii) receives no reward for work performed as a volunteer; and

(b) does not include a person who is in a place of work for the purpose of receiving on the job training or gaining work experience.

This definition:

- provides a core definition, from which the coverage of volunteers flows; and
- makes it clear that people receiving on the job training or work experience are not to be treated as volunteers under the Act - they have their own coverage provisions.

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